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CATALOGUE OF

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Index.

Page	Albuman Dance
American Optical Co., The 2 Highest Grade Portrait Cameras 5	Albumen Albumen Albumen Albumen Albumen Albumen Alcohol Lamps. S8 Adjusters for Cabinet Work 5
" " Highest Grade Portrait Cameras 5	Addustons for Cobinet Work
Attachments 5 Adjusters for Cabinet Work 5	Adjusters for Cabinet Work 5
Adjusters for Cabinet Work 5	Aluminium Weightts, square. 59 Automatic Print Washer. 73 Albion Blotting Paper. 70 Action Hydrometer. 53 Album Leaves, Extra 75
" Imperial Cameras 6	Automatic Print Washer 73
Boston Imperial Cameras 6	Albion Blotting Paper
Royal Cameras	Actino Hydrometer53
Multiplying Cameras 7	Album Leaves, Extra 78
Victoria Comorca	
Victoria Cameras 7	B
Copying Cameras. 8 Enlarging, Reducing and Copying Cameras. 8	Post of Torontal Communication
" Enlarging, Reducing and Copying	Boston Imperial Cameras
Cameras 8	Mat 89
" " Star view Cameras	B Outfit, Favorite
Revolving Back Cameras 12	Bromide Paper, Nepera, Directions for Using
" Manifold Cameras	B-B-B Equipment
" Irving View Cameras	Burnishers, Acme Flue Heating Rotary 75
	" Improved Rotary 75
Landscape Reversible Cameras 15	# Improved Rotary
Acme Burnishers, Flue Heating	" Stationary 75
Improved Rotary	Aristo
Stationary 75	Print Trimmer. 75 Brushes, Red Sable 77
* Print Trimmer 75	Brushes, Red Sable
" Aristo Rurnisher	Bristle 77
Sciopticon 88	Bristle
Mailing Envelopes. 81	Backgrounds, Felt 51
Standard Portrait Cameras	Oil
" " Gem " 10	and Accessories50, 89
Gem 10 10 10 10 10 10 10 1	Payor Magatina
Victoria " 5 x 7	Washing
, Multiplying ,	Washing
* Camera Stands	Waterbury 27
Reversible Back Cameras 14	Lantern Slide 27
	Bonanza Plate Holder 25
Standard Portrait Cameras	Brass Plates
Glass Bottom Reservoir Trays 57	Boards, Front. 26 Bellows, India Rubber 27
Accessories under the Skylight	Bellows, India Rubber
for Printing Mounting and Fiving	
the Developing Boom	Baths, Stands and Dippers
* the Developing Room53-65	Colid Class
" the Retoucher	* Solid Glass
Mounting, Burnishing, and Mailing 75	Hard Rubber
Glass Bottom Reservoir Trays. 57 Accessories under the Skylight 50, 51 for Printing, Mounting, and Fixing 50, 51 for Perinting, Mounting, and Fixing 50, 52 the Recoucher 66 Mounting, Burnishing, and Mailing 75 the Operating Room 44 Backgrounds 89 Acid Proceedilic Merch's 89	Baths, Stands and Dippers 56 - Solid Glass. 55 - Hard Rubber 69 - Covered 56 Britannia Alcohol Lamps 88
Backgrounds 80	Britannia Alcohol Lamps
Acid, Pyrogallic, Merck's 91	Bulb Funnels54
Schering's 62	Boxes, Negative Storage 27
Fixing and Hardening Compound 64	Baby Holder49
Schering s	Blotting Paper 70
Palinea	, "World"
" Ecilpse 78	Black Innanned Trave
" None Such	Diamond (f
/ Waterbury 79	Patricia III
Attachments for A. O. Co. Cameras 5	Balance, Handy 58
" Vignetting 87	Block Weights 59
* Lever Focusing 26	Binding Strips, Keystone
Apparatus, Sundry Pieces	Bands, Rubber 77
Hyatt's Stamp Portrait 90	Blocks, Diaphragms, etc
Outfit, Favorite	Bulb Funnels. 54 Boxes, Negative Storage. 27 Baby Holder. 49 Blotting Paper. 70 "World". 80 Black Japanned Trays. 57 Diamond. 58 Balance, Handy. 58 Block Weights. 59 Binding Strips, Keystone. 85 Bands, Rubber. 77 Blocks, Diaphragms, etc. 26 Berlin Porcelain Evaporating Dishes. 56 Blue Anilin 65
Agrate Iron Ware Page Lipped	Blue Anilin
None Such 78	
Evaporating Disnes	C
Funnels. 56 Measures 56 Amidol, Hauff's. 61, 63 Andresen's. 63	0
Amidal Hand's Measures	Cameras for Studio Use
Amidol, Flaun S	American Optical Co. Highest Grade Portrait 5
* Andresen's	, , Imperial 6
" Cartridges 61	Boston Imperial 6
Argentometer 55	Royal 6
	Royal
Andresen's Amidol Developer	Victoria
Antipyr, Woodbury's64	Conving
Addition for Comments	
	Enlarging Reducing and
Adjusters for Cameras	Enlarging, Reducing and
Adjustrible Triped's Sequille	Enlarging, Reducing and Copying
Adjustris for Cameras. 5 Adjustrient Stands 11 Adjustible Tripod's, Scovill's 23	Enlarging Reducing and Copying
Adjusters for Cameras. 5 Adjusternt Stands 11 Adjustible Tripod's, Scovill's 23 Jointed Tripods, Scovill's 23	Enlarging Reducing and Copying 8 Star View 12 Revolving Back 12
Adjustment Stands 5 Adjustment Stands 11 Adjustible Tripod's, Scovill's 23 Jointed Tripods, Scovill's 23 Albion Tripods 22	Revolving Back
Adjustment Stands	
Adjustment Stands 5 Adjustment Stands 11 Adjustible Tripod's, Scovill's 23 7 Jointed Tripods, Scovill's 23 Albion Tripods 22 AA-A Equipment 16 Adt's Printing Frame 28	Irving View 13
Adjustnert Stands 5 Adjustible Tripod's, Scovill's 23 Albion Tripods 22 Albion Tripods 22 Albion Tripods 5 A-A-A Equipment 16 Adt's Printing Frame 28 Alvan G. Clark Lenses 38, 40	Irving View 13 Irving-Clay 21 Chicago Card 21
Adjustment Stands 5 4 4 4 4 4 4 4 4 4	Irving View
Adt's Printing Frame 28 Alvan G. Clark Lenses 38, 39 Athlete Shutter 41	Irving View 13 13 17 17 17 17 17
Adt's Printing Frame 28 Alvan G. Clark Lenses 38, 39 Athlete Shutter 41	Irving View 13 13 17 17 17 17 17
Adt's Printing Frame 28 Alvan G. Clark Lenses 38, 39 Athlete Shutter 41	Irving View 13 13 17 17 17 17 17
Adt's Printing Frame 28 Alvan G. Clark Lenses 38, 39 Athlete Shutter 41	Irving View 13 13 17 17 17 17 17
Adt's Printing Frame 28 Alvan G. Clark Lenses 38, 39 Athlete Shutter 41	Irving View 13 13 17 17 17 17 17
Adt's Printing Frame 28 Alvan G. Clark Lenses 38, 39 Athlete Shutter 41	Irving View 13 13 17 17 17 17 17
Adt's Printing Frame 28 Alvan G. Clark Lenses 38, 39 Athlete Shutter 44 Arthicial Ivy 44 American Songster 50 Alaska Posing Chair 51 Aladdin Lantern 53	Trying View 13 17 17 17 17 17 17

PA	GE		PAGE
Cameras, Acme Standard Gem	IO	Dry Plate Holders, Waterbury. Flammang Single Daisy. Light Weight Double Three Shield Carbutt Hammer. Dry Plates and Films. Dayslows. Columbias	. 24
American Optical Co. Landscape Perercibles		Flammang Single	24
Cincinnati Com	15	Daien	. 24
" Cincinnati Gem	10	Links Waints Double	
Mercer Photo Micrographic	19	" Light Weight Double	24
Acme Standard Victoria 5 x 7	85	Three Shield	. 51
" Multiplying Victoria	85	« Carbutt	. 52
Reversible Back View	T.4	Hammer	. 52
Ctanda Dorfoot	17	Dry Plates and Films	. 52
Bullius, Ferrect	**	Developers, Columbian Andresen's Carbutt's S. P. C.	. 62
" Excelsior	11	Developers, Columbian.	. 02
" . Semi-Centennial	II	Andresen's	. 63
" Henry Clay	20	" Carbutt's	. 63
Stereoscopic Hyatt Stamp Portrait	20	« S. P. C	. 63
. Hyatt Stamp Portrait	go	Developing Chemicals	. 63
Ctores Transporter		Darlot Com Langes	. 34
Stereo Transparency	19	Wide Apple Destilines	34
and Outhts for Ferrotypers	85	wide Angle Rectimear	. 35
Camera Stand Parts, etc	27	Rapid Hemispherical Lenses	- 35
. Acme	II	Detective Triplex Shutter	. 41
Compact View Outfits. Centennial Outfits. Coolidge's Foregrounds.	14	Duplex, Ir., Shutter	. 41
Centennial Outfite	10	Drapery Curtains	. 50
Carlidara's Possessands	19	Diamonde Glace Cutting	- 55
Coolinge's Foregrounds	90	Diamonds, Glass Cutting	. 60
Chrome Photography	88	Drying Support	. 00
Corrugated Protecting Cases	87	Dippers	. 56
Chrome Photography Corrugated Protecting Cases Colors, Dry. Liquid Water Liquid Water	86	S. P. C. Developing Chemicals. Darlot Gem Lenses Wide Angle Rectilinear Rapid Hemispherical Lenses. Detective Triplex Shutter Duplex, Jr., Shutter Drapery Curtains Diamonds, Glass Cutting Drying Support Dippers Drawing Room Transparency Frames. D. Favorite Outfit. D-D-D Equipment Daisy Tripods Double Level.	. 87
Liquid Water	86	D. Favorite Outfit	. 16
Liquid Water New Acme Water New Acme Water Egyptian Chemical Chrome Photography, Materials for Carbutt's Developer Camera Attachment for American Optical Co. Camera C, Favorite Outfit Common Sense Print Cutter Color Screens, Yellow	86	D-D-D Equipment	. 17
Poweries Chamical	86	Daicy Tripode	22
" Egyptian Chemical		Daisy Tipous	- 23
Chrome Photography, Materials for	88	Double Level	. 00
Carbutt's Developer	63	Directions for Use of Empire Matt Paper	. 71
Camera Attachment for American Optical Co. Camera	5	Gloss	1, 72
C. Favorite Outfit	16	Gelatine Paper	. 72
Common Sense Print Cutter	88	Nepera Bromide Paper	. 73
Color Sproons Vollow	00	Divie Vicenetter	68
Color Screens, renow.	00	Discharge Discharge	. 06
Chairs, White's Posing44-40, 47-	-51	Diaphragms, blocks, etc	. 20
 Schindler's	47	Dry Colors	. 80
Color Screens, Yellow. Chairs, White's Posing	51	Daisy Tripods Double Level Directions for Use of Empire Matt Paper. Gloss Gloss Gelatine Paper. Nepera Bromide Paper. Dixie Vignetter Diaphragms, Blocks, etc. Dry Colors Double Film Holders. Dark Room Lamp, Aladdin.	. 24
Chair Rest.	10	Dark Room Lamp, Aladdin	. 53
Chair Rest. Cutter, Common Sense Print. C-C-C Equipment. Cabinet Mailing Envelopes, Reversible. California Automatic Print Washer.	88		
C.C.C. Equipment			
C-U-C Equipment	17	E	
Cabinet Mailing Envelopes, Reversible	81		
	81	Enlarging, Reducing and Copying Cameras, A. O. Co	. 8
California Automatic Print Washer	73	Elite Studio Stands	. 11
Cans. Varnish	69	Excelsior Camera Stands	. 11
Compound Fixing and Hardaning		Elm City Outfits	. 14
California Automatic Print Washer. Cans, Varnish. Compound, Fixing and Hardening. Magnesium. Clasp, Russell Negative. Corrugated Funnels. Cover Glass, Thin Crystal. Columbian Triplex Shutter. C. C. H. Focusing Glass. Clips, Sholten's Head Rest. Curtains, Drapery. Celluloid Films. Trays.	64	Entarging, Reducing and Copying Cameras, A. O. Co. Elite Studio Stands. Excelsior Camera Stands. Elim City Outfits. E, Favorite Outfit. Equipment A-A-A.	. 16
wagnesium	83	E, Favorite Outilt	. 10
Clasp, Russell Negative	60	Equipment A-A-A	. 16
Corrugated Funnels	56	B-B-B	. 17
Covered Baths	=6	B-B-B	. 17
Cover Glass Thin Crystal	88	. D.D.D.	. 17
Columbian Tripley Shutter		F.E.E. Scovill's Photo-Microscopic.	17
C C H Passaine Class	41	Securit's Photo-Microscopie	· 17
C. C. H. Focusing Glass.	43	But I'm State and State an	. 10
Chps, Sholten's Head Rest	50	Elite View Outfits. Empire Gelatine Paper Elite Tine and Instantaneous Shutter Economic Lenses, Scovill's. Eldorado Wall and Bench Combination	. 17
Curtains, Drapery	50	Empire Gelatine Paper	. 72
Celluloid Films.	52	Elite Time and Instantaneous Shutter	. 34
, Trays	67	Economic Lenses, Scovill's	. 34
Collection Filters		Eldorado Wall and Bench Combination	. 51
Colloid Films. Trays. Collodion Filters. Vials. Carbutt's Plates. Convex Glass. Cartridges, Magnesium. Coal Oil Stoves. Cample Hair Brushes	55	Eikonagen, Schering's. Endless Roll Paper. English Tissue Paper. Eclipse Albums	. 63
Contestion Distance	55	Endlose Poll Paper	. 70
Carbutt's Plates	52	Engless Roll rapel	. 70
Convex Glass	55	English Tissue Paper	. 70
Cartridges, Magnesium	83	Eclipse Albums	. 78
Coal Oil Stoves	60	None Such Albums.	. 78
Camel's Hair Brushes		Egyptian Chemical Colors	. 86
Cartridges Amidol	77 61	Etched Ground Glass	. 87
Camel's Hair Brushes Cartridges, Amidol Cabinets, Alpha Cotton, Flandreau's Absorbent	01	Egyptian Chemical Colors. Etched Ground Glass. Evaporating Dishes, Porcelain.	. 56
Cotton Plandrous Absorbant	77	Acrate Iron	. 56
Cotton, Flandreau's Absorbent	61	Pater Cinale Light Weight Haldon	. 50
/ Gun	61	Extra Single Light Weight Holders	. 5
" Filtering	61	Enlargements, Table for	. 8
Cotton, Flandreau's Absorbent gun Gun Filtering Clemon's Matt Surface Paper Collodion Columbian Developer Chemicals for Developing and Accessories Compressed Tablets, John Wyeth Cardboard, Waterbury Calcined Flour Cut-Outs	70	Evaporating Disnes, Porcelain. Agate Iron. Extra Single Light Weight Holders. Enlargements, Table for Erasive Soap. Envelopes, Mailing. Extension Tripod, Scovill. Extra Leaves for Albums. Enanel Rowline.	. 88
Collodion	61	Envelopes, Mailing	. 81
Columbian Developer 6a	62	Extension Tripod, Scovill	. 22
Chamicale	6-	Extra Leaves for Albums	. 78
for Developing	05	Promol Povelina	· 78
for Developing	03	Enamel, Roxyline Empire Outfit, Portrait.	. 21
and Accessories	64	Empire Outlit, Portrait	. 21
Compressed Tablets, John Wyeth	65		
Cardboard, Waterbury	76	P	
Calcined Flour.	66	D A Out Gt	. 16
Cut-Outs Cepa Skin Cepa Skin Chemical Colors Egyptian Combination Photo Printing Frame.	68	Favorite Apparatus Outfit	. 10
Cana Clrin		* B Outfit	. 16
Сера окш	70	· C ·	. 16
Carriers, Film	25 86	, D ,	. 16
Chemical Colors. Egyptian	86	, E ,	. 16
Combination Photo Printing Frame	73	Flommana Single Dry Plate Holder	. 24
		Dila Halden Convilla Double	24
		Film Holder, Scovill's Double	24
D		Photography, Requisites for	. 25
Dishes, Porcelain Evaporating	56	Focusing Attachments, Lever	. 26
Agate Iron	56	Flammang Single Dry Plate Holder. Film Holder, Scovill's Double. Photography, Requisites for. Focusing Attachments, Lever. Front Boards Frames, Trying Printing.	. 26
Agate Iron. Dry Plate Holders.	24	Frames, Irving Printing	. 28
Day 2 1000 11010013	-4		And the last

	PAGE	
Frames, Adt's Patent Printing	. 28	
Scovill's Printing	29	Howard Albums
Retouching	. 29	Holders, Extra Sing Hanover Retouchers
Leigh's Combination Photo Printing	. 73	Hanover Retouchers
Rabbet and Light Weight Kit	. 26	Hand Cameras
r unnels, Glass	- 54	Hyatt Stamp Portra Henry Clay Camera Stereos
Acute Iron Consucrated	. 54	Honey Clay Comore
Pluted Class	. 56	Henry Clay Camera
Flech Light Materials	· 54 · 83	Hydrochinon
Lamp Lightning	. 84	Holders
Standard	. 84	Waterbury .
" Triple	. 84	. Flammano
Little Giant	. 84	Flammang, Light Weig
Light Vulcan	. 84	Daisy Dry I
Lamp, Lightning Storage	1, 84	Scovill's Do
Joniter, Safety	. 83	Bonanza
Finders, Scovill Magic	. 43	Bonanza
Focusing Glasses, C. C. H.	. 43	Head Screen, Photo
Waterbury	. 43	Head Screen, Photo Head Rest Clips
Fichus	. 44	Holder for Baby
Felt Backgrounds	. 51	Hard Rubber Plates
Film Carriers	. 25	
Films, Celluloid	. 52	Head Rests, S. & A.
Forms, Glass	. 54	· Clips,
Flasher, Handy	. 83	Hollow Glass Tubes
Filters, Collodion.	. 55	Hardening Compou
Flour, Calcined,	. 66	Handy Balance Handy Flasher
Flandreau's Absorbent Cotton	. 61	Handy Flasher
Fixing and Hardening Compound	. 64	riaun's Amidol
Fixing Baths	. 64	Hammer Dry Plates
Filtering Paper	. 61	Hardening Compou
Cotton	. 61	
Finger Tips, Rubber	. 58	
rerrotypers Cameras and Outnts	. 85	
" Outhts	. 85	
Plates	. 85	India Rubber Ware
Frames, Transparency	. 87	India Rubber Bello
rabric, Ruby	. 87	Irving Printing Fra
" Orange	. 87	Instantané Lens Ivy, Artificial
Finder Deeder View	. 90	Ivy, Artificial
Waterbury	. 43	Imperial Cameras,
" waterbury		
Folding Tripode	. 43	
Folding Tripods	. 22	, ,
Folding Tripods. French Pipettes.	. 22	, ,
Folding Tripods. French Pipettes.	. 22	, ,
Folding Tripods	. 22	Irving View * A Improved Taylor Taylor Taylor Taylor Patent Bo
Frames, Adt's Patent Printing. Scovill's Printing. Retouching. Leigh's Combination Photo Printing Rabbet and Light Weight Kit. Finnels, Glass Bulb Agate Iron Corrugated Fitted Glass Flash Light Materials Lamp, Lightning. Standard. Triple Little Giant Light, Vulcan. Lamp, Lightning Storage Igniter, Safety. Florense Sovill Magic Focusing Glasses, C. C. H. Waterbury Fichas Felt Backgrounds. Film Carriers Films, Celluloid. Forms, Glass Flasher, Handy Flitters, Collodion. Flour, Calcined, Flandreai's Absorbent Cotton Fixing and Hardening Compound Fixing Baths. Filtering Paper. Cotton Firnger Tips, Rubber. Ferrotyper's Cameras and Outfits Platics. Frames, Transparency. Fabric, Ruby Orange Foregrounds Firing Tipods. French Pipettes.		Irving View , A Improved Taylor To Patent Bo Storage F
		Irving View F Improved Taylor T Patent Be Storage F India Ink
		Irving View F Improved Taylor T Patent Be Storage F India Ink
		Irving View F Improved Taylor T Patent Be Storage F India Ink
		Irving View F Improved Taylor T Patent Be Storage F India Ink
		Irving View , A Improved Taylor To Patent Bo Storage F
		Irving View F Improved Taylor T Patent Be Storage F India Ink
		Irving View F Improved Taylor T Patent Be Storage F India Ink
		Irving View F Improved Taylor T Patent Be Storage F India Ink
		Irving View , Amproved Taylor T. Patent B. Storage F. Storage F. India Ink
Gem Cameras, Acme Standard. Cincinnati. Ground Glass without Frames. for Transparencies Scovill's Etched Glassware W. I. A. Patent Solid Corner Kits. Ruby and Orange.	. 10 . 26 . 87 . 87 . 87 . 54 . 54 . 54 . 54	Irving View , A Improved Taylor T. Patent B. Storage F. India Ink
Gem Cameras, Acme Standard. Cincinnati. Ground Glass without Frames. for Transparencies Scovill's Etched Glassware W. I. A. Patent Solid Corner Kits. Ruby and Orange.	. 10 . 26 . 87 . 87 . 87 . 54 . 54 . 54 . 54	Irving View , A Improved Taylor T. Patent B. Storage F. India Ink
Gem Cameras, Acme Standard. Cincinnati. Ground Glass without Frames. for Transparencies Scovill's Etched Glassware W. I. A. Patent Solid Corner Kits. Ruby and Orange.	. 10 . 26 . 87 . 87 . 87 . 54 . 54 . 54 . 54	Irving View , A Improved Taylor T. Patent B. Storage F. India Ink
Gem Cameras, Acme Standard. Cincinnati. Ground Glass without Frames. for Transparencies Scovill's Etched Glassware W. I. A. Patent Solid Corner Kits. Ruby and Orange.	. 10 . 26 . 87 . 87 . 87 . 54 . 54 . 54 . 54	Irving View , Amproved Taylor T. Patent B. Storage F. Storage F. India Ink
Gem Cameras, Acme Standard. Cincinnati. Ground Glass without Frames. for Transparencies Scovill's Etched Glassware W. I. A. Patent Solid Corner Kits. Ruby and Orange.	. 10 . 26 . 87 . 87 . 87 . 54 . 54 . 54 . 54	Irving View , A Improved Taylor T. Patent B. Storage F. India Ink
Gem Cameras, Acme Standard. Cincinnati. Ground Glass without Frames. for Transparencies Scovill's Etched Glassware W. I. A. Patent Solid Corner Kits. Ruby and Orange.	. 10 . 26 . 87 . 87 . 87 . 54 . 54 . 54 . 54	Irving View , A Improved Taylor T. Patent B. Storage F. India Ink
Gem Cameras, Acme Standard. Cincinnati. Ground Glass without Frames. for Transparencies Scovill's Etched Glassware W. I. A. Patent Solid Corner Kits. Ruby and Orange.	. 10 . 26 . 87 . 87 . 87 . 54 . 54 . 54 . 54	Irving View , Amproved Taylor T. Patent B. Storage F. India Ink
Gem Cameras, Acme Standard. Cincinnati. Ground Glass without Frames. for Transparencies Scovill's Etched Glassware W. I. A. Patent Solid Corner Kits. Ruby and Orange.	. 10 . 26 . 87 . 87 . 87 . 54 . 54 . 54 . 54	Irving View , Amproved Taylor T. Patent Bay Storage F. India Ink. Ilo Negative Varnis Igniter, Flash Interior Backgroune Irving-Clay Camere Jointed Adjustable Jenny Lind Table Japanned Trays Japanese Art Tisst Keystone Lantern S.
Gem Cameras, Acme Standard. Cincinnati. Ground Glass without Frames. for Transparencies Scovill's Etched Glassware W. I. A. Patent Solid Corner Kits. Ruby and Orange.	. 10 . 26 . 87 . 87 . 87 . 54 . 54 . 54 . 54	Irving View , A Improved Taylor T. Patent B. Storage F. India Ink
Gem Cameras, Acme Standard. Cincinnati. Ground Glass without Frames. for Transparencies Scovill's Etched Glassware W. I. A. Patent Solid Corner Kits. Ruby and Orange.	. 10 . 26 . 87 . 87 . 87 . 54 . 54 . 54 . 54	Irving View , A Improved Taylor T. Patent B. Storage F. India Ink
Gem Cameras, Acme Standard. Cincinnati. Ground Glass without Frames. for Transparencies Scovill's Etched Glassware W. I. A. Patent Solid Corner Kits. Ruby and Orange.	. 10 . 26 . 87 . 87 . 87 . 54 . 54 . 54 . 54	Irving View , A Improved Taylor T. Patent B. Storage F. India Ink
Gem Cameras, Acme Standard. Cincinnati. Ground Glass without Frames. for Transparencies Scovill's Etched Glassware W. I. A. Patent Solid Corner Kits. Ruby and Orange.	. 10 . 26 . 87 . 87 . 87 . 54 . 54 . 54 . 54	Irving View , Amproved Taylor T. Patent Be Storage F. Storage F. India Ink. Ilo Negative Varnis Igniter, Flash Interior Backgroune Irving-Clay Camere Jointed Adjustable Jenny Lind Table Japanned Trays Japanese Art Tisst Keystone Lantern S , Adhesive , Thin Crys , Yellow Cc , Roxyline
Gem Cameras, Acme Standard. Cincinnati. Ground Glass without Frames. for Transparencies Scovill's Etched Glassware W. I. A. Patent Solid Corner Kits. Ruby and Orange.	. 10 . 26 . 87 . 87 . 87 . 54 . 54 . 54 . 54	Irving View , A Improved Taylor T. Patent B. Storage F. India Ink
Gem Cameras, Acme Standard. Cincinnati. Ground Glass without Frames. for Transparencies Scovill's Etched Glassware W. I. A. Patent Solid Corner Kits. Ruby and Orange.	. 10 . 26 . 87 . 87 . 87 . 54 . 54 . 54 . 54	Irving View " Improved Taylor T Patent Be Storage F India Ink. Ilo Negative Varnis Igniter, Flash Interior Backgroune Irving-Clay Camere Jointed Adjustable Jenny Lind Table Japanned Trays. Japanese Art Tisst Keystone Lantern S Adhesive Thin Crys Yellow Ce Roxyline Kits, Solid Glass Ce Roxyline Kits, Solid Glass Ce Roxyline
Gem Cameras, Acme Standard. Cincinnati. Ground Glass without Frames. for Transparencies Scovill's Etched Glassware W. I. A. Patent Solid Corner Kits. Ruby and Orange.	. 10 . 26 . 87 . 87 . 87 . 54 . 54 . 54 . 54	Irving View , A Improved Taylor T. Patent B. Storage F. India Ink
Gem Cameras, Acme Standard. Cincinnati. Ground Glass without Frames. for Transparencies Scovill's Etched Glassware W. I. A. Patent Solid Corner Kits. Ruby and Orange.	. 10 . 26 . 87 . 87 . 87 . 54 . 54 . 54 . 54	Irving View " Improved Taylor T Patent Be Storage F India Ink. Ilo Negative Varnis Igniter, Flash Interior Backgroune Irving-Clay Camere Jointed Adjustable Jenny Lind Table Japanned Trays. Japanese Art Tisst Keystone Lantern S Adhesive Thin Crys Yellow Ce Roxyline Kits, Solid Glass Ce Roxyline Kits, Solid Glass Ce Roxyline
Gem Cameras, Acme Standard. Cincinnati. Ground Glass without Frames. for Transparencies Scovill's Etched Glassware W. I. A. Patent Solid Corner Kits. Ruby and Orange.	. 10 . 26 . 87 . 87 . 87 . 54 . 54 . 54 . 54	Irving View , A Improved Taylor T. Patent B. Storage F. India Ink
Gem Cameras, Acme Standard. Cincinnati. Ground Glass without Frames. for Transparencies Scovill's Etched Glassware W. I. A. Patent Solid Corner Kits. Ruby and Orange.	. 10 . 26 . 87 . 87 . 87 . 54 . 54 . 54 . 54	Irving View , A Improved Taylor T. Patent B. Storage F. India Ink
Gem Cameras, Acme Standard. Cincinnati. Ground Glass without Frames. for Transparencies Scovill's Etched Glassware W. I. A. Patent Solid Corner Kits. Ruby and Orange.	. 10 . 26 . 87 . 87 . 87 . 54 . 54 . 54 . 54	Irving View , A Improved Taylor T. Patent Be , Storage F India Ink
Gem Cameras, Acme Standard. Cincinnati. Ground Glass without Frames. for Transparencies Scovill's Etched Glassware W. I. A. Patent Solid Corner Kits. Ruby and Orange.	. 10 . 26 . 87 . 87 . 87 . 54 . 54 . 54 . 54	Irving View , A Improved Taylor T. Patent B. Storage F. India Ink
Gem Cameras, Acme Standard. Cincinnati. Ground Glass without Frames. for Transparencies Scovill's Etched Glassware W. I. A. Patent Solid Corner Kits. Ruby and Orange.	. 10 . 26 . 87 . 87 . 87 . 54 . 54 . 54 . 54	Irving View , A Improved Taylor T. Patent Be , Storage F India Ink
Gem Cameras, Acme Standard. Cincinnati. Ground Glass without Frames. for Transparencies Scovill's Etched Glassware W. I. A. Patent Solid Corner Kits. Ruby and Orange.	. 10 . 26 . 87 . 87 . 87 . 54 . 54 . 54 . 54	Irving View , A Improved Taylor T. Patent B. Storage F. India Ink
Gem Cameras, Acme Standard. Cincinnati. Ground Glass without Frames. for Transparencies Scovill's Etched Glassware W. I. A. Patent Solid Corner Kits. Ruby and Orange.	. 10 . 26 . 87 . 87 . 87 . 54 . 54 . 54 . 54	Irving View , A Improved Taylor T. Patent Be , Storage F India Ink
Gem Cameras, Acme Standard. Cincinnati. Ground Glass without Frames. for Transparencies Scovill's Etched Glassware W. I. A. Patent Solid Corner Kits. Ruby and Orange.	. 10 . 26 . 87 . 87 . 87 . 54 . 54 . 54 . 54	Irving View , A Improved Taylor T. Patent B. Storage F. India Ink
Gem Cameras, Acme Standard. Cincinnati. Ground Glass without Frames. for Transparencies Scovill's Etched Glassware W. I. A. Patent Solid Corner Kits. Ruby and Orange.	. 10 . 26 . 87 . 87 . 87 . 54 . 54 . 54 . 54	Irving View , A Improved Taylor T. Patent B. Storage F. India Ink
Gem Cameras, Acme Standard. Cincinnati. Ground Glass without Frames. for Transparencies Scovill's Etched Glassware W. I. A. Patent Solid Corner Kits. Ruby and Orange.	. 10 . 26 . 87 . 87 . 87 . 54 . 54 . 54 . 54	Irving View , A Improved Taylor T. Patent B. Storage F. India Ink
	. 10 . 26 . 87 . 87 . 87 . 54 . 54 . 54 . 54	Irving View , A Improved Taylor T. Patent Be , Storage F India Ink

H	n.	
Howard Albums. Holders, Extra Single Light Weight, for Adjusters Hanover Retouchers. Hand Cameras , Henry Clay. Hyatt Stamp Portrait Apparatus. Henry Clay Cameras. , Stereoscopic Cameras. Hydrochinon Holders. , Waterbury , Flammang, Single Dry Plate. Light Weight Double, Daisy Dry Plate , Daisy Dry Plate , Daisy Dry Plate , Daisy Dry Plate , Scovill's Double Film. Bonanza , Solid Glass Corner. Head Sereen, Photographic Head Rest Clips Holder for Baby Hard Rubber Plates. , Fring Baths Head Rests, S. & A. , Hollow Glass Tubes. Hardening Compound. Handy Flasher Hauf's Samidol. Hammer Dry Plates. Hardening Compound. Hauf Balance. Handy Flasher Hauf's Amidol. Hammer Dry Plates. Hardening Compound.	PA	
Holders, Extra Single Light Weight, for Adjusters		5
Hand Cameras	20.	66 21
" Henry Clay		20
Hyatt Stamp Portrait Apparatus	(90
Renry Clay Cameras		20
Hydrochinon		63
Holders		24
Flammang, Single Dry Plate	•••••	24 24
Light Weight Double,		24
Daisy Dry Plate		24 24
Bonanza		25
Solid Glass Corner		25
Head Screen, Photographic		48 50
Holder for Baby		48
Hard Rubber Plates		68
Head Rests S & A		69 50
Clips, Scholten's		50
Hollow Glass Tubes.		55
Handy Balance		64 58
Handy Flasher		83
Hauff's Amidol		61
Hardening Compound.		52 64
		-4
India Rubber Ware		58
Irving Printing Frames.		27 28
Instantané Lens.		35
Imperial Cameras: American Optical Co		44
India Rubber Ware. India Rubber Bellows. Irving Printing Frames. Instantande Lens. Ivy, Artificial Imperial Cameras, American Optical Co Peerless No. 1 No. 2 Irving View American Optical Co. Irving View American Optical Co. Improved Taylor Tripods.		9
No. 2		9
Improved Taylor Tripods		13
Patent Bonanza Plate Holder		25
India Ink		41
Ilo Negative Varnish.		66
Igniter, Flash		83
Irving View - American Optical Co. Improved Taylor Tripods Patent Bonanza Plate Holder. Storage Flash Lamp. India Ink. Ilo Negative Varnish. Igniter, Plash Interior Backgrounds. Irving-Clay Camera.		89
Arting-only Camera		21
J .		
Jointed Adjustable Tripods, Scovill's. Jenny Lind Table Stands. Japanned Trays. Japanese Art Tissues.		23
Japanned Trays		50
Japanese Art Tissues		57 68
K		
Keystone Lantern Slide Mats		88
Thin Crystal Cover Glass		88
* Yellow Color Screens		88
Roxyline Enamel.		88
Rabbet and Light Weight		26
Kuhn's Paper Stretcher		68
Keystone Lantern Slide Mats Adhesive Binding Strips for Slides. Thin Crystal Cover Glass. Yellow Color Screens. Roxyline Enamel. Kits, Solid Glass Corners. Rabbet and Light Weight Kuhn's Paper Stretcher. Vignetting Attachment		87
L		
Light Weight Holders, Extra, for Adjusters, and Rabbet Kit Frame Landscape Cameras, Acme. Reversible Camera, American Optical Co Light Weight Double Holders Lever Focusing Attachments. Adjustment Stands Lenses.		5
I and cane Cameras Acms		26
Reversible Camera, American Ontical Co		14
Light Weight Double Holders		24
Lever Focusing Attachments		26
Lenses	30	-40
		40

Index Continued.

PAGE

	30	Materials for Chrome Photography	89
Lenses, Swift & Sons' Paragon. New Portable Long Focus Landscape. W. A. Landscape Triple. Portable Paragon. 13. 32. 3	30	Materials for Chrome Photography. Mat, Boston Magic Vignetter Marine Backgrounds Merck's Pyrogallic Acid Mats, Lantern Slide Metric Weights Matt Surface Paper, Clemon's	89
W. A. Landscape Triple 3	30	Magic Vignetter	89
Portable Paragon 21 32 3	22	Marine Backgrounds	80
Rapid " 31, 32, 33 Wide Angle Paragon 31, 3	20 1	Marok's Pyrogallic Acid	OI
Wide Angle Paragon	3	Mote Lantorn Slida	88
Universal "	53	Matrie Weights	50
Postable Photo Combination Cota	32	Meth Confee Description	27
Portable Photo. Combination Sets	32	Matt Surface Paper, Clemon's	10
	53		
" Extra Rapid Carte-de-Visite 3	33		
" " Quick Acting Cabinet 3	33	N N	
Portrait	33 .		
Waterbury	34	Nouveau Shutter	41
Darlot Gem Scovill Economic. Morrison Wide Angle View Combination Wide Angle. Instantané. Scovill's Portait.	34		27
Seovill Economic	34	* Boxes	27
Morrison Wide Angle View	94	, Storage	27
Combination Wilds And	34	. Waterbury	27
Total and	34	Waching	60
" Instantane	35	Clean Duscell's	60
" Scoviil's Portrait	35	D	69
Peerless Quick Acting Stereoscopic Darlot Wide Angle Rectilinear View	35	" Preservers	69
Darlot Wide Angle Rectilinear View	35 .	" Varnish, 110	69
* Ranid Hemispherical	35	Nelson's Photo Gelatine	86
Gundlach Rapid Rectigraphic	35	Nepera Bromide Paper Directions New Peerless Lantern No. 3. Nest Weights New Peerless Lantern No. 3.	73
Steinheil 36, 37	28	New Peerless Lantern No. 3	53
Bausch & Lomb's Rapid Universal	.8	Nest Weights	59
Alvan C Clark	30	New Peerless Lantern No. 2	53
Coords Double Anasticmet	39	Non-Cockle Poste	76
Stainhail Antiplanatio	40	Non-Cockle Paste	76 86
Stemmen, Antipianatic	30	new Meme water Colors	30
Apianatic	36		
Patent Antiplanatic Portrait	36		
" " Group	36	0	
Gundlach Rapid Rectigraphic. Steinheil. Steinheil. Bausch & Lomb's Rapid Universal. Alvan G. Clark Goerz's Double Anastigmat. Steinheil, Antiplanatic. Aplanatic. Patent Antiplanatic Portrait Patent Antiplanatic Group Improved Aplanatic. Rapid W. A. Extreme Aplanatie Focusing. Prisms. Leigh's Combination Photo Printing Frame Litmus Paper Lighting Storage Flash Lamp Shutter. Lantern, Peerless.	37	Out Ct. Powertown	0.
Rapid W. A.	37	Outfits, Ferrotype	85
Extreme	27	# Elm City	14
Aplanatic Focusing	08	" Compact View	14
Prisms	30	for Viewing	17
Leigh's Combination Photo Printing Frame	30	Elm City Compact View for Viewing Favorite Apparatus	16
Litmus Papar	73		
Lightning Storage Flesh Lomp	70	, C	16
Chutton	84	C. D. D. E. Waterbury.	16
Touton Deadles	41	, E	16
W I A D. L. T. L.	53	Waterbury	17
Lantern, Peerless W. I. A. Ruby Light. Multum in Parvo. Aladdin Dark Room.	53	Flite View	17
Multum in Parvo.	53	Contennial	10
Aladdin Dark Room	53	Camilla Dhata Missassania	19
	27	Doubuit Empire	0.1
Mats.	88	Portrait, Empire	0
Levels, Double	88	ior Ferrotypers	05
Liquid Water Colors	86	for viewing	1/
Inquid water Colors	67	for Printing, Toning, Fixing, and Mounting	04
Liquid Opaque, Weber's		Oil Backgrounds	
Liquid Opaque, Weber's Liquid India Ink	67	0	09
Liquid Opaque, Weber's Liquid India Ink Leaves, Round Corner	67	Oil Stoves	60
Liquid Opaque, Weber's Liquid India Ink Leaves, Round Corner. Lamps, Aladdin Dark Room	67 78	, Waterbury. , Elite View. , Centennial. , Scovill's Photo-Microscopic. , Portrait, Empire. , for Ferrotypers. , for Viewing. , for Printing, Toning, Fixing, and Mounting. Oil Backgrounds Oil Stoves. Ormsbee's Photo Washer.	
Liquid Opaque, Weber's Liquid India Ink Leaves, Round Corner Lamps, Aladdin Dark Room	67 78 53	Orange Glass	60 88 54
	53 84	Orange Glass	54
	53 84	Orange Glass	54 87 66
	53 84	Orange Glass	54
Standard Flash	53 84 84 88 88	Orange Glass	54 87 66 67
Standard Flash 41, Storage Alcohol Standard Triple Little Gignt	53 84	Orange Glass. Fabric. Opaque, Gibon's.	54 87 66
Standard Flash 41, Storage Alcohol Standard Triple Little Gignt	53 84 84 88 84 84 78	Orange Glass	54 87 66 67
Standard Flash 41, Storage Alcohol Standard Triple Little Gignt	53 84 84 88 88 84 84 78 89	Orange Glass. Fabric. Opaque, Gihon's. Liquid, Weber's. Osborne's Statue Pedestal	54 87 66 67
, Standard Flash	53 84 84 88 84 78 89 56	Orange Glass. Fabric Opaque, Gibon's. Liquid, Weber's. Osborne's Statue Pedestal	54 87 66 67 74
Standard Flash 41, Storage Alcohol Standard Triple Little Gignt	53 84 84 88 84 78 89 56	Orange Glass. Fabric Opaque, Gibon's. Liquid, Weber's. Osborne's Statue Pedestal	54 87 66 67 74
, Standard Flash	53 84 84 88 84 78 89 56	Orange Glass. Fabric Opaque, Gibon's. Liquid, Weber's. Osborne's Statue Pedestal	54 87 66 67 74
, Standard Flash	53 84 84 88 84 84 78 89 56	Orange Glass. Pabric Opaque, Gihon's. - Liquid, Weber's. Osborne's Statue Pedestal P Photographic Lenses. Apparatus. Horal Status. Horal Status.	54 87 66 67 74
, Standard Flash	53 84 84 88 84 84 78 89 56	Orange Glass. Pabric Opaque, Gihon's. - Liquid, Weber's. Osborne's Statue Pedestal P Photographic Lenses. Apparatus. Horal Status. Horal Status.	54 87 66 67 74
, Standard Flash	53 84 84 88 84 84 78 89 56	Orange Glass. Pabric Opaque, Gihon's. - Liquid, Weber's. Osborne's Statue Pedestal P Photographic Lenses. Apparatus. Horal Status. Horal Status.	54 87 66 67 74
, Standard Flash	53 84 84 88 84 84 78 89 56	Orange Glass. Pabric Opaque, Gihon's. - Liquid, Weber's. Osborne's Statue Pedestal P Photographic Lenses. Apparatus. Horal Status. Horal Status.	54 87 66 67 74
, Standard Flash	53 84 88 88 88 84 78 89 56	Orange Glass. Fabric. Opaque, Gihon's. Opaque, Gihon's. Liquid, Weber's. Osborne's Statue Pedestal. P Photographic Lenses. 30- * Apparatus. Head Screen. * Chair Rest. Times. * Series, S. & A.	54 87 66 67 74
, Standard Flash	53 84 88 88 88 84 78 89 56	Orange Glass. Fabric Opaque, Gihon's. Opaque, Gihon's. Description of the property of the pr	54 87 66 67 74
, Standard Flash	53 84 88 88 88 84 78 89 56	Orange Glass. Fabric Opaque, Gihon's. Opaque, Gihon's. Description of the property of the pr	54 87 66 67 74
, Standard Flash	53 84 88 88 88 84 78 89 56	Orange Glass. Fabric Opaque, Gihon's. Opaque, Gihon's. Description of the property of the pr	54 87 66 67 74
, Standard Flash	53 84 88 88 88 84 78 89 56	Orange Glass. Pabric. Opaque, Gibon's. Liquid, Weber's. Osborne's Statue Pedestal P Photographic Lenses. 30-Apparatus. 4 Head Screen. Chair Rest. 5 Chair Rest. Times. Series, S. & A. Plates, Three Shields. Carbutt's. 4 Hammer. Hammer. 5 Hard Rubber. Hammer.	54 87 66 67 74
, Standard Flash	53 84 88 88 88 84 78 89 56	Orange Glass. Pabric. Opaque, Gibon's. Liquid, Weber's. Osborne's Statue Pedestal P Photographic Lenses. 30-Apparatus. 4 Head Screen. Chair Rest. 5 Chair Rest. Times. Series, S. & A. Plates, Three Shields. Carbutt's. 4 Hammer. Hammer. 5 Hard Rubber. Hammer.	5487 666 677 74 25 49 34 51 52 68 84
, Standard Flash	53 84 88 88 88 84 78 89 56	Orange Glass. Pabric. Opaque, Gibon's. Liquid, Weber's. Osborne's Statue Pedestal P Photographic Lenses. 30-Apparatus. 4 Head Screen. Chair Rest. 5 Chair Rest. Times. Series, S. & A. Plates, Three Shields. Carbutt's. 4 Hammer. Hammer. 5 Hard Rubber. Hammer.	54 87 66 67 74
, Standard Flash	53 84 88 88 88 84 78 89 56	Orange Glass. Fabric. Opaque, Gihon's. Liquid, Weber's. Osborne's Statue Pedestal. P Photographic Lenses. Apparatus. Head Screen. Chair Rest. Times. Series, S. & A. Plates, Three Shields. Carbutt's. Hammer. Hard Rubber. Ferrotypers. Brass. Lifter.	5487 666 6774 49 49 49 51 52 52 68 84
, Standard Flash	53 84 88 88 88 84 78 89 56	Orange Glass. Fabric. Opaque, Gihon's. Liquid, Weber's. Osborne's Statue Pedestal. P Photographic Lenses. Apparatus. Head Screen. Chair Rest. Times. Series, S. & A. Plates, Three Shields. Carbutt's. Hammer. Hard Rubber. Ferrotypers. Brass. Lifter.	5487 666 677 74 25 49 34 51 52 68 84
, Standard Flash	53 84 88 88 88 84 78 89 56	Orange Glass. Fabric. Opaque, Gihon's. Liquid, Weber's. Osborne's Statue Pedestal. P Photographic Lenses. Apparatus. Head Screen. Chair Rest. Times. Series, S. & A. Plates, Three Shields. Carbutt's. Hammer. Hard Rubber. Ferrotypers. Brass. Lifter.	5487 666 6774 49 49 49 51 52 52 68 84
, Standard Flash	53 84 88 88 88 84 78 89 56	Orange Glass. Fabric. Opaque, Gihon's. Liquid, Weber's. Osborne's Statue Pedestal. P Photographic Lenses. Apparatus. Head Screen. Chair Rest. Times. Series, S. & A. Plates, Three Shields. Carbutt's. Hammer. Hard Rubber. Ferrotypers. Brass. Lifter.	5487 666 6774 49 49 49 51 52 52 68 84
, Standard Flash	53 84 88 88 88 84 78 89 56	Orange Glass. Fabric. Opaque, Gihon's. Liquid, Weber's. Osborne's Statue Pedestal. P Photographic Lenses. Apparatus. Head Screen. Chair Rest. Times. Series, S. & A. Plates, Three Shields. Carbutt's. Hammer. Hard Rubber. Ferrotypers. Brass. Lifter.	5487 666 6774 49 49 49 51 52 52 68 84
, Standard Finsh	53 84 88 88 88 88 88 88 88 88 88	Orange Glass. Fabric. Opaque, Gihon's. Liquid, Weber's. Osborne's Statue Pedestal. P P Photographic Lenses. 30- 4 Apparatus. 4 Head Screen. 5 Chair Rest. 7 Imes. 6 Series, S. & A. Plates, Three Shields. 7 Carbutt's. 4 Hammer. 8 Hard Rubber. 5 Ferrotypers. 8 Brass. 4 Lifter. 8 Hard Rubber. 5 Ferrotype. Paper, Abumen. 7 Pain Saxe.	5487 666 6774 49 49 49 51 52 52 68 84
, Standard Flash	534 5884 5884 5888 5886 5675 5813 5	Orange Glass. Fabric. Opaque, Gihon's. Liquid, Weber's. Osborne's Statue Pedestal. P P Photographic Lenses. 30- 4 Apparatus. 4 Head Screen. 5 Chair Rest. 7 Imes. 6 Series, S. & A. Plates, Three Shields. 7 Carbutt's. 4 Hammer. 8 Hard Rubber. 5 Ferrotypers. 8 Brass. 4 Lifter. 8 Hard Rubber. 5 Ferrotype. Paper, Abumen. 7 Pain Saxe.	5487 666 6774 49 49 49 51 52 52 68 84
, Standard Flash	534 5884 5884 5888 5886 5675 5813 5	Orange Glass. Fabric. Opaque, Gihon's. Liquid, Weber's. Osborne's Statue Pedestal. P P Photographic Lenses. 30- 4 Apparatus. 4 Head Screen. 5 Chair Rest. 7 Imes. 6 Series, S. & A. Plates, Three Shields. 7 Carbutt's. 4 Hammer. 8 Hard Rubber. 5 Ferrotypers. 8 Brass. 4 Lifter. 8 Hard Rubber. 5 Ferrotype. Paper, Abumen. 7 Pain Saxe.	5487 666 6774 49 49 49 51 52 52 68 84
, Standard Flash	534 5884 5884 5888 5886 5675 5813 5	Orange Glass. Fabric. Opaque, Gihon's. Liquid, Weber's. Osborne's Statue Pedestal. P P Photographic Lenses. 30- 4 Apparatus. 4 Head Screen. 5 Chair Rest. 7 Imes. 6 Series, S. & A. Plates, Three Shields. 7 Carbutt's. 4 Hammer. 8 Hard Rubber. 5 Ferrotypers. 8 Brass. 4 Lifter. 8 Hard Rubber. 5 Ferrotype. Paper, Abumen. 7 Pain Saxe.	5487 666 6774 49 49 49 51 52 52 68 84
, Standard Flash	534 5884 5884 5888 5886 5675 5813 5	Orange Glass. Fabric. Opaque, Gibon's. Liquid, Weber's. Osborne's Statue Pedestal. P Photographic Lenses. Apparatus. Head Screen. Chair Rest. Times. Series, S. & A. Plates, Three Shields. Carbutt's. Hammer. Hard Rubber. Ferrotypers. Brass. Lifter. Hard Rubber. Ferrotype. Paper, Albumen. Plain Saxe. Clemon's Matt Surface. English Tissue. Gummed.	5487 666 6774 49 49 49 51 52 52 68 84
, Standard Flash, 41, Storage , Alcohol Standard Triple , Little Giant. Leaves for Albums. Landscape Backgrounds. Lipped Pans, Agate Iron. Measures, Agate Iron. Multiplying Cameras, American Optical Co. Manifold American Optical Co. Micrographie Walmsley's. Mercer Microscopic Outfit, Scovill. Equipment, Scovill. Morrison's Wide Angle View Lenses. Combination Wide Angle Lenses Magic Finders, Scovill's. Mats, East India Grass. Linen Grass. Multum in Paryo Lantern Mortars and Pestles Medallion Masks. Mask Paper. Mailing Envelope. Magnesium Flash Light Photographs. Magnesium Flash Light Photographs. Magnesium Flash Light Photographs. Magnesium Flash Light Photographs.	534 88 88 88 88 88 88 88 88 88 88 88 88 88	Orange Glass. Fabric. Opaque, Gibon's. Liquid, Weber's. Osborne's Statue Pedestal. P Photographic Lenses. Apparatus. Head Screen. Chair Rest. Times. Series, S. & A. Plates, Three Shields. Carbutt's. Hammer. Hard Rubber. Ferrotypers. Brass. Lifter. Hard Rubber. Ferrotype. Paper, Albumen. Plain Saxe. Clemon's Matt Surface. English Tissue. Gummed.	5487 666 6774 49 49 49 51 52 52 68 84
, Standard Flash, 41, Storage , Alcohol Standard Triple , Little Giant. Leaves for Albums. Landscape Backgrounds. Lipped Pans, Agate Iron. Measures, Agate Iron. Multiplying Cameras, American Optical Co. Manifold American Optical Co. Micrographie Walmsley's. Mercer Microscopic Outfit, Scovill. Equipment, Scovill. Morrison's Wide Angle View Lenses. Combination Wide Angle Lenses Magic Finders, Scovill's. Mats, East India Grass. Linen Grass. Multum in Paryo Lantern Mortars and Pestles Medallion Masks. Mask Paper. Mailing Envelope. Magnesium Flash Light Photographs. Magnesium Flash Light Photographs. Magnesium Flash Light Photographs. Magnesium Flash Light Photographs.	534 88 88 88 88 88 88 88 88 88 88 88 88 88	Orange Glass. Fabric. Opaque, Gibon's. Liquid, Weber's. Osborne's Statue Pedestal. P Photographic Lenses. Apparatus. Head Screen. Chair Rest. Times. Series, S. & A. Plates, Three Shields. Carbutt's. Hammer. Hard Rubber. Ferrotypers. Brass. Lifter. Hard Rubber. Ferrotype. Paper, Albumen. Plain Saxe. Clemon's Matt Surface. English Tissue. Gummed.	5487 666 6774 49 49 49 51 52 52 68 84
, Standard Flash	534 88 88 88 88 88 88 88 88 88 88 88 88 88	Orange Glass. Fabric. Opaque, Gihon's. Liquid, Weber's. Osborne's Statue Pedestal. P P Photographic Lenses. 30- 4 Apparatus. 4 Head Screen. 5 Chair Rest. 7 Imes. 6 Series, S. & A. Plates, Three Shields. 7 Carbutt's. 4 Hammer. 8 Hard Rubber. 5 Ferrotypers. 8 Brass. 4 Lifter. 8 Hard Rubber. 5 Ferrotype. Paper, Abumen. 7 Pain Saxe.	5487 666 6774 49 49 49 51 52 52 68 84

Index Continued.

1	PAGE		PAG
Paper, Albion Blotting. Empire. Nepera Bromide. Print Roller. Simples. Printing Frames Irving. Adt's Patent. Scovill. Leigh's Combination. Plate Vises Pyrogallic Acid. Posting Chairs. Alaska Supports. Pedestal, Statue.	70	Rodinal Royal Cameras, American Optical Co Revolving Back Cameras, American Optical Co Reversible Back View Cameras, Acme Landscape Camera, American Optical Co Registering Sildes.	6
. Empire	72	Royal Cameras, American Optical Co	
Nepera Bromide	73	Revolving Back Cameras, American Optical Co	1:
Print Roller	74	Reversible Back View Cameras, Acme	1.
Simplex	81	 Landscape Camera, American Optical Co 	1
Printing Frames	. 20	Landscape Camera, American Optical Co. Registering Sildes. Reguistics for Film Photography. Rabbet and Light Weight Kit Frames. Round Corner Leaves Roller, Simplex Print. Print Revolving Trimmers Rack, Negative. Reetilinear View Lenses, Darlot. Rapid Hemispherical View Lenses, Darlot. Refractions.	2
r Irving	28	Register, Studio	8:
Adt's Patent	28	Requisites for Film Photography	2
« Scovill	20	Rabbet and Light Weight Kit Frames	20
Leigh's Combination	70	Round Corner Leaves	75
Plate Vices	13	Poller Simpley Print	8
Dunoscallia Asid	29	Roller, Shiplex Fint	-
Destroit Longon Conville	03	P. 1 in This	1-
Portrait Lenses, Scoviii s	35	Revolving Trimmers	75
Posing Chairs44, 45, 46, 47	, 51	Rack, Negative	2
* Alaska	51	Rectilinear View Lenses, Darlot	35
* Supports	48	Rapid Hemispherical View Lenses, Darlot	35
Pedestal, Statue	74	Rectigraphic Lenses, Gundlach	35
Peerless Lantern No. 3	53	 Universal Lenses, Bausch & Lomb 	38
Pedestal, Statue. Peerless Lantern No. 3. Pans, Agate Iron Lipped. Glass, Secull's W. I. A. Solid Glass.	56	- Shutter	41
Glass, Scovill's	54	Rest. Photographic Chair	49
W. I. A. Solid Glass.	54	S. & A. Head	50
Porcelain Trays	56	Ruby Light Lantern W I A	5
Porcelain Trays. Evaporating Dishes Pile's Silver Test Tube Porcelain Ware.	56	Glass	5.
Pile's Silver Test Tube	50	. Papar	70
Porcelain Ware	55	Pode Clase Stirring	-
Deint Teinmar	56	Rapid Hemispherical View Lenses, Darlot. Rectigraphic Lenses, Gundlach. Universal Lenses, Bausch & Lomb Shutter. Rest, Photographic Chair S. & A. Head. Ruby Light Lantern, W. I. A. Glass. Paper. Rods, Glass Stirring. Rubber Ware. Gloves.	5
Print Trimmer.	75 88	Pands	50
Director Promph	88	Classical Colored Colo	7
Properties, Prench	88	Gloves	58
Papier Mache Trays	57	Fixing Bath	60
Pipettes, French Papier Maché Trays. Protecting Cases Photographers' Handy Balance.	87	Fixing Bath. Finger Tips. Trays Plates, Hard.	58
Photographers' Handy Balance	58	· Trays	58
Scales	59	Plates, Hard	68
Prepared Solutions, Powders, etc	61	Bellows	27
Park Backgrounds	89	Bellows. Russell's Negative Clasp Retouching Frames.	- 60
Paper Filtering.	61	Retouching Frames	20
Paste, Parlor.	76	Glasses	66
Paste, Parlor. Non-Cockle. Pyrogallic Acid, Schering's. Pelletone Tablets.	76	# Pencils	66
Pyrogallic Acid Schering's	63	Retouchers, Hanover. Peck's Pneumatic.	66
Pelletone Tablets	63	Pack's Proumatio	67
Paneile Ratouching	63	Roxyline Enamel	88
Pencils, Retouching Peck's Pneumatic Ketoucher Papers, Waymouth's Vignetting Paper Stretcher, Kuhn's	-66	Roxyline Enamel	00
Description Western William Miles William Miles	67	Rotary Burnishers. Red Sable Brushes.	75
Papers, waymouth's vignetting	67	Red Sable Brusnes	87
Paper Stretcher, Kuhn's	68	Ruby Fabric. Reservoir, Glass Bottom Acme, Trays.	87
Preservers, Negative	69	Reservoir, Glass Bottom Acme, Trays	57
Preserving Tubes	69		
Pyrogallic Acid, Merck's	01		
Pyrogallic Acid, Merck's Portrait Cameras, American Optical Co	91	1	
Pyrogallic Acid, Merck's. Portrait Cameras, American Optical Co Peerless. Peerless.	91	S	
Pyrogallic Acid, Merck's. Portrait Cameras, American Optical Co Peerless. Acme Standard.	91 5 9		
Pyrogallic Acid, Merck's. Portrait Cameras, American Optical Co. , Peerless. , Acme Standard. , Outfit. Scovill's	91 5 9		64
Pyrogallic Acid, Merck's. Portrait Cameras, American Optical Co Peerless. Acme Standard. Outfit, Scovill's Peerless Imperial Camera, No. 1.	91 5 9 21		64 63
Paper Stretcher, Kuhn's. Preservers, Negative. Preserving Tubes. Pyrogalile Acid, Merck's. Portrait Cameras, American Optical Co Peteless. Acme Standard. Outfit, Scovill's. Peerless Imperial Camera, No. 1.	91 5 9 21	S. P. C. Outfit for Printing, Toning, Fixing and Mounting S. P. C. Developer	64 63 77
		S. P. C. Outfit for Printing, Toning, Fixing and Mounting S. P. C. Developer	64 63 77 54
		S. P. C. Outfit for Printing, Toning, Fixing and Mounting S. P. C. Developer	64 63 77 54 60
		S. P. C. Outfit for Printing, Toning, Fixing and Mounting S. P. C. Developer Sable Brushes, Red. Scovill's Glass Pans. Scovill's Efficient Plate Lifter Pure Chemicals and Accessories	64
		S. P. C. Outfit for Printing, Toning, Fixing and Mounting S. P. C. Developer Sable Brushes, Red Scovill's Glass Pans. Scovill's Efficient Plate Lifter Pure Chemicals and Accessories Etched Ground Glass	54 60 64 85
		S. P. C. Outfit for Printing, Toning, Fixing and Mounting S. P. C. Developer Sable Brushes, Red Scovill's Glass Pans. Scovill's Efficient Plate Lifter Pure Chemicals and Accessories Etched Ground Glass	54 60 64 85
		S. P. C. Outfit for Printing, Toning, Fixing and Mounting S. P. C. Developer Sable Brushes, Red Scovill's Glass Pans. Scovill's Efficient Plate Lifter Pure Chemicals and Accessories Etched Ground Glass	54 60 64 85
		S. P. C. Outfit for Printing, Toning, Fixing and Mounting. S. P. C. Developer Sable Brushes, Red. Scovill's Glass Pans. Scovill's Efficient Plate Lifter Pure Chemicals and Accessories Etched Ground Glass. Extension Tripod. Adjustable Jointed Tripod	54 64 87 22 23
		S. P. C. Outfit for Printing, Toning, Fixing and Mounting. S. P. C. Developer Sable Brushes, Red. Scovill's Glass Pans. Scovill's Efficient Plate Lifter Pure Chemicals and Accessories Etched Ground Glass Extension Tripod. Adjustable Devite Fire Holder Devite Fire Holder	54 66 64 87 22 23 23
		S. P. C. Outfit for Printing, Toning, Fixing and Mounting. S. P. C. Developer Sable Brushes, Red. Scovill's Glass Pans. Scovill's Efficient Plate Lifter Pure Chemicals and Accessories Etched Ground Glass Extension Tripod. Adjustable Devite Fire Holder Devite Fire Holder	54 66 64 87 22 23 23
		S. P. C. Outfit for Printing, Toning, Fixing and Mounting. S. P. C. Developer Sable Brushes, Red. Scovill's Glass Pans. Scovill's Efficient Plate Lifter Pure Chemicals and Accessories Etched Ground Glass Extension Tripod. Adjustable Devite Fire Holder Devite Fire Holder	54 66 64 87 22 23 23
Prisms, Steinheil. Print Trimmer, Acme Printing Outfit, S. P. C. Peerless Polding Tripod. Plate Holders, Bonanza Improved. Waterbury. Flammang Single Light Weight Double. Daisy. Solid Glass Corner.	38 75 64 22 25 24 24 24 24 24 25	S. P. C. Outfit for Printing, Toning, Fixing and Mounting. S. P. C. Developer Sable Brushes, Red. Scovill's Glass Pans. Scovill's Efficient Plate Lifter Pure Chemicals and Accessories Etched Ground Glass Extension Tripod. Adjustable Devite Fire Holder Devite Fire Holder	54 66 64 87 22 23 23
Prisms, Steinheil. Print Trimmer, Acme Printing Outfit, S. P. C. Peerless Folding Tripod. Plate Holders, Bonanza Improved. Waterbury Flammang Single Light Weight Double. Daisy. Solid Glass Corner. Parts of Camera Stands and Sundries.	38 75 64 22 25 24 24 24 24 25 27	S. P. C. Outfit for Printing, Toning, Fixing and Mounting. S. P. C. Developer . Sable Brushes, Red . Scovill's Glass Pans . Scovill's Efficient Plate Lifter . Pure Chemicals and Accessories . Etched Ground Glass . Extension Tripod Adjustable . Jointed Tripod Double Film Holder . Magic Finders Printing Frames . Universal Safety Shutter.	54 66 64 87 22 23 24 43 29 43
Prisms, Steinheil. Print Trimmer, Aeme Printting Outfit, S. P. C. Peerless Folding Tripod. Plate Holders, Bonanza Improved. Waterbury Flammang Single Light Weight Double. Daisy. Solid Glass Corner. Parts of Camera Stands and Sundries.	38 75 64 22 25 24 24 24 24 25 27	S. P. C. Outfit for Printing, Toning, Fixing and Mounting S. P. C. Developer. Sable Brushes, Red. Scovill's Glass Pans. Scovill's Efficient Plate Lifter Pure Chemicals and Accessories. Etched Ground Glass. Extension Tripod. Adjustable Jointed Tripod. Double Film Holder. Magic Finders. Printing Frames. Universal Safety Shutter. Economic Lenses.	54 66 64 87 22 23 24 43 29 43
Prisms, Steinheil. Print Trimmer, Aeme Printting Outfit, S. P. C. Peerless Folding Tripod. Plate Holders, Bonanza Improved. Waterbury Flammang Single Light Weight Double. Daisy. Solid Glass Corner. Parts of Camera Stands and Sundries.	38 75 64 22 25 24 24 24 24 25 27	S. P. C. Outfit for Printing, Toning, Fixing and Mounting S. P. C. Developer. Sable Brushes, Red. Scovill's Glass Pans. Scovill's Efficient Plate Lifter Pure Chemicals and Accessories. Etched Ground Glass. Extension Tripod. Adjustable Jointed Tripod. Double Film Holder. Magic Finders. Printing Frames. Universal Safety Shutter. Economic Lenses.	54 66 64 87 22 23 24 43 29 43
Prisms, Steinheil. Print Trimmer, Aeme Printting Outfit, S. P. C. Peerless Folding Tripod. Plate Holders, Bonanza Improved. Waterbury Flammang Single Light Weight Double. Daisy. Solid Glass Corner. Parts of Camera Stands and Sundries.	38 75 64 22 25 24 24 24 24 25 27	S. P. C. Outfit for Printing, Toning, Fixing and Mounting. S. P. C. Developer Sable Brushes, Red Scovill's Glass Pans Scovill's Efficient Plate Lifter Pure Chemicals and Accessories Etched Ground Glass Extension Tripod. Adjustable Jointed Tripod. Double Film Holder Magic Finders. Printing Frames Universal Safety Shutter Economic Lenses. Portrait Lens Peerless Quick Acting Stereoscopic Lenses.	54 66 64 87 22 23 24 43 29 43 34 35
Prisms, Steinheil. Print Trimmer, Aeme Printting Outfit, S. P. C. Peerless Folding Tripod. Plate Holders, Bonanza Improved. Waterbury Flammang Single Light Weight Double. Daisy. Solid Glass Corner. Parts of Camera Stands and Sundries.	38 75 64 22 25 24 24 24 24 25 27	S. P. C. Outfit for Printing, Toning, Fixing and Mounting. S. P. C. Developer Sable Brushes, Red Scovill's Glass Pans Scovill's Efficient Plate Lifter Pure Chemicals and Accessories Etched Ground Glass Extension Tripod. Adjustable Jointed Tripod. Double Film Holder Magic Finders. Printing Frames Universal Safety Shutter Economic Lenses. Portrait Lens Peerless Quick Acting Stereoscopic Lenses.	54 66 64 87 22 23 24 43 29 43 34 35
Prisms, Steinheil. Print Trimmer, Aeme Printting Outfit, S. P. C. Peerless Folding Tripod. Plate Holders, Bonanza Improved. Waterbury Flammang Single Light Weight Double. Daisy. Solid Glass Corner. Parts of Camera Stands and Sundries.	38 75 64 22 25 24 24 24 24 25 27	S. P. C. Outfit for Printing, Toning, Fixing and Mounting. S. P. C. Developer Sable Brushes, Red Scovill's Glass Pans Scovill's Efficient Plate Lifter Pure Chemicals and Accessories Etched Ground Glass Extension Tripod. Adjustable Jointed Tripod. Double Film Holder Magic Finders. Printing Frames Universal Safety Shutter Economic Lenses. Portrait Lens Peerless Quick Acting Stereoscopic Lenses.	54 66 64 87 22 23 24 43 29 43 34 35
Prisms, Steinheil. Print Trimmer, Aeme Printting Outfit, S. P. C. Peerless Folding Tripod. Plate Holders, Bonanza Improved. Waterbury Flammang Single Light Weight Double. Daisy. Solid Glass Corner. Parts of Camera Stands and Sundries.	38 75 64 22 25 24 24 24 24 25 27	S. P. C. Outfit for Printing, Toning, Fixing and Mounting. S. P. C. Developer Sable Brushes, Red Scovill's Glass Pans Scovill's Efficient Plate Lifter Pure Chemicals and Accessories Etched Ground Glass Extension Tripod. Adjustable Jointed Tripod. Double Film Holder Magic Finders. Printing Frames Universal Safety Shutter Economic Lenses. Portrait Lens Peerless Quick Acting Stereoscopic Lenses.	54 66 64 87 22 23 24 43 29 43 34 35
Prisms, Steinheil. Print Trimmer, Aeme Printing Outfit, S. P. C. Peerless Polding Tripod. Plate Holders, Bonanza Improved. Waterbury. Flammang Single Light Weight Double. Dously. Solid Glass Corner. Parts of Camera Stands and Sundries. Print Washer, California Automatic. Panoramic Cameras, Seovill's. Photo-Micrographic Camera, Walmsley's. Microscopic Outfit, Seovill's. Pocket Scales.	38 75 64 22 25 24 24 24 25 27 73 18 19 18	S. P. C. Outfit for Printing, Toning, Fixing and Mounting. S. P. C. Developer Sable Brushes, Red Scovill's Glass Pans Scovill's Efficient Plate Lifter Pure Chemicals and Accessories Etched Ground Glass Extension Tripod. Adjustable Jointed Tripod. Double Film Holder Magic Finders. Printing Frames Universal Safety Shutter Economic Lenses. Portrait Lens Peerless Quick Acting Stereoscopic Lenses.	54 66 64 87 22 23 24 43 29 43 34 35
Prisms, Steinheil. Print Trimmer, Aeme Printing Outfit, S. P. C. Peerless Polding Tripod. Plate Holders, Bonanza Improved. Waterbury. Flammang Single Light Weight Double. Dously. Solid Glass Corner. Parts of Camera Stands and Sundries. Print Washer, California Automatic. Panoramic Cameras, Seovill's. Photo-Micrographic Camera, Walmsley's. Microscopic Outfit, Seovill's. Pocket Scales.	38 75 64 22 25 24 24 24 25 27 73 18 19 18	S. P. C. Outfit for Printing, Toning, Fixing and Mounting. S. P. C. Developer Sable Brushes, Red Scovill's Glass Pans Scovill's Efficient Plate Lifter Pure Chemicals and Accessories Etched Ground Glass Extension Tripod. Adjustable Jointed Tripod. Double Film Holder Magic Finders. Printing Frames Universal Safety Shutter Economic Lenses. Portrait Lens Peerless Quick Acting Stereoscopic Lenses.	54 66 64 87 22 23 24 43 29 43 34 35
Prisms, Steinheil. Print Trimmer, Aeme Printing Outfit, S. P. C. Peerless Polding Tripod. Plate Holders, Bonanza Improved. Waterbury. Flammang Single Light Weight Double. Dously. Solid Glass Corner. Parts of Camera Stands and Sundries. Print Washer, California Automatic. Panoramic Cameras, Seovill's. Photo-Micrographic Camera, Walmsley's. Microscopic Outfit, Seovill's. Pocket Scales.	38 75 64 22 25 24 24 24 25 27 73 18 19 18	S. P. C. Outfit for Printing, Toning, Fixing and Mounting. S. P. C. Developer Sable Brushes, Red Scovill's Glass Pans Scovill's Efficient Plate Lifter Pure Chemicals and Accessories Etched Ground Glass Extension Tripod. Adjustable Jointed Tripod. Double Film Holder Magic Finders. Printing Frames Universal Safety Shutter Economic Lenses. Portrait Lens Peerless Quick Acting Stereoscopic Lenses.	54 66 64 87 22 23 24 43 29 43 34 35
Prisms, Steinheil. Print Trimmer, Aeme. Pate Holders, Bonanza Improved. Waterbury Flammang Single Light Weight Double. Dalsy. Parts of Camera Stands and Sundries. Print Washer, California Automatic. Panoramic Cameras, Evosvil's. Photo-Micrographic Camera, Walmsley's. Microscopic Outfit, Scovil's. Equipment Pocket Scales. Plain Ground Glass. Photo Washer, Ormsbee's. Gelatine, Nelson's.	38 75 64 22 25 24 24 24 25 27 73 18 19 18	S. P. C. Outfit for Printing, Toning, Fixing and Mounting. S. P. C. Developer Sable Brushes, Red Scovill's Glass Pans Scovill's Efficient Plate Lifter Pure Chemicals and Accessories Etched Ground Glass Extension Tripod. Adjustable Jointed Tripod. Double Film Holder Magic Finders. Printing Frames Universal Safety Shutter Economic Lenses. Portrait Lens Peerless Quick Acting Stereoscopic Lenses.	54 66 64 87 22 23 24 43 29 43 34 35
Prisms, Steinheil. Print Trimmer, Aeme. Pate Holders, Bonanza Improved. Waterbury Flammang Single Light Weight Double. Dalsy. Parts of Camera Stands and Sundries. Print Washer, California Automatic. Panoramic Cameras, Evosvil's. Photo-Micrographic Camera, Walmsley's. Microscopic Outfit, Scovil's. Equipment Pocket Scales. Plain Ground Glass. Photo Washer, Ormsbee's. Gelatine, Nelson's.	38 75 64 22 25 24 24 24 25 73 15 18 18 18 59 87 88 86	S. P. C. Outfit for Printing, Toning, Fixing and Mounting. S. P. C. Developer Sable Brushes, Red. Scovill's Glass Pans Scovill's Efficient Plate Lifter Pure Chemicals and Accessories Etched Ground Glass. Extension Tripod. Adjustable Jointed Tripod. Double Film Holder Magic Finders. Printing Frames. Printing Frames. Universal Safety Shutter Economic Lenses. Portrait Lens Peerless Quick Acting Stereoscopic Lenses. Time and Instantaneous Shutter Squeeges. Magnesium Cartridges Magnesium Cartridges Portrait Units, Empire Perrotype Printing Frames.	54 66 64 87 22 23 24 43 29 43 35 35 43 21 83 83
Prisms, Steinheil. Print Trimmer, Acme Printing Outfit, S. P. C. Peerless Folding Tripod Plate Holders, Bonanza Improved. Waterbury Flammang Single Light Weight Double. Daisy. Solid Glass Corner. Parts of Camera Stands and Sundries. Print Washer, California Automatic. Panoramic Cameras, Evovil's. Photo-Mierographic Camera, Walmsley's. Microscopic Outfit, Scovil's. Pecket Scales. Plain Ground Glass. Photo Washer, Ormsbee's Gelattine, Nelson's Paup, Syphon.	38 75 64 22 25 24 24 24 25 73 15 18 18 18 59 87 88 88 88	S. P. C. Outfit for Printing, Toning, Fixing and Mounting. S. P. C. Developer Sable Brushes, Red. Scovill's Glass Pans Scovill's Efficient Plate Lifter Pure Chemicals and Accessories Etched Ground Glass. Extension Tripod. Adjustable Jointed Tripod. Double Film Holder Magic Finders. Printing Frames. Printing Frames. Universal Safety Shutter Economic Lenses. Portrait Lens Peerless Quick Acting Stereoscopic Lenses. Time and Instantaneous Shutter Squeeges. Magnesium Cartridges Magnesium Cartridges Portrait Units, Empire Perrotype Printing Frames.	54 66 64 87 22 23 24 43 29 43 35 35 43 21 83 83
Prisms, Steinheil. Print Trimmer, Acme Printing Outfit, S. P. C. Peerless Folding Tripod Plate Holders, Bonanza Improved. Waterbury Flammang Single Light Weight Double. Daisy. Solid Glass Corner. Parts of Camera Stands and Sundries. Print Washer, California Automatic. Panoramic Cameras, Evovil's. Photo-Mierographic Camera, Walmsley's. Microscopic Outfit, Scovil's. Pecket Scales. Plain Ground Glass. Photo Washer, Ormsbee's Gelattine, Nelson's Paup, Syphon.	38 75 64 22 25 24 24 24 25 73 15 18 18 18 59 87 88 88 88	S. P. C. Outfit for Printing, Toning, Fixing and Mounting. S. P. C. Developer Sable Brushes, Red. Scovill's Glass Pans Scovill's Efficient Plate Lifter Pure Chemicals and Accessories Etched Ground Glass. Extension Tripod. Adjustable Jointed Tripod. Double Film Holder Magic Finders. Printing Frames. Printing Frames. Universal Safety Shutter Economic Lenses. Portrait Lens Peerless Quick Acting Stereoscopic Lenses. Time and Instantaneous Shutter Squeeges. Magnesium Cartridges Magnesium Cartridges Portrait Units, Empire Perrotype Printing Frames.	54 66 64 87 22 23 24 43 29 43 35 35 43 21 83 83
Prisms, Steinheil. Print Trimmer, Acme Printing Outfit, S. P. C. Peerless Folding Tripod Plate Holders, Bonanza Improved. Waterbury Flammang Single Light Weight Double. Daisy. Solid Glass Corner. Parts of Camera Stands and Sundries. Print Washer, California Automatic. Panoramic Cameras, Evovil's. Photo-Mierographic Camera, Walmsley's. Microscopic Outfit, Scovil's. Pecket Scales. Plain Ground Glass. Photo Washer, Ormsbee's Gelattine, Nelson's Paup, Syphon.	38 75 64 22 25 24 24 24 25 73 15 18 18 18 59 87 88 88 88	S. P. C. Outfit for Printing, Toning, Fixing and Mounting. S. P. C. Developer Sable Brushes, Red. Scovill's Glass Pans Scovill's Efficient Plate Lifter Pure Chemicals and Accessories Etched Ground Glass. Extension Tripod. Adjustable Jointed Tripod. Double Film Holder Magic Finders. Printing Frames. Printing Frames. Universal Safety Shutter Economic Lenses. Portrait Lens Peerless Quick Acting Stereoscopic Lenses. Time and Instantaneous Shutter Squeeges. Magnesium Cartridges Magnesium Cartridges Portrait Units, Empire Perrotype Printing Frames.	54 66 64 87 22 23 24 43 29 43 35 35 43 21 83 83
Prisms, Steinheil. Print Trimmer, Acme Printing Outfit, S. P. C. Peerless Folding Tripod Plate Holders, Bonanza Improved. Waterbury Flammang Single Light Weight Double. Daisy. Solid Glass Corner. Parts of Camera Stands and Sundries. Print Washer, California Automatic. Panoramic Cameras, Evovil's. Photo-Mierographic Camera, Walmsley's. Microscopic Outfit, Scovil's. Pecket Scales. Plain Ground Glass. Photo Washer, Ormsbee's Gelattine, Nelson's Paup, Syphon.	38 75 64 22 25 24 24 24 25 73 15 18 18 18 59 87 88 88 88	S. P. C. Outfit for Printing, Toning, Fixing and Mounting. S. P. C. Developer Sable Brushes, Red. Scovill's Glass Pans Scovill's Efficient Plate Lifter Pure Chemicals and Accessories Etched Ground Glass. Extension Tripod. Adjustable Jointed Tripod. Double Film Holder Magic Finders. Printing Frames. Printing Frames. Universal Safety Shutter Economic Lenses. Portrait Lens Peerless Quick Acting Stereoscopic Lenses. Time and Instantaneous Shutter Squeeges. Magnesium Cartridges Magnesium Cartridges Portrait Units, Empire Perrotype Printing Frames.	54 66 64 87 22 23 24 43 29 43 35 35 43 21 83 83
Prisms, Steinheil. Print Trimmer, Acme Printing Outfit, S. P. C. Peerless Folding Tripod Plate Holders, Bonanza Improved. Waterbury Flammang Single Light Weight Double. Daisy. Solid Glass Corner. Parts of Camera Stands and Sundries. Print Washer, California Automatic. Panoramic Cameras, Evovil's. Photo-Mierographic Camera, Walmsley's. Microscopic Outfit, Scovil's. Pecket Scales. Plain Ground Glass. Photo Washer, Ormsbee's Gelattine, Nelson's Paup, Syphon.	38 75 64 22 25 24 24 24 25 73 15 18 18 18 59 87 88 88 88	S. P. C. Outfit for Printing, Toning, Fixing and Mounting. S. P. C. Developer. Sable Brushes, Red. Scovill's Glass Pans. Scovill's Glass Pans. Scovill's Efficient Plate Lifter Pure Chemicals and Accessories Etched Ground Glass. Extension Tripod. Adjustable Jouble Film Holder. Magic Finders. Printing Frames. Printing Frames. Universal Safety Shutter. Economic Lenses. Portrait Lens Peerless Quick Acting Stereoscopic Lenses. Time and Instantaneous Shutter Squeegees. Magnesium Cartridges Jompound. Portrait Outfits, Empire Ferrotype Printing Frames Pure Chemicals and Accessories Negative Washing Box. Print Roller and Squeegee. Print Roller and Squeegees. Negative Washing Box. Print Roller and Squeegee.	5466 6487 222 233 244 433 535 433 728 838 211 855 296 666 666 666 666 666 666 666 666 666
Prisms, Steinheil. Print Trimmer, Acme Printing Outfit, S. P. C. Peerless Folding Tripod Plate Holders, Bonanza Improved. Waterbury Flammang Single Light Weight Double. Daisy. Solid Glass Corner. Parts of Camera Stands and Sundries. Print Washer, California Automatic. Panoramic Cameras, Evovil's. Photo-Mierographic Camera, Walmsley's. Microscopic Outfit, Scovil's. Pecket Scales. Plain Ground Glass. Photo Washer, Ormsbee's Gelattine, Nelson's Paup, Syphon.	38 75 64 22 25 24 24 24 25 73 15 18 18 18 59 87 88 88 88	S. P. C. Outfit for Printing, Toning, Fixing and Mounting. S. P. C. Developer. Sable Brushes, Red. Scovill's Glass Pans. Scovill's Glass Pans. Scovill's Efficient Plate Lifter Pure Chemicals and Accessories Etched Ground Glass. Extension Tripod. Adjustable Jouble Film Holder. Magic Finders. Printing Frames. Printing Frames. Universal Safety Shutter. Economic Lenses. Portrait Lens Peerless Quick Acting Stereoscopic Lenses. Time and Instantaneous Shutter Squeegees. Magnesium Cartridges Jompound. Portrait Outfits, Empire Ferrotype Printing Frames Pure Chemicals and Accessories Negative Washing Box. Print Roller and Squeegee. Print Roller and Squeegees. Negative Washing Box. Print Roller and Squeegee.	5466 6487 222 233 244 433 535 433 728 838 211 855 296 666 666 666 666 666 666 666 666 666
Prisms, Steinheil. Print Trimmer, Acme Printing Outfit, S. P. C. Peerless Folding Tripod Plate Holders, Bonanza Improved. Waterbury Flammang Single Light Weight Double. Daisy. Solid Glass Corner. Parts of Camera Stands and Sundries. Print Washer, California Automatic. Panoramic Cameras, Evovil's. Photo-Mierographic Camera, Walmsley's. Microscopic Outfit, Scovil's. Pecket Scales. Plain Ground Glass. Photo Washer, Ormsbee's Gelattine, Nelson's Paup, Syphon.	38 75 64 22 25 24 24 24 25 73 15 18 18 18 59 87 88 88 88	S. P. C. Outfit for Printing, Toning, Fixing and Mounting. S. P. C. Developer. Sable Brushes, Red. Scovill's Glass Pans. Scovill's Glass Pans. Scovill's Efficient Plate Lifter Pure Chemicals and Accessories Etched Ground Glass. Extension Tripod. Adjustable Jouble Film Holder. Magic Finders. Printing Frames. Printing Frames. Universal Safety Shutter. Economic Lenses. Portrait Lens Peerless Quick Acting Stereoscopic Lenses. Time and Instantaneous Shutter Squeegees. Magnesium Cartridges Jompound. Portrait Outfits, Empire Ferrotype Printing Frames Pure Chemicals and Accessories Negative Washing Box. Print Roller and Squeegee. Print Roller and Squeegees. Negative Washing Box. Print Roller and Squeegee.	5466 6487 222 233 244 433 535 433 728 838 211 855 296 666 666 666 666 666 666 666 666 666
Prisms, Steinheil. Print Trimmer, Acme Printing Outfit, S. P. C. Peerless Folding Tripod Plate Holders, Bonanza Improved. Waterbury Flammang Single Light Weight Double. Daisy. Solid Glass Corner. Parts of Camera Stands and Sundries. Print Washer, California Automatic. Panoramic Cameras, Evovil's. Photo-Mierographic Camera, Walmsley's. Microscopic Outfit, Scovil's. Pecket Scales. Plain Ground Glass. Photo Washer, Ormsbee's Gelattine, Nelson's Paup, Syphon.	38 75 64 22 25 24 24 24 25 73 15 18 18 18 59 87 88 88 88	S. P. C. Outfit for Printing, Toning, Fixing and Mounting. S. P. C. Developer. Sable Brushes, Red. Scovill's Glass Pans. Scovill's Glass Pans. Scovill's Efficient Plate Lifter Pure Chemicals and Accessories Etched Ground Glass. Extension Tripod. Adjustable Jouble Film Holder. Magic Finders. Printing Frames. Printing Frames. Universal Safety Shutter. Economic Lenses. Portrait Lens Peerless Quick Acting Stereoscopic Lenses. Time and Instantaneous Shutter Squeegees. Magnesium Cartridges Jompound. Portrait Outfits, Empire Ferrotype Printing Frames Pure Chemicals and Accessories Negative Washing Box. Print Roller and Squeegee. Print Roller and Squeegees. Negative Washing Box. Print Roller and Squeegee.	5466 6487 222 233 244 433 535 433 728 838 211 855 296 666 666 666 666 666 666 666 666 666
Prisms, Steinheil. Print Trimmer, Acme Parts of Camera Stands and Sundries Paisy. Solid Glass Corner. Parts of Camera Stands and Sundries Print Washer, California Automatic. Panoramic Cameras, Scovill's Photo-Wicrographic Camera, Walmsley's Microscopic Outfit, Scovill's Pocket Scales. Plain Ground Glass. Ploto Washer, Ormsbee's Gelatine, Nelson's Pump, Syphon Plate Lifter Perfection Head Screen. Peerless View Finder. Quick Acting Stereoscopic Lens. Perfect Camera Stand Varnish Camera Portrait Outfit, Empire.	38 75 64 22 25 24 24 24 25 73 15 18 18 18 59 87 88 88 88	S. P. C. Outfit for Printing, Toning, Fixing and Mounting. S. P. C. Developer. Sable Brushes, Red. Scovill's Glass Pans. Scovill's Glass Pans. Scovill's Efficient Plate Lifter Pure Chemicals and Accessories Etched Ground Glass. Extension Tripod. Adjustable Jouble Film Holder. Magic Finders. Printing Frames. Printing Frames. Universal Safety Shutter. Economic Lenses. Portrait Lens Peerless Quick Acting Stereoscopic Lenses. Time and Instantaneous Shutter Squeegees. Magnesium Cartridges Jompound. Portrait Outfits, Empire Ferrotype Printing Frames Pure Chemicals and Accessories Negative Washing Box. Print Roller and Squeegee. Print Roller and Squeegees. Negative Washing Box. Print Roller and Squeegee.	5466 6487 222 233 244 433 535 433 728 838 211 855 296 666 666 666 666 666 666 666 666 666
Prisms, Steinheil. Print Trimmer, Acme Printing Outfit, S. P. C. Peerless Folding Tripod Plate Holders, Bonanza Improved. Waterbury Flammang Single Light Weight Double. Daisy. Solid Glass Corner. Parts of Camera Stands and Sundries. Print Washer, California Automatic. Panoramic Cameras, Evovil's. Photo-Mierographic Camera, Walmsley's. Microscopic Outfit, Scovil's. Pecket Scales. Plain Ground Glass. Photo Washer, Ormsbee's Gelattine, Nelson's Paup, Syphon.	38 75 64 22 25 24 24 24 25 73 15 18 18 18 59 87 88 88 88	S. P. C. Outfit for Printing, Toning, Fixing and Mounting. S. P. C. Developer. Sable Brushes, Red. Scovill's Glass Pans. Scovill's Glass Pans. Scovill's Efficient Plate Lifter Pure Chemicals and Accessories Etched Ground Glass. Extension Tripod. Adjustable Jouble Film Holder. Magic Finders. Printing Frames. Printing Frames. Universal Safety Shutter. Economic Lenses. Portrait Lens Peerless Quick Acting Stereoscopic Lenses. Time and Instantaneous Shutter Squeegees. Magnesium Cartridges Jompound. Portrait Outfits, Empire Ferrotype Printing Frames Pure Chemicals and Accessories Negative Washing Box. Print Roller and Squeegee. Print Roller and Squeegees. Negative Washing Box. Print Roller and Squeegee.	5466 6487 222 233 244 433 535 433 728 838 211 855 296 666 666 666 666 666 666 666 666 666
Prisms, Steinheil. Print Trimmer, Aeme Printing Outfit, S. P. C. Peerless Polding Tripod. Plate Holders, Bonanza Improved. Waterbury Flammang Single Light Weight Double. Daisy Polif Glass Corner. Parts of Camera Stands and Sundries. Print Washer, California Automatic. Panoramic Cameras, Scovill's. Photo-Micrographic Camera, Walmsley's. Microscopic Outfit, scovill's. Pocket Scales. Plate Ground Glass. Photo Washer, Ormsbee's Gelatine, Nelson's Pump, Syphon Plate Lifter Perfection Head Screen. Peerless View Finder. Quick Acting Stereoscopic Lens. Perfect Camera Stand. Varnish Can Portrait Outfit, Empire. R	38 75 64 22 25 24 24 24 24 27 73 18 18 18 18 86 88 86 88 86 88 43 35 11 69 21	S. P. C. Outfit for Printing, Toning, Fixing and Mounting. S. P. C. Developer. Sable Brushes, Red. Scovill's Glass Pans. Scovill's Glass Pans. Scovill's Efficient Plate Lifter Pure Chemicals and Accessories Etched Ground Glass. Extension Tripod. Adjustable Jouble Film Holder. Magic Finders. Printing Frames. Printing Frames. Universal Safety Shutter. Economic Lenses. Portrait Lens Peerless Quick Acting Stereoscopic Lenses. Time and Instantaneous Shutter Squeegees. Magnesium Cartridges Jompound. Portrait Outfits, Empire Ferrotype Printing Frames Pure Chemicals and Accessories Negative Washing Box. Print Roller and Squeegee. Print Roller and Squeegees. Negative Washing Box. Print Roller and Squeegee.	5466 6487 222 233 244 433 535 433 728 838 211 855 296 666 666 666 666 666 666 666 666 666
Prisms, Steinheil. Print Trimmer, Acme Parts of Camera Stands and Sundries Paisy. Solid Glass Corner. Parts of Camera Stands and Sundries Print Washer, California Automatic. Panoramic Cameras, Scovill's Photo-Wicrographic Camera, Walmsley's Microscopic Outfit, Scovill's Pocket Scales. Plain Ground Glass. Ploto Washer, Ormsbee's Gelatine, Nelson's Pump, Syphon Plate Lifter Perfection Head Screen. Peerless View Finder. Quick Acting Stereoscopic Lens. Perfect Camera Stand Varnish Camera Portrait Outfit, Empire.	38 75 64 22 25 24 24 24 25 73 15 18 18 18 59 87 88 88 88	S. P. C. Outfit for Printing, Toning, Fixing and Mounting. S. P. C. Developer Sable Brushes, Red. Scovill's Glass Pans Scovill's Efficient Plate Lifter Pure Chemicals and Accessories Etched Ground Glass. Extension Tripod. Adjustable Jointed Tripod. Double Film Holder Magic Finders. Printing Frames. Printing Frames. Universal Safety Shutter Economic Lenses. Portrait Lens Peerless Quick Acting Stereoscopic Lenses. Time and Instantaneous Shutter Squeeges. Magnesium Cartridges Magnesium Cartridges Portrait Units, Empire Perrotype Printing Frames.	544 606 6487 223 244 433 433 433 433 433 433 433 433

Index Continued.

PAC		PAGE
Shutters, Triplex Improved. 4 Scovill Time and Instantaneous 4	Tripods, Daisy	23
Scovill Time and Instantaneous 4	Time and Instantaneous Shutter, Elite	34
- Iniversal Safety	Triplex Shutter	.41, 42
* The Rapid 4	Columbian Shutter	41
Puplex, Jr 4	Stereoscopic	41
The Rapid. 4 Duplex, Jr. 4 Elite. 3 Nouveau. 4	Triplex Shutter Columbian Shutter Stereoscopic Detective Triplex	41
* Nouveau 4	Triplex Improved Shutter Time and Instantaneous Shutter, Scovill. Trimmer, Print. , Scovill Revolving Table Stands, Jenny Lind. Three Shield Plates Tubes, Hollow Glass. Silver Test	42
Nouveau	Time and Instantaneous Shutter, Scovill	43
Statue Pedestal 7	Trimmer, Print	73
Saxe Paper 7	Scovill Revolving	79
Studio Register 58 Scales, Photographers' 58 Swift & Sons' Leinses 30-3 Shutter, Elite Time and Instantaneous 30-3 Stereoscopic Lenses, Scovill's Pecrless Quick Acting 3	Table Stands, Jenny Lind	. 50
Scales, Photographers'58, 5	Three Shield Plates	51
Swift & Sons' Lenses30-3	Tubes, Hollow Glass	- 55
Shutter, Elite Time and Instantaneous 3	Silver Test	55
Stereoscopic Lenses, Scovill's Peerless Quick Acting 3	Thin Crystal Cover Glass. The "Photographic Times". The S. & A. Photographic Series.	88
Steinheil Lenses	The "Photographic Times"	3
* Prisms	The S. & A. Photographic Series	88
Supports, Posing	Troxell's Silver Erasive Soap. 1	00
Schindler's Goods46, 4	Tablets, Pelletone	. 63
Screen, Photographic Head	John Wyeth's Compressed	65
Stands, Jenny Lind Table 5	Tissues, Japanese Art	68
Solutions 6	English Paper	70
Stretcher, Kuhn's	Tubes, Preserving	69
Prisms 3 3 3 3 3 3 3 3 3	Tissues, Japanese Art. English Paper. Tubes, Preserving. Trays, Porcelain.	56
Soap, Erasive 8	Waterbury	57
Solid Glass Pans.	Vulcanite	57
Solid Glass Pans. 5 Syphon Pumps. 8	Papier Maché	57 57
Screens, Keystone 8	Acme Glass Bottom	57
Scholten's Head Rest Clips	Black Japanned	57
S. & A. Head Rests	Black Diamond	58
Soap, Erasive. Solid Glass Pans. Soreens, Keystone. Socreens, Keystone. Socreens, Keystone. Solid Glass Pans. So	- Glossy Rubber	58
Skin, Cepa	m centalog	67
Songster, American	Transparency Frames	87
Stoves, Oil 6	Camera, Stereo	19
Safety Flash Igniter 8		
Stamp Portrait Cameras		
Sciopticon, Acme		
S. P. C. Reliable Graduates	U	
Stamp Portrait Cameras. Sciopticon, Acme. 8 S. P. C. Rellable Graduates. Schering's Pyrogallic Acid 5		
Eikonogen	Universal Safety Shutter, Scovill's	43
Hydrochinone 6	Lenses, B. & L. Rapid	38
Pelletone 6		
Series, S. & A. Photographic		
Stands, Ente Studio		
" Lever Adjustment I	V Comment of the comm	
Perfect Camera		
" Acme "		43
Fundajon		43
Fundajon		43 17 13
Fundam	o Outfit, Ellite Cameras, Irving Acme Reversible	13
Fundam	Outfit, Elite. Cameras, Irving. Acon Reversible.	17
Excelsior	Outfit, Elite. Cameras, Irving. Acon Reversible.	17
Excelsior	Outfit, Elite. Cameras, Irving. Acon Reversible.	17
Excelsior	Outfit, Elite. Cameras, Irving. Acon Reversible.	17
Excelsior	Outfit, Elite. Cameras, Irving. Acon Reversible.	17
Excelsior	Outfit, Elite. Cameras, Irving. Acon Reversible.	17
Excelsior	View Finders, Feeriess. Outlit, Elite Cameras, Irving. A. O. Co. Star Outlit, Compact Victoria Cameras, American Optical Co. Acme Standard Viess, Plate Viess, Collodion	17 13 14 12 14 7 10, 85 10, 85
Excelsior	View Finders, Feeriess. Outlit, Elite Cameras, Irving. A. O. Co. Star Outlit, Compact Victoria Cameras, American Optical Co. Acme Standard Viess, Plate Viess, Collodion	17 13 14 12 14 7 10, 85 10, 85
Excelsior Excelsior	View Finders, Feeriess. Outlit, Elite Cameras, Irving. A. O. Co. Star Outlit, Compact Victoria Cameras, American Optical Co. Acme Standard Viess, Plate Viess, Collodion	17 13 14 12 14 7 10, 85 10, 85
Excelsior Excelsior	View Finders, Peeriess. Outht, Elite. A. O. Co. Star Outht, Compact. Victoria Cameras, American Optical Co. Acme Standard. Vises, Plate. Vials, Collodion. Vulcanite Trays. Vignetting Papers, Weymouth's. Vignetter, Dixe.	17 13 14 12 14 7 .10, 85 .10, 85 29 55 57 67
Excelsior Excelsior	View Finders, Peeriess. Outht, Elite. A. O. Co. Star Outht, Compact. Victoria Cameras, American Optical Co. Acme Standard. Vises, Plate. Vials, Collodion. Vulcanite Trays. Vignetting Papers, Weymouth's. Vignetter, Dixe.	17 13 14 12 14 7 .10, 85 .10, 85 29 55 57 67
Excelsior Excelsior	View Finders, Peeriess. Outht, Elite. A. O. Co. Star Outht, Compact. Victoria Cameras, American Optical Co. Acme Standard. Vises, Plate. Vials, Collodion. Vulcanite Trays. Vignetting Papers, Weymouth's. Vignetter, Dixe.	17 13 14 12 14 7 .10, 85 .10, 85 29 55 57 67
Excelsion Excelsion	View Finders, Peeriess. Outht, Elite. A. O. Co. Star Outht, Compact. Victoria Cameras, American Optical Co. Acme Standard. Vises, Plate. Vials, Collodion. Vulcanite Trays. Vignetting Papers, Weymouth's. Vignetter, Dixe.	17 13 14 12 14 7 .10, 85 .10, 85 29 55 57 67
Excelsion Excelsion	View Finders, Peeriess. Outht, Elite. A. O. Co. Star Outht, Compact. Victoria Cameras, American Optical Co. Acme Standard. Vises, Plate. Vials, Collodion. Vulcanite Trays. Vignetting Papers, Weymouth's. Vignetter, Dixe.	17 13 14 12 14 7 .10, 85 .10, 85 29 55 57 67
Excelsion Excelsion	View Finders, Peeriess. Outht, Elite. A. O. Co. Star Outht, Compact. Victoria Cameras, American Optical Co. Acme Standard. Vises, Plate. Vials, Collodion. Vulcanite Trays. Vignetting Papers, Weymouth's. Vignetter, Dixe.	17 13 14 12 14 7 .10, 85 .10, 85 29 55 57 67
Excelsion Excelsion	View Finders, Peeriess. Outht, Elite. A. O. Co. Star Outht, Compact. Victoria Cameras, American Optical Co. Acme Standard. Vises, Plate. Vials, Collodion. Vulcanite Trays. Vignetting Papers, Weymouth's. Vignetter, Dixe.	17 13 14 12 14 7 .10, 85 .10, 85 29 55 57 67
Excelsion Excelsion	View Finders, Peerless. Outfit, Elite. A. Co. Star Outfit, Compact. Outfit, Compact. Acme Standard. Acme Standard. Multiplying. Vises, Plate. Vials, Collodion. Vulcanite Trays. Vignetting Papers, Weymouth's. Vignetter, Dixie. Magic. Varnish Can and Filter. Varnishes. Ilo Negative. Vulcan Magnesium Flash Light. Vignetting Attachment. View Lenses, Darlot Rapid Hemispherical.	17 13 14 12 14 7 .10, 85 .10, 85 29 55 57 67
Excelsion Excelsion	View Finders, Peerless. Outfit, Elite. A. Co. Star Outfit, Compact. Outfit, Compact. Acme Standard. Acme Standard. Multiplying. Vises, Plate. Vials, Collodion. Vulcanite Trays. Vignetting Papers, Weymouth's. Vignetter, Dixie. Magic. Varnish Can and Filter. Varnishes. Ilo Negative. Vulcan Magnesium Flash Light. Vignetting Attachment. View Lenses, Darlot Rapid Hemispherical.	17 13 14 12 14 7 .10, 85 .10, 85 29 55 57 67
Excelsion Semi-Centennial Camera Star View Cameras, American Optical Co Seosil's Panoramic Cameras Photo-Microscopic Outfit Equipment Sterooscopic Camera Henry Clay Slides, Registering Slides, Registering Solid Glass Corner Plate-Holders Sundry Pieces of Apparatus Solid Glass Corner Kits Solid Glass Solid G	View Finders, Peerless. Outfit, Elite. A. Co. Star Outfit, Compact. Outfit, Compact. Acme Standard. Acme Standard. Multiplying. Vises, Plate. Vials, Collodion. Vulcanite Trays. Vignetting Papers, Weymouth's. Vignetter, Dixie. Magic. Varnish Can and Filter. Varnishes. Ilo Negative. Vulcan Magnesium Flash Light. Vignetting Attachment. View Lenses, Darlot Rapid Hemispherical.	17 13 14 12 14 7 .10, 85 .10, 85 29 55 57 67
Excelsion Excelsion	View Finders, Peerless. Outfit, Elite. A. Co. Star Outfit, Compact. Outfit, Compact. Acme Standard. Acme Standard. Multiplying. Vises, Plate. Vials, Collodion. Vulcanite Trays. Vignetting Papers, Weymouth's. Vignetter, Dixie. Magic. Varnish Can and Filter. Varnishes. Ilo Negative. Vulcan Magnesium Flash Light. Vignetting Attachment. View Lenses, Darlot Rapid Hemispherical.	17 13 14 12 14 7 .10, 85 .10, 85 29 55 57 67
Excelsior Semi-Centennial Camera Star View Cameras, American Optical Co Scovill's Panoramic Cameras Photo-Microscopic Outfit Equipment Stercoscopic Camera, Henry Clay Sildes, Registering, Solid Glass Corner Plate-Holders Sundry Pieces of Apparatus. Solid Glass Corner Kits Silver Test Tube Stirring Rods, Glass Storage Boxes. Storage Boxes. Storage Flash Lamp, Lightning. Standard Triple Flash Lamp. Sundries. Scovill Double Level Single Dry Plate Holders, Flammang.	View Finders, Peerless. Outfit, Elite. A. Co. Star Outfit, Compact. A. Co. Star Outfit, Compact. Victoria Cameras, American Optical Co. Acme Standard. Vises, Plate. Vials, Collodion. Vulcanite Trays. Vignetting Papers, Weymouth's. Vignetter, Dixie. Magic. Varnishe Can and Filter. Varnishes. Ilo Negative. Vulcan Magnesium Flash Light. Vignetting Attachment. View Lenses, Darlot Rapid Hemispherical.	
Excelsion Excelsion	View Finders, Feeriess. Outht, Elite A. O. Co. Star Outht, Compact A. O. Co. Star Outht, Compact Victoria Cameras, American Optical Co. Acme Standard Vises, Plate Vials, Collodion Vulcanite Trays Vignetting Papers, Weymouth's Vignetter, Dixie Magic Varnish Can and Filter Varnishes. I lo Negative Vulcan Magnesium Flash Light View Lenses, Darlot Rapid Hemispherical	17 13 14 7 10, 85 29 57 68 89 69 69 84 84
Excelsior Semi-Centennial Camera Star View Cameras, American Optical Co Scovill's Panoramic Cameras Photo-Microscopic Outfit Steroscopic Camera, Henry Clas Sides, Registering Solide Sales Sundry Pieces of Apparatus Solid Glass Corner Rits Silver Test Tube Stirring Rods, Glass Shears Storage Boxes Storage Flash Lamp, Lightning Standard Triple Flash Lamp Scovill Double Level Single Dry Plate Holders, Flammang	View Finders, Feeriess. Outht, Elite A. O. Co. Star Outht, Compact A. O. Co. Star Outht, Compact Victoria Cameras, American Optical Co. Acme Standard Vises, Plate Vials, Collodion Vulcanite Trays Vignetting Papers, Weymouth's Vignetter, Dixie Magic Varnish Can and Filter Varnishes. I lo Negative Vulcan Magnesium Flash Light View Lenses, Darlot Rapid Hemispherical	17 13 14 7 10, 85 29 57 68 89 69 69 84 84
Excelsion Semi-Centennial Camera Star View Cameras, American Optical Co. Scovill's Panoramic Cameras Photo-Microscopic Outfit Equipment. Stereoscopic Camera, Henry Clay. Sildes, Registering. Solid Glass Corner Plate-Holders. Sundry Pieces of Apparatus. Solid Glass Corner Kits Baths. Silver Test Tube. Stirring Rods, Glass. Shears. Storage Boxes. Storage Boxes. Storage Flash Lamp, Lightning. Standard Triple Flash Lamp. Sundries. Scovill Double Level. Single Dry Plate Holders, Flammang.	View Finders, Peeriess, Outlit, Elite , Cameras, Irving , Acme Reversible , Outlit, Compact , Outlit, Compact Victoria Cameras, American Optical Co Acme Standard Vises, Plate Vials, Collodion Vulcanite Trays Vignetting Papers, Weymouth's Vignetting Papers, Weymouth's Vignetter, Dixie , Magic Varnish Can and Filter. Varnishes Ilo Negative Vulcan Magnesium Flash Light Vignetting Attachment View Lenses, Darlot Rapid Hemispherical W Waterbury Albums Outlits Outlits W Waterbury Albums Outlits	17 13 14 7 10, 85 29 57 68 89 69 69 84 84
Excelsion Semi-Centennial Camera Star View Cameras, American Optical Co. Scovill's Panoramic Cameras Photo-Microscopic Outfit Equipment. Stereoscopic Camera, Henry Clay. Sildes, Registering. Solid Glass Corner Plate-Holders. Sundry Pieces of Apparatus. Solid Glass Corner Kits Baths. Silver Test Tube. Stirring Rods, Glass. Shears. Storage Boxes. Storage Boxes. Storage Flash Lamp, Lightning. Standard Triple Flash Lamp. Sundries. Scovill Double Level. Single Dry Plate Holders, Flammang.	View Finders, Peeriess, Outlit, Elite , Cameras, Irving , Acme Reversible , Outlit, Compact , Outlit, Compact Victoria Cameras, American Optical Co Acme Standard Vises, Plate Vials, Collodion Vulcanite Trays Vignetting Papers, Weymouth's Vignetting Papers, Weymouth's Vignetter, Dixie , Magic Varnish Can and Filter. Varnishes Ilo Negative Vulcan Magnesium Flash Light Vignetting Attachment View Lenses, Darlot Rapid Hemispherical W Waterbury Albums Outlits Outlits W Waterbury Albums Outlits	17 13 14 7 10, 85 29 57 68 89 69 69 84 84
Excelsion Semi-Centennial Camera Star View Cameras, American Optical Co. Scovill's Panoramic Cameras Photo-Microscopic Outfit Equipment. Stereoscopic Camera, Henry Clay. Sildes, Registering. Solid Glass Corner Plate-Holders. Sundry Pieces of Apparatus. Solid Glass Corner Kits Baths. Silver Test Tube. Stirring Rods, Glass. Shears. Storage Boxes. Storage Boxes. Storage Flash Lamp, Lightning. Standard Triple Flash Lamp. Sundries. Scovill Double Level. Single Dry Plate Holders, Flammang.	View Finders, Peeriess, Outlit, Elite , Cameras, Irving , Acme Reversible , Outlit, Compact , Outlit, Compact Victoria Cameras, American Optical Co Acme Standard Vises, Plate Vials, Collodion Vulcanite Trays Vignetting Papers, Weymouth's Vignetting Papers, Weymouth's Vignetter, Dixie , Magic Varnish Can and Filter. Varnishes Ilo Negative Vulcan Magnesium Flash Light Vignetting Attachment View Lenses, Darlot Rapid Hemispherical W Waterbury Albums Outlits Outlits W Waterbury Albums Outlits	17 13 14 7 10, 85 29 57 68 89 69 69 84 84
Excelsion Semi-Centennial Camera Star View Cameras, American Optical Co. Scovill's Panoramic Cameras Photo-Microscopic Outfit Equipment. Stereoscopic Camera, Henry Clay. Sildes, Registering. Solid Glass Corner Plate-Holders. Sundry Pieces of Apparatus. Solid Glass Corner Kits Baths. Silver Test Tube. Stirring Rods, Glass. Shears. Storage Boxes. Storage Boxes. Storage Flash Lamp, Lightning. Standard Triple Flash Lamp. Sundries. Scovill Double Level. Single Dry Plate Holders, Flammang.	View Finders, Peeriess, Outlit, Elite , Cameras, Irving , Acme Reversible , Outlit, Compact , Outlit, Compact Victoria Cameras, American Optical Co Acme Standard Vises, Plate Vials, Collodion Vulcanite Trays Vignetting Papers, Weymouth's Vignetting Papers, Weymouth's Vignetter, Dixie , Magic Varnish Can and Filter. Varnishes Ilo Negative Vulcan Magnesium Flash Light Vignetting Attachment View Lenses, Darlot Rapid Hemispherical W Waterbury Albums Outlits Outlits W Waterbury Albums Outlits	17 13 14 7 10, 85 29 57 68 89 69 69 84 84
Excelsion Semi-Centennial Camera Star View Cameras, American Optical Co. Scovill's Panoramic Cameras Photo-Microscopic Outfit Equipment. Stereoscopic Camera, Henry Clay. Sildes, Registering. Solid Glass Corner Plate-Holders. Sundry Pieces of Apparatus. Solid Glass Corner Kits Baths. Silver Test Tube. Stirring Rods, Glass. Shears. Storage Boxes. Storage Boxes. Storage Flash Lamp, Lightning. Standard Triple Flash Lamp. Sundries. Scovill Double Level. Single Dry Plate Holders, Flammang.	View Finders, Peeriess, Outlit, Elite , Cameras, Irving , Acme Reversible , Outlit, Compact , Outlit, Compact Victoria Cameras, American Optical Co Acme Standard Vises, Plate Vials, Collodion Vulcanite Trays Vignetting Papers, Weymouth's Vignetting Papers, Weymouth's Vignetter, Dixie , Magic Varnish Can and Filter. Varnishes Ilo Negative Vulcan Magnesium Flash Light Vignetting Attachment View Lenses, Darlot Rapid Hemispherical W Waterbury Albums Outlits Outlits W Waterbury Albums Outlits	17 13 14 7 10, 85 29 57 68 89 69 69 84 84
Excelsion Semi-Centennial Camera Star View Cameras, American Optical Co. Scovill's Panoramic Cameras Photo-Microscopic Outfit Equipment. Stereoscopic Camera, Henry Clay. Sildes, Registering. Solid Glass Corner Plate-Holders. Sundry Pieces of Apparatus. Solid Glass Corner Kits Baths. Silver Test Tube. Stirring Rods, Glass. Shears. Storage Boxes. Storage Boxes. Storage Flash Lamp, Lightning. Standard Triple Flash Lamp. Sundries. Scovill Double Level. Single Dry Plate Holders, Flammang.	View Finders, Peeriess, Outlit, Elite , Cameras, Irving , Acme Reversible , Outlit, Compact , Outlit, Compact Victoria Cameras, American Optical Co Acme Standard Vises, Plate Vials, Collodion Vulcanite Trays Vignetting Papers, Weymouth's Vignetting Papers, Weymouth's Vignetter, Dixie , Magic Varnish Can and Filter. Varnishes Ilo Negative Vulcan Magnesium Flash Light Vignetting Attachment View Lenses, Darlot Rapid Hemispherical W Waterbury Albums Outlits Outlits W Waterbury Albums Outlits	
Excelsior Semi-Centennial Camera Star View Cameras, American Optical Co Scovill's Panoramic Cameras Photo-Microscopic Outfit Equipment Stereoscopic Camera, Henry Clay Slides, Registering Solid Glass Corner Plate-Holders Sundry Picese of Apparatus Solid Glass Corner Kits Baths Silver Test Tube Stirring Rods, Glass Schears Storage Boxes, Storage Boxes, Storage Flash Lamp, Lightning Standard Triple Flash Lamp Sundries Scovill Double Level Single Dry Plate Holders, Flammang. T Terms The American Optical Co Table for Enlargements Triad Cameras, Waterbury Tripose, Secoil Extension Secoil Steresion	View Finders, Peeriess. Outfit, Elite. A. O. Co. Star Outfit, Compact. Victoria Cameras, American Optical Co. Acme Standard. Vises, Plate. Vials, Collodion. Vulcanite Trays. Vignetting Papers, Weymouth's. Vignetter, Dixie. Magic. Varnishes. Ilo Negative. Vulcan Magnesium Flash Light. Vignetting Attachment. View Lenses, Darlot Rapid Hemispherical. W Waterbury Albums. Outfits. Dry Plate Holder. Negative Boxes. Lenses. Fecusing Glass. Finders. Frays. Card Board.	
Excelsior Semi-Centennial Camera Star View Cameras, American Optical Co Scovill's Panoramic Cameras Photo-Microscopic Outfit Equipment Stereoscopic Camera, Henry Clay Slides, Registering Solid Glass Corner Plate-Holders Sundry Picese of Apparatus Solid Glass Corner Kits Baths Silver Test Tube Stirring Rods, Glass Schears Storage Boxes, Storage Boxes, Storage Flash Lamp, Lightning Standard Triple Flash Lamp Sundries Scovill Double Level Single Dry Plate Holders, Flammang. T Terms The American Optical Co Table for Enlargements Triad Cameras, Waterbury Tripose, Secoil Extension Secoil Steresion	View Finders, Peeriess. Outfit, Elite. A. O. Co. Star Outfit, Compact. Victoria Cameras, American Optical Co. Acme Standard. Vises, Plate. Vials, Collodion. Vulcanite Trays. Vignetting Papers, Weymouth's. Vignetter, Dixie. Magic. Varnishes. Ilo Negative. Vulcan Magnesium Flash Light. Vignetting Attachment. View Lenses, Darlot Rapid Hemispherical. W Waterbury Albums. Outfits. Dry Plate Holder. Negative Boxes. Lenses. Fecusing Glass. Finders. Frays. Card Board.	
Excelsior Semi-Centennial Camera Star View Cameras, American Optical Co Scovill's Panoramic Cameras Photo-Microscopic Outfit Equipment Stereoscopic Camera, Henry Clay Slides, Registering Solid Glass Corner Plate-Holders Sundry Picese of Apparatus Solid Glass Corner Kits Baths Silver Test Tube Stirring Rods, Glass Schears Storage Boxes, Storage Boxes, Storage Flash Lamp, Lightning Standard Triple Flash Lamp Sundries Scovill Double Level Single Dry Plate Holders, Flammang. T Terms The American Optical Co Table for Enlargements Triad Cameras, Waterbury Tripose, Secoil Extension Secoil Steresion	View Finders, Peeriess. Outfit, Elite. A. O. Co. Star Outfit, Compact. Victoria Cameras, American Optical Co. Acme Standard. Vises, Plate. Vials, Collodion. Vulcanite Trays. Vignetting Papers, Weymouth's. Vignetter, Dixie. Magic. Varnishes. Ilo Negative. Vulcan Magnesium Flash Light. Vignetting Attachment. View Lenses, Darlot Rapid Hemispherical. W Waterbury Albums. Outfits. Dry Plate Holder. Negative Boxes. Lenses. Fecusing Glass. Finders. Frays. Card Board.	
Excelsior Semi-Centennial Camera Star View Cameras, American Optical Co Scovill's Panoramic Cameras Photo-Microscopic Outfit Steroscopic Camera, Henry Clay Sides, Registering. Solid Glass Corner Plate-Holders Sundry Picces of Apparatus. Solid Glass Corner Kits. Silver Test Tube. Stirring Rods, Glass. Shears. Storage Boxes. Storage Boxes. Storage Flash Lamp, Lightning. Standard Triple Flash Lamp. Scovill Double Level. Single Dry Plate Holders, Flammang. T Terms The American Optical Co. Table for Enlargements. Tripods. Peerless Folding Scovill Adjustable. Sovill Adjustable. Jointed	View Finders, Feeriess. Outht, Elite A. O. Co. Star Outht, Compact A. O. Co. Star Outht, Compact Victoria Cameras, American Optical Co. Acme Standard Vises, Plate Vials, Collodion Vulcanite Trays Vignetting Papers, Weymouth's Vignetting Papers, Weymouth's Vignetter, Dixie Magic Varnish Can and Filter Varnishes Ilo Negative Vulcan Magnesium Flash Light Vignetting Attachment View Lenses, Darlot Rapid Hemispherical W Waterbury Albums Outfits Dry Plate Holder Negative Boxes Lenses Focusing Glass Finders Trays Trays Trays Trays Cad Board. Wanley Photo-Micrographic Camera	

Index Continued.

	PAGE		AGE	
White's Posing Chair. Specialties. Specialties. Wall and Bench Combination, Eldorado. W. I. A. Ruby Light Lantern. W. I. A. Patent Solid Glass Pans. Weights. Weights. Washing Boxes. Washing Boxes.	45 51 53 54 59 60	Waymouth's Vignetting Papers. Water Colors. W. & C. Perfect Preserving Tubes. Washer, Print. ormsbee's. World Blotting Paper	73 88	
Wyeth's Compressed Tablets		Y		
Weber & Co, 's Liquid Opaque	. 67	Yellow Color Screens	88	



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- EXPRESS ORDERS.—Wherever the American Express Co. and Wells, Fargo & Co. have agencies, our goods may be ordered through their purchasing department, without expense for postage, and without any return charges on collections. Apply for order blank and information at the Companies' local agents.
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 - By REGISTERED Mail, 5c. on parcels valued at \$25.00 or less; 10c. for parcels valued at from \$25.00 to \$100.00.

Cost of registering Mail Parcels or Letters, 10c. each.

- By Unregistered Mail, 5c. on parcels valued at \$5.00 or less, 10c. for parcels valued at from \$5.00 to \$10.00.
- BREAKAGE.—We employ only experienced packers, who, under our supervision, pack with the utmost care, therefore we cannot be held responsible for breakage in transportation.
- NEW PRICE LISTS.—If our customers will notify us of any change made in their address, we will endeavour to send them when they issue.
- <u>commission orders.</u>—We can only accept orders for goods not made by us or carried in stock, with the understanding that such orders will be filled to the best of our ability; that the goods cannot be returned, and that the prices cannot be altered which we are obliged to charge.



HE AMERICAN OPTICAL COMPANY was established in 1856. Then the demand for cameras was quite limited. Many additions have been made to the factory since that time to keep pace with the growth of photography. The apparatus made by the American Optical Company has never been equaled in originality of design, excellence of workmanship, or fineness of finish. When we add that only the most highly skilled workmen are employed, and

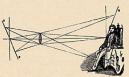
nothing but the choicest selected material used, it will be understood why the American Optical Company's cameras have always held the highest rank not only in this country but also in the West Indies, Mexico, Central and South America, Canada, Australia, and even in England.

The popularity of this apparatus has at various times caused unscrupulous dealers to try to palm off inferior cameras as of the American Optical Company's make; so we advise purchasers to examine cameras to see that they have the maker's name stamped in the woodwork and a name-plate on them.

All of the portrait cameras described in the following list are sold at the same price whether fitted with dry or wet plate holders. When ordering please give marginal numbers.

A remittance is required of one-third of the amount of the proposed purchase when apparatus must be made to order.

When the Swing-Back was introduced in our factory the following description, applicable to portrait work, was published in Mr. Lake Price's book "Photographic Manipulation."



"On focusing a subject in which the lines are inclined from the direct vertical, as in sitting figures, etc., it will be found impossible to bring the lower projecting portions into perfect focus with the upper retiring parts. Now, if the position of the film is judiciously altered by means of the Swing-Back, the portions defective in focus will be seen to assume equally correct definition with the rest of the subject.

"This treatment also applies to subjects in which one or the other side is nearer to the lens; by slightly altering the lateral distances, both sides come in focus. The operator can avail himself of both these movements simultaneously.

"It must be observed that although the 'Swing-Back' is useful in a modified degree, when 'short focus' lenses are employed, much discretion must be exercised by the operator not to cause an elongated distortion of the face and person of the sitter, by extreme and injudicious use of it."





HE PHOTOGRAPHIC TIMES commenced its career twenty-five years ago as a little eight-page monthly, published by The Scovill Manufacturing Co. The sprightly little magazine made such rapid strides that it soon became necessary to make important changes, and J. Traill Taylor,

editor of the British Journal of Photography, was engaged to edit it. It rapidly increased its influence and soon became the leading organ of photographers, both professional and amateur, in this country, a position it has held ever since. It has always been abreast the first wave of progress. In 1881, when the Photographers' Association of America held its annual convention in New York, the Photographic Times appeared regularly every day throughout the entire convention, giving full proceedings of the day previous.

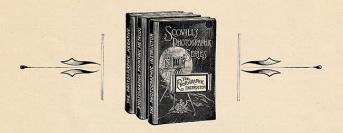
Many other important changes and improvements were made from time to time. With the beginning of the present year (1895) it was converted into a 64-page artistic and scientific magazine of the very highest order. Mr. Walter E. Woodbury—who is well-known in this country and in England as a practical worker, and the author of many books on photographic subjects—became editor.

Each (monthly) issue of the magazine in its present form is a veritable work of art. It is printed on the finest quality of paper, and besides a beautiful photogravure frontispiece, contains from fifty to a hundred illustrations by the half-tone and other processes. Many of these are reproductions from the choicest photographs of the best known photographic artists. They form valuable guides to pictorial work for the student.

The articles are all by the ablest authors and deal with photography in all ways. All the latest processes and inventions are chronicled.

It is published monthly by The Photographic Times Publishing Association, at 423 Broome Street, New York City, and the annual subscription is \$4.00. It will be sent for six months for \$2.00, or three months for \$1.00. Sample copy, post-paid, for 35 cents.

The S. & A. Photographic Series.



THE PUBLICATIONS constituting the S. & A. Photographic Series (now numbering fifty different books) are for the most part uniform in the size of page, type and the style of binding. They are Royal Octavo books, printed in good, clear type on heavy book-paper, and are neatly and substantially bound in cloth and paper. The external appearance of most of the books is indicated by the cut. Every book in the series is written by an authority, and each contains matter of the greatest value to the practical photographer, be he professional or amateur. It will be noticed that some of the earlier numbers are out of print. These it will be impossible to supply, as they were printed from type which has long been distributed. The later numbers of the series are all printed from plates. These books can be obtained of any dealer in photographic goods, booksellers, or will be sent post-paid on receipt of price by the publishers. with the exception of "The Times Annuals."

Cameras for Studio Use.

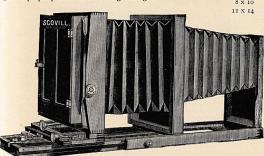
Portrait Cameras.

The American Optical Co.'s Portrait Cameras are manufacured from the best mahogany, French polished. They have India-rubber bellows, the V-shaped wooden guides, and, in sizes up to 8 x 10, are made with a focusing cam.

Larger sizes, 8 x 10 and upwards, are furnished with our telescopic platform and have Lever Focusing Attachment, by which the most delicate focus can be adjusted with the utmost facility and ease.

The attention of operators is especially called to the Double Swing-back on these fine Studio Cameras. When lenses of short ocal length are used, the face is very often distorted, unless the perator tips his camera, and even then he is apt to get the face ongated or widened, unless he is very careful. Any operator who has been annoyed by being unable to reflect the image upon the ground glass without distortion, will see how completely this arrangement overcomes the difficulty.

Very often it is desirable to get a little more of the lower or pper part of the figure, or of one side more than the other in the cture than can be done with the old style camera, without moving the person or the camera. This can be done quickly y means of the Double Swing-back, which allows the operator make any change, laterally or vertically, he desires, until the gure is properly delineated on the ground glass.

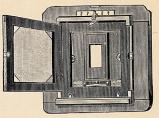


Sizes and Prices of American Optical Co.'s Portrait Cameras.

No.	Size.	To	Cover	Plate.						h Doi	
1	1-4	. 31/4	x 41/4	inch	es					\$20	0
2	. I-2	414	x 51/2							27	0
4	.4-4	61/2	x 81/2	,						35	0
5 Ex	tra4-4.8	x to i	ns.,	with p	latform	30 in	. lon	g		38	0
6	10	X 12				36				48	0
7	II	X 14	,			48		and ver	tical	64	0
8	12	X 15				48		,	Tone	72	O
	14					60				76	0
10	16	X 20			,	65				88	0
п	17	X 20				65				90	O
	18		,		,	70		,		100	O
13	20	X 24				72	,	,		110	0
-	22		,			72		,		130	O
	25					80				170	C
	30					100	, .	,		350	O

These Portrait Cameras are fitted with the Waterbury Curtain Slide Holders unless Bonanza Holders are wanted, and that preference is indicated when order is given.

American Optical Co.'s Highest Grade Attachments for American Optical Co.'s Portrait Cameras.



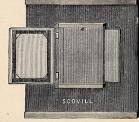
These attachments can, without bother, be laid aside when large-sized pictures are to be taken, and be replaced when Imperials or smaller pictures are to be made,

In ordering these, it will be necessary to specify name of camera in use, and the outside size of holder, to guard against possibility of error, and also to state whether Waterbury or Bonanza Holder is desired.

										ize			
8 x	10	Holder	and	Attachment	for	No.	7	Camera,	11	x	14	\$22	00
8 x	10			,			9		14	x	17	26	00
8 x	10					. :	11		17	x	20	32	00
IIX	14					,	13		20	x	24	42	00

American Optical Co.'s Adjusters for Cabinet Work.

These are made to fasten in the same place as the back diaphragms which must be displaced while the adjuster is used, and are designed for use with SCOVILL PATENT SINGLE LIGHT-WEIGHT HOLDERS. With each is a hinged ground glass.



Price of Adjuster with hinged ground glass and Carriage arranged for either $4\,\%$ x $6\,\%$, 5 x 7 or 5 x 8 Cabinet Negatives, according to choice, as follows :

er for 8 x 10 American Optical Co. Portrait Camera

ister	101	0.	X 10	with one	Single 1	Light-Weigh	t Holder,	\$8	oc
		10	X 12		,	,			OC
			x 14		,			10	OC
			X 15					11	OC
		14	X 17					11	OC
		15	x 18					12	OC
		17	X 20					13	OC
		18	X 22					13	1X
		20	X 24					14	CC
			-				100000000000000000000000000000000000000		

Extra Single Light-Weight Holders.

414	x	614	Single	Light-Weight	Holders	3	.per doz.	\$13	co
5	x	7					. "	14	50
5	x	8	,					15	50
614	x	81/2	,					18	00
8								21	00

The American Optical Co.'s Imperial Cameras.

EXTRA QUALITY.



The American Optical Co.'s "Imperial" Camera is one of the most useful and acceptable Studio Cameras ever made. It is provided with India-rubber Bellows, Double Swing-back, Swingprovided with India-rubber Bellows, Double Swing-back, Swing-ing Ground Glass, Lever Focusing Adjuster, and V-shaped Guides on the platform. The frame which carries the holder has a horizontal carriage movement, which, with the internal dia-phragm provided, enables the operator to make with this camera of the 8 x 10 size the following sizes and styles: Two promenade or imperial cards on an 8 x 10 plate, using

one 4-4 tube; any size single picture from 1-4 to 8 x 10; two cards on a 414 x 61/2 or 5 x 8 plate, using a 1/2 size lens.

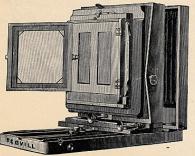
It will be observed, then, that this camera may be used for all single portraits up to 8×10 size, and for two promenades or imperials on one 8×10 plate. A smaller diaphragm enables you to make two cards on a 5×8 plate. The same style of camera is made in 4-4 size.

The 10 x 12 Imperial Camera is the same as the 8 x 10 Imperial and 4-4, only larger. All the Imperial Cameras can be arranged so as to take four cards and two Victoria or card size with two 1/2 lenses (simply by reversing the front-board, which requires an

illa	diapinagin).			W	ith Double
No	21.—4-1 Imper	ial Can	nera	S	wing-back.
	22 8 x 10	,			
	23IO X 12				60 00
	24II X 14				80 00
	25.—12 X 15				90 00
	2614 X 17	,			100 00

These Imperial Cameras are fitted with the Waterbury Curtain Slide Holders unless Bonanza Holders are wanted, and that preference is indicated when order is given.

The American Optical Co.'s Boston Imperial Cameras.



The 11 x 14 Boston Imperial Camera is the same as an 11 x 14 Portrait Camera, with the addition of an 8 x 10 Carriage and an

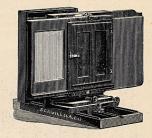
8 x 10 Holder, and is used to make two imperials on an 8 x 10 or 4-4 plate, using one 4-4 lens; two cards on a 5 x 8 plate, using one half size lens; two large panel pictures, 6 x 10 inches in size, can also be made, and regular work from 11 x 14 to one-quarter

							Swi	ng-ba	ck.
No.	30IIXI4	Boston	Imp'l	Camera,	with	8x10	attachment and holder · ·	.\$85	00
	31I4X17	,				8x10		.100	00
	3217X20					8x10		.IIO	
,	3318x22		,			8x10		.120	00
	3420X24					11X14		.140	00

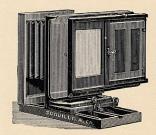
The Boston Imperial Cameras are fitted with the Waterbury Curtain Slide Holders unless Bonanza Holders are wanted, and that preference is indicated when order is given.

The American Optical Co.'s Royal Cameras.

EXTRA QUALITY.



This Camera does precisely the same work as an Imperial Camera, and has all the latest improvements. It has a carriage for the plate-holder, and the ground glass is where it is always ready to be brought into use. When the operator brings the plate-holder from the dark-room, he slides it into the carriage instead of placing it on the floor or some other inconvenient place while he obtains the focus. After securing the desired focus, he merely slides the ground glass to one side, in place of removing it, and simultaneously brings the plate-holder into place.



No.	40 8 x 10	Royal Camer	a, Double	Swing-back.	\$50	co
	40110 X 12				66	co
	4111 x 14				85	00
	4214 X 17				IIO	
	About the	0 sine on	outen one	and alone in		

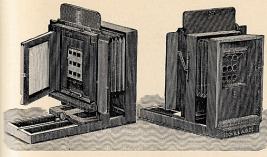
use in focusing when pictures and groups are being taken.

The American Optical Co,'s Royal Cameras are fitted with the Waterbury Holders unless Bonanza Holders are wanted, and that preference is indicated when order is given.

Cameras for Studio Use.

The American Optical Co.'s Multiplying Cameras.

EXTRA QUALITY.



gem of all Gem Cameras is the American Optical Co.'s 10 Multiplying Camera, which is represented by the double above. It is not duplicated by any other manufactory in world, neither is there any other which approaches it in design accuracy. One view shows the rear and the other the front

camera. Its regulation and movements examined. It is supplied with nine gem to work by sliding movements vertically horizontally, with assorted diaphragms, es, scales, and so on, simple in their nature, orking like an automaton, which, combined,

No. 50.-8 x 10. This camera will make sevtwo, thirty-six, and eighteen gems on a 7 x 10 ; nine gems on a 5 x 7 plate; eight ¼ size on a 7 x 10 plate, using two ¼ or ¼ lenses; cards, using one lens for copying, on a 7 x 10; four small Imperials or four Victoria cards x 10 plate, using a 4-4 lens; two Cabinets x 10 plate, using a 4-4 lens; regular work to 8 x 10 inclusive.

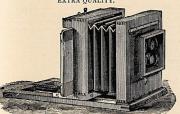
When arranged so as to take eight cards with lenses, it requires another diaphragm.

The holders contain two sets of kits for ferroand negatives -the latter with glass corners.

fitted (that is, without any tubes)..... \$76 00

The American Optical Co.'s Victoria Camera.

EXTRA QUALITY.



The introduction of the beautiful new size of photograph, d in America the "Victoria," in Prussia the Format," and in Austria the "Elizabeth," made it necessary to manufacture still another camera to accommodate it. This we have done, making it somewhat after the model of the Imperial, only adapting it to smaller sizes. It works a 5 x 7 plate, and may be used to make two Victoria cards, using one tube on a 5 x 7 plate; four cartes-de-visite, using four ¼ tubes, on a 5 x 7 plate; and by reversing the four lenses it will make eight "bon

tons" on a 5 x 7 plate. It also makes all regular sizes, from 1-6 to 5 x 7, using one tube. Four 1/4 lenses only accompany the camera when it is ordered

The above illustration is a fair representation. It is a charming piece of apparatus and works admirably. A novelty we have introduced with it is the catch which keeps the carriage movement in place when the camera is used as a multiplier.

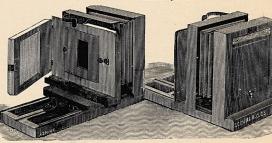
No. 52.—New style, using two ¼ size tubes only (without tubes)......... 24 00

New Style, with two 1/4 size tubes ... 34 00

N. B .- With this latter camera, which has only two ¼ tubes, the same work can be done as with the four-tube Victoria Camera. It is the only two-tube camera that will do this work. The front block separates according to the size required. These Cameras are fitted with Bonanza or rabbeted Holders.

The Chicago Card Camera.

EXTRA QUALITY.



This is a Camera adapted for making two card pictures on one plate with one tube, and at the same time so arranged with holders and tablets that the regular sizes, from 1-9 to 1/2 size. may be made with one tube. Until this camera was made by the American Optical Company, the fraternity had to put up with one of a very inferior grade. We have paid especial attention to quality and strength, as well as to beauty. It meets with an unexpected acceptance and demand. We call it "The Chicago Card Camera." The drawing above shows a rear and a front view of the camera. It will be seen that it is supplied with the Swing-back-although made without-with fine Focusing Screws, V-shaped Wooden Guides, Diaphragms, etc., and that no pains have been spared to make it good and exact.

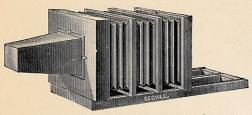
With Double

No. 53.-Chicago Card Camera for two cards on a 41/2 x 61/2 plate, and 1-9 to 1/2 size pictures, reversible .. \$36 oc

Solid Glass Corner Holders are supplied with this Camera.

Cameras for Studio Use.

American Optical Co.'s Copying Cameras.



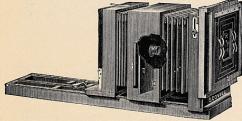
These Cameras are made of hard-wood shellaced, not varished. Na rally, they are without swing, but in every requisite they are complete. Such varied lengths of bed are required and ordered that we can only give a price list for Copying Cameras with the regulation length of bed. We make them to order of any length of platform desired, either rigid or detachable and with either single or ouble bellows. Occasionally swing-back and vertical shifting front also are supplied to order.

Estimates promptly furnished.

No.	706½ x 8½,	with bee	1 3 feet	in leng	gth\$25 00
	71.— 8 x 10		334	,	30 00
	72 -10 X 12		4		38 00
	73.—II X 14		41/2		45 00
	74.—14 x 17		5		58 00
	75.—17 X 20		6 .		64 00
	7620 x 24		6		90 00
		T arver c	igac me	do to o	rder

When ordering Copying Camera, please state style of Holder desired; also give length of cone, if that is needed.

The American Optical Co.'s Enlarging, Reducing and Copying Cameras.



When ordering, please specify number and sizes of kits, also tyle of Holder wanted.

No	. 61	Size	, 61%	x 81	6, 4	ft.	be	d											Price,	\$30	oc	,
	62.	"	8 x	10, 5	ft.	bec	l.,													35	00	,
	63.		IO X	12, 5																48	OC	,
	64.		IIX	14, 5																60	00	
	65.		14 X	17, 6							 									72	00	
	66.		17 X																	90	00	
	661/2.		18 x	22, 7																100	00	
	67.		20 X	24. 7																IIO	00	
			Snor	iol e	700	200	1 0	+	-1	01	m	0	de	to	0	rv.	ما	*				

The form of construction of this new Camera is apparent by the illustration here shown. The experienced copyist will not need any such simple directions for use as we append.

Directions for Use.

To copy a negative in the natural size, place it in the kit on the front of Camera and button it in. Attached to the center frame of the Camera is a division upon which, on the side towards the Camera front, a lens is mounted. Suppose this to be a quarterplate Portrait Lens, the focal length of which we will suppose to be 4 inches—draw back the center frame and the Lens twice the focal length of the Lens (8 inches); slide the back frame with ground glass the same distance from the center frame. To enlarge with the same Lens to eight times the size of the original, the center of the Lens must be 4½ inches from the negative, and the ground glass be 36 inches from the center of the Lens. To reduce in the same proportion, reverse and have 36 inches from the center of the Lens to the negative, and from the center of Lens to ground glass 4½ inches.

Table for Enlargements.

Focus of Lens.	Г	ABLES	FOR E	NLARGE	EMENT	AND R	EDUCTI	CN.
Times	1	2	3	4	5	6	7	8
Inches.	In. 4 4	In. 6 3	In. 8 23/4	ln. 10 21/2	In. 12 2 }	In. 14 2 ¹ / ₃	In. 16 2 ² 7	In. 18 2}
21/2	5 5	7½ 3¾	10 31	12½ 3½	15	17½ 2½ 2½	20 2 ⁶ / ₇	22½ 2½ 2½
3	6	9 41/2	12 4	15 3 ³ 4	18 3 ^a 5	2I 3½	24 3 ³ 7	27 3 ⁸
31/2	7 7	10½ 5¼	14 43	17½ 4¾	21 4 ¹ ₅	24½ 41½	28 4	311
4	8 8	12 6	16 51/4	20 5	24 45	28 4 ² / ₃	32 4‡	36 4½
41/2	9	131/2	18 6	221/2 5.58	27 53	311 51	36 5‡	40½ 512
- 5	10	15 7½	20 6 g	25 6¼	30 6	35 5 8	40 57	45 58
51/2	11	161/2	22 7½	27½ 6¾	33 61/2	38½ 6,5	44 6#	49½ 6¾ 6¾
6	12 12	18 9	24 8	30 7½	36 71	42 7	48 64 7	54 64
7	14 14	21 10½	28 91	35 834	42 83	49 81	56 8	63 7‡
8	16 16	24 12	32 103	40 10	48 93	56 91	64 9‡	72 9
9	18 18	27 13½	36 12	49	54 105	63 101	72 10 ² 7	81 101

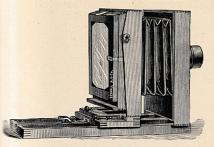
It is assumed that the photographer knows exactly what the focus of his lens is, and that he is able to measure accurately from its optical center. The use of the table will be seen from the following illustration:—A photographer has a carte to enlarge to four times its size, and the lens he intends employing is one of six inches equivalent focus. He must, therefore, look for 4 on the upper horizontal line, and for 6 in the first vertical column, and carry his eye to where these two join, which will be at 30—715. The greater of these is the distance the sensitive plate must be from the center of the lens, and the lesser the distance of the picture to be copied. To reduce a picture any given number of times the same method must be followed, but in this case the greater number will represent the distance between the lens and the sensitive plate. This explanation will be sufficient for every case of enlargement or reduction.

If the focus of the lens be twelve inches, as this number is not in the column of focal lengths, look out for 6 in this column and multiply by 2; and so on with any other numbers.

Cameras for Studio Use.

To meet the wants of those customers who give preference to the Scovill Cameras over all others, but who wish cheaper cameras an are listed in the foregoing pages, the Peerless and Acme Cameras are made at the Scovill & Adams Co.'s New Haven factory. The Cameras there produced are warranted accurate and reliable, in fact superior to any others in the market, excepting only the American Optical Co.'s extra quality cameras. The Acme and Peerless Cameras are offered at low prices simply because they are reduced in large quantities.

"Peerless" Portrait Cameras.



These Cameras are made of seasoned Mahogany, well polded. They have the Lever Focusing Attachment. Above 10 x 12 they have the Telescopic Extension Platform, Double Swing-

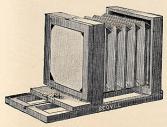
These Cameras are either fitted with Bonanza Holder with Boy Plate Rail in addition to the Wet Plate Trough, but if so ardered they may be fitted with plain Rabbeted Holders.

				*** * *** ***								ng Ba	
00	8 x	10	with	Plain Plati	form							\$30	00
011	o x	12	-									42	00
02.—1	IX	14		Extension	Platfor	m						60	00
03.—1	4 X	17										70	00
04.—1	7 X	20			,							84	00
05.—1	8 x	22										90	00
05.—2	20 X	24										100	00
	01.—1 02.—1 03.—1 04.—1 05.—1	01.—10 X 02.—11 X 03.—14 X 04.—17 X 05.—18 X	00.— 8 x 10 01.—10 x 12 02.—11 x 14 03.—14 x 17 04.—17 x 20 05.—18 x 22 05.—20 x 24	01.—10 X 12 F 02.—11 X 14 F 03.—14 X 17 F 04.—17 X 20 F 05.—18 X 22 F	01.—10 X 12	01.—10 x 12	01.—10 x 12	01.—10 x 12 , , , , , , , , , , , , , , , , , ,	01.—10 x 12 , , , , , , , , , , , , , , , , , ,	01.—10 x 12 , , , , , , , , , , , , , , , , , ,	01.—10 x 12	01.—10 x 12 ,	02.—11 x 14

The Smaller Holder, same as furnished with the Boston Imperial areas, the price is as follows:

₹10.—11 x 14	Peerless	Portrait	Cameras,	with 8 x 10 Attach- ment and Holder.	\$80	00
- 411.—14 X 17		,		**	95	00
- 412.—17 X 20					105	00
- 41318 X 22					115	00
- 414.—20 X 24				with 11 x 14 Attachment and Holder,	135	00

Acme Standard Portrait Cameras.



Acme Portrait Cameras have Rubber Bellows, Swing Ground Glass, and Reversible Holder.

Acme Standard Portrait Cameras.

							C	Plain solid : orner l	glas	h S	back Bona	ınza	
No.	500.—1-4	size,	rever.,	plate	e 31/4	x414	inch	es	\$8	00			
,	501.—1-2		. ,		41/4	x 51/2			10	00			
,	5024-4			*	61/2	x 81/2			14	00	\$24	00	
,	503.—Ex	. 4-4			8	x 10			20	00	26	00	
P	504				8	x 10	0.	with					
	í	ocus	rack						22	50	28	00	
	505.—10	X 12	size, re	vers	ible,	with	focus	rack	25	00	33	00	
	506.—11	x 14		,				*	35	00	45	00	
	507.—14	x 17							45	00	55	00-	
	51061	x 8	4 Acm	Sta	ndaı	d Por	trait	Cam-					
	(era, w	rith Slic	ling	S. G	. Cor.	Hole	der	19	00			
,	5118 3	10 A	cme St	auda	ard I	ortra	it Car	nera,					
		with :	Sliding	S. G	. Co	r. Ho	lder.		27	00			

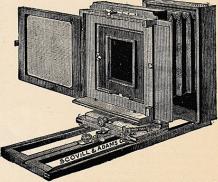
Solid glass corner or rabbeted Dry Plate Holders supplied with these cameras.

Peerless Imperial Camera No. 1.

This is the best and cheapest Camera on the market for the money. It is made of first growth mahogany, neatly polished, has carriage with sliding Bonanza Holder, extra rail rubber bellows, &c.

					PRICE	ES:				
8	x	10,	Peerless	Imperial	Camera	No. 1,	D. S.	B	.\$35	00
10	X	12,							. 45	00
11	X	14,				W	,		. 70	00

Peerless Imperial Camera No. 2.



These Cameras are the same as the No. 1 but are *not polished*.

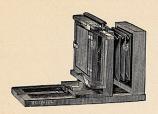
Without

D. S. B. Swing.

8 x 10.\$25 00 \$20 00

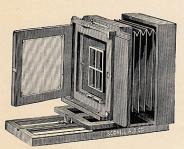
TO X 12...... 40 00

called the



No. 530.—" New York Gem" Camera, complete, with four 1-9 Darlot tubes; will make four, eight and sixteen pictures on a 1-4 plate, two cards on a		
1-2 plate, 1-9 to 1-2 reversible	\$28	00
Without the four 1-9 tubes	18	00
 531.—I-4 size Gem Camera, with four Darlot tubes, complete; will make four pictures on a 1-4 		
plate, and 1-9 to 1-4, reversible	23	00
Without the four 1-9 tubes	11	00
532.—I-2 size Gem Camera, with six Darlot tubes; will make six pictures on 1-2 plate, and 1-9 to 1-2,		
reversible	34	
Without the six 1-9 tubes	17	00
 533.—5 x 7 size Gem Camera, with four Darlot tubes, complete; will make four pictures on a 5 x 7 plate and regular work—not reversible—1-4 		
to 5 x 7	32	00
Without the four 1-4 tubes	11	00
The holder and kits for the above camera are rabbeted.		

Cincinnati Gem Cameras.



This Camera, by some called the Lakeside, makes with one tube one picture on either a 1-4, 1-2, 4-4, 8×10 , 5×7 , or 7×10 , plate, and two on either a 5×7 , 7×10 , or 8×10 plate.

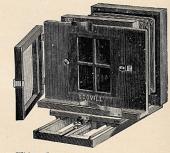
It makes, with four 1-4 gem tubes on brass plate, four or eight pictures on a 5 x 7 or 7 x 10 plate.

The 7 x 10 and 5 x 7 are rabbeted kits. The kits for all other sizes are supplied with solid glass corners—Scovill's Improved. It has but one outside holder, in which all the kits reverse.

Cincinnati Gem Cameras.

	9	nitted with solid Glass rner Holder	With four	Wate	ith rbu lder
No.	540—Sliding S. G. C. Holder (without Carriage or				
	Swing)	\$22 00	\$37.00		
	541- Carriage Movement	25 00	40 00	\$32	00
	542- Single Swing	28 00	43 00	35	00
	543- Double Swing	33 00	48 co	40	00
,	544—Cincinnati Imp'l Camera, Carriage	27 00)	with Bonar	770	
	545—Cincinnati Imp'l Camera, Double Swing	30 00		12/66	
	When ordering please state styl	e of Hold	lers wanted		

'Acme 5 x 7 Standard Victoria Cameras. (THE FERROTYPER'S CAMERA.)



No. 515.—Without Lenses 516.—With four ¼ Lenses on a brass plate	\$18	00
The newest pattern of the standard quality of V		
Cameras, which produces 9 and 18 pictures on a 5 x 7 pl		

Acme Multiplying Victoria Camera.

(THE FERROTYPER'S CAMERA.)



No. 517.—The Acme Multiplying Victoria Camera will make nine or eighteen Gems on 5×7 plate, using 9 1-9 Gem Lenses. It has Sliding Holder, and admits of cabinet work on 5×7 plate and two pictures on that size or smaller when gem fixtures are removed and single.

Price, without Lenses......\$25 00

When ordering one of the above Cameras, please state whether rabbeted or solid glass corner Holder is desired.

Studio Stands.

Elite Studio Stands.

PATENTED.



These are the only Stands suited in workmanship and finish, a size, to the large American Optical Co's Portrait Cameras, their great length of bellows and extension platform. Pracportraitists cannot fail to admire the case with which these can be adjusted to any desirable height or inclination, and esseless manner in which they may be moved from place to the educant programs and correct construction.

their elegant appearance and accurate construction.

The proper elevation of the "Elite" stand is obtained by
g a wheel with handle, within reach of the operator, so that
ay adjust the height or inclination of this camera without
his head from under the focusing cloth.

by means of the wheel at the rear end of the platform, the stad position of the platform may be inclined upward or and to a limit of 13 degrees. In the No. 2 size the platform two inches long and twenty-six inches wide, and its length be increased to seventy inches by an attachment which out forward, making it quite long enough to support a copying camera. The semi-circular cut-out, at the rear end platform, is a convenience to the operator, who is thus do stand closely up to the ground glass, no matter how the camera may have been pushed forward; bending of the is obviated, which is a necessity with all the older stands.

- Dormitten, which is a necessity	mich dir circ c	ide bearing
"ELITE" STUDIO STANDS.	No. 1 Size.	No. 2 Size.
thest point from platform to floor	48 inches.	48 inches.
Lowest " " " " "	32 "	32 **
adth of platform	22 (1	26 11
Length of platform without attachment	45 "	52 "
" with "		70 "
PRICE, with Rack for Plate Holder	\$22.00	\$36 00

Lever Adjustment Stands.



The Lever Gallery Stands are light and easily moved, yet perfectly free from vibration. The adjusting levers are so arranged that the stand may be made level at any desired height and then depressed.

They have brass mountings and pocket to hold Plate Holder.

from 8x 10t0 11x 14 19 00

Perfect Camera Stand.

nd. Acme Camera

Stands.

The "Perfect" Camera Stand has been manufactured for many years, and is, as it has been justly called, a "Perfect" Camera Stand. It is made of finely poilshed black walnut and has best of metal castings. It has superior advantages for studio cameras up to 8 x 10 size.

Price, with Plate Holder Pocket....\$16 00

No. 1, for 1-2 and 4-4 Cameras....... \$8 00 No. 2, with Plate Holder Pocket, for 8x10 and 10x12 Cameras. 12 00

Excelsior Camera Stands.

(WITH IRON CENTER.)

No.	I,	for	1-4	and	1 1-2	Cameras			.9	3	75
	2,		4-4							4	00
	3,		8 x	10						4	00

The Semi-Centennial Camera Stand.

PATENTED January 7 and March 11, 1890

Reasons why you should adopt it:
FIRST—Because you can lower the Camera within 13 inches of the floor, this being lower than

any other stand will admit of.

SECOND — Because it is the only Camera Stand using Rubber Wheels as castors, therefore it is perfectly noiseless.

THIRD — By the use of its coiled springs and a key you can make it counterbalance any weight of Camera from 8 x 10 to 11 x 14 inclusive.

Weight of Stand, packed

Weight of Stand, packed ready for shipment, 95 lbs.

Price, boxed......\$25 00

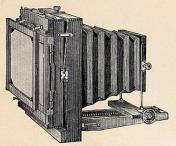
Cameras for Views.

American Optical Co.'s Star View Cameras.

The Star Reversible Back Cameras have the patent reversible back, with automatic latch, which allows Holder to be inserted without holding back the ground-glass frame, the rack and pinion movement, and the patent latch for making the bed rigid in-

stantaneously.

Each Camera has one Daisy Holder with patent Registering



STAR REVERSIBLE BACK CAMERAS.

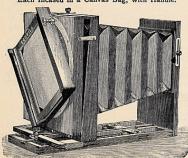
			For	V	ew					Swine	gle -back.	Swing-	
N	0.	110		x	5	front	focus			. \$25		\$29	
-		111	414	x	51/2					. 26	00	30	00
,		112	414	x	61/2					30	00	34	00
,	,	113	5	x	7	,				. 32	00	35	00
,		114	5	x	8					. 34	00	38	00
,		115	61/2	x	81/2					. 36	00	40	00
		116	8	x	10					. 40	00	44	00
		117									00	64	00
,		118	14	x	17, 1	vith F1	amm	ang	Curtai	n			
		Slide	e Sin	ng	le H	older.				. 70	00)	75	00
		1181/2	-18	X :	22, W	rith Fl	amma	ang (Curtai	n		Back 75	
		Slide	Sin	ng	le H	older.				. 90	00 }	3 95	00
		1202									1	8	
		Slide	Sir	19	le H	older.				. 95	00	100	00
											than	one Ho	older

American Optical Co's Revolving-Back Cameras.

(PATENTED.)

made to order at extra price.

Each Incased in a Canvas Bag, with Handle.



(BACK-FOCUS PATTERN.)

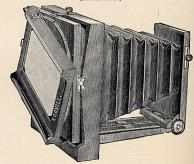
Wherein lies the morit and attractiveness of the Revolving-Back Camera, that photographers want to cast aside cameras now

in use and procure one of this new pattern? Briefly stated, it enables the view-taker to secure either an upright or horizontal picture without changing the plate-holder after it has been slid into the carriage. No other camera can with such wondrous ease and celerity be changed from the vertical to the upright, or $vi\acute{e}e$ versa. The carriage is simply turned about in the circle and automatically fastened. By this latter provision the carriage may be secured at either quarter of the circle. Ordinarily, the slide will be drawn out of the holder to the right; but in certain conwill be drawn out of the holder to the Fight; but in certain confined situations, the ability to withdraw the slide to the left enables the photographer to obtain a view which he could not get with the usual provision in a camera. The photographer of experience is well aware of the difficulty, when taking an upright picture with a large camera without the revolving back feature of reaching up to draw up the slide at the top, and, what is more essential, of getting out the slide without fogging the plate in the

Grace and strength are combined in the Revolving-Back Camera, and its highly desirable features are gained without the sacrifice of steadiness or any other essential principle in a good

Revolving-Back Cameras.

(PATENTED.)



(FRONT-FOCUS PATTERN.)

REDUCED PRICE LIST.

Revolving-back Cameras, each incased in a canvas bag, with handle, and above 14 x 17 size, with two handles.

	R	EVERS	SIBL	Ε.			Single Swing.	Double Swing.	
Vo.	120For	View	4	X 5	in.		\$27 00	\$32 00	
	121		414	X 51/2			29 00	34 00	
	122.—		414	x 61/2			31 00	36 00	
	123.—		5	x 7			33 00.	38 00	With Revolving
	124.—	,	5	x 8			35 00	40 00	Back and
	125.—		61/2	x 81/2			40 00	45 00	Reversible Back and
	126.—		8	x 10			45 00	50 00	Holders for each
	127.—		10	X 12	-		60 00	65 00	Back
	128	,	11	x 14	. '	with detachable revolving-back	65 00	70 00	\$90 00
,	129.—	,	14	x 17		,	75 00	80 00	105 00
	130		17	X 20			85 00	90 00	115 00
	131.—		18	X 22	,		95 00	100 00	130 00
	132.—	,	20	x 24			115 00	120 00	150 00
	These Ca	meras	are	fitted	wi	th Daisy	Dry-p	late Hol	ders.

Please state, when ordering any size below 10 x 11 whether front or back focus is desired.

Revolving-Back Cameras, front-focus, not made above 8 x 11

Canvas Cases to contain Camera with more than one Holder made to order at extra price.

Cameras for Views.

American Optical Co.'s Manifold Cameras.

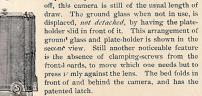


this camera serves manifold purposes as its name indig could be more simple or more easily manipulated. old Camera has special advantages peculiar to itself, ses the greatest number of desirable features which ombined in a camera without sacrificing lightness and or having complicated adjustments. The unique which controls the horizontal and vertical swings was by Mr. W. J. Stillman, of the editorial staff of the TIMES. To this has been added a central latch for see of bringing the swing movements within perfect of the operator. An approximate focus is obtained



with the rear portion of the camera, which is provided patent reversible back. The fine focus is obtained by the rack and pinion movement, moving the front upon the lens is attached

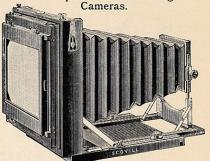
this camera is made to compass the great length of an in the first illustration, the rear portion of the bed wholly detached and, when desired, one-third of the g portion of the platform; a great advantage when ng interiors, when an obtrusive tail-board renders almost an impossibility. With one-half of the bed taken



List, including Canvas Case for Camera and one Holder:

Tan314	x	41/2	size										 							\$30	,	0
1414	x	5			 		 				 				,					32		0
143434	x	61/2					 				 									38	;	O
nas5	x	7									 			 				×		38	3	0
14561/2	x	81/2	,		 		 				 									45	,	0
паб8	x	10					 				 					 				50	,	0

American Optical Co.'s Irving View



The Irving Camera recently introduced by the American Optical Co. was awarded the highest prize by the judges at the American Institute Fair. They expressed themselves as unable to see how a more complete, compact, light, handsome, and serviceable camera could be made.

The Irving Cameras all have swing-front in addition to swing-back, also vertical shifting front-board, and the back can be moved toward the front when a very short focus lens is used. They have the Howe patent reversible back, fitted with selflocking, ground-glass frame.

One of the best features of the camera is the absence of detachable screws. An idea of this is conveyed by the illustrations showing the camera when extended and the canvas carrying



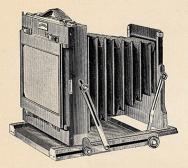
A superb canvas case, the finest ever made, is supplied with each one of the Irving Cameras. Price list is as follows .

			Single Swing.	Double Swing.
No.	200 4	x 5	 \$27 00	\$32 00
	201 5	x 7	 33 00	38 00
,	202,- 5	x 8	 35 00	40 00
	203 61/2	x 8½	 40 00	45 00
	204 8	x 10	 45 00	50 00
	205.—10	x 12	 60 00	65 00
,	20611	x 14	 65 00	70 00
,	20714	x 17	 75 00	80 00
	20817	x 20	 . 85 00	90 00
	20918	x 22	 95 00	100 00
	21020	x 24	 115 00	120 00

In order to convey an idea of the lightness of these cameras, it is sufficient to say that the 5 x 8 size camera weighs only 3 lbs.

Cameras for Views.

Elm City Outfits.

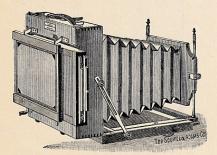


Are made from the finest selected mahogany, are handsomely polished, have Cone Bellows, Reversible Back, Vertical Shifting Front. The bed telescopes with rack and pinion movement for focusing. The body of the Camera is also arranged to telescope with the bed, which makes the instrument capable of taking a very short focus lens.

Price of Camera and Holder, with Canvas Case and a No. 1 Albion Tripod:

5 x 7 size\$33 oo	6½ x 8½\$40 00 8 x 10 50 00
5 x 8 , 36 oo l	8 x 10 50 00

The Compact View Outfits.



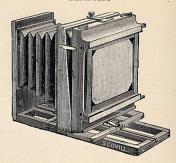
The Compact View Outfits comprise a Compact View Camera—which is a polished mahogany box—with Patent Reversible Swing-Back, with Turn-Table on Platform, and with Raising Front which can be set back on Platform when Camera is used with a short focus lens.

One canvas Carrying Case for Camera. One Scovill Adjustable Tripod.

5	x 7	Compact	View Outfit.				 								20	(00
5	x 8	*					 					 ,			22	(00
61/2	x 81/2						 								25	(co
8	X IO		,		4.					y		J.	H		20		00

Acme Reversible-Back View Cameras.

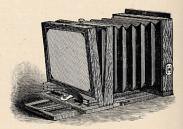
(PATENTED.)



These Cameras are supplied with Cone Bellows, Paters Reversible-Back, Vertical Shifting Fronts and Folding Platforms with patent bed-latch—are compact, light, and portable.

					Single Swing.	Double Swing-back
No.	560 61/2	x	81/2	reversible	 \$29 00	\$33 00
	561 8	x	10		 34 00	38 00
	562.—10	x	12		 40 00	45 00
	563.—11	x	14		 50 00	55 00
	564.—14	x	17		 60 00	- 65 00
	565.—17	x	20		 70 00	75 00
	20	x	24			100 00
	18	x	22			90 00

Acme Landscape Cameras.

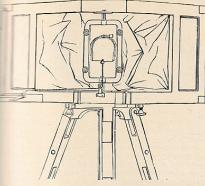


This new Camera is made of mahogany, polished, and has Single Swing-Vertical Shifting Front, Cam for focusing, Patent Side Latch for Folding Platform, and Side Plate for reversing. It was designed for professional photographers who wish to came about a very light, compact View Camera, which is cheap, and yet in every respect substantial and serviceable.

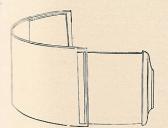
569.—4 x 4 size, with one Scovill Patent Double Dry Plate Holder...... 15

Cameras for Views.

The Scovill Panoramic Camera.

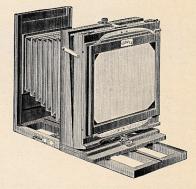


exact pleasure in introducing to the photographic fratertew Panoramic Camera, which is made in various dimento the size capable of making photographs 18 x 48 inches, the design of constructing these cameras in hemispherical been invented; a new movement of crossing the lens segments of the circle, and an automatic release for the also been constructed. Carbutt's No. 27 films, or his attic films of the same sensitiveness, are used by means seniously constructed flexible dark slide, which permits of serve curve to conform with the back of the camera. The serve solidly and serviceably made, elegant in finish, and way maintain the world wide reputation of the American Company. The cuts shown herewith give an idea of the appearance of the camera, and the dark slide for holding



The prices of these Cameras, including in each case a substantial wooden box or trunk for holding the instrument, a suitable tripod, a panoramic printing frame, two holders, two developing baths, and the celebrated Swift lens, are given below.

The American Optical Co.'s Landscape Reversible Camera.



Made of the finest mahogany, with the American Optical Co.'s high grade polish. rubber bellows, rising front, double swing reversible patent spring back. It is the finest Tripod Camera on the market for the price, which includes Camera, a handsome Carrying Case and one Light Weight Double Dry Plate Holder.

PRICES :

5	x	7,	Double	Swing	Back	٤										\$21	00
5	x	8,					 									. 22	00
61	x	81	, .				 									. 23	00
8	x	10,				:.	 									. 25	00
11	x	14,					 									. 35	00
14	x	17,		,												. 50	00



Outfits for Viewing.

Favorite Apparatus Outfits,

All Articles of which are Warranted Accurate in Every Respect.

These Outfits are lighter, more compact, far handsomer and more accurate than any which are offered at the same price. Many professional photographers have bought them and use them constantly.

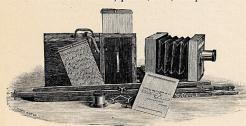
Favorite Outfit A, price \$10.00, comprises



A FAVORITE VIEW CAMERA to produce 4 x 5 inch pictures, with vertical shifting front, single swing movement, rubber bellows and folding platform, with patent latch for making bed rigid instantaneously.

- 1 Scovill Double Dry Plate Holder (Reversible), with patent Registering Slides, and with Kits.
- I Taylor Improved Folding Tripod.
- I No. A "Waterbury" Achromatic Lens, with revolving diaphragm.
- 1 Carrying Case.

Favorite Outfit B, price \$12.00, comprises



A Favorite View Camera, to produce pictures 5×8 inches, with vertical shifting front, single swing movement, rubber bellows and folding platform, with patent latch for making bed rigid instantaneously; also

- I Scovill Double Dry Plate Holder (Reversible), with patent Registering Slides, and with Kits,
- I Taylor Improved Folding Tripod.
- I No. B "Waterbury" Achromatic Lens with revolving diaphragms.
- I Carrying Case.

Favorite Outfit C, price \$18.50, comprises



A FAVORITE VIEW CAMERA, to produce 5 x 8 inch pictures, with vertical shifting front, single swing movement, rubber bellows and folding platform, with patent latch for making bed rigid instantaneously.

This Camera is constructed so as to make either a picture on the full size of the plate (5 x 8 inches), or by substituting the extra front (supplied with the outfit) and using the pair of lenses of shorter focus, it is admirably adapted for taking stereoscopic negatives. Included in this outfit are also

- 1 Scovill Double Dry Plate Holder (Reversible), with patent Registering Slides, and with Kits.
- I B "Waterbury" Achromatic Lens, with revolving diaphragms.
- 1 Pair "Waterbury" Achromatic Matched Stereoscopic Lenses.
- 1 Taylor Improved Folding Tripod.
- 1 Carrying Case.

Favorite Outfit D, price \$15.00, comprises

A FAVORITE VIEW CAMERA to produce pictures 6½ x 8½ inches with vertical shifting front, single swing movement, rubber bellows and folding platform, with patent latch for making bed rigid instantaneously; also

- I Scovill Double Dry Plate Holder (Reversible), with patent Registering Slides, and with Kits.
- I Taylor Improved Folding Tripod.
- 1 No. BB "Waterbury" Achromatic Lens with revolving diaphragms.
- 1 Carrying Case.

Favorite Outfit E, price \$25.00, comprises

A FAVORITE VIEW CAMERA to produce pictures 8 x 10 incheswith vertical shifting front, single swing movement, rubber bellows and folding platform, with patent latch for making bed rigid instantaneously; also

- r Scovill Double Dry Plate Holder (Reversible), with patent Registering Slides, and with Kits.
- 1 Taylor Improved Folding Tripod.
- r No. C "Waterbury" Achromatic Lens with revolving the phragms.
- 1 Carrying Case.

Equipment A-A-A.-Price, \$20.00.

Complete in every requisite for making the Highest Class Pictures.

Lacking nothing for view taking, development and the prinning and mounting of photographs.

Consisting of Favorite Apparatus Outfit A	\$10	00
Also I Developing Outfit, 4 x 5	. 5	25
. 1 Printing and Toning Outfit, 4 x 5	. 4	37
5 x 7 Favorite Equipment	. 24	20

Outfits for Viewing.

Favorite Apparatus Outfits-Continued.

Equipment B-B-B.-Price, \$24.50.

lete in every Requisite for making the Highest Class

ing of Favorite Apparatus Outfit B	\$12	00
Developing Outfit, 5 x 8	6	50
# Printing and Toning Outfit, 5 x 8	6	38

Equipment C-C-C .- Price, \$30.00.

Pictures

ing of Favorite Apparatus Outfit C\$18	50
Developing Outfit, 5 x 8	50
Printing and Toning Outfit, 5 x 8 6	38

Equipment D-D-D.-Price, \$28.00.

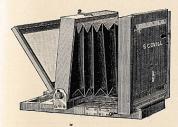
sisting of Favorite Apparatus Outfit D\$	15	00
Developing Outfit, 61/2 x 81/2	7	00
Printing and Toning Outfit, 61/2 x 81/2		

Equipment E-E-E.-Price, \$40.00.

sting of Favorite Apparatus Outfit E\$25	00
Developing Outfit, 8 x 10 8	
Printing and Toning Outfit 8	50

Waterbury Outfits.

with Double Film Holders, or with Glass Plate Holders.



The Waterbury Cameras, introduced in 1885, are like other eras and apparatus made by the American Optical Company approachable!

They are made of mahogany, are well polished, have rubber bellows, folding platform, patent latch for making bed rigid instantaneously, single swing, vertical shifting front, and are as light and compact as substantial cameras can be constructed.

4 x 5 Waterbury Outfits, complete.....\$12 00

- 1 Single Swing Camera, described above.
- I Light Weight Double Dry Holder, with Patent Registering Slides.
- 1 Wooden Carrying Case.
- I Improved Taylor Tripod.
- I No. A Waterbury Lens with Revolving Diaphragm.

Latest Sizes introduced:

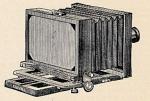
414	x	51/2	Waterbury	Outfit,	complete							\$13	00
414	x	61/2										14	00
5	x	7					 		٠.		 	16	00

5 x 8 Waterbury Outfits, complete\$16 50

consisting of

- 1 Single Swing Camera, described above.
- I Light Weight Double Dry Holder, with Patent Registering Slides.
- 1 Wooden Carrying Case.
- I Improved Taylor Tripod.
- 1 No. B Waterbury Lens, with Revolving Diaphragm,

Elite View Outfits.



An Elite View Outfit comprises: One Single Swing Mahogany polished Camera, with vertical shifting front; Rubber Folding Bellows and Rack and Pinion Focusing Adjustment.

By means of the side plate the Camera may be reversed when vertical views are desired. To this Camera, which is very light and compact, is fitted one of the incomparable Light Weight Holders, with Patent Registering Slides. The Outfit also comprises a Scovill Extension Tripod, a Waterbury Achromatic Lens, with Revolving Stops, and a Carrying Case.

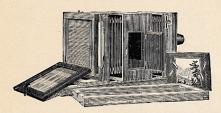
Price List is as follows:

Size o	of '	Viev	v.																				
41/4	x	61/2	٤.																		\$17	0	0
5	x	7									 						 				17	5	0
5	x	8			 																18	0	0
61/2																							

Cameras.

The Walmsley Photo-Micrographic Camera.

Manufactured by the American Optical Co. Now in use by many Colleges and leading Microscopists, and is an efficient, practical and cheap instrument for the purpose.



It is made in three sizes: the cheaper, No. 1, selling for \$18.00), is adapted only to the making of negatives on plates $3\frac{1}{2} \times 4\frac{1}{2}$, or $4\frac{1}{2} \times 3\frac{1}{2}$, as may be necessary. The complete form No. 2 (costing \$39) is also a miniature enlarging, reducing, and copying camera, admirably adapted to the production of lantern transparencies from any size negative up to 41/4 x 51/2.

The Camera (of mahogany) is square, carrying a Flammang single plate-holder for $4/8 \times 5/9$ plates; usable vertically or horizontally, and with kits of $3/8 \times 4/9$ plates. The bellows are in two sections, with a central division of mahogany, which carries a removable partition, to which a suitable rectilinear photographic lens can be attached, for enlarging, reducing or copying. A light-tight door on one side of this wooden section gives ready access to the lens for inserting or removing diaphragms, or other necessary manipulations, whilst a milled head, accessible from the same opening, clamps the lens-bearing section firmly to the bed of the camera at any desired point.

The bellows have an extension of two feet in addition to the length of the box, sliding very smoothly upon V-shaped ways, which for greater convenience are made in two sections, firmly attached to each other by wooden dowels, and a solid brass screw,

worked by a milled head worked lower, and a sort of the steeps worked by a milled head. The bellows are firmly held at any desired point of extension by a cam, operated by a lever conveniently placed at the rear of the focusing-screen, which latter is hinged at the bottom, and, when not in use, lies out of the way upon the extension bed. when not in use, lies out of the way upon the extension bed. The screen itself is of the very finest ground glass, but is used only for arranging the portion of the object to be photographed properly in the center of the plate, as no surface can be ground intely enough to permit the sharp focusing of any delicately-lined object. For this purpose, a circle or disc of thin microscopic covering glass is attached with balsam to the center of the ground the control of the glass screen, which clears away all the inequalities of the latter, and leaves an exquisitely fine surface to receive the image, which, by using an ordinary focusing-glass, may be as sharply defined as in the eye-piece of the microscope.

The front of the camera (which is double-shifting, for the

purpose of centering carries a cone-shaped tube, which receives the tube of the microscope when the latter is inclined to a horizontal position, and conveys the image-bearing rays of light therefrom into the body of the camera. This cone is removable, and in its place may be inserted kits, carrying negatives from quarter to half size, for enlargement or reduction to lantern slides as may be desired. Or a front-board, bearing a lens, may be inserted in its place, converting the camera into a copying one. Indeed, a more complete instrument for all the purposes for which it was devised could scarcely be conceived or desired.

In use, the camera is attached to a solid platform (which also carries the microscope and lamp) by a screw such as is used with an ordinary tripod. By this means any jar or tremor produced by a passing vehicle or other means, is communicated to microscope and camera alike, preventing any diminution of sharpness in the negative. By this arrangement, also, the whole apparatus is so compact that, with the bellows closed, the operator can easily see the image upon the ground glass, and at the same time reach the milled heads upon the microscope controlling the stage and focusing-movements, permitting the arrangement of the subject with the greatest nicety. But when the bellows are extended to their full length, some appliance becomes necessary to

operate the fine adjustment of focus, whilst the eye can discern the changes upon the screen. This is most simply effected in the employment of a fine cord passing in a groove around the periphery of the milled head of the fine adjustment-screw, and thence through a series of hook-eyes to the rear of the camera bed, where it is held taut by a couple of leaden weights. The slightest pull upon either cord moves the fine adjustment screw

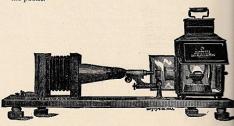
Price.	
Walmsley Micro-Camera\$18	00
41/4 x 51/2 Walmsley Micro-Camera, enlarging, reducing, and copying pattern	do
copying pattern	co

The Scovill Photo-Microscopic Outfit.

Photographing with the microscope has hitherto been accom-Photographing with the microscope has hitherto been accomplished by the aid of elaborate and costly apparatus, and been applied chiefly to making illustrations for scientific magazines. The process used, that of wet collodion in connection with sunlight, involved the procurement of an expensive heliostat to produce a steady illumination, for with any less powerful light the exposure would necessarily be so prolonged that the coating of the plate would dry and become useless. Now all this is changed, for with the modern improvements in photography which are the result of the introduction of gelatine dry plates, the

which are the result of the introduction of gelatine dry plates, the photographing of microscopic objects becomes as easy of accomplishment as the photographing of the beautiful and visible in ature is with the popular amateur outfits.

The scientist and microscopist, instead of spending hours in making imperfect drawings, aided by the camera lucida, may in a few minutes, with the assistance of photography, produce a more perfect representation of a minute object than it is possible. for the hand of man to, working conjointly with the eye. Not only can an enlarged image of a microscopic object be formed for illustration, but professors in colleges will find it a ready means to produce negatives of a suitable size from which may be made transparencies or magic lantern slides for exhibition to classes or



If this is done in the daytime, a room from which all white light is excluded should be selected; but if used at night, as in most cases it would be, the operations may all be performed in the midst of a family group for their interest and amusement, and to impart to them knowledge of the minute life or organisms of the world which the microscope alone can reveal.

THE SCOVILL PHOTO-MICROSCOPIC EQUIPMENT. consisting of

- I Scovill Special Half Plate Camera.
- 1 Multum in Parvo Lantern, with Double Condenser.
- I dozen 41/4 x 51/2 size B Keystone Plates to make Negatives
- I dozen 31/4 x 41/4 size A Plates for Transparencies.

Price, complete	 	 	\$18 00
The Camera, alone	 	 	9 00

The presumption is that you are provided with a microscope If not, we recommend the purchase of one from a regular dealer in microscopical goods.

Circular containing directions for use sent with each outfit.

Cameras.

The Mercer Photo-Micrographic Camera.

SIZE, 23/ x 31/4. PRICE, \$7.50.



ER CAMERA, SHOWN WITH MICROSCOPE TO ILLUSTRATE WORKING.

This Camera is provided with a Brass Cone and Plate Holder Ground Glass attached, to slide back and forth in the car-as desired.

The Stereo Transparency Camera.

A new copying camera for making stereoscopic transpar-

is new copying camera for making stereoscopic transpar-from stereoscopic negatives without cutting the negative is manufactured by the American Optical Company. Iddway between the ends of the camera is a frame which es the body of the camera in two parts. A door at the side ives access to the inside. On a hooded front (B), with a flap er, is screwed a pair of 5 or 6 inch lenses. The front carryenses is so arranged that the lenses may, by means of D), be brought nearer to each other or farther apart. If nded that the transparency be a little smaller or larger than the negative, the bellows in front and rear of this permits the same to be accomplished.

practically illustrate: In the front of camera (A) button a negative, placing it upside down and film side in. Move er portion with the lenses back from the negative, so that the stop of the lens to the negative will be twice the focal of the lens in use. Clamp this section, and move the glass back until the distance from ground glass to stop of uals twice the focus of lens in use. Adjust the ground ntil the image on the same is sharp, then tighten all clamp-



Stereo negative. B, Hooded front, covering lenses. C, Mill-head lap-shutter D. Screw for moving right-hand lens. E, Set-screw for ling-front. F, Ground glass. G, Holder. H, Door.

The diaphragm at back of camera gives the size of the two images, being 3½ inches high by 3 inches wide. Inside the rear bellows is placed a bellows division separating the light from the two lenses. The sliding front of camera carrying the negative should now be moved up or down in order to fix a base line for the picture, which will be an imaginary line drawn across the negative and passing through two similar objects in the two halves of the negative. This settled, then, by means of the milled head screw, move the right-hand lens so as to bring some object, as a tree, corner of a house or fence, that it may be close to the side of

diaphragm; then move the other lens so the same object will be 1/3 of an inch from the other diaphragm.

These points settled, place a Keystone ground glass transparency plate, 3/4 x 6/3 inches, in the holder, and adjust it to the camera. Place fairly small stops in the lenses; close the flapshutter by means of the milled head (C), draw slide to holder, point camera to the sky; then raise the flap-shutter, and give one, then the stops of the sky; then raise the flap-shutter, and give one, then the sky; then raise the flap-shutter, and give one, then the sky; then raise the flap-shutter, and give one, then the sky; then raise the flap-shutter, and give one, then the sky; then raise the flap-shutter, and give one, then the sky; then raise the flap-shutter, and give one, then the sky; then raise the flap-shutter, and give one than the sky; then raise the flap-shutter, and give one, then the sky is the s two or three seconds, according to circumstances. After developing, fixing, washing and drying, the face is covered with a thin piece of glass and the edges bound, when the transparency is ready for the stereoscope.

Price, without Lenses.....\$35 00

Centennial Outfits.

(INTRODUCED IN 1876).

CENTENNIAL OUTFIT, No. 202, consists of a Mahogany Polished Camera for taking pictures 4 x 5 inches, with Folding Bellows Body, single swing, hinged bed, and brass guides. It has a double shifting front for adjusting the sky and foreground, with I Double Dry Plate Holder, with Patent Registering Slides; also I Canvas Carrying Case, and I No. I Scovill Extension Tripod. Price.....\$22 00

CENTENNIAL OUTFIT No. 202, with Instantaneous Lens. ... 32 00

CENTENNIAL OUTFIT No. 202 A. The same as No. 202, but with Camera for taking pictures 41/4 x 51/2 inches..... 24 00

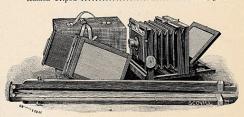
CENTENNIAL OUTFIT No. 202 B, for pictures 41/4 x 61/2 inches. 26 00

CENTENNIAL OUTFIT No. 203, consists of a Folding Mahogany



Camera, well known as the '76 Camera (see illustration). It is adapted for taking 5 x 8 inch pietures, and also for stereoscopic views-together with I Daisy Double Dry Plate Holder, with Patent Registering

Slides; also I Canvas Carrying Case; I No. 2 Scovill Extension TripodPrice, 30 00



CENTENNIAL OUTFIT, No. 204, consists of a Folding Mahogany Camera of finest style and finish for taking 61/2 x 81/2 inch pictures, with I Daisy Dry Plate Holder, with Patent Registering Slides; also I Canvas Carrying Case, and I No. 3 Scovill Extension Tripod ... Price, \$36 oo

Hand Cameras.

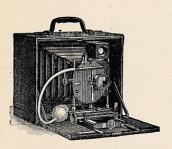
The Henry Clay Camera.

This is the only Double-Shifting and Swing-Front Hand-Camera.



The case is leather-covered, and, when closed, there is no finder visible, or openings elsewhere, to indicate that the Camera mechanism is concealed inside.

To open the front of Camera press on the knob at the top of the Camera. It will at once be apparent how the lens board may be racked outward until the front end of it is over the lines which indicate the focus for various distances. The figure 60 on the focusing scale indicates the focus for 60 feet or beyond. The finder of the Camera is now placed on the top of the front-board, and is, therefore, always at the same angle as the lens; the finder is a reversible one, which may be turned when the Camera is fastened to a tripod, or is held, not with the handle upward, but with the handle on the side, in order to secure a vertical instead of a horizontal view. The front-board is arranged to slide upward when taking a tall building, church-spire, or any high object, and it is also arranged to swing, to still further aid in that



By an ingenious arrangement the swing and vertical sliding adjustments may be made to work when the camera is turned over and used horizontally.

One of the advantages of this Camera, when used in the hand, is in taking of street scenes from an elevated position and having the lines of the building straight while the subjects taken may be near by.

On the same principle, objects situated above the Camera level may be taken by reversing the position of lens and finder.

By opening the back door of Camera and using a tripod the
Henry Clay Camera may be used like an ordinary View Camera

for timed exposures.

PRICE

5x7 Henry Clay Camera with Pneumatic Release Shutter, \$55 00 With Roll Holder, \$15.00 additional.

The Henry Clay Stereoscopic Camera.

It is commonly known that of all pictures, those which are arranged to give the stereoscopic effect when viewed in a stereoscope, convey the true impression of perspective and solidity. It seems strange, indeed, that of the myriads of instantaneous pictures made, so few are taken with reference to their future use



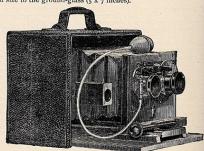
in connection with the stereoscope, for it is only by that means that the idea of perspective and solidity can be conveyed. We can only assign as the reason the present almost universal use of hand cameras, and that none of them have, up to this time. been arranged for stereoscopic pictures.

There is a mach over-worked phrase—"the long felt want," but we think that just that, literally, will be met by the new hand camera which the American Optical Company have just finished.

The first illustration shows one of these cameras closed, and you will observe there is no external opening for finder, lens or anything to indicate that the leather covered case contains the appliances which go to make up an instantaneous camera.

The second illustration conveys the idea of the appearance

of the camera when open. The pair of lenses is fitted with a triplex stereoscopic shutter, made by the Prosch Manufacturing Company. The septum which divides the camera inside is here not visible, but it is arranged so that it may easily be taken out when the possessor of the camera wishes to make pictures equal in size to the ground-glass (5 x 7 inches).



The lenses are mounted on a removable front, which is displaced when a single picture is to be taken with a larger lens. This camera measures eight inches high, nine inches long, and five inches wide. It has a screw plate underneath, so that it may be used with a tripod. The reversible finder, focusing scale and shutter, with pneumatic release, go to make up a com-

The stereo, negatives when cut in two are exactly of the size suitable for making lantern-slides; that is, each half will make a lantern-slide.

HENRY CLAY STEREOSCOPIC CAMERA. Price, with pair Rapid Rectilinear Lenses and Prosch Stereoscopic Shutter, with Pneumatic Release and

Hand Cameras.

Scovill's Empire Portrait Outfit

consists of

8 x 10 Double Swing Mahogany Portrait Camera, Lever Attachment, with Waterbury Holder, Curtain Slide.

Revolving Back Adjuster. Can be made for either 41/2 x 61/4, sx7 or 5 x 8 Plates.



Empire Camera Stand. For lightness, compactness, portability, ease and rapidity of movement.

\$45.00.

\$70.00.

II x 14 Size,

PARTS SEPARATE.

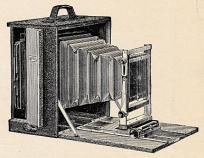
-	Ca	mera							Oar	00
EII	1					 	 		50	00
Impi	re (Camer	a Stand	for 8 x	10	 	 		15	00
-		**	"	"II X	14	 	 			
E 00	Re	volvin	g Adjus	ter		 	 		10	00
III.		**	61				 		12	00
	434	x 61/2	Holders	,)						
	5	x 7	Holders	}		 	 ea	ich,	1	50
	5	x 8	**)						

The Irving-Clay Camera.

The name of this new Camera is in itself a description of the ment. As the name indicates, it is a combination of the leading cameras of their respective styles-the "Irving." is the most accurately adjusted and practical folding tripod

camera, and the "Henry Clay," the most popular hand and tripod folding camera. It is at once evident that an instrument embodying the best features of these two cameras must necessarily be the highest ideal of perfection.

In appearance the Irving-Clay Camera does not differ essentially from the regular Henry Clay. It is neatly covered with black leather of fine quality, and the only sign of the mechanism visible are two knobs on top. By pressing one of these springs, a small trap door where the holder is inserted when vertical views are to be taken, is opened; and the other releases the front of the case. When the front side is released it is pressed down until the brass supports at each side become locked, thus making



it firm. On the opposite side there is a button that lets down the door which reveals the ground glass for focusing. The camera is drawn out the same as the Henry Clay, and the focusing is accomplished by means of an accurately adjusted rack and pinion movement. The front of the case is so arranged that it can be let down below the horizontal plane to get it out of the way when a very short focus lens is used. The rising front of the camera has a vertical swing, and the back, which is reversible, has also a swing on the principle of the Irving. The ground glass is selfadjusting, with a patent spring. We attach great importance to the reversible back, for one of the serious objections to the use of large hand-folding cameras has been the necessity of reversing the whole instrument which means screwing and unscrewing the camera from the tripod, an operation which consumes a great deal of time and patience. It has also the additional advantage of a removable lens board for the interchange of lenses. The camera is highly polished inside, and presents a very attractive appear-

PRICES.

61/4 x 81/4, with two Double Irving-Clay Plate Holders \$45 00 8 x 10, , , , , , , , , , , , 50 00



Tripods.

Peerless Folding Tripods for Field Photography.

Manufactured from selected second growth ash, with brass mountings and folding legs, which make them very light and portable; yet they are perfectly firm and rigid when extended

refectly firm and rigid when extended for use. No better Tripods have ever been devised for the professional view photographer.

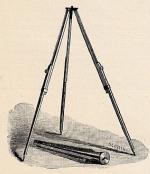




No.	1	Peerless	double-jointed	legs	6	inch	wooden	top	.\$2	85	
**	2.	44	"	"	12	**					
		44	hinged		12	**					
**	4.	16	"		11	**	metal to		. 0	50	
**		44	six foot, rigid		12	44	wooden	top	. 6	00	
66	6	16									

The above tripods are so constructed that they can be easily taken apart for packing, and yet can, when in use, be made as stiff and solid as though carved from a solid block.

The Scovill Extension Tripods.



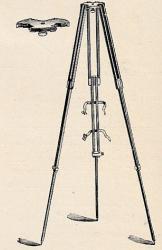
This Tripod possesses special advantages. It can be set up, ready for use, quicker than any other, and with less trouble. By turning the brass buttons shown in the accompanying illustration, the legs may "in a twinkling" be extended to the desired length, and fastened. When this Tripod is placed on uneven ground, the camera it supports may be brought to the proper level by simply adjusting the length of the Tripod legs. Another commendable

feature of the Scovill Extension Tripod is, that it has no detachable parts to be misplaced or lost. Combining as it does firmness, strength and lightness, this Tripod must at once find favor with the professional view-taker, who very often wastes valuable time or loses opportune moments in placing the Tripod legs and changing their position to include just what is wanted in a picture, and to level the camera.

No.	I, for	1-4 and 4 x 5 Cameraseac	h, \$3	00
		5 x 8		
	2 1/2"	• with Brass Circle	3	50
	3, "	6½ x 8½	5	00

The Albion Tripods.

This is the most elegant Tripod ever introduced. It is adapted to and is firm enough to support without vibration any View Camera from 5 x 7 to 10 x 12 size inclusive.



The Legs of this Tripod are adjustable as to length, and may be quickly folded. As the binding straps are attached, they are always in place when wanted.



The artistic design and faultless finish of every portion of this Tripod cannot be realized without seeing one, and to use an ALBION TRIPOD means to be fully satisfied, and wish for none other.

No.	1.—Cherry-Wood\$4 50	
	2.— • •	
	3.—Spruce (very light)	

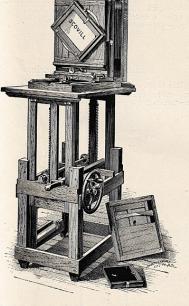
Hand Cameras.

Scovill's Empire Portrait Outfit

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One 8 x 10 Double Swing Mahogany Portrait Camera, Lever Attachment, with Waterbury Holder, Curtain Slide.

One Revolving Back Adjuster. Can be made for either 41/4 x 61/2, 5 x 7 or 5 x 8 Plates.



One Empire Camera Stand. For lightness, compactness, portability, ease and rapidity of movement.

\$45.00.

11 x 14 Size, - - \$70.00.

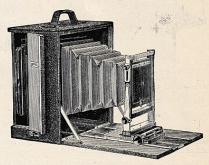
PARTS SEPARATE.

X IO	Car	ne	ra.							 ٠,			 	 	 			\$21	00	
Empir										 			 	 				50	00	
Empir	e C	an	era	Sta	and	for	8	X I	0.	 			 	 	 			15	00	
							1	X	14	 			 		 					
N IO	Rev	rol	ving	g A	dju	ster				 		. :	 	 	 			IO	00	
11 x 14										 			 		 			12	00	
Extra	414	X	61/2	Hol	der	s,)														
Extra	5	x	7		N	1				 	4		 	 	 . 6	eac	ch,	1	50	
- 2	5	x	8			1														

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PRICES.
6½ x 8½, with two Double Irving-Clay Plate Holders..... \$45 00
8 x 10, 50 00



Tripods.

Peerless Folding Tripods for Field Photography.

Manufactured from selected second growth ash, with brass mountings and folding legs, which make them very light and portable; yet they are perfectly firm and rigid when extended

for use. No better Tripods have ever been devised for the professional view photographer.

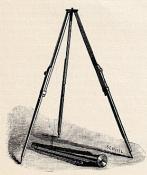




		Wood	Top.		Metal Top.									
No.	1	Peerless	double-jointed	legs	6	inch	wooden t	ор	\$2	85				
**	2.	66	"	"										
**		**	hinged		12	**								
**	4.	- 16					metal top		. 9	50				

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No.	I, for	1-4 and 4 x 5 Cameras	each,	\$3 cm
	2, ,	5 x 8		3 25
	2 1/2"	with Brass Circle		3 50
	3. "	5½ x 8½	,	5 00

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No.	ı.—Cherry-Wood\$4 50	
	2 , , 6 00	
,	3.—Spruce (very light)	1

Photographic Apparatus.

Registering Slides.

(PATENTED.)

Will be supplied with new American Optical Co,'s Dry-Cameras and Amateur Outfits up to 10 x 12 size without on to present price list.



Extract from "PHOTOGRAPHIC TIMES," March, 1884.

n the pleasure or excitement attendant upon picture-taking, to their identity. All photographers, whether professional or to solve such vexatious questions as these-

Have I or have I not exposed that plate?"

If exposed, was the plate used for that prized picture?"
Shall I incur the risk of making a double exposure?"
forth will have themselves only to find fault with if they do ocure and use in their dry-plate holders registering slides, they have been called, "Record Slides." These can be upon with slate or lead pencil ad libitum, and the writing without injury to them. Before taking a picture, the d surface of these slides is seen; afterward they are turned, the blackboard surface, which was toward the sensitive is out, and the data respecting the exposures are penciled on—a very convenient place, by the way, to consult it when oping the plates.

The material out of which these Registering Slides is made is ard that they outlast common paper slides in the proportion we to one. Additional Holder Slides of this kind supplied at

Price of Registering Slides.

					Ea	ch.	1									ach.	
Size for	314	x 41/4			.\$0	18	Size	for	5	X	8			 	.\$0	40	
		x 5				20			61/2	x	81/2			 		55	
	41/4	x 51/2				24			8	x	10			 		75	
		x 61/2				28			10	X	12			 	. I	00	
		x 7				35	1		11	x	14			 	. I	30	
	P	arrieta	rin	or Sli	doc	not	made	ahe	we '	т	x 14	si	7.€				

Requisites for Film Photography.

The Scovill Double Film Holders are so much smaller, mer and lighter than holders made for glass plates, that en first exhibited they were dubbed by some facetious individual ancake holders." With old cameras an "Adapter" should be because we do not make these new holders as large as glasste holders. These Adapters, with ground glass, are supplied the same list price as the Scovill Double Film Holders, which

Scovill Double Film Holders.

	10 5 x 7
	25 5 x 8 I 4
44 x 5½ I	25 6½ x 8½ 1 7
4 x 6½ I	25 8 X 10 2 0
x 6½ I	30

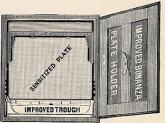
Films may also be used with Daisy, Light-Weight-Scovill Patent-and Flammang Holders, by placing in them Scovill Film

Scovill Film Carriers.

3¼ x 4¼\$0	10	5	x 7	 	 	 \$0	17
4 x 5	10	5	x 8	 	 	 	22
4¼ x 5½	II	61/2	x 81/2	 	 	 	26
4¼ x 6½	15	8	X IO	 	 	 	30

The Improved Patent Bonanza Plate Holder.

The Photographer's Silver Saver.



Any practical photographer can, by one glance at the illustration, see where the great merit of this holder lies, how perfectly silver solution is saved, and how the trough may be fastened in the different grooves avoiding the necessity of kits.

This Plate Holder has now a

world-wide reputation, and, because of its great merits, infringements have been attempted.

Being the sole agents for the manufacture and sale of the "Bonanza Holder," we hereby notify all concerned that such holders made by other parties are infringements of said patent, and we will hold all dealers or others having infringing goods in their possession responsible in damages.

In ordering holders, parties should send their old holder as

sample, if possible, to avoid mistakes; otherwise the exact di-mensions of old holder should be given,
Please bear in mind that Bonanza Holders cannot be put on any camera that will not take a silver-saving bottle in the holder.

Price List of Bonanza Holders.

1-4\$4 25	II x 14\$21 50	0
1-2 6 40	14 x 17 24 00	0
41/4 x 61/2 and 43/4 x 61/2 8 00	17 x 20 27 50	0
5 x 7 8 50	18 x 22 31 00	0
4 4 9 60	20 x 24 35 75	5
8 x 10	25 x 30 44 00	0
10 x 1216 00		
Bonanza Holder for Cincinnati C	amera with Rabbet Kits \$12 70	
	, I2 7	
Troughs for Bonanza Holders		

Solid Glass Corner Plate Holders, for Wet Plates.

Bolla Glass Collic	I I late	Holders, for week I la	LCG.
Outside Holder only.	Price.	Outside Holder only.	Price.
For 31/4 x 41/4	84 40	For 8 x 10 and Cincinnati	
* 4 × 5 ······	4 80	Box	
414 x 51/2 and New Y	ork	* IO X I2	11 00
Gem Box		* 11 X 14	
, 4¼ x 6½		* 14 X 17	
5 x 7 and Victo		* 17 X 20	
Camera.		* 18 x 22	22 00
* 5 x 8		* 20 X 24	
6½ x 8½,	7 30	* 25 X 30	32 00
	Vite	ovtro	

5 x 8 Solid Glass Corner Holder for Stereo. Camera.....\$6 oo Rabbeted Outside Holders 10 per cent. less than Solid Glass Corner Holders below 10 x 12 size. Larger sizes made to order.

Photographic Apparatus.

Ground Glass without Frames.

SELECTED CLEAR CRYSTAL PLATE GLASS, FINELY GROUND, FOR ACCURATE FOCUSING.

Si	ize	of		For I	Por	trait			P	er l	Light.	Fo Ca	r V	iew ras.	,		Per	Li	ght.
			14									31/4							
5	x	5		4	x	5					15	4	X	5					10
51/2	x	5	1/2-	414	x	51/2					20	41/4	x	5	1/2.	 			15
61/2	x	6	1/2-	414	x	61/2					25	41/4	x	6	1/2.	 			15
7	x	7		5	x	7		٠.			30	5	X	7	,				20
8	x	8	_	5	x	8					35	5	x	8					20
81/2	X	8	1/2-	61/2	x	81/2					40	61/2	x	8	1/2				25
10	X	10	_	8	x	10					45	8	x	10					32
12	x	12	1	10	x	12	3	٠.			55	10	X	12		 			50
14	x	14		11	x	14					80	11	X	14					75
17	x	17	1	4	x	17		 		1	10	14	x	17				1	00
20	X	20		7	x	20		٠.		1	15	17	X	20				1	35
22	x	22		8	x	22				1	80	18	X	22		 		1	65
24	x	24	2	0	x	24				4	30	20	X	24				4	00
30	X	30		25	X	30				6	75	25	X	30				6	00

Rabbet and Light Weight Kit Frames for Dry Plate Holders.



OUTSIDE MEASUREMENT. ANY OPENING.

	x	5								\$0	28	61/2	x	81/2	έ.						 \$0	34	
14	x	51/	٤.								29	8	X	10								40	6
14	x	61/	4		 						30	10	x	12								60	
	x	7									31	II	x	14								66	
	x	8									32	14	X	17								80	

When ordering please specify whether Rabbet Kits are wanted for wet or dry plates on account of difference in thickness.

Brass Plates

WITH HOLES CUT AND THREADED.

For	4	one	-ninth	Darlot	Gem	Lenses								SI	ch.
				,		,									
*	4	one	quart	er »				 	٠.					 I	30

Sundry Pieces of Apparatus.

	Wooden Holder Slides.	Focusing or Adjusting Screws (Not Lever Pattern
1-4 Plate Camera	\$0 27	\$2 25
4 x 5	32	2 25
1/2	34	2 25
41/4 x 61/2	36	2 25
5 x 7 ,	38	2 25
5 x 8 *	40	2 25
61/2 x 81/2 ·	45	2 25
8 x 10	72	2 70
Cincinnati Camera	72	3 00
10 X 12 ,	1 35	2 70
11 x 14	2 02	2 70
14 X 17	2 25	4 50
17 X 20 ,	2 70	4 50
18 x 22	3 15	4 50
20 X 24 ,	3 60	4 50
25 x 30	5 40	4 50

For India Rubber Slides list prices of Registering Slides.

Lever Focusing Attachments.

		Eac
For	8 x 10 size and smaller\$	
	above 8 x 10 size to 25 x 30 inclusive	6 0

Diaphragms, Blocks, &c.

			Diaphragms.	for Lenses
or	No.	153, 1-2 New York Gem Came	ra\$0 90	\$1 35
		11, 1-2 Gem Camera		I 35
		154, 1-4	90	1 35
		155, 1-2	90	i 35
		156, 4-4	1 80	1 8o
	,	157, 4-4 *	I 8o	1 8o
		22, 4-4 Imperial Camera	1 35	1 8o
		23, 8 x 10 ,	I 35	1 8o
	,	24, IO X I2 "	1 80	I 80
		25, 8 x 10 Multiplying Came	ra 9 00	I 80
	,	21 or 21a Victoria Camera	2 70	I 80
or	Cinc	innati Cameras	2 00	1 80

Solid Glass Corner Kits.

OUTSIDE MEASUREMENT IN INCHES.

31/4	x 41/4	·	\$0 60	10 x 12\$1 25
4	x 5		. 64	11 x 14 1 30
41/4	x 51/2		. 65	14 x 17 1 80
41/4	x 61/2		. 67	17 x 20 1 96
5	x 7		. 68	18 x 22 2 30
5	x 8		. 74	20 x 24 2 45
61/2	x 81/2		. 84	25 x 30 3 80
8	X IO		. 95	

Front Boards.

MADE OF SPANISH MAHOGANY, FINELY POLISHED.

2 x 2 in\$0	32 8 7 4 9	8 x 8	\$1 25
2 x 2 in\$0 3 x 3 in	40 0 0 0 0 0	9 x 9	1 50
4 x 4 in	50 7 6 0	to x 10	I 80
5 x 5 in	60 g 80 0	12 X 12	2 00
6 x 6 in	75 E 0 E 0 1	14 X 14	2 40
7 x 7 in I	at at	15 X 15	2 50
		ne-half above list.	
Horizontal Sliding Front	s. complete	with Lens Board.	for
'76, or Model Stereosc Plain Front, complete wi	copic Camera	ıs	\$1 20
Stereoscopic Cameras			

Photographic Apparatus.

of Camera	Stands and Sundries.
Camera Stand Top	, ½ size\$0 60 8 x 10 size80
Leg	8 x 10 size
, Woo	od Centre
	Braces 60
Scre	ws for Top 10 * Body 12
Bod.	y, iron I 00
· · · Iron	y, iron
Leg	n Leg 1 80 with Wheel 2 10
, , Who	eel or Caster
Woo	od Set Screw
	, body 2 40
	Crank, for top 35
	Rack, for top 25
	, body 55
- Wor	m Screw for Elevator, for top 65 for body 85
. Sere	w and Nut for fastening top 35
Ton	without Elevator 4 20
Acme Camera Stand T	op without Elevator
	plain 1 60
	aster 30
	ron Set Screw for Leg 45 Lower Triangle 50
· · · ·	llevator, complete, for body I 80
- = · · · · ·	Iandle or Crank, for above 35
· · · · · · · · · · · · · · · · · · ·	Cack for above
Iron part only:	
	levator, complete, for top 90
- =	crank or Handle for above 25
	Vorm Screw for above 40
, , (aster for Leg 25
· · · · · · · · · · · · · · · · · ·	levator, complete, for body 1 75
T	Vorm Screw for above 60
i	lack for above
Politica	Cack for above
Bed for 4 x 5 Out	fit Camera I 25
. 6½x 8½ .	, 1 50
8 X 10	vorite Camera, etc 1 75
23	65
	or Favorite Camera, etc 0 85
or Scovill Tallies	, , , , , , , , , , , , , , , , , , ,
	Camera Boxes each, 75
Latch Bolts for Bed of C	Camera Boxeseach, 75 of 5 x 8 Box
Screws for No. 1 Ext	ension 35
2	* * 35
Serew for Extension Trip	ood Legs 50
for Tripod Screws	25
Top of Imperial	25 Jox. 40 perial Box. 50 2 Extension Tripods. 25
Flange for "76" Box	" 50
for Albion Tripods	2 Extension Tripods 25
Daisy	1 25
Mignon , for Holder Slides	, 1 00
or Holder Sides	doz., 25

India Rubber Bellows.

											•	•	•	•	•	ì	•	_	Ĭ	•		_	_		_			٠.	Pl				ne
																								ĸ	Οι	ıtı	ht	s.		rait.			W
	I	4	14	,	4	X	5	, .	4	1	4	x	1	5 5	1/2										Şi		5	0	\$3	00	\$4	1	5
	X	6	1/2	,	5	X		7.		;	x	8															5	0	3	00	(5	O
	x																												4	00	(5	0
	10																						 			3	C	0	5	00		7	5
3	1	2																					 						6	00	(•	o
z	I	4						٠.																					8	00	10	5	0
3	1	7																											10	00	12	2	0
1	2	ó																					 						12	00	19	5	0
I	2	2																					 						13	00	16	5	0
3	2	1																											16	00	20	0	0

Negative Rack.



Negative Boxes.

MANUFACTURED FROM WHITEWOOD, WITH HINGED COVER.

A VERY SUPERIOR ARTICLE.



For hold 24 Plat	es,	Regular with Hook.	with Lock	For holding 24 Plates.	Regular with Hook.	Light Tight with Lock and Key.
1-0	each	\$0 60	SI 60	8 x 10 each.	.\$I TO	\$2 10
1-6		60	I 60	10 X 12 ,	1 50	2 50
31/x 41/4		62	1 62	For holding		2000
4 × 5		65	I 65	12 Plates.		
41/4 x 51/2		70	I 70	II x 14 each.	2 50	3 50
41/x 61/2		75	I 75	13 x 16	2 75	3 75
4 × 7		75	1 75	14 X 17 " .	3 00	4 00
4 x 8	"	75		16 x 20 " .	3 50	4 50
5 x 7		85	I 75 I 85	17 X 21 " .	4 50	5 50
5 x 8		90	1 00	18 x 22	5 00	6 00
61/2 x 81/2		I 00	2 00	20 X 24 " .	5 50	6 50
1000						

Special sizes made to order to hold any number of plates required.

Negative Storage Box.

Waterbury Negative Boxes.

 Very Light, for Twelve Plates.
 \$0 30

 5 x 8.
 50

Lantern Slide Boxes.



			Lantern												
2,		50				 				 				1	40
3,		100								 				2	50

Photographic Apparatus.

Irving Printing Frames.

(PATENTED.)

The Irving Frames have valuable features which cannot be copied. They are in workmanship, design, and other respects, superior to all other printing frames.



IRVING PRINTING FRAME, CLOSED (BACK VIEW).



IRVING PRINTING FRAME, OPEN (FRONT VIEW).

The continuous felt pads, made especially to order for us, insure absolute protection and uniform pressure throughout. The Irving Patent Catches lock the back, so that when one flap is open there

the springs are cut by dies of specially tempered and tested metal, and are riveted to the backs with washers underneath to protect the wood-work.

The Irving Frames are made of cherry guaranteed not to warp or crack. Their construction and finish is acknowledged to be superior to that of all other printing frames.

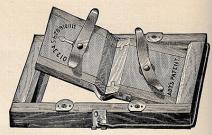
The tally does not depend upon any other part of the frame to lock it, for the pointer will remain in place no matter what is done to other parts of the frame.

Price for Half or Two-thirds Opening Style.

	x 41/4\$0											
4	x 5	48	61/2	x 8 1/2			70	14 X	17		2	70
41/4	x 51/2	50	8	x 10.			80	18 x	22		4	45
41/4	x 61/2											
5	x 7	60	II	x 14.		. 2	IO	22 X	27		6	50
	When made	with	bac	ks to	open	len	gth	ways,	ten j	per cer	at.	is

added to the foregoing prices, for the respective sizes.

Adt's Patent Printing Frame.



These Frames are now supplied (without extra charge) with Adt's Patent Support, with which the frame can be stood on either end, and at four different angles, for exposure while printing. It is out of the way of the printer when introducing the paper, or examining the print, for when the frame lies or is held with back up, the support instantly drops upon its stops for rest, and is entirely out of the way of the hand of the printer, so that he may remove or open the back-board, or replace it, as if there were no support present. Being arranged close around the sides and ends of the frame, it occupies so little space as not to interfere with the packing or storage of the frames, and when the printer places his frame for exposure the support readily finds its position for supporting the frame without any special manipulation.



When made with back to open lengthways, an additional charge of ten per cent. will be added to the prices given below.

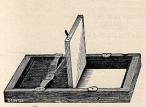
As will be seen by a glance at the cut, the adjacent edges of the parts of the back-board are beveled outward, and the hinges placed on the sides with their axes on a line with the surface. This permits the attachment to the face of the back-board of a Heavy, CONTINUOUS ELASTIC FELT PAD. This obviates the necessity of using a separate pad, which is so easily misplaced and lost.

31/4																																
4																																
414																																50
414																																60
5	X	7															 															6
5	X	8																ě.		į,	i.				 							6
61/2	x	81	2.					 											٠.													7
8																																
		12																														
		14																														
		16																														
	X	17	١,																		٠.						٠.			2	2	8
16	x	20		٠.						Ų.	Ų.																			2	3	3

Photographic Apparatus.

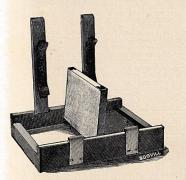
Scovill Printing Frames.

FACTURED OF CHERRY, WITH BRASS SPRINGS, PANELED BACKS AND TALLY



SCOVILL FLAT PRINTING FRAME (OPEN).

Our Printing Frames are constructed so that a uniform e is obtained, thus insuring perfect contact between the paper and negative plate. The back-boards are so d that the progress of the printing may be watched withanger of shifting the paper.



SCOVILL DEEP PRINTING FRAME (OPEN).

in Plates.	Flat.	Deep.	For Plates.	Flat.	Deep
E = 434	. \$0 36.	\$0 75	13 x 16	\$2 05	\$2 7
E 5	38.	75	14 x 17	2 45	3 0
E = 51/2	40.	75	16 x 20	3 10	4 2
E = 61/2	42	85	17 X 20	3 30	4 6
5 ×7	50.	85	18 x 22	. 4 20	5 2
= x8	52.	1 00	20 x 24	5 10	5 5
E 1814	60.	1 25	24 X 30		9 0
E 10	75.	I 50	35 x 45		15 0
X 12	I 00.	I 75	30 x 60*		22 0
X 14	I 85.	2 50			

*Larger or special sizes made to order at short notice, acg to specification.

When made with backs to open lengthways, ten per cent. is ied to the foregoing prices for the respective sizes.

Retouching Frames.



No.	I,	for	1-4	to	8	x	10	negatives,	black	walnut\$3	75	
	0		1.4	to	**		14			-	50	

They have a drawer and all the modern improvements.

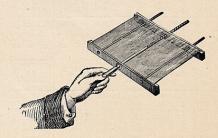
Plate Vises for Holding Glass when being Polished.



MANUFACTURED IN HARD WOOD, WITH IMPROVED SCREW ADJUSTMENT.

No. 1.- For holding 1-9 to 8 x 10 plates, with best quality of screw, price, each.....\$1 00

Extra Sizes and Quality.



No. 2.—For plates	from	1-9 to 4-4 \$3 8	30
. 3		4-4 to 17 x 20 5 7	70

James Swift & Son's (London, England) Paragon Lenses.

The reputation of these Lenses abroad is superior to that of any other make. They have been selected by the following named institutions because of their unequaled qualities and excellence:

The Scientific Department of the English Government in England, Calcutta and Bengal.

The Universities of Oxford and Cambridge, King's College and Edinburgh University College Schools. Owens College, Manchester, besides the Governments of France, Germany and Italy.

The Swift Lenses have been awarded no less than seven gold medals, besides numerous diplomas of honor.

The Lenses are manufactured from the new Abbe-Schott glass, which is undoubtedly more uniform in quality and specific gravity than the best optical flint and crown glass heretofore made; hence the Lenses are of a uniformly superior quality.

The Rapid and Portable Paragon Lenses

are supplied with Iris Diaphragms, and mounted in brass as well as aluminum; while the Wide-Angle Paragon Lenses are fitted with Revolving Diaphragms.

Swift's New Portable Long Focus Landscape Lenses.

Effective working aperture U. S. No. 8, f 11.314, this being double the rapidity of any other portable series made Each Lens in first series is composed of three glasses, cemented

together, thus presenting but two reflective surfaces. For covering power, these Lenses will prove to be of about

half the diameter of those usually employed upon a similar sized

J. Swift & Son guarantee these Lenses to produce pictures containing panoramic and aerial perspective, such as cannot be obtained with Lenses of shorter focus. They will be a great boon in photographing mountainous scenery or exceptionally distant landscapes. Owing to their great focal length, the most distant objects (that would otherwise be lost to view with a lens of ordinary focus for same covering power) are rendered perfectly and clearly defined. Waterhouse Diaphragms marked as below are supplied in a case with each Lens.

U. S. Nos.	8	16	32	64	128	256
	f	f	22.627	f	f 45.255	f
	11.314	16	22.627	J 32	45.255	64

Working Intensity.	No.	Size of Plate.	Diam- eter of Lenses.	Equiva- lent Focus.	Price with Waterhouse Diaphragm.	Price with Iris Diaphragm.
		Inches.	Inches.	Inches.		
r	I	5 x 4	11/8	9	\$21 25	\$26 65
	2	6 x 5	13/8	\ II 14	23 50 27 00	28 80 32 50
4	. 3	8½ x 6½	11/2	114	29 25 32 40	34 60 37 80
8, 5 11.314	4	9 x 7	134	116	32 40 34 20	37 80 39 60
	5	10 x 8	2	18	35 70 39 25	41 10 44 70
No.	6	12 × 10	21/8	20	45 40 49 00	50 80 55 10
si	7	13 X II	21/4	22	50 40	56 50
5	7 8	15 X 12	21/2	25	57 25	64 50
7 11	9	18 x 16	234	28	64 80	72 00
	10	22 X 18	3	31	90 75	99 75
	11	25 X 22	31/2	34	123 15	132 15
U	12	28 X 24	4	38	144 00	158 00

Intermediate or Longer Focus Lenses to those mentioned in above list made to order

Second series composed of two glasses, working aperture same as first series

Working Intensity.	No.	Size of Plate.	Diam- eter of Lenses.	Equiva- lent Focus.	Price with Waterhouse Diaphragm.	Price with Iris Diaphragm.
	K. Th	Inches.	Inches.	Inches.		
31	Ia	5 x 4	11/8	714	\$12 00	\$17 30
S. No. 8, f 11.314	20	6 x 5	13/8	81/2	14 50	19 80
=	30	81/2 x 61/2	11/2	12	19 80	25 25
511	40	9 x 7	134	13	21 60	27 00
00 X	5a	10 x 8	2	15	24 15	29 50
0	6a	12 X 10	21/8	17	30 00	35 30
2	70	13 X II	21/4	18	32 40	37 80
S	8a	15 X 12	21/2	22	36 00	41 40
5 U	90	18 x 16	23/4	25	44 00	51 15

Swift & Son's First Series of Wide Angle Landscape Triple Lenses,

THE EFFECTIVE WORKING APERTURE OF WHICH IS U.S. No. 4, OR f S.

Each of these Lenses is composed of three distinct single ones cemented together, producing brilliant negatives of landscapes, pure and simple. This result is due to the fact of there being only two reflecting surfaces. Architectural subjects are not so satisfactorily rendered when taken with a single as with a double combination, such as the Rapid Paragon, it being impossible to correct single combinations so as to produce straight lines at the margin of the plate.

This First Series being

composed of a triple combination gives finer pictures than the Second Series, which is formed of two single Lenses only, it being a recognized fact

LANDSCAPE LENS. 5 X 4 WIDE ANGLE. that a triple or three-fold combination produces a considerably flatter field than that consisting of but two.

Messrs. J. S. & Son guarantee their First Series to produce more satisfactory results than can be obtained with any other Landscape Lens now before the public, whether used for large heads, groups, or instantaneous effects.

U	. S. N	f	8 16 f f 314 16	32 f 22.627	64 12 f J 32 45.	f
Work'g Int'sity	No.	Size of Plate,	Diam- eter of Lenses.	Equiva- lent Focus.	Price with Waterhouse Diaphragm,	Price with Iris Diaphragm.
U. S. No. 4, f 8	1 2 3 4 5 6 7 8 9	Inches. 5	Inches. 19/8 11/2 15/8 17/8 21/8 22/2 23/8 33/8 41/4	Inches. 514 6 7 81/2 10 12 15 18 22 25	\$21 25 22 35 23 40 29 20 35 65 35 40 57 25 68 00 90 75 123 15	\$26 65 28 50 30 00 35 70 41 00 51 15 62 65 75 60 98 25 130 35

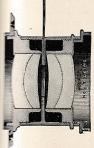
U	. S. N	os. 4 8 11.	16 f	32 f 22.627	64 12 f f 32 45.	f
Work'g Int'sity	No.	Size of Plate.	Diam- eter of Lenses.	Equiva- lent Focus.	Price with Waterhouse Diaphragm.	Price with Iris Diaphragm
4,78	1 <i>a</i> 2 <i>a</i> 3 <i>a</i>	Inches. 5	Inches. 13/8 11/2 15/8	5 1/4 6	\$14 40 18 00 19 80	\$19 80 23 40 25 20
S. No.	4 <i>a</i> 5 <i>a</i> 6 <i>a</i> 7 <i>a</i> 8 <i>a</i>	8½ x 6½ 10 x 8 12 x 10 15 x 12 18 x 16	2 ½ 2 ½ 2 ½ 2 ½ 2 58	8½ 10 12 15 18	23 75 30 00 36 00 44 00 55 80	29 20 35 30 41 40 50 00 61 20
5	9a 10a	22 X 20 25 X 21	358	22 25	72 00 104 00	79 20 111 25

Second Series, same working intensity as First Series.

Photographic Lenses.

Swift & Son's Portable Paragon Lenses.

Specially constructed for Landscapes, Architecture and ing, giving either wide, medium or ordinary angles, accordto the diaphragm used.



PORTABLE PARAGON,

Are universally used by most of our eminent photographers : this is attributed to their extraordinary definition and flatness of field, as well as the portable way in which they are mounted,

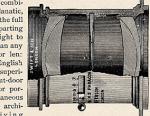
No. 1 to No. 10 being set in a cell 13/diameter, the same flange answers for all the above sizes.

With No. 1 to No. 6 a thin Revolving Diaphragm is used. All the other sizes are supplied with Water house Diaphragms, the apertures used being those recommended by the Photographic Society of Great Britain as follows:

Working Intensity.	No	5	arge Stop rering.	5	edium Stop rering.	S	mall itop rering.	Equivalent Focus.	Price with Revolving Diaphragm.	Price with Iris Diaphragm.
S. No. 8, 11,314	1 2 3 4 5 6 7 8 9 10 II I2 13 14	3 4 5 7 8 8 8 8 9 10 12 13 15 18 20 22	X 3 X 3 X 4 X 4½ X 5 X 6½ X 7 X 8 X 10 X 11 X 16 X 18 X 20	4 5 74 8 8 8 9 10 12 13 15 18 22 24 26 25	X 3 X 4 X 5 4 X 5 5 X 7 X 8 X 10 X 11 X 12 X 16 X 20 X 22 X 24	10 12 13 15 18 42 25 28 31	X 4 X 4½ X 5 X 7 X 8 X 10 X 11 X 12 X 16 X 18 X 21 X 23 X 23 X 28	3 ins. 4 · 4 · 5 · · · 7 · · · 8 · · · 9 · · · · · · · · · · · ·	\$19 50 21 00 22 75 25 95 32 40 40 00 45 50 52 00 58 40 64 80 77 75 129 60 169 20	\$25 00 26 30 28 10 31 35 37 80 44 30 50 75 57 25 68 00 80 00 104 40 110 80 178 20 216 50
	16	24 26	X 22 X 24	30	X 26 X 28	34 37	X 28 X 31	30 "	259 20	268 20

Swift & Son's Rapid Paragon Lenses

e composed of two symically cemented combions, which are aplanatic, they work with the full ing, thus imparting derably more light to sensitive plate than any er rapid out-door lens made, whether English foreign. Their superiv in all kinds of out-door ires, whether for ports groups, instantaneous cts, landscapes, archiural subjects (giving ight lines to the edge of plate), or dimly lighted riors, they are unrivaled.



6 x 5 RAPID PARAGON, fitted with Iris Diaphragm (Actual Size).

copying and enlarging purposes these Lenses are unique, and e been supplied to home and foreign governments. With aller stops, each Lens will cover the next or even two sizes rer plates than recorded, thus embracing angles of pictures m 60 to 80 degs., and without any flare or central white spot.

U. S. Nos.	aterno	4	Biaphi:	16 32	64	128	256
	5.657	8	11.314	f f 22.62;	32	f 45.255	64
orking Intensity.	Size Vie	of w.	Size of Group.	Diam- eter of Lenses.	Equiva- lent Focus.	Price in Rigid Settings and Waterhouse Diaphragms.	Price with Iris Diaphragm.
S. No. 2 f 5.657.	3 X 4 X 5 X 6 X 8 X 8 X 9 X 10 X *12 X	4 5 5 6 6 7 8	5 X 4 71/4 X 4 8 X 5 81/2 X 6 81/2 X 6	1/2 1/3 " 11/2 " 11/2 " 11/4 " 11/4 "	3 ins. 4½ " 6 " 7½ " 9 " 11 " 12 " 14 "	\$22 70 26 00 27 50 34 00 37 25 42 30 48 60 54 75 68 00 68 00	\$28 00 31 35 32 75 39 40 42 70 47 70 54 co 60 15 75 25 75 25
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	12 X 13 X 15 X 18 X 22 X 25 X	10 11 12 16 18 22 24 28	10 X 8 10 X 8 11 X 9 13 X 11 15 X 12 18 X 16 22 X 18 25 X 20 28 X 24 31 X 27	2½ " 2½ " 3½ " 4½ "	16 " 18 " 20 " 24 " 30 " 34 " 38 " 44 "	68 00 74 50 93 60 120 co 162 00 164 40 259 20 367 20 482 40	75 25 82 50 102 60 131 40 174 (0 208 80 280 80 396 00 511 20
*	40 X		36 X 32	6 "	58 "	612 00	648 00

Waterhouse Diaphragms marked thus

*Extensively used by professional photographers where position will not allow of the use of a 16 inch focus Lens. For general work J. S. & Son recommend the 12 x 10 16-inch focus.

James Swift & Son's Wide-angle Paragon Lenses.



No. 2 Wide-angle Paragon

These Lenses embrace angles of pic-These Lenses embrace angles of pic-tures of nearly too deg, when used with the smallest stops. They are entirely free from distortion and flare, but al-though not aplanatic like the preceding Lenses (viz., the rapid Paragons), they work with a larger stop than any other wide-angle combination Lens "giving the same angle" now before the photo-graphic world. The Wide-angle Paragon Lenses are intended for architectural views, landscapes, etc., in cramped situations, where longer focus Lenses cannot be used, and for these purposes their advantages have been recognized by many eminent photographers. For general purposes, however (more especially for architecture), the useof Wideangle Lenses is not to be recommended, inasmuch as pictures produced by them when viewed at the ordinary vision distance (i. e., from 12 to 16 inches) appear distorted. That the foreground objects are exaggerated and the distance is

shortened is no fault of these Lenses as will be seen on looking at the picture from a point that is equal to the focal length of the Lens used. In using these Wide-angle Lenses it is imperative that the camera be perfectly level and straight. When tilting is neces sary the swing-back must be used so as to bring the focusing screen parallel to the planes of the object. If this is not done vertical and horizontal lines will appear as though they were falling together. When the swing-back is brought into play a smaller stop should be used, as this will compensate for throwing the screen out of its usual position. They are supplied with a revolving diaphragm of apertures marked as below

From Nos. 1 to 4 work at double the rapidity of any Wide-angle Lens made

Working Intensity.	No.	Largest Dimension of Plates.	Diameter of Front Combination	Back Focus.	Equivalent Focus.	Price with Revolving Diaphragm.	Price with Iris Diaphragm
U. S. No. 8, f 11, 314.	2 3 4	Inches. 31/4 × 31/4 5 × 4 71/4 × 41/4 81/9 × 61/2 12 × 10 15 × 12 18 × 16	Inches	Inches 2 21/2 31/4 45/8 61/4 71/9	Inches 21/2 3 4 51/4 7 81/2 13	\$26 00 26 00 29 25 35 75 50 00 73 00 90 75	\$31 50 31 50 34 60 41 00 55 50 78 50
	5 6 7	22 X 20 25 X 21	3 3 1/4	14	151/2	129 65	99 75 136 80 212 40

Swift & Son's Universal Paragon Lenses

For Portraits, Groups, Studies in Studio and Panel Pictures.

For general purposes and ordinary studio work, the Universal Paragon Lenses will be found very useful all-round Lenses Their rapidity is double that of the Rapid Paragons.

They will produce negatives that will bear enlarging many diameters. Nos. 4 and 5 are particularly well adapted for first-class panel pictures and large heads. They possess excellent covering power and give a very flat field, perfectly free from distortion.

These Lenses are also useful for outdoor work, such as landscapes, architecture,

No. 1 Universal Paragon. (Half Actual Size.) 'giving perfectly straight lines to the margin of the plate" and instantaneous effects, embracing sufficient angle to give pictorial effects when suitable stops are used.

The Universal Paragon may be said to possess properties between the Portrait Lens and Rapid Paragon.

Waterhouse Diaphragms marked as below:

128 f 45-255 5.657 11.314 22.627 Specimens can be seen at our Works taken in some of the principal London Studios with the above Lenses.

Working Intensity.	No.	View Size.	Group Size,	Diameter of Lenses.	Báck Focus.	Price in Rigid Mounts and Waterhouse, Diaphragms.	Price with Iris Diaphragm.
U. S. No. 2. f 5.657	1 2 3 4 5 6 7 8	8½ x 6½ 10 x 8 12 x to 15 x 12 18 x 16 22 x 18 25 x 21 28 x 24	714 x 414 816 x 616 10 x 8 12 x 10 15 x 12 18 x 16 22 x 18 25 x 20	Inches 2 2 1/4 2 3/4 3 1/4 4 5 6 7	Inches 81/2 10 1/4 131/4 161/2 20 24 30 36	\$48 60 59 50 81 00 107 00 162 00 291 60 385 20 518 40	\$55 80 65 50 90 00 112 30 176 40 343 20 414 00 568 80

Swift & Son's Portable Photographic Combination Sets of Lenses

Which have been designed with a view of obtaining extreme portability for the use of the amateur and professional photographer on a tour, where Lenses of various focus are likely to be



These sets are so arranged that from three to four pairs of Lenses of different focuses can be screwed into the one brass jacket supplied with each set. It is fitted with Swift & Son's Improved Iris Diaphragm.

The box containing the sheaves of the Iris Diaphragm is engraved with the Photographic Society's numbers and exposure

Each set is packed in a very portable case for the convenience of carrying.

Portable Paragon Lenses.

Embracing Angles from 53° to 80°.

No. 1.-Comprising four pairs of Lenses for pictures, from lantern size to 61/2 x 43/4 of the following focuses, viz.: 3 in. for plates 31/4 x 31/4, 4 in. for plates 44 x 34, 5 in. for plates 5 x 4, and 6 in. for

No. 3.—For negatives from 9 x 7 to 12 x 10, comprising pairs of Lenses of the following focuses, viz.: 9 in. for plates 9 x 7, 10 in. for plates 10 x 8, 12 in

If any of the above Lenses are stopped down they will cover plates two or three times larger than mentioned in list.

Rapid Paragons.

The best form of Lens that an Amateur can have for all Outdoor Photography.

No. 1.-For negatives from lantern size to 5 x 4, comprising pairs of Lenses of the following focuses, viz.:

3 in. for plates 3\(\frac{1}{2}\) x 3\(\frac{1}{2}\), 4\(\frac{1}{2}\) in. for plates

3 in. for plates 3\(\frac{1}{2}\) x 3\(\frac{1}{2}\), 4\(\frac{1}{2}\) in. for plates

No. 2.—For negatives from 6\(\frac{1}{2}\) x 4\(\frac{1}{2}\) to 3\(\frac{1}{2}\) x 6\(\frac{1}{2}\), comprising pairs of Lenses from 7\(\frac{1}{2}\) in. to 11 in.

in focus, viz.: 7½ in. for plates 6½ x 4¾, and 9 in. for plates 7½ x 5 and 8 x 5, 11 in. for plates

pairs of Lenses from 12 in. focus to 16 in , viz. : 12 in. for plates 9 x 7, 14 in. for plates 10 x 8,

Portable Long Focus Landscape Lenses. First Series.

For Photographing Mountainous Scenery or Exceptionally Distant Landscapes.

No. 1.—For negatives 6½ x 4¾ to 8½ x 6½, comprising pairs of Lenses of the following focuses, viz.: It in. for plates 6½ x 4¾, 14 in. for plates 7½ x 5,
To in for plates 8½ x 5½

Price, \$81 oo

Lenses

Accurately Paired for Stereoscopic Photography.

Single landscape Lenses made with the new Jena flint and single lanuscape Lenser made with the new Jean little and crown glass. These Lenses can be strongly recommended for landscapes, pure and simple. The largest aperture is of sufficient intensity to give a fully exposed negative when making instantaneous exposures. Each Lens is adapted to an adjustable mount and fitted with revolving diaphragm of apertures, the largest being U. S. No. 8 or f. 11.314.

	Diameter of Lenses. Inches.	Equi focus. Inches.	Price per pair with revolving wheel of apertures	Price with Iris diaphragm
No. 1	11/4	334	\$26 00	\$36 75
2	114	4	26 00	36 75
3	11/4	41/2	28 50	39 25
4	11/4	5	31 50	42 15
5	-114	6	34 00	46 75

Portable Paragon Lenses.

Accurately Paired.

base Lenses give microscopic definition in landscapes, archi-and interiors (they are not recommended for instantaneous), fitted with a rigid mount with a revolving wheel of the largest being U. S. No. 8, f. 11.314.

	Equi focus Inches.	Price per pair, with revolving wheel of aperture.	Price with Iris diaphragm.
No. 1a	3	\$39 00	\$49 75
* 2a	4	41 75	52 50
* 3a	5	45 50	56 00
= 4a	6	52 00	62 75

Rapid Paragons.

Largest Aperture, U. S. No. 2, f. 5.657.

portraits, groups, instantaneous effects, landscapes, archiand dimly lighted interiors, fitted in rigid mounts. Nos. 1 with revolving wheel of apertures, and No. 3, with Water-

	Diameter of Lenses. Inches.	Equi focus. Inches.	Price per pair, with revolving wheel of apertures.	Price with Iris diaphragm.
n ia	56	3	\$45 50	\$56 25
24	34	41/2	52 00	62 72
30.	I	6	54 75	68 00

Wide-Angle Paragon Lenses.

architecture, etc., in cramped positions, fitted in rigid with revolving wheel of apertures, U. S. No. 8, f. 11.314.

	Diameter of Lenses. Inches.	Back focus, Inches,	Equi focus. Inches.	Price per pair, with revolving wheel of apert's.	Price with Iris diaphragm.
0.14	5%	2	214	\$52 00	\$62 75
= 24	3/8	21/2	3	52 00	62 75
- 34	7-10	31/2	4	58 50	69 15

Swift & Son's Rapid Carte-de-Visite Lenses.

ough not so quick as the extra rapid C.-D.-V. Lenses, ill be found to produce very fine pictures, immensely su-to those taken by the ordinary continental Lenses intended same purpose. These combinations will be found invalthe production of either standing or sitting figures, with ng of Lens. They are constructed to give as flat a field sistent with good definition at the margin of plate, and rapid results with brilliancy and exquisite defining In cases where the studio exceeds twenty feet in length 3 C.-D.-V. Lens should be used to obtain the best pictures ect perspective. Where this distance cannot be obtained 2. or even the No. 1, will be found to give excellently negatives when a stop is used. Waterhouse diaphragms with Lenses marked as below:

4 5.657 8 11.314 16 22.627 32 Diameter of Lens, 13/4 in.; focus, 41/4 in.; requiring 14 ft. between the Lens and the subject. . . Price, \$39 60 Diameter of Lens, 2 1-10 in.; focus, 434 in.; requiring

16 ft. between Lens and subject Price, 45 00—Diameter of Lens, 2½ in.; focus, 6 in.; requiring from 18 to 19 ft. between Lens and subject. Price, 73 oo

Extra Rapid Carte-de-Visite Lenses.

Specially Computed for Photographing Children.

ames Swift & Son have devoted a considerable amount of and expense in perfecting all their Lenses intended for use studio by the professional photographer, but more particuthe above C.-D.-V. and their improved Portrait Lenses.
The No. 1 C.-D.-V. Lens covers the quarter-plate sharp to

argin with the full opening; and will permit of a photogra-

pher taking pictures on dull days during the winter months, which would be an impossibility with the ordinary Carte Lenses. First-class cabinets can be taken with the No. 2 C.-D.-V. Lenses, if slightly stopped down. To get the best effect the No. 2 Lens should be used where the studio exceeds twenty feet in length. Waterhouse diaphragms supplied with Lenses marked as below:

2 2.828 4 5.657 8 11.314 16 22.627 No. 1.-Diameter of Lens, 21/2 in.; focus, 41/2 in., with

Swift & Son's Quick-Acting Cabinet Lenses.

The undermentioned Cabinet Lenses work extremely rapidly, and cover the plate to the edge, giving most brilliant and exqusitely defined pictures. J. S. & Son guarantee them equal to the most expensive Cabinet Lenses produced in this country. When the full opening of Lens is used the results are perfect either of standing or sitting figures, but by far the best results are obtained with No. 3 Lens. Waterhouse diaphragms marked as below:

U. S. Nos. 4 5.657 8 11.314 16 22.627 32

3.-Diameter of Lenses, 31/2 in.; focus, 10 in.; requiring 20 ft. between subject and lens Price, 126 50

Portrait Lenses.

The undermentioned Portrait Lenses give very fine pictures. It will be tives taken of large heads will possess most beautiful modelings, with great softenings of outline. This is a feature only to be obtained when Lenses are perfect from an optical point of view. Enlargements from small negatives may be produced with

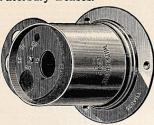
them, which will be found equal to No. 1 PORTRAIT LENS. (One-third Actual Size.) others of the same size taken direct with larger Lenses. It is well known to every photographer that this is the most severe test for defining powers to which a Lens can be put; it should be borne in mind that no Lens giving diffusion of focus will stand this, absolutely sharp negatives being required when enlargements are wanted. These Lenses give perfect pictures of either vignettes, half-lengths or sitting figures. Waterhouse diaphragms marked as below:

U. S. Nos. 4 5.657 8 11.314 16 22.627 32 No. 1 Portrait Lens .- Diameter of Lenses, 31/2 in.; back focus, 10 in.; for plates 61/2 x 43/4; when a diaphragm is used whole plate portraits may be phragm is used whole place portions had be obtained. Price, \$113 40
2 Ditto.—Diameter of Lenses, 4 in.; 12 in. focal length;
for plates \$4\foxedxio 8\foxed in. and under. Price, 175 00
3 Ditto.—Diameter of Lenses, 4\foxedxio in.; 15 in. focal length;
for plates 10 x 8 in. and under. Price, 253 50
4 Ditto.—Diameter of Lenses, 5 in.; 20 in. focal length;

for plates 18 x 16 in. and under Price, 275 50 -Diameter of Lenses, 6 in.; 24 in. focal length; for plates 22 x 18 in. and under......Price, 357 00

Waterbury Lenses.

The unprecedented success which has everywhere resulted from the employ-ment of the Waterbury Lenses, for 4x5 and 5x8 plates respectively, in-duced the Scovill & Adams Co. to extend the series of this favorite objective. The popular C Waterbury Lens gave an opportunity for producing 8 x 10 and even



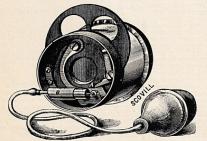
10 x 12 photographs with the sharpness, detail and brilliancy of the smaller sizes, but after its advent there was still a gap between the 5x8 and 8x10 sizes. The desire to see the Waterbury series complete has led to the production of the BB Waterbury Lens, which covers 61/4 x 81/4 (the ever popular 4-4 size) to the extreme edges. In o 23 × 22 the every popular 4-4 skey to the extreme edges. In them are the supplied with all the Waterbury Lenses. In them are the without the supplied with all the Waterbury Lenses are composed of a bi-convex crown glass lens cemented to another lens of the plano-convex form,

made of the best selected flint glass. Be sure that the convex side of the lens is toward the focusing screen,

Owing to the great advances in the sensitiveness of emulsion plates, the Waterbury Lenses are now commonly used for groups and for instantaneous views, with the Scovill Safety Shutters, described on another page. No better testimony can be given to the excellence and reliability of these objectives, and the mathematical accuracy with which they are made, than that deduced from the recent test made of 392 lenses of the C series, in which large number only two lenses differed at all in focal length or luminous power from the others.

		Inches.	
A, Single, for 4 x 5 plate	I 16	6	\$3 50
A. Matched pair, stereoscopic			7 00
B. Single, for 5 x 8 plate	1 1 1	IO	4 50
BB Single, for 61/2 x \$1/2 plate	114	1034	6 00
C, Single, for 8 x 10 plate	21/2	16	8 00

The Elite Time or Instantaneous Shutter.



This economical shutter was especially designed for use with the Waterbury Lenses.

DIRECTIONS FOR USE.

To set the shutter for snap work, push the point A as close to the piston B as it will go. Push arm T as close to the edge of the lens as possible. The shutter is now set for quick work. When ready to expose, give a hard, quick squeese on the bulb.

FOR TIME EXPOSURE.

Press arm T as close to centre of lens as it will go. Push the point A close to the piston B. For exposure, squeeze and hold the bulb, which will open the shutter; when the time of exposure is up, release the pressure upon the bulb and the shutter will close.

Dar	lot	Gem	Lenses.

1-9																									
1-6																									
1-4		 ٠.			 											 						4	(00	

The Scovill Economic Lenses.

These Lenses are intended to fill the want experienced by thousands of successful workers with the Waterbury Lens for a good low-priced Rectangular Wide-Angle Lens, whereby they can gain artistic effects in perspective at short distances.



Price Scovill Economic Lens	rice	Scovill	Economic	I.ens
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No.	Size of Plate.	Back Focus.	Equivalent Focus.	Price.
3 4	6½ x 8½ 8 x 10	6 inches.	6½ inches.	\$15 00 20 00

Morrison Wide-Angle View Lenses.



These Lenses are absolutely rectilinear; they embrace an angle of fully 90 degrees, and are the most rapid, and are universally conceded to be the best wideangle lenses made.

No.		meter ens.				Plate			Fo	valer cus.		Pri		
0	1		1	3	x	414	in	 	214	in.,	each,	\$20	00	
3			1	41/4	x	61/2			41/2			25	00	
4		in	1	5	X	8			6			25	00	
5			1	61%	x	81/2			7			25	00	These 6 sizes
6			J	8	x	10			81/2			30	00	i flange.
7	11/4		1	I	x	14		 1	11/2			40	00	- manger
8	11/4			14	x	17		 . 1	13			50	00	

13 13 15 0 00]

13 No. 1 to 6 are all made in matched pairs for stereoscopic work. The shorter focused Lenses are specially adapted for street and other views in confined situations. For general purposes, a pair of No. 5 Lenses will be found most useful.

Morrison Combination Wide-Angle Lenses.

The acknowledged superiority of the Morrison Wide-angle Lenses, and the desire of photographers to have a number representing the various focal lengths in as compact form as possible rendered it necessary for Mr. Morrison to devise a scheme for combining the various foci in one instrument. This he did some time ago, and his "Combination" Lenses are now in great

demand.

An elegant morocco case, velvet lined, four and a quarter inches long by two and a half wide by one and three-quarter high, contains one eighth-inch Wide-angle Lens in its usual brass mounting, with revolving diaphragm, and a set of Lens Cells of four, five, six and eight inches focal length respectively. These Lens Cells are interchangeable, and the operator is thus possessed of one Lens Combination by which he secures focal length of four, five, six, seven, and eight inches, and hence is fully equipped for interior and exterior work from 4 x 5 to 8 x 10 in the most confined situations, or for landscapes at nearest and greatest dis-

tances from the point of observation.

The device is so simple that it will be readily understood from the following explanation. Put in Cells as follows:

Front.			with					4.				f	01	r 4-	inch	Back	Focus.
5																	
6			"					5						6			
6								8,					,	7			
8			"					8.					u	8			

Thus the operator combines five focal lengths in one Lens. These Lenses, if purchased separately, would cost in the

Photographic Lenses.

The Instantané Lens. With Aluminum Mount and Iris Diaphragm.

several Lenform the on of the Inare ground newly inass which has prompt rec-Europe. By the crystaland whiteglass, the will answer the alt requirespeed, and atisfactorily rs fail



such a reprilliant, yet soft illumination, this Lens will be found rior to all others of the Rectilinear class for portraits. the full opening, it takes a portrait of very superior

Instantané Lens is perfectly Rectilinear, and entirely astigmatism, even when used with its full aperture, most remarkable depth of focus ever produced in any character.

stantané is one of the few Lenses that are really It is guaranteed not only to cover the size plate for old, but to do this without the least loss of definition of the plate.

good field, although not so forced a capacity as some, n a considerably larger image of the principal object ther Lens of its size would yield, besides absolute free-any distortion whatever.

PRICE LIST OF INSTANTANÉ LENSES.

for	14	x	5	size, instantaneous or timed
				photographs 6 in\$30 co
-	5	X	8	size 8 " 35 00
-21	61/2	X	81/2	" 50 00
-	8	Х	10	" 60 00
1	Inst	an	tané	Lens with Inst. Shutter and Iris Diaphragm

Scovill's Portrait Lens.

Scovill's "Peerless" Quick-Acting Stereoscopic Lenses. For Portraiture or Views.

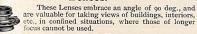
Lenses are especially designed for Stereoscopic Pho-

are particularly adapted for instantaneous work. er of Lenses 11/2 inch; focal length, 31/2 inches.

oving the back lens and substituting the front comfocal length of 51/2 inches is obtained. are supplied with six Waterhouse diaphragms in

..... per pair, 17 00

Darlot Wide-Angle Rectilinear View



۰	30	ick F	ocus.										S	ize		Vi	c	w.								Pri	ce.
20.		23/2	inche	s.	٠.		, l)1	S	t	er	e	0	sc	oj	ρi	c	1	V	O	rŀ	٤,	each			\$12	50
	=	3																								15	00
	3	5	,																							20	00
-	4	8																								25	00
-	5.	12									•															35	00

Darlot Rapid Hemispherical View Lenses.

These Lenses embrace an angle of from 60 to 75 degrees; are quick-acting, perfectly rectilinear, and provided with central stops. Will be found very fine Lenses for landscapes and outdoor groups; also for copying engravings, maps, architectural

	B	ack Fo	cus.				S	ize	v	iew	٠.		R	igie	d M	founts.	Pr	ice.
No.	I.	51/2	inches					5	x	6				.\$	13	50	.\$15	00
								5	x	8					20	00	. 25	00
	3.	101/2						8	x	10				. :	30	00	. 35	00
	4.	14														00		

No. 1 can be had in matched pairs for Stereoscopic Work.



Description and Prices of the Gundlach Rapid Rectigraphic Lenses.

No.	Size of Plate.	Diameter of Lenses.	Equivalent Focus.	Focus of Back Lens.	Focus of Front Lens.	Price.
0	31/4 x 41/4	18 in.	5 in.	8 in.	11 in.	\$14 00
I	4 X 5	I ,	614 *	10 "	131/2 "	18 00
11/2	414 x 61/2	11/8 .	7 "	II "	1434 "	20 00
2	5 x 8	11/4 "	81/2 "	131/2 "	18 .	24 00
3	61/2 x 81/2	11/2 "	II "	17 "	23 "	30 00
4	8 x 10	134 "	13 "	201/2 "	28 .	38 00
5	10 X 12	2 *	16 .	251/4 "	34 "	45 00
6	11 X 14	21/4 "	181/2 "	291/4 "	391/2 "	60 00
7	14 X 17	234 "	22 *	3434 "	47 "	85 00
8	17 X 20	314 .	26 "	41 "	56 .	00 001

The two triplets constituting the Lenses are of different focal length, the Back Lens having a much shorter focus than the Front Lens, and their relative curvatures are so calculated as to secure perfect optical (not geometrical) symmetry of the compound, and at the same time to form perfect achromatic and aplanatic objectives, for themselves, if used singly. This novel plan offers the ives, for themselves, it used singly. This novel plan offers the important advantage that these new Lenses now in fact contain or consist of three objectives of different powers or focal lengths, which are of the following approximate proportion: Equivalent of Compound 2, Back Lens alone 3, Front Lens alone 4, thus giving, on the same plate, pictures differing in size about as 2 to 3 to 4. To use the Back Lens alone the Front Lens is to be removed and the hood screwed into its place. To use the Front Lens alone, the Back Lens is to be removed and the Front Lens screwed into its place. The focal lengths of the compound and of each separate Lens are engraved on the mounts of the Lenses.

Steinheil Lenses.

Quality, not quantity, governs in determining the price of lenses. By an examination of the following price list, which supersedes all previous ones, it will be seen that the Steinheil lenses are sold lower than any first-class lenses with which alone they may be compared. The introduction of Steinheil lenses marked an important advance in photographic optics.

How to Select a Steinheil Lens.

The Steinheil Lenses are divided into six series, presented in the order of their respective rapidities. Each series begins with No. 1 for the smallest size, and continues upwards. To avoid errors, it is therefore necessary in ordering to quote both the number of the series and the number of the lens in the present catalogue.

All Steinheil Lenses are rectilinear and are strictly corrected for spherical errors and chemical focus.

They are free from disturbing reflections, and strongly illuminated objects can be taken with them without producing flare or light spots. They are, moreover, constructed so as to give the

regreatest possible equality of definition over the whole picture.

In focusing with these lenses always use largest stop and focus on object of chief interest. Then without changing focus insert proper diaphragm to secure depth in foreground and

According to the principle involved in their construction, the Steinheil Lenses are divided into two classes, viz.: Antiplanetic and Aplanatic.

Antiplanetic Lenses.

(PATENTED IN UNITED STATES AND EUROPE.)

Briefly stated, these lenses, which are the result of a series of calculations extending through several years, are composed of two non-symmetrical combinations each of as great but opposite faults as possible, which correct each other. One combination has a shorter focus than the objective as a whole, and the other has a negative focus. The combinations are placed closely

By the peculiar construction, as described above, differing widely from the usual forms, it has been possible to correct to a considerable extent the hitherto greatest defect in photographic objectives, viz., "Astigmatism," and the consequent rapid decrease of definition from the center to the margin of the picture.

The result is greater sharpness and depth distributed more equally over a larger and strictly even picture, before any decrease in definition is perceptible.

Illumination, too, is more evenly distributed in consequence of lenses being proportionately nearer together.

These properties allow the lenses to be worked with full aper-

ture or large stops, and give them great rapidity of action.

The perfectly correct delineation produced by the antiplanets render them particularly suitable for enlargements as well as for

dissolving view apparatus.

If small and sharp originals are taken, and subsequently enlarged, depths are obtained which would be unattainable in larger pictures taken direct with same amount of light. For this purpose, which will probably play an important part in photography, the antiplanets are specially suitable.

In making enlargements the front lens of the antiplanets

should always be turned towards the enlarged picture, and the

Should aways be turned words the emaged preme, and the back lens towards the object to be enlarged.

This construction is designed for strictly even and correctly delineated pictures, and all tilting of the camera should be decidedly avoided and a movable lens board used instead.

The antiplanets are made in two series: The portrait antiplanets (Series I.) and the group antiplanets (Series II.), the latter being, however, also excellent dry-plate portrait lenses.

Aplanatic Lenses.

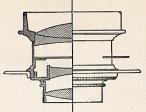
These lenses consist of the original and now well-known symmetrical and rectilinear combinations, invented by STEINHEIL in 1868 but not patented. They are made in four series, each of in 1808 but not patented. They are made in four series, each of which is especially designed for a certain class of work. Their capabilities and object are fully explained below.

The lenses of Series V., also Series III., No. 1; Series IV.,

Nos. 1 and 2, have rotary diaphragms.

All the other lenses are furnished with Waterhouse diaphragms in morocco case.

Series I .- Patent Antiplanetic Portrait Lens.

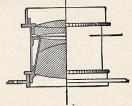


The rapidity is the same as in the usual Portrait Objectives but there is more equality in the distribution of sharpness and illumination over the picture and greater depth. Contrary to the ordinary Portrait Objectives they pro-duce perfectly correct delineation, Designed for Portraits, Enlargements and Dissolving View Apparatus.

No.	Aperture, Inches.	Focal Length, Inches.	Plate, Inches.	Price.
1	5%	2	Locket-Size.	\$25 00
1a	58 118 218	411	1-9 plate.	50 00
16	200	718	1-6 plate.	75 00
2	3	91/2	Carte de Visite.	100 00
3	358	1258	Cabinet.	165 00
4	35% 514	23 3/8	Boudoir up to ½	330 00

Special quotations for larger Sizes.

Series II.—Patent Antiplanetic Group Lens.



New in principle and construction, consisting of two non-symmetrical cemented pairs, placed closely together. It is rectilinear, and is remarkable for its powerful and even illumination and sharpness. In rapidity. it is only excelled by the regular and expensive portrait combinations.

Recent improvements in the mounting of the lenses of this Series make them still more compact

than formerly, and allow the front hood of lens to screw off, un-covering a screw thread which can be very conveniently used for adjusting lens to detective cameras, shutters, prisms or other Designed for Portraits, Groups, Architecture, Landscape

Instantaneous Work and Enlargements.

Unexcelled for Flashlight Portraits and Groups.

No.	Aperture, Inches.	Focal Length, Inches.	Size of Portrait or Group, Inches.	Size of View or Landscape, Inches.	· Price.
0	3/8	17/8	15% x 15%	2 X 2	\$18 00
*1b	16	334	3¼ x 3¼ 4¼ x 3¼	4½ x 3¼ 4½ x 3¾	21 00
2	I	5 %	4½ x 3¾	5 X 4	28 00
*26	113	61/2	5 X 4	5½ x 4¾	33 00
3	116	714	5½ x 4¼	7 X 5	37 00
4	111	91/2	7 X 5	8½ x 6½	48 00
5	17/8	101/8	81/2 x 61/2	10 x 8	60 00
6	21/2	141/8	10 x 8	12 X 10	95 00
7	316	1734	12 X 10	15 X 12	140 00

* Special Detective Camera Lenses: No. 1 b for plates 4¼ x 3¼; No. 2 b for plates 5 x 4.

Nos. o to 3 are made in matched pairs for Stereo Work.

Shutters of any desired make will be fitted to our lenses at manufacturer's prices.

Photographic Lenses.

Steinheil Lenses.

Series III,-Improved Aplanatic Lens.

The prototype of rapid symmetrical rectilinear comtions. Is now with increased ination and rapand guaranteed equal or superior e most expensive the Antiplanetic Lens, Series II., the best Lens for ral work. Nos. 5 to 10 incluof this Series are shed to order an attachment

ing the distance een front and back combinations to be adjusted either for negatives or for copying from flat surfaces, thus practically the operator two lenses in one. For direct pictures ach the two combinations as near as the mounting will

w, and for copying separate them in the same manner, whereby tens loses in depth and gains correspondingly in flatness of field. Designed for Portraits, Groups, Architecture, Landscape and Landscape Landscape and Landscape and

No.	Aperture, Inches.	Focal Length, Inches.	Size of Portrait or Group, Inches.	Size of View or Landscape, Inches.	Price.
	14	15%	For en	larging.	\$18 00
	1/4 5/8	334	3¼ x 3¼	4¼ x 3¼	18 00
	I	558	4¼ x 3¼	51/2 x 41/4	25 00
	11/4	71/2	5½ x 4¼	7 x 5	32 00
·	110	91/2	7 X 5	8½ x 6½	38 00
	111	11	8½ x 6½	10 x 8	44 00
	215	141/8	10 x 8	12 X 10	57 00
	23/8	173/8	12 X 10	14 X 11	86 00
	215	2113	17 X 14	20 X 17	125 00
	318	25	20 X 17	22 X 18	166 00
	416	33	22 X 18	24 X 20	245 00

Nos. 2 to 4 are made in matched pairs for Stereo Work.

Series IV .- Rapid Wide Angle Aplanat.

Angle about 75 , and covering a ver field than the es of Series III. ctive aperture at f. 10. Specially gned for Lande Work and Arcture, but can be advantageused for Flash-Interiors and

		Focal	Size of	Picture.	
No.	Aperture.	Length, Inches.	Full Aperture, Inches.	Smallest Stop, Inches.	Price.
	13 34	23/8	2 x 2 3½ x 3½	3½ x 3½ 4½ x 4½	\$18 00
	1/2	434 63%	5 X 4 7 X 5	7 x 5 8½ x 6½	26 00 32 00
	I .	91/2	8½ x 6½	12 X 10	44 00
	11/2	153/8	12 X 10	17 X 14	86 oc
	21/8	23 %	17 X 14	24 X 20	160 O

It is frequently desirable to get a picture from a given point It is requently desirable to get a picture from a given point to get it just the size to cover your plate, or of any other given without changing your position. This can only be accombed by using objectives of different foci, by which you can use or enlarge the image at will. For this work we have arranged a Set of Four Single Aplanats fitting in the same flange, aperture 1 in., covering 8½ x 6½ with full aperture, and 12 x 10

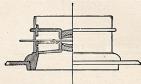
with smallest stop.

Used singly and by combination among themselves seven different foci are obtained as follows:



Price, in neat lock-up case\$85 oo Sets of any class and size of Aplanats made to order.

Series V .- Extreme Wide-Angle Aplanat.

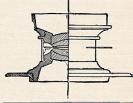


The proportionately short focus and large angle (about 100 deg.) of these lenses make them particularly adapted for Interiors, Architecture, and for very high, broad objects taken from short distances.

No.	Aperture, Inches.	Focal Length, Inches.	Size of Sharp Pictures, Inches.	Price.
1	3-16	334	5 X 5	\$26 00
2	5-16	434	7 x 7	30 00
3	7-16	714	10¼ x 10¼	42 00
4	9-16	103/8	121/4 X 121/4	61 00
5,	14-16	16	18½ x 18½	93 00

Special quotations for larger sizes,

Series VI.-Wide-Angle Aplanat for Copying.



These lenses give perfect flatness of picture and sharpness of definition, and have at the same time a considerable field. Designed specially for Copying Maps, Charts, Drawings, Paintings and Engravings, and Photo-mechanical work gener-

No.	Aperture.	Focal Length.	Size of Sharp Picture.	Price.
1	I inches.	143% inches.	10 x 10 in.	\$75 00
2	114 .	18	13 X 13 *	105 00
3	134	2358 .	17 X 17 *	145 00
36	2 .	3034	20 X 20 #	210 00
4	21/2 "	383/8 "	24 X 24 #	320 00
5	3 .	4814	28 x 28 .	540 00
6	31/2 "	56 .	34 × 34 *	760 00

Special quotations for larger sizes.

It is only a few years since this Lens has been brought to the notice of photo-mechanical establishments in the United States, but it was at once recognized as the very best Lens for their work for which it has been specially designed. To-day this Lens is found in every establishment where the production of the highest class of work is the first consideration.

As a result of our experience we beg to point out particularly the necessity of avoiding the slightest vibration during exposure, when it is desired to obtain the extremest sharpness of picture which these Lenses are capable of producing. It is also advisable not to use too small a diaphragm, as the diffraction caused thereby

veils the picture.

For obtaining inverted negatives, without stripping the film, we have designed the Prisms of Series VII, which can be fitted to the above or any other Lenses.

Steinheil Lenses. Series VII.-Prisms.

Camera.

These prisms are made of one solid homogeneous mass of glass, with silvered hypothenuse

They are center-ed in their mountings and adjustable to our lenses simply by unscrewing the hood of the lens and screwing the prism

With every prism is furnished a rotary flange with set screw allowing the prism to be turned and

ing. Draw

fixed at any angle to the horizon. Designed for making Inverted Negatives with out stripping the film. Also for special and scientific work.

To work with Lenses as follows:	Price.
Ser. III. No. 2, Ser. IV. No. 3, Ser. IV. No. 4	0
Ser. IV. No. 5, Ser. V. No. 3, Ser. VI. No. 1	41 CO
	45 00
	57 00 68 00
	80 00
Ser. VI. No. 3b	110 00
Ser. IV. No. 7	125 00
Ser. II. No. 4, Ser. III. No. 6	155 00
Ser. VI. No. 4	185 00
Ser. III. No. 7, Ser. VI. No. 5	403 00
	Ser. III. No. 2, Ser. IV. No. 3, Ser. IV. No. 4 Ser. V. No. 1, Ser. V. No. 2

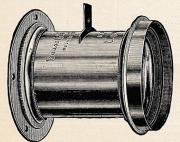
No charge made for fitting the above Prisms to Steinheil Lenses. For fitting to other makes of lenses the labor will be charged for at cost.

Series VIII.-Aplanatic Focusing Lenses.

These are a combination of three lenses, so constructed that, at a considerable focal distance and large field, they produce an even, undistorted picture, achromatic both inside and outside of

No.	Focal Length.	Linear Magnifying Power.	Price.
I	23g in.	about 3½ times	\$12 00
2	15% "	* 5 *	10 00
3	. I #	8	8 00

Bausch & Lomb Rapid Universal Lenses.



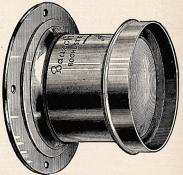
These Lenses since their first introduction have enjoyed an unusual popularity and are beyond doubt destined to become the

best known Lenses in the American market, due to their merits best known Lenses in the American marker, due to their merits only. We are desirous that they be compared in every direction with the best foreign productions of similar type. They are of the rectilinear, compound type, intended for studio work and all kinds of out-door photography. They are in no manner an imita-tion of any form, but have a construction peculiarly their own, the result of years of experiment to reach the highest results. The glass is specially manufactured for us of unusual hardness and brilliancy. involving specially favorable curves and the practical advantage that the Lenses are not liable to become scratched or undergo chemical changes. The cement is absolutely coloriess and not liable to deterioration. The mountings are of neat design, well finished and carefully centered.

The diaphragm rings which we have introduced and have been in use for several years, have found general commendation. They are readily attached or removed, and for ordinary work may be left undisturbed. By means of them the angle is reduced giving unusual depth and flatness without affecting the speed to any extent. Without the rings the Lenses have a speed given in the table below, with a covering capacity or flatness at least equal to that of any known Lens, and greater speed than any of the regular rectilinear Lenses. Every Lens is supplied with morocco cap and case and eight stops. Unless othewise mentioned, we supply brass stops, but finding that hard rubber is excellently adapted to this purpose, and considerably lighter in weight, we also make them of this material and supply them in place of those of brass, when desired.

Nos.	Stop Covers.	Medium Stop Covers.	Diame- ter of Lenses.	Back Focus.	Equiva- lent Focus.	Largest Stop.	Price.
	,		Inches.	Inches.	Inches.		
41/4 5 8 81/2	31/4 X 41/4	4 X 5 5 X 8	3/8	41/4		6.7	\$16 0
5	4 X 5 5 X 8	5 x 8 6½ x 8½	1 1-16	534	51/4 61/4 81/4	7.0	20 0
8			13/8 13/8 13/8 25/6 31/8 41/8	71/4	81/2	7.0	24 0
81/2		8 X 10	158		11/4	7-5	32 0
10	8 X 10	10 X 12	17/8	121/4	13	7-5 8.4 8.8	44 0
12	10 X 12	12 X 15	2/8	15		8.4	56 o
5 8	12 X 15	16 X 18	298		191/2	8.8	70 O
8	16 X 18	20 X 22	31/8	221/4	231/4	9.0	90 0
2	20 X 22	21 X 25	41/8	28	30	9.0	120 0

Alvan G. Clark Lenses.



(Full Size, 61/4 x 81/4, A. G. C.

These Lenses are the invention of Alvan G. Clark, the celebrated manufacturer of telescopes, and are of a construction dissimilar from anything heretofore followed, and are as striking in their results as Mr. Clark's success in the telescope objectives

These Lenses may be used in three directions:

1. To all work to which the Rapid Rectilinear type may be

adapted, when they give an angle of about 55 degrees. 2. To all work requiring a medium angle objective.

3. Then they may be used as wide-angle objectives, having an aperture of about 95 degrees, and as such can be used with larger stop than other specially constructed Wide-Angle Lenses of the symmetrical type. They are quite free from marginal distortion and magnified perspective, so common to Lenses of this class. When using these Lenses in this capacity, care

Photographic Lenses.

Alvan G. Clark Lenses.

uld be used in beveling the back of the front board so as to o free passage of the rays.

The Lenses are uncemented, each Lens of the combination mounted for itself, are therefore free from danger of al decrease in speed, so common in many Lenses owing to chemical change in the cement. The crown glass is on the e, and therefore less liable to become scratched. The tings are unusually compact and each mounting has end upon it Mr. Clark's autograph as well as the firm name of ch & Lomb.

While these Lenses are intended to be used in all out-door they are also suited to portraiture, particularly for groups, ing the plates for which they are rated noticeably better other symmetrical Lenses.

These Lenses are fully covered by patent,

No.	Size of Plate work'g with Stop F. 8 Angle about 55°.	Size of Plate work'g with Stop F. 20 Angle about 75°.	Size of Plate work'g with Stop F. 35 Angle about 95°.	Diam. of Lenses.	Back Focus.	Equiva- lent Focus.	Price.
41/4 58 81/4 10 12 15 18 22	3½ x 4½ 4 x 5 5 x 8 6½ x 8½ 8 x 10 10 x 12 12 x 15 16 x 18 20 x 22	4 x 5 5 x 8 6½ x 8½ 8 x 10 10 x 12	5 x 8 6½ x 8½ 8 x to 10 x 12 12 x 15	54 in. 17/8 ii ii 17/8 ii ii 17/4 ii ii 27/8 ii ii	45% in., 53% ii. 53% ii. 10% ii. 112% ii. 113% ii. 113 ii. 122 ii. 128 iii. 128 ii. 128 iii. 128 ii. 128 iii. 128 ii.	5 in. 61/4 " 81/4 " 131/4 " 161/4 " 161/4 " 231/4 "	\$18 00 22 00 28 00 36 00 48 00 60 00 78 00 100 00 140 00

SERIES III.

Goerz's Double Anastigmat F:7.7.

Universal Extra Rapid Lens

R PORTRAITS, GROUPS, INSTANTANEOUS PHOTOGRAPHY, LAND-SCAPES, ARCHITECTURE, INTERIORS AND ENLARGEMENTS.





The Lenses of this series are universal instruments in the sense of the word. At full aperture, they admit of instanous photographs embracing an angle of 70° being taken, even dull days. By the use of small stops the photograph may be de to include an angle of 90°. The Double Anastigmats of ries III satisfy, therefore, the highest requirements and are nently adapted for all-round purposes, in and out of doors.

SERIES III. GOERZ'S DOUBLE ANASTIGMAT F:7.7.

No.	Equiv-		Size of Pl	ate sharply	covered at	Code Word.	Price,
210.	Focus.	Aper- ture,	F:7-7	F:15.5	F:62	Code word,	Dia- phragm,
00 0 1 2 3 4 5 6 7 8 9	Inches 3½ 4¾ 6 7 8¼ 9½ 10¾ 12 14 19 24	Inches 1/2 5/8 7/8 1 1/4 1/5 1/5 1/5 2 2 5/8 3 5 5	Inches 3 x 3 3 4 x 4 4 4 x 5 4 3 4 x 6 1/2 5 x 8 6 1/2 x 8 1/2 7 x 9 8 x 10 10 x 12 12 x 15 16 x 18	Inches 3¼ x 4¼ 4 x 5 ¼ x 6½ 5 x 8 2½ x 8½ 7 x 9 8 x 10 10 x 12 12 x 15 16 x 18 18 x 22	7 x 9	Cadiz Caesar Calderon Calla Calvin Camerun Camillus Canada Capet Carlos Census	\$34 50 36 50 43 50 50 00 60 50 73 00 88 50 104 00 136 00 213 00 316 00
11	30 35	414	18 X 22 22 X 25	22 X 25 24 X 30	28 x 36 34 x 44	City Columbia	524 00 1040 00

As the image is perfectly sharp, even with large apertures, the definition, brilliancy, and depth of every point of the field is absolutely uniform. Hence perfectly sharp wide-angle instantaneous photographs may be taken.

The back lens, the focus of which is about the double of that of the entire objective, may, by itself, be used as a landscape lens,

Nos. oo to 5 are particularly adapted for hand and traveling cameras. The higher numbers will be found of great service for large portraits and group photography and similar work.

The size of plate indicated sub F:7.7 represents the area which is sharply covered up to the edge. It is, however, advisable to select a higher number than that actually required in all cases where the lens is largely used at full aperture and where, at the same time, it is important that the entire plate should be uniformly illuminated when the camera front is moved out of its central

I am prepared to supply lenses mounted for adaptation to detective cameras if ordered in sufficiently large numbers.

For stereoscopic views the lenses are "paired" at an extra

SERIES III, GOERZ'S DOUBLE ANASTIGMAT F:7.7

is particularly adapted for hand and detective cameras, since at full aperture, i. e., with maximum rapidity, it covers sharply up to the corners a plate whose longest side is equal to the focus. This series comprises, therefore, the best hand camera lenses.

If a considerable number of one kind of lens be ordered the Double Anastigmats may be had mounted specially according to drawings. Special prices will be quoted in this case.

SERIES III. GOERZ'S DOUBLE ANASTIGMAT F:7.7.

Fitted with Iris Diaphragm and a very convenient worm focusing screw. Eminently adapted and largely used for hand

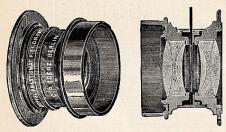
No.	Equiv-		Size of Pl	ate sharply	covered a:	Code Word.	Price.
NO.	alent Focus.	Aper- ture.	F:7.7	F:15.5	F:62	Code Word,	Dia- phragm.
0 1	Inches 4¾ 6	7/8	Inches 3½ x 4½ 4 x 5	Inches 4 X 5 4 X 6 ½	Inches 134 x 6½ 5 x 8	Courant	\$41 50 50 00
2	7	I	434 x 61/2	5 x 8	7 X 9	Cuba	57 00

SERIES IV.

Goerz's Double Anastigmat F:11.

Rapid Copying Lens

FOR FULL SIZE REPRODUCTIONS, ENLARGEMENTS, LARGE GROUPS, LANDSCAPES, INSTANTANEOUS PHOTOGRAPHY AND INTERIORS.



Series IV of the Double Anastigmatic Lenses has been specially computed for copying in full size. It is, for this purpose, made to cover a plate of a diameter which is double the focal length of the lens without any distortion and without astigmatic aberrations and with perfectly uniform sharpness up to the extreme edge.

This excellent lens may also be used for photographing distant objects; for in this case the curvature of the image is barely appreciable and is counterbalanced by the depth of the focus and the sharpness of the image, which is free from astigmatic aberrations. The sharp image subtends an angle of 75° with the largest stop; hence instantaneous wide angle photographs, groups, landscapes, and architectures may be taken with these lenses. By means of small stops the image may be made to embrace an angle of 90°.

The hood is, as may be seen from the illustration, detachable and is fitted on in such a manner as to admit of the adaptation of

The back lens, whose focus is about double that of the whole objective, may in like manner as the lenses of Series III be used by itself as a landscape lens.

SERIES IV. GOERZ'S DOUBLE ANASTIGMAT F:11.

	lent s.	Aperture.	Plate for	l Size of Copying at to F:22.		of Plate ered at		Price,
No.	Equivalent Focus.	Free Apo	In Life Size.	In Reduced Size,	F:15.5 For Groups.	With small'r Stops for Landscapes, Interiors, etc.	Code Word.	Water- house Stops.
	In.	In.	In.	In.	In.	In.		
6	12	116	16 x 18	10 X 12	10 X 12	16 x 18	Damara	\$107 00
7 8	14	1 5	18 x 22	12 X I5	12 X 15	18 x 22	Darius	137 50
8	19	134	22 X 25	16 x 18	16 x 18	22 X 25	Dekan	223 50
9	24	21/8	24 X 30	18 x 22	18 x 22	24 X 30	Dictator	335 00
10	30	234	28 x 36	22 X 25	22 X 25	28 x 36	Dolomit	549 00
11	35	31/2	34 × 44	24 X 30	24 X 30	34 × 44	Doria	1064 00
12	47	416	40 x 60	28 x 36	28 x 36	40 x 60	Drusus	1922 CC

The normal plate sizes tabulated above for copying in full size are covered with great uniformity and with a degree of sharpness which is equal to that of a fine engraving. Where this degree of sharpness is not insisted upon, e. g., for reproductions in mezzo-tint, the same area may be covered with full aperture.

In order to obviate any misunderstanding, I beg to remark that the double anastigmatic lenses F:11 cover a considerably larger plate than those usually required by photographers. For nearly all cameras now in use are designed for long focus lenses, owing to the inferior capabilities of the older types of copying lenses. For this reason it is often advisable not to choose a lens of inconveniently short focus, but rather to take the next size







THE TRIPLEX.

The world-wide reputation this shutter has gained makes it un-necessary for us to go into a de-tailed statement of its merits.

"When it has been used once it will always be used," is the dictum of the knowing ones. It has three movements—Fast-Instantaneous, Slow-Instantaneous

Size:	0 76 13.00	oA 1 13.50	1 11/8 14.00	1Å 1¼ 15.00	136 15.50	2Å 1½ 16.00	
3,1%	3A	21/4	5 21/2	6	31/2	10.00	

\$17.00 18.00 20.00 22.00 25.00 30.00
All sizes to and including No. 3 are fitted with rotary stops. When plain stops to ordered in place of rotary, the price will be \$1.00 less. If flange screw is on only to tube, an extra charge of 50 cents will be made on all sizes to No. 3A. On o. 3A and larger sizes, 75 cents. Extra for fitting to Steinheil lenses, \$2.50.

DIRECTIONS FOR WORKING.

Annexed cut shows shutter Annexed cut shows shutter djusted for Time movement but with spring hooked in ratchet to hold open for focus-ag. Unhook spring and shutter closes. Now attach bulb and be to pneumatic, then a gentle ressure on bulb will cause butter to open and remain so ntil pressure is released. Move and pressure is released. Move book No. 3 (see cut) to upright position, press the bub and a sea made. Throw in lever catch No. 1 (see cut), hook spring in arthet, turn back look No. 3 and see cut). Shutter is now set for see cut). Shutter is now set for such-internaneus and a pressure on bub releases it. Two



Any deviation

COLUMBIAN TRIPLEX.

The Columbian Triplex is set by one movement only. It has an Automatic

ting it for use v	ith Koll	Film and	Magaz	ine Han	d Came	ras.		
SIZE APERTURE, in.		° 7/8	oA	11/6	1A	136	2A	
PRICE		14.50	15.00	15.50	16.50	17.25	18.00	
	134	3A	21/4	21/2	3	3/2		
	\$19.25	20.25	22.50	24.50	29.00	33.00		
	STER	REOSC	OPIC	TRI	PLEX			

from our stand-ards of separa-tion, as below, \$1 00 extra per 1/2 This shutter is

manipulated in the same manner as our regular Triplex. STANDARD SEPARATION, in. APERTURE, in..... Pares \$20.00 22.00 23.00 25.00
Faces of shutters must not be pressed together nor oil used on working parts. tust gets in pneumatic, take out plunger and clean thoroughly with a dry cloth.

TRIPLEX DETECTIVE.

Arranged to operate from outside camera, in the manner preferred by the opera-Trigger and pneumatic release. Camera should be sent with lens when this ter is to be fitted.

15.50 THE RAPID. Intended for extreme speed work only.
Two to three times as fast as the "Athlete."
Made in these sizes at prices as follows:

OPENING Inches. PRICE \$18.00

DUPLEX, JR.

This shutter is intended for instantaneous This shutter is intended for instantaneous work only, with small hand cameras. It is so arranged that it is perpetually set, except for the reversing of spring tension after making an exposure. The speed will equal that of the "Triplex" from slow-instantaneous up.

OPENING, in.. 34



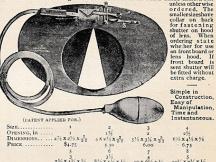
As the name im-plies, this shutter is designed to meet the requirements of the requirements of those who desire to photograph athletic and all track events. It combines all the movements of the Triplex with a poss-ible speed of 1/500 of a second.

PRICE:

\$5.00 additional to prices of any given site Triplex up to For Time work, unhook the spiral spring from lever bar 2A soper cent, addi-and straight spring from ratchet on back of shutter and proceed tional. Fitted only as with the Triplex. For Extreme Speed, turn back arm on with plain stops, lower edge of shutter, hook spiral spring to lever bar and set which the spiral spring in ratchet and shutter is ready for utimots speed.

THE NOUVEAU.

An inexpensive shutter for use in the Gallery and with view lenses, for which we make no wonderful claims, preferring that it should sell on its merits without flourish of trumpets. Made in eight sizes from x inch to 5 inch opening the largest sizes of which will be arranged for attachment to front board inside camera box



THE "LIGHTNING."-(An Improved Storage Flash Lamp.)

THE "LIGHTNING"—(An Improved Storage Flash Lamp.)
Is safe to use centively reliable in operation, gives a larger, more intense and declifedly more effective illuminating flame with five consurption of powder, less smoke, smell and dirt than any other flash-light device in the market.

In size it is 45x3x inches, but in execution it is a cient. One lamp is sufficient to light the largest rooms in private develings, while two to four will give satisficated the storage chamber will hold about roo grains of pure magnesium powder. A general rought is a cient of the storage chamber will hold about roo grains of pure magnesium powder. A general rought is a cient of the storage chamber will hold about roo grains of pure magnesium powder. A general rought is a cient of the storage chamber of the storage chamber of the storage chamber will hold about roo grains of pure magnesium powder. A general rought is a cient of the storage of nearly roo square inches.

The full charge of powder may be consumed in a protonged light of several seconds duration, or repeated short flashes can be made. The powder feeds a sternal country of the storage of

A handle can be inserted either side of tube nozzle, and lamp held in the hand. The lamp may also be secured to a stand-rod by binding screw

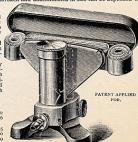
on side.

A reflector may be attached over nozzle and held in place by binding nut shown in an-

made of brass, heavily nickel plated, each lamp pack-ed in pasteboard box with wicks, handle, bottles for alcohol and magnesium, and five feet rubber tubing with

PRICES:

Complete as above \$5,00 Extra tubing per foot... Storage chamber exten-sions doubling capacity Connectors for 2 lamps. Reflectors (6in.).



Shutters and Finders.

The Triplex Improved Shutter,



The development of Photography, especially during the last decade, has brought the photographic shutter, or exposer, as it is sometimes very properly called, into great prominence. "Cap exposures" are almost a thing of the past, for nearly every outfit, however cheap and elementary, includes some sort of shutter, even if its range of speed is only from "time" to a tenth or a fifteenth of a second; indeed, the shutter is in many cases esteemed second only to the lens itself; and when we consider that the full use and benefit of a costly and high-class rapid rectilinear or doublet lens of any kind, can only be obtained by the attachment of a shutter, correctly constructed according to the optical laws applying to a lens, and having a range of speed from time exposures to at least 100, and preferably 1 of a second, this view of its importance seems but natural.

The photographer who begins to consider the question of procuring a first-class, all-around shutter to complete a good outfit, finds that there are many contrivances on the market which, were they to be judged by

their price, and the claims made as to their speed and qualities, ought to be first-class. Our correspondence, however, contains so many letters from those who have found themselves with a second or third, instead of a firstclass instrument, especially in regard to speed, and are consequently compelled to buy over again, that we offer the following hints on the points required in

A PERFECT ALL-AROUND SHUTTER:

It should permit a range of exposure from "time" to at least $\frac{1}{100}$ or $\frac{1}{100}$ of a second. It should have as good a co-efficient of light as is possible with the above quality.

It should be simple, durable, with no delicate clockwork mechanism to become deranged.

It must not, through powerful movement in one direction, shake or jar the camera.

It should work at the diaphragm, as there is less space (at that point) to travel over for same speed.

The first third, fourth and fifth requirements are so obvious and self-evident that they speak for themselves. Concerning the second, the "co-efficient of light," however, there has been much discussion, as it is undoubtedly the most important point about a photographic shutter.

The "Triplex Improved" placed upon the market this season to succeed the "Triplex," is essentially like it, the working parts only having been altered to meet certain demands. Users of this shutter have always been extremely well satisfied with it, only one improvement seeming desirable, viz.: ability to "slow up" the shutter to a greater extent. The following are the

Features of the Improvements.

A NEW RELEASE, by which the pneumatic is entirely detached from any connection with the lever-bar during instantaneous exposures.

FOUR Springs are furnished with each shutter, instead of two, as heretofore, giving, in connection with the new release, the great range of exposures shown in the

Speed Card, furnished with each shutter, which has been compiled after a series of careful tests, and is approximately as correct as anything of the kind can be.

By the above alterations, the ordinary sizes range in speed from $\frac{1}{2}$ to $\frac{1}{180}$ of a second, and give both the possibility of making a much slower, and also a considerably more rapid exposure than the Triplex.

Fitting to Lenses.

The Triplex Improved being fitted between the combinations of the lens, each shutter also contains an entirely new lens tube, the original lens tube or barrel not being cut in any way, unless specially ordered, but returned intact

Rotary stops are fitted to all shutters, when possible. Shutters may also be adapted for use with Waterhouse or plain stops, same price.

Shutters are fitted, unless otherwise ordered, having same full opening as lens.

We prefer, under all circumstances, to have at least customer's lens tube, and do not guarantee fit unless we have complete lens. Where the lenses come very close together, as in the Zeiss and Goerz lenses, we must have

We would point out that the very small space needed between the combinations for shutter, renders the Triplex Improved well adapted for such lenses as the Zeiss, Goerz, etc., when there is but slight room.

PRICE LIST OF "TRIPLEX IMPROVED" SHUTTERS.

Size,	00						2A				5		7	8
Aperture, inches, -	3/4	7/8	I	11/8	11/4	13/8	1 1/2	13/4	2	21/4	21/2	3	31/2	4
Price,	\$12.50	13.00	13.50	14.00	15.00	15.50	16.00	17.00	18.00	20,00	22,00	26,00	30.00	35.00
Extra for Aluminium.	\$3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00					-

N.B.—When the combinations of lens come so close together that it is necessary to fit stop inside of shutter case, extra \$1.50.

Shutters and Finders.

Scovill Time and Instantaneous Shutter.

That the substitution of a pneumatic release the ordinary trigger on a wood drop-shutter eatly enhances its value, "goes without say-

The Scovill Time and Instantaneous Shutter is fitted with Pneumatic Attachment,

hich may be worked at a considerable distance m the Camera, thus enabling the operator to m part of a group or to be included in a view s photographing. This Shutter may be used either timed or instantaneous exposures; the hange is made by simply moving a switch.

Scovill Universal Safety Shutters.



This Shutter is styled Universal, not only because more of the Scovill Safety Shutters are in use than of any other pattern, but be-cause it can be arranged with a variety of openings, from 1/4 to 4 inches at the center, as shown by the dotted lines of the accompanying illus-tration. Uniform distribution of light over the plate is insured by the form of opening.
The brakes on all these

Shutters make them safe to use, by preventing a recoil with the resulting double exposure, and the jarring common to many Shutters, which in time breaks apart the glasses of a lens where cemented together - hence the designation "Safety Shutters





Scovill Safety Shutter with Time and Instan-taneous Attachment.

	Width of Opening in Slide.	Scovill Universal Shutters.	Universal Shutters, with Pneu matic Re- lease.	Scovill Safety Shutters.	Safety Shutters, with Pneu- matic Re- lease.	Universal Time and Instant'n's Shutter with Pneu- matic Re- lease.
	1¼ ins.	\$2 70	\$4 20	¥1 20	\$2 70	84 70
2	1 1/2 1 1 3/4	2 80	4 30	I 30	2 80	4 80
	134 *	2 90	4 40	I 40	2 90	4 90
	2 "	3 00	4 50	I 50	3 00	5 00
	21/2 .	3 10	4 60	1 60	3 10	5 10
5	3 "	3 25	4 75	1 75	3 25	5 25

When ordering these Shutters, exact diameter of hood of should be given, so that the proper circular opening may be out to exactly fit hood of lens.

For sale by all dealers in photographic material.

Scovill Magic Finders.

(PATENTED.)

UNEQUALED FOR LANDSCAPE PHOTOGRAPHY.

Ordinary Finders are quite unsatisfactory, on account of the ersed image which they reflect. While, with the camera, this ersal may be regarded as unavoidable, it is certainly a very desirable feature in the finder, for it greatly interferes with the gment of the operator as to the best arrangement of the desired

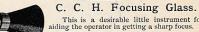




Looking through the finder from the proper distance, toward the view to be taken, the operator sees before him a correct, right side up, and delightfully brilliant and sharp miniature picture of the view before him, the little frame taking in the full picture projected by means of an instantaneous lens on the ground-glass of his camera. Two circles, marked in the exact centers of the front and back surfaces of the combination, serve to enable the operator to bring any certain part of the view to the exact center of the picture by placing the eye so that the two circles cover each other, and at the same time adjusting the camera so that the selected part of the view appears inside the circles.

The Scovill Magic Finders are light, ornamental, easily adjusted and detached, and are now considered indispensable by

				Camera.						 						8	ì	50	
2,	5	X	8							 							I	75	
			81/2	,				 		 							2	00	
4,	8	X	10							 							2	50	



This is a desirable little instrument for aiding the operator in getting a sharp focus. C. C. H. Focusing Glass\$4 00

C. C. H. Glass. Darlot Focusing Glass. 2 50
Save your eyes by using one of these instruments. 75

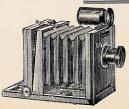


Waterbury Focusing Glass.

Waterbury Focusing Glass, Rubber.....each, \$0 50

Peerless View Finder.

Price, each...



The Waterbury Finder.

To Attach to Camera for Instantaneous Work .. \$3 oc

Accessories for the Operating Room.

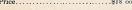
Knell Chairs.

Turkish Chair.

The design and art of upholstering is to slope the back and the seat down to give room for the garments. The back is so curved to assist the artist to get good positions for children. Figured goods for covering; colors especially selected

Grecian Chair.

A very attractive modern design, elegantly upholstered; has removable arms, spring seat, plain or tufted back, spun silk covering.





Pharaoh Chair.



The back of this chair can be raised and lowered; the arms can be removed at will. This chair is very durably made, richly carved, spring seat, spun silk covering, suitable colors.

Pharaoh Chair No. 2, is less expensive in the woodwork; spring seat figured Ramie covering 18 00

Roman Chair.



Has a prominent carved front and back; arms can be raised or lowered, or fixed with one arm so as to form a corner chair ; handy to have for children; spring seat, spun silk covering, select

Price	00
Roman Chair No. 2 is made plainer in the woodwork; sub-	
stantially upholstered, Ramie covering, good colors 18	00

The Scovill Improved Posing Chair.



This is the most substantially made of any Posing Chair in the mar-ket, and is universalinits adaptation totherequirements of the modern skylight. The frame of the chair is made of iron, and the upholstering is done in the best drab velveteen. The and lowers-running on iron uprights-sets itself at any desired is so constructed that one or two arms may be used

Price of Chair with Long Back\$40 ∞

Queen Anne Child's Lounge



A novelty itself; the open space between the seat and back is for the garments; the hole made in the back indicates its usefulness, and the back is so curved to hold a child comfortably; the seat stands twenty inches high; covering selected to take easy.

Sliding Arm Chair

	•	numg Arm Ch	all.	
	The pioneer of Ph nch fringe.	notographic Chairs.	Green Terry cov	ering,
Price				\$8 oc
		Artificial Ivy		
Nati	ıral Green, per ya	rd		80 25
	Eas	t India Grass	Mats.	
3 x 6	feet, each			\$1 00
	L	inen Grass Ma	ts.	
				\$0 67
2 X 5				88
2 X C				100

Fichus. Lace Scarfs for the operating room, each..... \$0 25

Accessories for the Operating Room.

White's Specialties.

article herein named has a distinctive use, and all are the result of careful study and invention, by one having long training in the production and handling of refined mechanism, and instruments requiring precision of action, freedom of move-

White's Posing Chair.

Posing Chair is, without exception, the most perfect piece of mechanism of its kind to be found. It is fitted in the most manner with the ball and socket joint, which is applied in such a variety of ways as to make an almost endless variety of



The adjustable extension movement in ball and socket joints affords a mechanism whereby motion in all directions is controlled agle lever, or one point of fastening. When this fastening is released the ball-sections open around the slide-rod, which is then to be moved to any place through its entire range as the human hand, while a touch of the lever in the opposite direction causes the equal closure of the space around the slide rod without varying the adjustment in the slightest degree, and there

Reference to the cuts will show a few of the many changes which can be made in this chair by simply loosening the set screw It may be used with any or all of the various parts, and is offered to the trade as the only perfect posing chair in the market.

PRICES, BOXED.

P	osing Cha	ir, com	plete	342	0
If	without l	head re	st	34	0
			and arms	26	C
			and below holder	T8	

Accessories for the Operating Room.

Schindler's Goods.









60 A \$18 00 .



57
All wood carving..... \$25 00
Pulp top facing...... 18 00



Serpentine seat, velveteen 6 inch
fringe, back rises 10 inches... \$==
Square seat, round corners...
Baby Attachment

Accessories for the Operating Room.

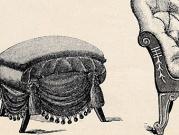




Relief Pulp Composition Background Decoration.

Armor and Weapon Trophies of the fourth, fifth and later centuries, mounted on shields or separate.

OVER ONE HUNDRED ARTICLES FOR PHOTOGRAPHIC POSING AND DECORATIVE
PURPOSES. MAKE KNOWN YOUR NEEDS.



With a roll and wedge for posing......\$20 00



Accessories for the Operating Room.

Posing Support, No. 1.
This Posing Support has the

applied principle of the improved combination slide-rod, ball and socket joints. It is adapted to the smallest or tallest person, and for all adjustments or positions.

The ear-clips of the support have swiveling adjustment as well as lateral or spread movement combined at one fastening, affording facility for either horizontal or vertical positions of the carrying rod, placing the parts to conform to the pose without regard to instrument itself, or the liability of portions thereof appearing in view. A detachable back rest is provided, which has all desirable facilities of adjustment easily and quickly handled.

The adjustable joints are formed in the most perfect manner, especially adapted for giving accuracy and uniformity of movement, and the sliding rods are of steel of accurate gauge, and are plated with nickel. The stand is nicely

Posing Support, No. 2.

japanned with blue and gold line ornamentation.

Price, complete, boxed, \$20.00.



Posing Support, No. 2.

This cut shows another form of the posing support of somewhat lighter construction, and lacking the ball and socket joint at top of base, but which is instead provided with telescopic movement and handle for convenience in moving about the

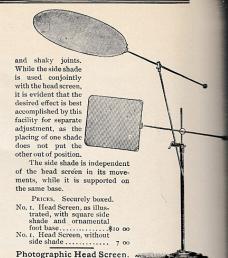
Price, boxed......\$14 00

Perfection Head Screen and Side Shade.

STYLE NO. 1.

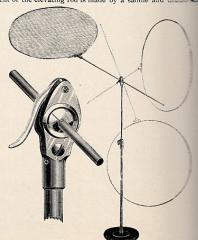
The base standard has the double or duplex joint, providing a separate rod for the new compound clamping and swiveling joint.

In this style the head screen is held by a projecting joint on the base support, having the sectional ball and slide rod movement, which extends its range more than two-fold in the area it will cover, giving adjustment from a height of 8 feet to the floor, to any position within a circle of 8 feet, and without other means of adjustment than is instantly afforded by the cam lever, which latter is provided with a nut to take up any wear occasioned by use, as are all the joints provided against wear. None of the parts have back-lash or loose of the parts have back-lash or loose



STYLE No. 2.

This style head screen is the same as previously and and of which a large number have been sold. It has a base with the elevating rod telescoping into the base swithout the off-set or projecting sectional ball joint. The above the elevating rod is made by a saddle and thank



at the top of the base standard. In all other respects it solves, having the same slide rod ball and socket joint with burdlever, as shown in detail in this cut. Side shades can be with this style of head screen, attached by the improved can joint to the elevating rod.

Price, No. 2, Head Screen, with oval side shade, incl. box. ...

Accessories for the Operating Room.

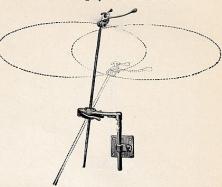
Photographic Head Screen.

STYLE No. 3.

is is a new pattern, having ornamental foot base. The is in one piece, 1½ inch diameter, 6 feet high, of hard it has the new compound clamping and swiveling joint, fords adjustment to all positions in a secure and practical by one fastening. By slightly releasing the clamping is shade rod is free to slide or be turned to place the shade agle around the supporting standard. A greater release clamping joint permits adjustment of the screens up or the standard.

PRICES.

 Photographic Chair Rest,



This appliance is for attachment to any studio chair by means of the plate, into which the supporting rod slides and, as shown by cut, has the ear clips and ball and socket adjustment, and, as shown by dotted lines, may be applied in almost any direction or angle. It will be found to be a very valuable accessory.

Price, \$8.00.

Baby Holder.

This has all needed adjustments for contraction and enlargement to accommodate infants, from the smallest to those about three years of age.

It may be successfully employed in scenic effects, for nicely disposing infant among representations of nature. The baby holder is furnished with a telescoping standard support having an ornamental base; or, if preferred, with an arm bracket to connect it to the arm of a chair or other support; or, with low down base.

PRICE.

With telescoping standard support, as illustrated.....\$12 00





Accessories under the Skylight.

The "S. & A." Head Rests.



These are well made of first quality cast iron. The column is secured firmly by means of a strong wrought iron bolt passing through the base. All the thumbserews are made of cast brass, which is stronger and more ornamental for this purpose than iron.

Tall, complete, each			 				 . 5	\$3	25
Short, complete, each			 				 	3	15
Back Supports, extra	Sini	16		31	37				00

PARTS OF HEAD REST.

	Each,
Base	I OC
Pillars, tall	I 50
* short	
Rods, tall	
• short	
Ear Pieces, complete	
Cross Heads	35
Comets for Ear Pieces	20
Bolts for Head Rest	
Washers for Head Rest	08
Thumb Screws to hold Rod of Pillar	20
for Cross Heads	15
Back Supports	

Jenny Lind Table Stands.

With 14-inch Round Top, each....

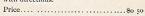
The American Songster.

The best Baby Charmers ever offered to the trade.

The songsters are made of metal, nickel-plated, painted in a variety of bright colors in imitation of life. They sing as clear and liquid as song birds. Are substantially and handsomely made and finished, and not liable to get out of order.

While the bird sings it moves its mouth (or bill) and tail in exact imitation of a living bird. In addition to its being a photographic novelty, it is highly useful in teaching birds to sing. It supersedes the bird organ, and when used near a bird, it will induce it to start up its best notes immediately.

Each songster packed in a neat box, with directions.

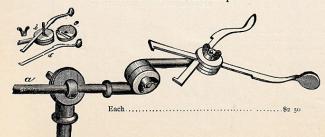


Backgrounds and Accessories.

Plain Woolen, 8 feet wide and any length, square foot... Rembrandt Painted Backgrounds, with frame.....

Bracket Castors for Background Frames, with 2½ inch wheel....

Scholten's Head Rest Clips.



Drapery Curtains.

Handsome Draperies for petc. Imitation of raw silk 5 x 7 feet.

No. 101.—Plain design, with border and fringe, each &

border and friedblue tinted.

105.—Figured design, with border and fringe orange tinted.

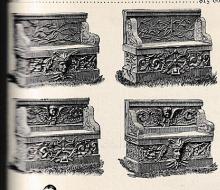
Velvet Draperies, with Greens border..... Egyptian Curtains, with Greens

Gros-grain Curtains, with Gracian border, \$20 in 3

Accessories Under the Skylight.

The Eldorado Wall and Bench Combination.

eight (8) different combinations.







The Three Shield Plates.

se Plates are specially prepared for gallery work, where dest rapidity in the exposure is necessary. These Plates only ones that produce the soft effects of the wet collodion

	PRI	CES.							
Dog	ten.	Size	e.					Do	zen.
\$0	30	61/2	x	81/2.	 	 	 	 \$1	65
	30	8	X I	0	 	 	 	 . 2	40
	35	10	X I	12	 	 	 	 . 3	80
4	45	11	X I	14 .	 	 	 	 . 5	00
	65	14	X J	17 .	 	 	 	 . 9	00
S.	75	16	x :	20 .	 	 	 ٠.	 .12	50
	90	17	X 2	20	 	 	 	 .13	00
I	CO	18	X :	22	 	 	 	 .15	50
I	10	20	X 2	24 .	 	 	 	 .18	50
	25								

Felt Backgrounds.

The Scovill & Adams' Plain Felt Background, recently introduced, is a great boon to all photographers, both professional and amateur.

It is made of strong, thick and even stock, and is of an agreeable neutral drab color. It is especially suitable for vignetting. The texture of the cloth absorbs instead of reflecting light, and thus produces soft effects, and agreeable depth in print. The liability of defacement by water stains is obviated.

The prices of these grounds are as follows:

4 x 6	feet	t.,				 																			1	\$2	5	0
5 x 6	**		 			 	 			,			 		 						 					2	7	5
6 x 6															 	 							 	 		3	0	0
6 x 7	**																									3	5	0
6 x 8	**												 		 						 					4	0	0

These sizes may be sent by mail on receipt of 35c. extra.

THE "ALASKA"

Is the Latest POSING CHAIR for Bust Portraits.



The legs, back and frame are of oxidized steel; seat and back-support are of oak. The seat revolves and can be raised or lowered to any desired height. The back slides backward and forward, as shown in the cut, and the back-support automatically adjusts itself to give a maximum of comfort to the sitter. The "Alaska" is the most comfortable posing chair on the market.

Price (f. o. b., New York), \$7.00.

Dry Plates and Films.

Dry Plates.

We supply plates of the following standard brands: Carbutt Keystone, Cramer, Seed, and Wuestner's Eagle, at the market prices, and call special attention to the price list and formula of the various reliable plates made by the veteran John Carbutt, as below.

Brands and Sensitometer Numbers.

CARBUTT'S DRY PLATES "CELLULOID" FILMS.

- "ECLIPSE," Sen. 27.—Is extremely sensitive, and specially intended for quick studio exposures, concealed and detective cameras, instantaneous views, and magnesium flash-light photography.
- "Special," Sen. 25.—For portraits, instantaneous views, outdoor groups, etc. Blue Label. This plate, and our Ortho. Sen. 23 to 25, are the best plates for professionals and view work.
- "ORTHOCHROMATIC" Plates, Sens. 23 and 27, give correct color values. The best plates for landscapes, interiors, photomicrography, portraiture in varied-colored draperies, photographing paintings, flowers, etc.
- "B" Plates, Sens. 16 and 20.—For landscape views and general photography. Admittedly the finest plate for professional and amateur all-around work.
- "B" Process Plates.—For use by photo-lithographers, photo-engravers, and zinc-etchers in making intense and clear-line negatives.
- "A" GELATINO-ALBUMEN Plates. For lantern-slides and copying.
- "A" Gelatino-Albumen Ground Glass Plates, specially prepared for window transparencies.
- STRIPPING PLATES.—For photo-mechanical printers. Emulsions "B" 20 and "Special" 25, kept in stock. "Eclipse" 27 made to order
- "Celluloid" Films—Transparent.—Emulsion "B," Sen. 12, for producing intense negatives for photo-reproductive processes.
- "Celluloid" Films—Matt-Surface.—Emulsions "Eclipse,"
 Sen. 27; "Orthochromatic," Sens. 23 and 27; "Special,"
 Sen. 25; "B," Sens. 16 and 20.

Price List Carbutt's Dry Plates, Celluloid Finance and Specialties.

Eclipse, Ortho. 23 and 27, Special 25. B 16 and 20. 200 and A. Transparency.

Size	Dozen.	oers ozen	Non-H	LATION.	Glass arency es.	Jozens ISC.	OPAL !	PLATES	Pilms.
OF PLATES.	Per De	Strippers Per Dozen	Plain.	Strip.	Ground Glass Transparency Plates.	No. of Dozens in Case.	Plain.	iround.	Partie.
Lantern Plates 34 x 4	\$0 55					36			
31 x 41	45		\$0 55	\$0 65		36	\$0 55	\$0.50	-
4 X 5	65		80	95	\$0 70	36	80	55	-
41 x 61	. 90		I IO	1 30	1 15	24	I 20	1 45	3.00
44 x 61	1 00		I 20	I 35		24			12.00
5 x 7 5 x 8	1 10	\$1 45	I 30	I 55	1 40	24	I 50	1 80	2.40
5 x 8	1 25	1 65	I 50	I 75	1 60	24	1 70	2 25	
			MAR		1/2 Doz.		Doz.	i Dec	
61 x 81	1 65	2 20	2 00	2 35	1 15	12	I 20	1.45	2 36
7 X 10	2 10	2 80	2 50	2 95		12			
8 x 10	2 40	3 20	2 90	3 45	1 65	12	I 75	2 15	5 80
10 X 12	3 80	5 00	4 50	5 40	2 50	4	2 65	3 25	- 35
11 X 14	5 00	6 60	6 00	7 50	3 20	3	3 50	4 20	1:15
14 X 17	9 00	12 60	10 80	12 95	5 50	2	6 00	7 00	100
16 X 20	12 50	16 60	15 00	18 00		1			
17 X 20	13 00	17 30	15 60	18 70		I			
18 x 22	15 50	20 00	19 80	23 75		1			
20 X 24	18 50	24 50	22 20	26 60		I			

10 x 12 and larger sizes are packed 1/2 dozen in a box.

Celluloid Films, Eclipse or Orthochromatic

FOR PANORAMIC CAMERAS.

5	ize,	IO X 22	inches		 				. ,	 						per	dozen,	\$10	-
		10 x 30																100	-
		16 x 43																31	-
	,	18 x 48													ı			-	100
		20 X 50												٠				5	-

French Measure

PLATES AND FILMS.

9 x 12 Ce	ntime	ter	 										 Pla \$0			8		
12 x 16					 	 								0	15	1	a	器
12 x 161			 										 1	0	ю	-	8	a di
13 x 18			 		 	 							 1	1	0	=	-	40
12 X 20					 	 							 1	2	25	2	E	ø
18 x 24													 2	2	00	=	ā	ä
21 X 27										 			 2	8	5	-	a	ē
24 x 30			 							 			 3	8	80	2	ä	麗
27 x 33						 				 			 4	5	0	3	а	闙
30 x 40										 			 5	7	15	2	ä	×

CARBUTT'S LANTERN PLATES, 55 cts. per dozen, on special ported thin Crystal Glass, size 3½ x 4.

The Hammer Dry Plate

Satisfies those who want the Best.

For they are the standard of EXCELLENCY, RAPIDITY, and UNIFORMITY.

To-day are even better than ever

INCOMPARABLE for the Studio.

for Landscape Photography.

for the Hand Camera.

for Interiors.

Accessories for the Developing Room.

New Peerless Lantern No. 3.



Scovill's Peerless Dark-Room Lantern has long been a favorite with photographers, both professional and amateur. Many thousands have been sold during the years it has been upon the market. Improvements of a minor nature have been made in it from time to time by the manufacturers, but it has for the most part continued to sell substantially as it first appeared.

Recently, however, the manufacturers have given the lantern an entire overhauling. The result is a very much improved light and a more compact article.

new Peerless Dark-Room Lantern is considerably smaller original, though giving a greater illumination. The screen in front, to throw the light upon the developing its with more convenience, not requiring the brass chain he old lantern had. It also has a reflector inside, at the the lantern, to concentrate and better control the light.

I sees—an orange and a ruby—enclose the lantern on four stead of one as heretofore, which makes the light not only one for dark-room purposes, but also is pleasanter for the the operator. The wick may be manipulated from the of the lantern, thus obviating the necessity of removing the form the dark-room each time the wick needs adjust. The original lantern was so constructed that the lamp had to be removed before the wick could be adjusted.)

......\$2 50

W. I. A. Ruby Light Lantern.



Used when putting Dry Plates into the Holders, and also then developing them.

Price......each, \$0 60

Multum in Parvo Lantern.



LANTERN ARRANGED FOR DEVELOPING, AND, AFTER FIXING, EXAMINING
NEGATIVE BY OPAL LIGHT.

The following are some of the advantages possessed by this Lantern: It is simple and easy to manage, nothing complicated, yet has three separate and distinct forms of light, and can be used for seven or more different operations in photography. It is adapted for the use of either oil or gas; is provided with coal oil lamp, an improved patent burner and silver reflector; is about nine inches square by fourteen high, with 8 x 10 light of deep ruby glass in front, and hood for protecting the eyes from the glare of the red light. A full descriptive circular sent on application.

Price, boxed, ready for shipment.....\$6 00

The "Aladdin" Dark-Room Lamp.

PATENTED.



For use with gas Burning the patent Sodium Wick, which produces a non-actinic chemical flame. It gives a beautiful yellow light for darkroom use, which is perfectly safe, without smoke or odor; more brilliant than the ordinary ruby light, and both pleasant and restful to the eves. The lamp is made in two styles: the Bracket Lamp, which may be



ALADDIN.
TABLE LAMP.

slipped over any ordinary gas burner, and the Table Lamp, for which the gas connection is made by rubber tubing.

In ordering please specify whether Bracket or Table Lamp is lesired.

Accessories for the Developing Room.

Glassware.

Scovill Glass Pans.

These Pans are made of the best metal and are as serviceable as porcelain ware and much less fragile than india-rubber ware. Their transparency adds to their practical value.

Siz	e.				Price Ea	ch.
41/4 X	51/2	inches	inside bottom	of Pan	 \$0	28
51/2 X	81/2	**			 	38
7 X	9				 	65
8½ x	101/2	,			 	75

The W. I. A. Patent Solid Glass Pan.



With reservoir, and with slightly raised knobs to prevent the negative adhering to the bottom, is the first solid glass pan with reservoir, dispensing wholly with wooden rim or frame.

																				rice,		25
5	X	8	i.np	ove	1															,	1	75
7	x	9												.,					0		2	25

Ruby and Orange Glass.

FOR DARK ROOMS.

9	ize	s.							1	P	·r	Lis	ht.	13	Size	28								P	er	Li	gh	ıt.
61/2	X	8	1/2									\$0	20	13	X		16				٠.					\$0	1	70
														12														
10	X	12											50	18	X		19									I	2	25
9	X	16											55	13	X		32					٠.				. 1		50
11	x	14					1						5.5															



The S. P. C. Reliable Graduates.

These Graduates are marked with great care and tested accuracy according to United States Pharmacopoxia Standard.

They have been selected for use in some of the largest laboratories in America, where perfect accuracy is essential.

They are put up each in a pasteboard box.

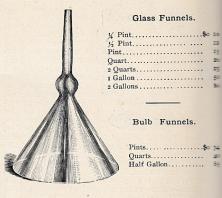
labeled, as a safeguard against breakage.

Mi	ini	m	1.					 				\$0	20	8	02	z.							 			80		45	
1	0	z.											20	12		١,											-	60	
2	,												20	16														75	
3													25	24												I	1	00	
4											 		30	32				 								1		25	
6	,												35																



Glass Mortars and Pestles.

Glass,	21/2	inel	h\$	0 15	Glass	, 4 i	ne	h	80	40
	3			20		5				15
	31/2			30		6	,		1	00



Fluted Glass Funnel.



This is the latest and best glass funnel ever made. They are very strong; are made in molds; have solid glass ribs on the inside, running vertically, thus forming passages through which the solution descends freely after passing through the paper, and accomplishing the filtration in a fraction of the time hereotomrequired. Another advantage of this funnel is, the outside of the neck is fluted, and the lower end beveled, so as to prevent choking up in the neck of the bottle and overflowing.

1/2	Pint	ich, S	3
1			21
I	Quart,		34
2	· · · · · · · · · · · · · · · · · · ·		-55

Glass Forms.

For cutting out Photographic Prints. Made of fine polished Glass, beveled edge.

Carte de Visite, square	Each, &	25
Stereo. Cards, square or arch		20
Victoria Cards, square		50
Cabinet Cards, square		30
5 x 8, square	,	3
614 x 814, square		OK

Accessories for the Developing Room.

Glassware.

Solid Glass Baths.



made expressly for us of selected metal. Each bath will be inted PERFECT in every respect. (We cannot guarantee is breakage in transportation.)



PRICES ARE AS FOLLOWS

1	Some	e de reme	ent.					Ori Pac	n ginal kage	B	Top Stu	nged , and for dio.		oxe ma Out	ke, door	Use.	Э.
	I	-	for	plate	41	x	53	 .\$0	95	 	.\$2	CH. 50.	/		.\$5	60	
		10.										25.					
	I	12,		,	8	x	10	 . 2	00.	 	. 4	50.			. 7	60	
	I	14,			10	x	12	 - 3	50.	 	. 7	00.			. IO	00	
	X	16,			II	x	14	 . 5	25.	 	. 8	75.			.12	00	
	I	20		,	14	x	17	 .20	00.	 	.24	00.			.27	50	
S	I	22			17	x	20	 30	00	 	.40	00.			.43	00	



Argentometer known as the Actino-Hydrometer.

For Testing Strength of Silver Baths.

Best Single Degree Scale........\$0 50

Convex Glass.

								rei	DOZ.	(31033)	
Card size	e, Ova	l or S	quar	e25	8 x	37/8	inche	es\$0	25	\$2 25	
Cabinet	size,	,		43	4 x	614			45	5 40	
Promena	de siz	e, Sq	uare.	43	8 X	71/8			65	6 75	
Panel sh	ape, S	Squar	e	4	4 x	814			80	8 50	
Boudoir	(R. C	.) .		5	4 x	81/2			1 05	· 11 00	
Oval or	Squar	e		6	2 X	81/2			1 25		
				8	x	10			2 50		
				10			,		6 75		



Collodion Vials.

2	oz	 	.p	lain,	So 15	Cometle	ess	3.	
3		 			18				
4	,	 		,	20				80
6	,	 			25				90
8	*	 		,	30			1	25
10	,				35			1	50
16					55			1	75

Glass Stirring Rods.

8	inch,	eacl	h\$0	10	22	men,	each	- •	 	••••	 	
12				15	24					 • • •	 	38
15				20	26			٠.		 	 	45
15				25	30				 		 	50
20				27								
			Both ends	are	glaz	e fini	shed.					

Hollow Glass Tubes.

FOR SILVERING PAPER.

(One end flattened to prevent its turning,)



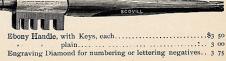
15	inches	lone	z	1/2	inch	diamete	er	 each,	\$0 2	5
10	,	,		34					4	O
24		,		34				 y	5	0

Collodion Filters.

Pile's Silver Test Tube.

Collogio	n Filters.
\$1 25	12 oz\$2 oo
5 1 35	16 2 50
I 35	24 * 2 50
32 OZ	\$3 75

Glass Cutting Diamonds.



Accessories for the Developing Room.

Porcelain Ware.

Porcelain Trays.

(The Dimensions given are for Inside the Bottom of the Tray).

				Shall	ow.	De	еер
	5	x	7	 \$o	44	\$0	62
					60		
	7	x	9	 	66		82
	8	x	10	 	82	. I	00
I	0	x	12	 I	32	. I	66
1	I	x	14	 2	16	. 2	64
1	4	x	17	 5	IO	. 6	60
I	5	x	19	 6	28	. 8	00
I	9	x	24	 12	88	16	00

No.							
00.	Diameter,	16	inches,	containing	3	Gallons \$5 00	,
0.		14			2	3 50	,
1,		12		,	1	2 10	,
2.		11			3	Quarts 1 75	
3-		10				· I 30	
4-		9			3	Pints 1 00	,
5-		8				* 85	
6.		7			24	Ounces 75	

Berlin Porcelain Evaporating Dishes.

Baths, Stands, and Dippers.

							Ba	tl	ıs.					Sta	nd	s.			D	pp	ers.
334	x	41	4		 	 	\$1	(00.		 			\$0	2	5 -	 	 	 	\$0	30
5	x	6	2		 		. 1	1	75	 	 				4	0.	 	 	 		44
Ste	re	osco	pi	c.		 	. 2		00		 		٠		5	ο.	 	 			66
61/2	x	81	2		 	 	2	(ю		 				6	0.	 	 	 		66
8	x	10			 	 	. 4		50	 					9	0.	 	 . ,			82
10	x	12					. 7		75	 	 			1	2	5.		 	 	1	10
TI	x	14			 	 	. 8		50	 		,		1	2	5.				1	25
13	x	16				 	. IO	(00	 	 			2	0	0.	 	 		1	50
14	x	17	5		 		12		00	 	 			2	5	0.	 	 	 	1	85

Covered Baths, Water-tight Rubber Tops.

(Without Stand or Dipper.)

3¾ × 4¼	.\$1 05
Stereo. and 5 x 61/2	
5 x 8 and 6 1/2 x 8 1/2	3 00
8 x 10	. 4 50
10 X 12	. 7 20
11 x 14	
13 x 16	.15 60
14 x 17	. 16 20

Agate-Iron Ware.

Patented May 30th, 1876, Feb. 27th and July 3d, 1877.

Agate-Iron Lipped Pans.



(The Dir	nensions giv	en are for	Inside of Botton	n of the Tray.)	
Nos.	Shallow.	Deep.	Nos.	Shallow.	Desc
31 5 x 7	\$0 80	\$1 00	34 10 x 12.	\$2 00	S: 35
32 7 x 9	I 00	I 25	35 II X 14	3 00	3.33
33 8 x 10	1 25	1.60	36 14 x 17.	5 00	0 000

Agate-Iron Evaporating Dishes.



No.	Diameter,	5	inches;	Capacity,	1	Pint
2.	*	8			1	Quart =
3.		9			1/2	4 Gallon : ==
4.		12			1	1
5.	111 11	16			2	2 ,
6.		18			3	3 ,
7.		20			4	4
8.		22			5	5
9.		24		1000	6	5

Agate-Iron Corrugated Funnels.



E.	ach.	E	d
Gill\$0	34	Quart\$	Ti
½ Pint	40	2 Quarts	B
Pint	46	4 Quarts 1	2

Agate-Iron Measures.



	CHIEF .			
Eac	ch.		E	-
Gill\$0	45	Quart	.\$0	3
½ Pint				
Pint	68	4 Quarts	. 1	-

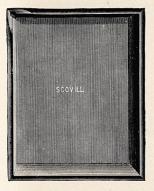
Accessories for the Developing Room.

Waterbury Trays.

(PATENTED.)

In response to repeated and urgent solicitations we were into put upon the market "Waterbury Trays," constructed more scientific principles than any other wooden tray in the

The following description and illustration is taken from Photographic Times:



These Trays are far superior in design and finish to any saly offered. Canvas is not required for the seams, as they tually seamless. The bottom rests on cross-strips—a great ement, for steadiness, over knobs at the corners, which hable to be broken off. The Waterbury Trays do not warp

PRICE LIST.

																					C-St	CII.	
	Ξ	19	Waterbury	Tray											٠.	 					\$ 3	50	
	Ξ	24																					
=	Ξ	23														 					6	50	
Ė	=	30																			9	00	

Vulcanite Trays.

W.X	514	\$0 50	12 x 16\$2 40
53 I	714	60	15 x 18 4 25
EEX	81/2	70	18 x 22 5 00
- 1	9	85	19 x 24 5 75
BEX	101/2	I 15	21 x 26 7 50
- Mary	123/	T 75	

Papier Mache Trays.

3¼e	ach \$0 25	1414 x 1734	each,	\$2 7
4 x 5 1/4	. 30	161/2 x 201/2		3 2
= x 8½	• 40	191/2 x 231/2		50
- I 9	• 60	23 x 27		60
= x 10¼	, 90	26 x 30		97
X 121/4	· I 25	28 x 34		10 5
- T TAW				

The Acme Glass Bottom Reservoir Trays

For Developing Dry Plates.



These Trays enable the operator to develop a plate without removing it from the solution until fully developed.

They are made of walnut, with glass bottoms, and receptacle at one end to hold the solution while looking at the plate. They also have buttons adhering to the glass to prevent suction.

They are lined with acid proof cement, and warranted not to

			Plate	a	n	d	S	n	12	al	le	21	٠.				 					 6		 		SI	C
	x	8																								I	2
4	x	81/2																								I	2
	x	10																								I	3
	X	12																								2	0
	x	14																								2	2
	x	17																								4	0
	x	18	,																							4	0

Patent Black Japanned Developing Trays.

Made of selected metal for dry-plate photography, with depressions to prevent plate adhering to the Tray.

	Siz	e.			F	r	ic	e, ea	ach.			Size	inches			F	r	ice	e.	ca	ch.
414	x	51/2	inches.					.\$o	20	15	X	18	inches		٠.				.8	I	00
51/2	X	81/2		٠.					25	19	X	22			 					2	00
7									30	22	x	26								2	50
o									40	24	X	30			 					2	75
ó	x	12							50	26	X	32			 					3	00
2	x	15							60												

Celluloid Trays.



	S	ze.					Plates										1	P	rie	ce	, ea	ch.
41/4	x	51/2.	for	4	x	5	Plates		 ٠.												\$0	50
51/2	x	81/2,		5	x	8	0															72
7	x	9,		61/2	x	81/2																85
81/3	×	9,		8	x	10	0															

Accessories for the Developing Room.

India Rubber Ware.

rio.					Galler	y. for F		Dippe	
3.	4 x 5	India Rul	ber Bath	s	.\$0 9	0		\$0	35
4.	5 x 7				. I 2	0 \$4	50		40
5-	7 x 10				. I 8	0 5	50		45
6.	9 x 11		,		. 3 5	0 7	00		50
61/2									55
7-	12 x 16				. 5 5	0 10	50		60
8.	15 x 18	,			. 6 5	0 13	50		90
9.	17 X 20				. 8 5	0 17	50	1	10
10.	19 x 24	,			.11 5	0 22	50	I	60
4.	5 x 7	Stereosco	oic Covere	ed Baths.		4	00		
5.	7 X 10	,				6	00		
6.	9 x 11					7	75		
0.	1/ Pint	each, Ind	ia Rubber	Funnels				\$0	40
1.	1/2								50
2.	I								55
3.	1 Quar	t each,						,.	69

The "Black Diamond" Tray.



T	hese T	rays are made in	two sizes-		
41/4 x	5½ insi	ide measurement,	list price.	each,	So 30
	81/2				55

Rubber Gloves.





Just the thing to keep silver off the hands

	Dizes.	rei ran.
Ladies' long, Nos.	7, 8 and 9	\$1 50
short,	7, 8 and 9	I 25
Gents' long,	12, 13 and 14	1 65
short,	12, 13 and 14	1 35

Pure Rubber Finger Tips.

Specially made for Photo Use. A Perfect Protection for the Fingers.



The only economical means ever offered against the discoloration of nails and fingers from acids and chemicals. A great improvement over the expensive and clumsy glove, as they do not impair the sense of touch, but rather increase it. Very easily applied or removed.

Per set of threeSo	¥

Glossy Rubber Trays.



INSIDE MEASUREMENT

No.	200,	43/8	x	558	for	4	x	5	plates							_	8	3	
	300,	51/2	x	81/2		5												3	å
	400,	7	x	9	,	61/2	X	81/2			 			 -	 		-1	3	ä
		81/2											 		 		-3	=3	ä
	600,	1034	X	1234		10	X	12			 ٠.		 				-3	=)	ä
	700,	12	X	15	*	II	X	14					 	-			- 3	=	ä

These Trays are the genuine polished hard rubber especially for us and are superior to any in the market attention is called to the fact that the inside measurements above are the inside of the bottom of the Trays.

The Photographer's Handy Balance.

	Per Design
9 in. beam, 41/2 in. pans, all nickel-plated, will weig	A 15
grain to 1 lb., without weights	Scr 100
With set weights from 1/2 grain to 1 lb	

Photographers' Scales.



This new scale has been especially constructed to convenience of ordinary photographic work. It really comin one the two scales heretofore needed by photographes, small pan and light beam weigh from 1 to 60 grains, while large pan and beam weigh from 1/2 to 8 ounces. The beams pans are nickel plated.

No. 3025, Movable Pans, 41/2 and 21/2 in. diameter....each

Accessories for the Developing Room.

Photographers' Scales.

Prescription Pattern.



This well-known scale is adapted for the finer class of photogwork and is much used by amateurs for general weighing. a capacity indicated on the beam, without loose weights, main to 8 drachms.

3040, 21/2 inch Movable Pan..... each, \$5 00

Robervahl Pattern.



NEATLY ORNAMENTED IN GOLD LINES.

HEAVY BRASS PANS AND BRASS INDICATOR

No. 2,	9 i	nch	Pan,	price	without	weigh	its	 	each,	\$7 50
								 		6 00
No. 4,	6							 		5 00

Solution Scales.



These scales are specially designed for weighing liquids and are provided with a beam for balancing the bottle before use. The practical artage of placing a bottle on the scale and weighing, without owing it, all the constituents of the developer, both liquid and will be readily appreciated.

51. Capacity 1 gram to 4 kilos., or 1-16 oz. to 8 lbs., each, \$10 00

Block Weights.



SOLID BRASS IN CHERRY BLOCK.

	TROY.	AVOIRDUPOIS.	
	to 1/2 grain\$1 00		Brass.
	to ½ grain 1 75	I lbs. to 1/8 oz	
	to ½ grain 2 50	2 lbs. to 1/8 oz	3 50
IO OZS.	to ½ grain 4 00	4 lbs. to 1/8 oz	5 00

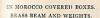
Metric Weights.

SOLID BRASS IN CHERRY BLOCK.

20	gram	piece	and	down	to	1	centigram										80	6
50				*													1	I
																		60

Pocket Scales.







IN OAK BOX. STEEL BEAM AND WEIGHTS.

inch Beam, Brass Pans, \$0.75 6 inch Beam, Brass Pans, \$1.50

Scales and Weights.

5 in.	Beam Scales,	in wood or ti	n boxe	s.	 		 		 	.\$0	65
6 in.											75
8 in.		,					 			. I	25

Square Aluminum Grain Weights.



MADE OF PURE SHEET ALUMINUM; MADE CONCAVE, SO THEY CAN BE PICKED UP READILY.

½ grain to 10.....per set, \$0 40

Nest Weights.

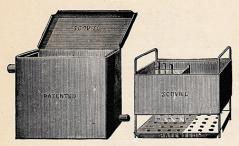


						Ire	on. 2	inc.	Bra	iss.
Capacity	8	Ibs.	down to	1/4	0z	.\$2	75 \$5	5 50.	\$11	00
	4					. I	75 3	3 50.	6	00
	2					. I	25 :	2 50.	3	50
	1	lb.								
	8	ozs.				. 0	75	25.	I	50

Accessories for the Developing Room.

The Scovill Negative Washing Boxes.

(PATENTED



The Scovill Negative Washing Boxes are all now made adaptable and so that plates may be taken out without putting the fingers in the washing water (See illustration.) The perforated bottom prevents water from passing through the box with too great force, and distributes it so that every plate and every portion of a plate is equally washed, and this cannot be done with any other washing box.

					(ADAPT	ABLE.)										
																Ea	ich.
For	31/4	x	41/4	Plates												\$1	60
,	4	x	5		and smaller	sizes	s									I	75
,	414	x	51/2													I	90
	41/4	x	61/2													2	00
	5															. 2	10
	5								• • •			• •				. 2	15
	61/2	x	81/2									• •					25
	8	x	10														50
* 1	0	x	12													133	. 00
• 1	1	x	14			,											00
, 1			17													320	50
(8:	x IC	A	djus	table V	Vashing Box											4	00
1 _A	Ad	ju iz	stable es to	be was	1/2 x 8 1/2, 5 : hed at once.	x 8, 9	5 x 7	, 4	x	5.	3,4	×	4	14	P	lat	es.

Coal Oil Stoves.

FOR PHOTOGRAPHERS.



SUMMER QUEEN.

2.	Two	each	3 in.	flan	ne	 	2	50
21/2			31/2			 	3	00
2			4		THE RESERVE		2	50

Scovill's Efficient Plate Lifter.



This Plate Lifter is very nearly like an ordinary open thimble with a pointed piece of metal soldered securely to shown in the illustration.

Where a number of plates are developed in one dist.

Plate Lifter is not only a convenience, but quite a necessity.

Price each pr

Russell's Negative Clasp and Drying Support.



By using the Russell Negative Clasp and Drying States is no need of wetting or staining the fingers in the eveloper, or of touching a plate until after it has been developed varnished and dried.



Adaptable for all sizes, from 31/4 x 41/4 to 8 x 10 inclusive.

Price.....each, 15 ceans

Accessories for the Developing Room.



L	EIKOQUINOLE DEVELOPER price, per bottle,	\$0 35
3	EIKONOGEN DEVELOPERper package,	75
3	C. Pyro and Soda Developer	60
3	HYDROCHINON DEVELOPER. Does not stain the	
	ingers or leave the plate yellow; works equally well	
	all brands of plates, giving perfect detail, density	
	brilliancy in the negative. Full directions enclosed	
	m each package price, per package,	60
и	C. Pyro and Potash Developer.	60
я	COLUMBIAN DEVELOPER, "The latest and best," Price,	100
×		200
	a counce bottle	30



š.	C. BROMIDE PAPER DEVELOPER for Bromide Paper, set, \$0	75
Ė		50
S.	P. C. DEVELOPING POWDERS per box of 12,	50



, ,large ,	75
Reduces density in negatives and positives on glass	
or paper. Can be applied locally to remove halation	
marks, ghosts, etc.	
P. C. Hypo Eliminator. (For removing every trace of	
hyposulphite of soda from negatives and prints.	
Price, per bottle, with book of testing paper	50
P. C. RETOUCHING FLUID. (For varnished and unvar-	
nished negatives)price, per bottle, \$6	25
MAGNESIUM FLASH COMPOUND	50
HALL'S INTENSIFIER. (For strengthing weak negatives)	
Priceper bottle,	75

S. P. C. Negative Varnish per bott	le, \$0 35
FRENCH AZOTATE. (For Toning Prints)	25
Kristaline Varnish	40
S. P. C. Toning Solution	
chocolate to black on ready-sensitized paper.	
S. P. C. ORTHOCHROMATIC SOLUTIONS. By which any plants of the state of	ate
may be rendered color-sensitive price, per package	ge, 1 50

Hauff's Amidol.

If you are not using one of these Amidol Developers send for a sample at once.

					PR								
In	I	ounce	packag	es		 	 	 	 	 		\$0	75
				(Hauf	's).	 	 	 	 	 		I	50
	1/4	poune	d :										
	I					 	 	 	 	 	٠.	10	00
				AMIDO									
In	pa	ackage	s of 5 (2	Andrese	i's)	 	 	 	 	 		\$1	00
	9		, 6(1	Hauff's)		 	 	 	 	 		I	20
			" 10 (Andrese	1's)	 	 	 	 	 		2	00

Flandreau Absorbent Cotton.

ing cotton ev	er made.				of Alc				
i lb, package	s\$o	75	1 4	oz.	paper	box.	 	 \$0	2

Gun Cotton.

Vogel's	Negative	80	
Pary's			50
Hance's	s Silver Spray Negative		55 80

			Collodion.		oot.
Phenix	Plate F	errotyp	end Copying Collodion	 ŧ0	50
E. A. N Ground	Glass S	ative a	tete.		50
			quarts	 3	25

Filtering Papers.

ren	ch Rour	id, in packs	of 100 shee	ets, No.	19, 71/2 1	n. diam	., \$0	30	
					25, 10			38	
					33, 13			62	
	,				40, 16			82	
		,			45, 18		I	00	
					50, 191/2		1	20	
est	Square	White Filte	ring Paper]	per quir	е,	40	

Filtering Cotton.

Prepared expressly for photo. use. Per bundle. 50

Accessories for the Developing Room.

SOMETHING NEW!

THE

COLUMBIAN DEVELOPER



COMPLETE IN ONE SOLUTION.

The Very Latest and The Very Best.

The Columbian Developer is a powerful, new, one-solution developer especially some for undertimed and instantaneously exposed plates. It yields negatives of the most beautiful half tones and middle tints, and of unsurpassed printing qualities.

FULL DIRECTIONS FOR WORKING ON EACH BOTTLE.

PRICE, for Eight-ounce Bottle, only 30 CENTS.

FOR SALE BY ALL DEALERS IN PHOTOGRAPHIC MATERIALS.

Accessories for the Developing Room.

Andresen's Amidol.

FINEST DEVELOPER YET INTRODUCED.

MOST ENERGETIC AND POWERFUL.

IN USE BY LEADING PHOTOGRAPHERS.

(See Testimonials in THE PHOTOGRAPHIC TIMES.)

ALSO

Hauff's Amidol.

WHICH IS ESTEEMED QUITE AS HIGH BY ITS ADMIRERS.

If you are not using one of these AMIDOL DEVELOPERS send for a sample at once.

PRICE LIST.

(THE SAME FOR BOTH.)

In r ounce Pa	ackages\$0	75
. 2 .	, (Hauff's) I	50
	, 2	
. 1/2 .	, 5	25
, I ,	, 10	00
	AMIDOL CARTRIDGES:	
In Packages	of 5 (Andresen's) \$1	00
	- 6 (Hauff's) I	20
	, 10 (Andresen's) 2	00

Price List of Leading Developers.

316

rochino	n (two 8	-ounce		, per package	60
				. Doction	35
Pyro and S	oda -			· package	 60
				tles), per package ate Potass, and on	60
bottle I	ron, per	set			 75
			Carbu	tt's.	

and Soda (two 8-ounce bottles), per package

Anderson's.

Rodinal (3-ounce	bottle)			 \$0
	The	Colum	bian.	

Chemicals for Developing.

Schering's Pyrogallic Acid.

One 1b, can. \$4.67 each.	½ lb. can. \$2.40 each.	¼ lb. can. \$1.25 each.	Oz, glass. 4 c. each.	Oz. can. 35c. each.
	E	ikonogen.		
\$3.95 each.	\$2.10 each.	\$1.20 each.		37c. each
	Ну	drochinon.		
\$5.27 each.	\$2.80 each.	\$1.47 each.	38c. each	
1	Pelletone (Pyro-acid :	Γablets).	
One bottle, co	ntaining 100 ta	ablets of 2 gra	ins each	\$0 40

Accessories for the Developing Room.

Scovill's Pure Chemicals and Accessories For Making Negatives.



We offer for use with any Outfit, to make pictures 4×5 inches, the following goods packed securely in a wooden case:

4 x 5 DEVELOPING OUTFIT.

1 pkg. S.P.C. Carbonate Soda Developer, 2 4 x 5 Glass Paus, 1 do. Graduate, 1 Minim Graduate, 1 oz. Bromide Potassium, 1 lb, Hyposulphite Soda, 1 lb, Alum, 1 bottle S.P.C. Negative Varnish, 1 doz. 4 x 5 Dry-Plates, 1 Scovill Focusing Cloth, 1 Ruby Lantern, 1 Adt Manipulator.

			Developing	Outfit													.\$	6	35	5
5	X	8		,	 								. ,					6	50	,
61/2	x	8 1/2						 										7	OC	,



S. P. C. Outfit for Printing, Toning, Fixing and Mounting 5 x 8 Pictures.

Securely packed in a paper box.

61/2	x 8	1/2	Printing	and Tonin	g Outfit	 	 \$7	00
8	X IO)		,		 	 8	50

S. P. C. Outfit for Printing, Toning, Fixed Mounting 4 x 5 Pictures.

1 4 x 5 Flat Printing Frame, 2 4 x 5 Glass Pans. S.P.C. Sensitized Paper, 1 2-02. Graduate, 1 Pound Hypothes S.P.C. Toning Solution, 2 doz. Collins Parlor Paste, 1 Bristle Brush, 1 4 x 5 Glass Form, 1 Trimmer.

Price, complete....

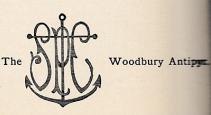
Securely packed in a box, which serves also for a fund



For Negatives, Transparencies, Lantern Slides and Benefit Paper.

Destroys all developing fog and yields peculiarly be and permanent results.

This solution can be used repeatedly so long as it can also be used as a reducer of over-density by a long comment.



An Improved Concentrated Hardener for Gelatine Pand Prints

Mix 1 ounce of this solution with 10 ounces of water and set the plate or print therein for from six to ten minutes. Then set off and dry.

The plate or print thus treated will withstand a heat examing 100° F. This solution may be used repeatedly.

Price per bottle.

Accessories for the Developing Room.

A GREAT ADVANCE.

JOHN WYETH & BROTHER'S

Chemicals.

A compact and complete equipment of adjusted and accurately ored photographic chemicals in the form of compressed as, for the extemporaneous preparation of the various soluses and required to develop and fix plates and to tone and points.

Necessity for Scales. Dry and Portable. No Waste or Deterioration of Solutions.

Marked strides have lately been made in the art of Photogby through increased interest in all that pertains to its deement, by the facilities now afforded to the experienced artist to the amateur, in the simplified devices, appliances, instruts, cameras, etc., the extended experience in the use and faction of the various chemicals intended for developing and g the plates and toning and fixing the prints, and the simplifyof many of the former intricate and tedious processes.

One great drawback has been the difficulty and inconvenience arrying and storing the solutions for properly conducting the red details. At the suggestion and with the active co-operaof an experienced and thoroughly practical Photographer, have prepared, in the form of Compressed Tablets, a complete s of all the necessary Photographic Chemicals used in the These will be found perfect in their adaptation to all that is ired; they are compact, convenient and portable; the necry solutions can be prepared at a moment's notice, in sufficient tities, as the occasion demands. There is no waste, no bulky phernalia to carry, no stock solutions are required, only eient water being needed at the moment. Every tourist ing a camera, and those engaged in scientific work especially, fully appreciate the importance and value of such an outfit, their experience will testify to the fact that their time and labor ave often been lost by the undue exposure of their plates before ev could be properly developed.

The Tablets are stable, do not alter or change by age or dimatic influences; the only requirement being to re-cork the bottles securely immediately after being used. We feel assured, after the critical tests and practical demonstration which we have given them, that we have not exaggerated their merits and usefaincess to all who are interested in Photography.

With this equipment the photographer, professional or amateur, can develop his work in the most simple and convenient way, and the plates will be absolutely perfect in finish. It was not until we had thoroughly experimented and tested the value of these combinations that we ventured to place them upon the market, but we are now thoroughly convinced, from exhaustive trials, that there is no more convenient and efficient method of producing aperfect plate or print. Of course, the care and various details necessary when using the ordinary solutions, are also required when employing our Compressed Chemicals. For those not entirely familiar with the manipulations of dry plates or the toning and fixing of prints, there is enclosed in each box a copy of directions and hints referring to the processes and details required.

The Complete Case contains the following Tablets, with full instructions on each bottle for preparing the solutions.

No. 1. Developing—Pyro. (Composed of Sulphite of Soda, Acid Pyrogallic, Acid Citric.)

No. 2. Developing-Soda.

(Composed of Sulphite of Soda, Carb. Soda and Carb. Potash.)
Nos. 1 and 2 when mixed, as directed on the label, constitute
the "Developing Solution," or, as sometimes called, "Developer."

No. 3. FIXING AND CLEARING.

(Composed of Sulphite of Soda, Acid Citric, Chrome Alum.)

No. 4. FIXING AND CLEARING. (Consists of Hyposulphite of Soda.)

Nos. 3 and 4, when mixed, according to instructions on the label, make the Fixing and Clearing Bath, which can be kept for stock solution if so desired.

No. 5. Toning for Prints -Gold Chloride,

No. 6. Toning for Prints-Soda.

Nos. 5 and 6 constitute the Toning Bath; this must be alkaline.

No. 7. PRINT FIXING-HYPOSULPHITE OF SODA.

This can also be used advantageously for stock solution, a few drops of Aqua Ammonia greatly enhancing its value.

No. 8. Bromide of Potash.

For checking the too rapid development of over-exposed plates.

The Developing Outfit contains the following Tablets, with full instructions on each bottle for preparing the solutions:

No. 1. DEVELOPING-PYRO.

(Composed of Sulphite of Soda, Acid Pyrogallic, Acid Citric.)

No. 2. DEVELOPING-SODA.

(Composed of Sulphite of Soda, Carb. Soda, and Carb. Potash.)

No. 3. FIXING AND CLEARING.

(Composed of Sulphite of Soda, Acid Citric and Chrome Alum.)

No. 4. Fixing and Clearing. (Consists of Hyposulphite of Soda.)

No. 8. Bromide of Potash.

For checking the too rapid development of over-exposed

Our Nos. 1 and 2 Developing Tablets are so prepared that those who are in the habit of immersing the plates with Pyro. solution first and then adding the Soda, can do so. Our formulas Nos. 3 and 4, for Fixing and Clearing, are of such combination that we dispense entirely with the Alum Bath, thus requiring only two trays to develop and fix the plate.

Price for Developing Outfit\$1 75

The Print Toning Outît contains the following Tablets, with full instructions on each bottle for preparing the solutions:

No. 5. Toning for Prints-Gold Chlorine.

No. 6. Toning for Prints--Soda.

Nos. 5 and 6 constitute the Toning Bath; this must be lkaline.

No. 7. PRINT FIXING—HYPOSULPHITE OF SODA.

This can also be used advantageously for stock solution, a few drops of Aqua Ammonia greatly enhancing its value.

Any of the above can also be secured separately in bottles of 100 Tablets each.

Price for Print Toning Outfit\$1 75

Explicit instructions will be found in the General Pamphlet
contained in each Outfit.

PRICES OF SEPARATE BOTTLES OF 100 TABLETS EACH:

No. 1 \$	0 75	No. 5 \$1	50
No. 2	30	No. 6	18
No. 3	40	No. 7	35
No. 4	35	No. 8	25

Accessories for the Retoucher.

Retouching Glasses.

German Silver Band. Ebony Handle.



																E	ich.	
2	inch	Lens														\$0	85	
21/2																1	25	
3																1	75	
31/2																2	25	
4		,														3	25	
41/2																3	75	
4/2			٠	•	۰	•											,,,	

Retouching Pencils.

A. W. Faber's Pencils.

With Siberian Lead from the
Alibert Mine.

For Retouching, etc.

We give the following scale for

LEADS ONLY.

convenience in ordering:

BBBBBB—Extra soft and extra
black.

BBBB-Very soft and extra

black. BBB-Very soft and very

black.
BB—Soft and very black,
No. 1.

B-Soft and black.

HB-Hard and Black, No. 2.

F-Middling, No. 3. H-Hard.

HH—Harder, No. 4. HHH—Very hard.

HHHH—Very hard. HHHHHH—Extra hard.

The above scale applies to both the pencils in wood and LEADS only, so be sure to state which is wanted.

The four degrees of pencils bearing the numbers 1, 2, 3 and 4 form a collection especially suited for ordinary use; these are the finest grade of pencils made.

Ea	ch.	Per	ioz.
2B to 6H\$0	10	\$1	00
3B to 6B	13	I	25

METAL POINTS		
The Crowelleach, \$0 25;		
Faber's Holder for Leads,	including	
one Lead	each, 25	

Calcined Flour for Retouching Negative



Calcined Flour....

Hanover Retouchers.

Better than India ink for spotting and retouching prints, either before or after burnishing.

They dry with a gloss.

There are three dark tints matching the different shades of backgrounds.

The three white retouchers are very popular.

Hanover Retouchers are used in the leading galleries in New York, and have the highest commendation from the artists.

Price, 50 cents per cake.

Gihon's Opaque

Is designed for completely obscuring the imperfect background of copies, retouching faulty skies in landscape negatives, countries the inside of lenses or cameras, backing solar negatives, countries boards, etc., etc. Wherever you want to keep light, use Opaque. It is applied with a brush, dries quickly, sticks.

rice, per box....

India Ink.



ccessories for Printing, Toning and Fixing.



Peck's Pneumatic Retoucher.

(PATENT GRANTED.)

AS A DEVICE FOR ASSISTING THE RETOUCHER, HAS NO EQUAL.

IT IS A NECESSITY IN EVERY GALLERY
IN THE LAND.

It will treble your out-put,

It will treble your income

It will improve your work.

YOU WANT IT AND YOU NEED IT.
WRITE FOR PARTICULARS.

without a Battery	0 1	00
With two Cells of Primary Battery2	5 4	00
With a Storage Battery 3	0 (oc

F. Weber & Co.'s

Photographers' Liquid Opaque,

50 CENTS PER BOTTLE,

is the best medium for blocking out back-grounds or skies, and to cover large and small imperfections in the negative



F. Weber & Co.'s

Liquid India Ink,

50 Cents per Bottle.

For making or numbering negatives, for drawing on matt surface print, and for all purposes where India ink is used.

Waymouth's Vignette Papers.



Nineteen sizes are now made, suiting all dimensions of pictures, from a small carte figure to Victorias, cabinets, whole size, etc. They are printed in black for ordinary negatives, yellow bronze for thin negatives, and red bronze for still weaker ones.

In envelopes, containing one each, Nos. 1 to 15\$1	C	00
Nos. 1, 2, 3, 4 and 5, for cartes, per doz,	5	0
Nos. 6, 7, 11, 12 and 13, for large cartes and Victorias, per doz.	7	5
Nos. 8, 9, 10, 14, 15 and 151/2, for cabinets and 4-4 size, . I	C	00
Nos. 16, 17 and 18, for cabinet and half-size, per doz 1	2	5

Accessories for Printing, Toning and Fixing.

Cut-Outs or Medallion Masks.

For Printing Photographs.



For Carte de Visite,	3 sizes, per doz\$0	15
· Victoria,	1 size,	20
	2 sizes,	25
# 4-4 Ovals, set of		30
One package, conta	ning six of each of above seven sizes	75
Gihon's Cut-Outs, 3	assorted sizes (sold only in sets)	60

Aniline Blue.

Dissolve one-half ounce aniline blue, letter R, in sixteen ounces water. When your fixing bath is made up, add from thirty to forty drops of the blue to every forty ounces of fixing bath. Fix your prints from twelve to fifteen minutes, and remove to a strong solution of salt and water. Let them remain five minutes, and then gradually dilute with fresh water, so that the change of temperature will not be too sudden, and you will never be troubled with blisters, and will always have pure whites. But directions for saing accompany each box: also shendid Full directions for using accompany each box; also splendid

formula for printing bath, toning, fixing, etc. Price, per package......\$0 35

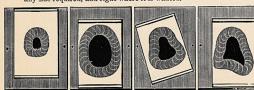
The Dixie Vignetter.

THE FIRST AND ONLY SUCCESSFUL ADJUSTABLE VIGNETTER.



Practicable, Cheap, Simple, Durable and Indispensable to all

Photographers who keep up with the times. It is attached to the ordinary printing frame, and can be quickly, easily and accurately adjusted to any Negative—the Pear, Oval, Round, Square or any desired opening can be produced of any size required, and right where it is wanted.



The above shows a few of its many possible adjustments. The Dixie Vignetter is all complete. No separate parts to cost extra and get mislaid or broken, and it is always ready for use. It costs but a trifle and will pay many a dollar in time saved, besides producing superior results.

PRICE LIST OF THE DIXIE VIGNETTER.

Size.	Each.	Per doz.	Size.	Each.	
3¼ x 4¼	\$0 30	\$3 50			\$3 50
4 × 5		3 50	6½ x 8½	. 45	5 000
4¼ x 6½	30	3 50	8 x 10	. 60	7.00
434 x 61/2	30	3 50	IO X I2	. 75	9 00
5 X 7	30	3 50			

Sample by mail post paid, to cents additional.

Kuhn's Sensitized Paper Stretcher and Dryer.



Paper dried with I lies perfectly flat and therefore better prizes can be obtained. You can also cut your paper lengthwise or crosswise of the sheet, as = neither stretches nor shrinks afterward. is also very desirable for handling bromide

Whole or halfsheet size, each, \$1 50 20 x 24 size 1 75

Japanese Art Tissues.



The finest quality of Mikado Silk Paper for covering fronts of photographs, and preserving the burnish or gloss. Eight charming designs printed in blue ink. Price per 1,000\$2 CO Assorted designs.

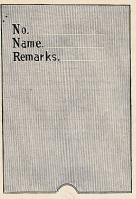
Hard Rubber Plates.

For Squeegeeing Prints upon.

4	x 5,	d in.	thic	k\$	0 10		10,	1 in.	thick	·	40
5	x 7.				18	IO X	12,				 60
5	x 8,		,		20	II X	14,				 75
61/	x 816.				30	1000					

Accessories for Printing, Toning, and Fixing.

Negative Preservers.



It offers security against breakage, dust, mistakes, etc. It consists of a stout manilla paper envelope, one end open and cut to admit the thumb and forefinger in removing the negative, and having on the front three printed lines for the number, name and remarks.

For	314	x	414	negatives	 	 	 	 			Per 10		
,	414	x	51/2	,	 	 	 	 		22	2	50	
	41/4	x	61/2		 	 	 	 		25	2	75	
	5	x	8		 	 	 	 		30	3	25	
	5	x	7		 	 	 	 		28	3	00	
,	61/2	x	81/2		 		 	 		40	4	20	
	8	x	10		 	 	 	 		55	5	00	
	10	x	12		 	 	 	 	I	50			
	II	x	14	,	 	 	 	 	I	75			
	14	x	17		 		 	 	3	00			

W. & C. Perfect Preserving Tubes, for Sensitized Photographic Papers.

(PATENT APPLIED FOR.)



Tin Box, size for Nos. 1, 2, and 3 Tubes, \$0 20

. 4 and 5

Hard Rubber Fixing Bath.



Its advantages are: First, that it is made of hard rubber, the material which best withstands the action of photographic chemimaterial which best withstands the action of photographic chemicals and general wear and tear. Second, that it is smooth and can easily be kept clean. Third, that it holds one dozen plates Fourth, that it has a ridge at the bottom which keeps the plate above any sediment which may collect there. Fifth, that deges of the film will not be scratched in the groove. Sixth, that it takes up little space. Seventh, that it is far less liable to break than dishes. Eighth, that it is cheap.

	10000		2000		7	,	~	0	•	7	ď	•	6		~		٠.	•	r	•													
																CE																	
				plates																													
	4	X	5	,			١,		٠.																		 				2	(00
,	5	x	7																		 										2	:	25
	5	x	8																								 				2		50
	61/2	x	81/2																								 	S			3	(00
	8	x	101/2																												3	1	50

Perfect Varnish Can and Filter,



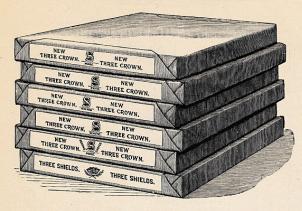
The funnel which acts as a filter, running nearly to the bottom of can, is constantly in the varnish, and does not get dry. The funnel and filter screws into can when in use.

Price...... 50 cents.

Varnishes.

S. P. C. Neg	ative.		 			٠,		٠,										8	0	35	
Keystone			 																	50	
Phenix Ferr	otype			 					 e,				.1	oei	rl	bo	ttl	e,		50	
Mountfort's	Negat	ive	 		 	 														40	
Diamond F	erroty	pe.	 		 	 														40	
,			 		 	 	٠.						.1	I P	ot.				1	CO	
Crystal	,		 										.1	pê	r					30	
Crystal Retouching.			 											,						50	
Grit			 		 							 								40	

Accessories for Printing, Toning and Fixing.



Albumen Paper.

Dresden, Three Crown-
Single, Pink, Pensé or White, per
dozen
Extra Brilliant, White, Pearl, Pensé
or Pink, per dozen 1 11
Single, per ream34 5
Extra Brilliant, per ream40 00
201/2 x 241/2 Saxe Extra Brilliant Paper,
per dozen 1 #
22 x 36 Saxe Extra Brilliant Paper, per
dozen 3 00
26 x 40 Saxe Extra Brilliant Paper, per
dozen 6 50
Absolutely the best Albumen Paper to be
obtained.

Other Papers.

Plain Saxe Paper.

Mediun	a, pe	er	d	oze	en																	\$0	50)
,																								
Heavy,	per	d	02	en	١											٠.							55	
	per	r	ea	m																		18	00	,

Clemon's Matt Surface.

Salted,	per	dozen	 	 									 	\$0	8	5
	per	ream	 	 		 			 				 ٠.	32	00)

Endless Roll.

Plain,	Steinbach's,	Medium	(54 inches	wide),	per yar	d	\$0 30	
							45	

Cepa Skin.

For Vignetting, size	17 x 22, per	dozen	 \$0 20

English Tissue Paper.

Size 20 x 30, per dozen (any color except ruby)	0 I
Ruby color, per dozen	7

Gummed Paper.

Sheplie's, per roll of 300 yards, half-inch	wide\$0 6
---	-----------

Litmus Paper.

Per	sheet,	blue	or	red	١	 		 										\$c	0 0	05
Per	dozen																		5	0

Ruby Paper.

Carbutt's, 20 x 25, pe	sheet\$0 2	5
------------------------	------------	---

Mask Paper.

Perfectly	Opaque,	size	20 X 24,	per	dozen	(Post Office)\$0	25
		,	20 x 24,			(Needle)	25

Albion (100 Lb.) Photo Blotting Paper.

ABSOLUTELY PURE.

We have at last obtained a Photo Blotting Paper (The Albior) which is absolutely chemically pure. It is a very different article from ordinary blotting paper, which always contains more or less impurities that are injurious to photographic prints. This paper may be used in the most delicate photographic operations with perfect safety. We had it especially made for photographers' purposes, and can unhesitatingly recommend it.

Price per	half ream\$12	00
	dozen sheets	72

Accessories for Printing, Toning and Fixing.

Directions for Use of Empire Matt Paper.

A STATEMENT.

It is now a conceded fact indisputably proven, that collodion paper is the only practical printing-out paper that will produce results permanent enough to meet the demands of the photographic profession, and all attempts to cheapen the manufacture by introduction of gelatine, or other substitutes for collodion, have proven disappointing failures.

In presenting the Empire brand to the trade, no claim of any wonderful or new combination of chemicals unknown as to permanency is made, but simply the guarantee that the Empire goods are strictly collodion, made of the best and most expensive ingredients by experienced manufacturers, and priced as low as they can be honestly made for.

MANIPULATION.

Several beautiful effects may be secured with this paper, each entirely distinct from the other, depending on the manner of treatment.

FOR OLIVE CARBON EFFECTS.

Print exceedingly deep until the deep shadows bronze and there is a perceptible tint to the high lights. Flatten prints same as with a gloss collodion paper and wash through five or six changes of cold water, separating prints thoroughly. Then tone as follows:

Gold Rath

Water, 60 ozs.

Borax (saturated solution), enough to make slightly alkaline.
Empire gold enough to tone in about eight minutes to a

As fast as toned drop prints into a stop-bath of salt water—i

ot. of salt to each quart of water—rinse prints through a couple
of changes of clear water and tone in the following Platinum

Water, - - - 50 ozs. Empire Platinum Solution, 3 drachms.

If this bath does not tone in eight minutes, so that all traces of red or purple disappear in the deepest shadows, add more Platinum solution, as too slow toning causes yellow whites. Wash prints after this bath in two changes of clear water and then fix in a hypo bath, showing 18 hydrometer test, for ten minutes. Final wash through ten changes of water or one hour running

PARTICULARS.

Do not use the same tray for gold and platinum toning. Keep separate tray for each bath. The washing of prints after gold toning and again after platinum toning is important. When prints are first immersed in platinum bath, the whites often turn muddy and shadows severe, but if left long enough the whites clear beautifully and the shadows become transparent.

FOR BLACK AND WHITE EFFECTS.

Observe the same manipulation as above, but in place of stopping the tone in gold bath at a chocolate brown, carry it to a reddish purple. Then proceed as with the olive manipulation, there being no change in subsequent treatment.

FOR SEPIAS.

Print much lighter than above directed or about the same depth as required for warm tones on gloss paper—a shade or two darker than desired when finished. Flatten and wash as usual, then tone as follows:

Water,			-	-	60 ozs.
Empire	Gold,	-	-	-	1 drachn

Add enough saturated solution of borax to turn red litmus gradually blue. Tone only until high lights are clear and fix in hypo bath, 12 hydrometer test, 15 to 20 minutes. Final wash one hour in running water or ten changes of water by hand.

Nork

To secure best chemical action in all above treatments, toning baths should be kept at a temperature of about 70 degrees F. and made up from two to three hours before use. The wash waters, however, should be decidedly cool.

FINISHING.

Mount and spot after the manner usual with collodion paper. The chief requirements are to squeegee the water thoroughly out of the prints before the paste is applied to avoid rolling up on card. Use a heavy paste made of starch, and after mounting it is important that the prints are separated while drying, otherwise slow drying when stacked together will ferment the paste, causing white spots.

Platino Collodion Matt.

PLATINO MATT.

	217	C.		DOZ.	Gross.
31/4	x	414		\$0.20	\$1 60
		5		25	2 00
			Carte de Visite	15	I 10
3	x	4	Mantello	15	I 25
37/8	x	51/2	Cabinet	25	2 00
37/8	x	57/8		25	2 00
1	X	6		25	2 00
5	x	7	½ gro., \$1 85	40	3 50
,	x	8		45	4 00
1/2	x	734	Paris Panel	50	5 00
)	x	8		60	5 50
51/2	x	81/2		65	6 00
, -				75	7 00
3	x	10	4 20	90	8 00
0	x	12		1 25	12 00
I	x	14	7 90	I 50	15 00
14	x	17		2 25	24 00
6		20		3 00	32 00
18	x	22		4 00	40 00
20		24	1/2 " 23 00	4 00	44 00
					100 Aug 100 Au

COLLODION MATT SECONDS.

(In Cabinet Size only.)

Price	per	gross				 				 		٠.		 		\$1	44	
"	"	100 sheets	• •	• •	 	 			 	 	• •	• •		• •		I	00	

EMPIRE PLATINUM.

Per bottle	 	 	 \$1 c	0

Directions for Use of Empire Gloss Paper.

A STATEMENT.

It is now a conceded fact indisputably proven, that collodion paper is the only practical printing-out paper that will produce results permanent enough to meet the requirements of the photographic profession, and all attempts to cheapen the manufacture by introduction of gelatine and other substitutes for collodion have proven disappointing failures.

In presenting the Empire brand to the trade no claim of any wonderful or any new combination of chemicals unknown as to permanency is made, but simply the guarantee that the Empire goods are strictly collodion, made of the best and most expensive ingredients by experienced manufacturers, and priced as low as they can be honestly made for.

MANIPULATION.

After printing several shades darker than desired when finished and washing out the free silver through five or six changes of water tone as follows:

Water, - - - - 60 ozs. Empire Gold, - - - 1 drachm.

Accessories for Printing, Toning and Fixing.

Directions for Use of Empire Gloss Paper.

Continued.

Add sufficient saturated solution of borax to turn a good red litmus paper slowly blue. If dry gold is used, one to two grains in place of the Empire Gold solution. Empire Gold will be found the most reliable. The addition of one-half drachm of Acetate of Soda is under some conditions of water and with some negatives found desirable. Always allow bath to stand two hours before using. Muddy tones are due to the presence of too much alkali in bath. Bleaching, blue half tones, and failure of shadows to tone, indicate an insufficient quantity of alkali.

It is important to have a liberal fixing bath which will cover the prints thoroughly. The bath should be 12 hydrometer test, which is equivalent to about one ounce of saturated solution of hypo to every sixteen ounces of water used. It is important to use a hydrometer for testing strength of bath. Fifteen to twenty minutes should fix the prints. Separate the prints thoroughly several times during the fixing.

WASHING.

Washing properly has much to do with permanency, and it should be understood that the number of complete changes of water and not the length of time the paper soaks in the same water eliminates the hypo. Eight changes of water when washed in a tray by hand is advised, or one hour in running water.

FINISHING.

Mount, spot and burnish after the manner usual with collodion paper. The chief requirements are to squeegee the water thoroughly out of the prints before the paste is applied to avoid rolling up on card. Use a heavy paste made of half starch, half flour, and after mounting it is important that the prints are separated while drying, otherwise slow drying when stacked together will ferment the paste, causing white spots.

To Collodion Beginners.

To those who have never used a collodion paper it is important

to bear in mind the following points:

1st. Do not use trays that have been employed for combined baths or gelatine paper, without having first washed them thoroughly with acid, and afterward a liberal scrubbing with water.

2d. Collodion prints when thrown into water without first

having been flattened properly, will curl in a most annoying manner to the novice, while if a simple system is observed no trouble whatever will be experienced.

The curl is caused by the fibre of the paper side swelling in the water while the collodion side does not expand correspondingly. Therefore, if the prints are placed collodion side down flatly on the bottom of a good size smooth bottom tray, with only water sufficient to dampen them and not swim them, the prints have no opportunity to curl while the fibre of the paper is swelling, and after once expanded there will be no further inclination to curl. The entire bottom of the tray should be covered with prints placed as above described, overlapping each other a trifle, when a little more water may be added and another layer of prints placed in like manner on the first layer and so on until all are in. Stand tray on end and drain off water, allowing the tray to stand in this position two or three minutes with prints sticking flatly to bottom. After this a liberal amount of water may be used with no further tendency to curl.

Empire Paper Collodion Gloss.

			GLOSSY.		
Siz		.,		Doz.	Gross.
3/4	x				\$1 20
4	x				1 35
21/4	x	33/4	Carte de Visite	 15 .	75
3	x	4	Mantello	 15	1 00
*37/8	x	51/2	Cabinet	 25	I 35
4	x	6		 25	I 50
5	x	7		 35	2 65
5	x	8		 40	3 00

Size.	Doz:	Grane
5½ x 7¾ Paris Panel		\$0 3 #
6 x 8	50	3 75
6½ x 8½		4 36
7 x 9		5 25
7½ x 9½		5 75
8 x 10		6 05
IO X 12	I 10	9 00
II x 14		11 20
14 x 17		15 00
16 X 20		24 00
18 x 22	3 00	30 00
20 X 24 200	3 00	33 00
ro-yard rolls	6oc.	per yard

*STANDARD CABINET SIZE.—This size will be furnished on all orders for "Cabinets" when no special size is mentioned.

EMPIRE SECONDS. Per 100 sheets......\$0 75

EMPIRE GOLD.										
No. 2 Bottle, tones 8 gross	Cabinets									

Empire Gelatine Paper.

Price List.		
Size.	Doz.	Gross.
21/4 x 33/4 Carte de Visite	. \$0 10	\$ 0 60
3 x 4 Mantello	. 10	70
31/4 x 31/4	. 10	75
3½ x 4½		80
4 X 5		1 00
3% x 51/2 Cabinets		1 00
4 x 6		1 00
5 x 7		I 75
5 X 8		2 00
		7.0000000000000000000000000000000000000
		2 50
6½ x 8½		3 00
7. x 9		3 50
7½ x 9½		3 75
8 x 10		4.00
9 X II	. 60	5 00
IO X 12	. 65	6 00
II x I4	. 75	7 50
14 X 17	. 1 15	12 00
16 x 20	. 1 50	16 00
18 x 22	. 2 00	20 00
20 X 24		24 00
10-foot roll		I 00
10-yard roll		3 00
10-yard ron		. 500

SECONDS. - A limited quantity of Cabinet Seconds at 50 cents

Cabinets, postage paid, \$1.10 per gross,

DIRECTIONS.

Print fairly deep, same as Albumen Paper.

Wash in several changes of cold water to remove the free silver. Keep prints face down while washing.

Toning Bath. Any good gold bath, slightly alkaline, can be used. Take one grain of gold to 32 ounces of water, and add saturated solution of borax to turn red litmus paper slightly observed. Mix bath two hours before using. If bath tones quicker than six minutes, add more water; if slower, add more gold. After toning place prints in running water, then fix for 15 minutes in following bath:

Fixing Bath.

Water,	-	-		-				70	ounces.
Hypo,			-		-		-	4	ounces,
Sulphite	Soda,	-		-		-		1/4	ounce.
Alum			-						oumon

Wash one hour in running water, or in ten changes of cold water, keeping prints well separated.

Mount and burnish as usual.

Accessories for Printing, Toning, and Fixing.

How to Use Nepera-Bromide Paper.



Nepera-Bromide Paper is manufactured in three grades :

PLATINOID is a matt surface paper giving platinum effects, and is specially adapted for contact prints and enlargements not exceeding 20 x 24.

ROUGH SURFACE is a heavier paper, generally preferred for crayon work.

GLOSSY SURFACE OF ENAMELED PAPER gives, as suggested by its name, glossy prints. When toned Sepia such prints closely resemble albumen or aristotype prints, and magnificent enlargements can be made on this paper, which look like prints obtained directly under a negative. It can be burnished, or squeegeed

The emulsion used for Nepera-Bromide Paper is made by a process which is entirely independent of condition of weather and quality of water, insuring perfect uniformity.

Nepera-Bromide Paper, on account of the special preparation of its emulsion, has better keeping qualities than any other paper. Prints made on Nepera-Bromide Paper, according to our directions, will not fade.

PRICES.

3 X	4per	dozen,	\$0 30
4 X	5		40
3 i x	5½ to 4 x 6 (Cabinet)		50
41 X	64		55
5 X	7		65
5 ½ X	7½ (Paris Panel)		75

5	x	8				 		 		 										 per	dozen,	\$0	75
61	x	8	١.			 								 								1	10
7	x	9				 		 		 												1	20
8	x	10								 												1	50
0	x	12				 				 		 ٠.										2	25
I	x	14												 								3	00
4	x	17						 		 								٠.				4	50
6	x	20						 		 				 								6	00
8	x	22				 				 				 			٠.					7	50
)	x	24						 		 		 										9	00
2	x	27				 				 						.,						11	25
1	x	30				 		 		 				 								13	50
5	x	30																				14	00
1	x	36																				16	00
)	x	40						 		9.												22	50

Prices Continued

		IN ROLLS AT LEAST TEN YARDS LONG.	
o inc	hes wi	deper yard, \$0 56	,
11		62	2
12		68	3
14			,
16		, gc)
18		/ I OC)
20		" I I2	2
22		r I 24	
24		" I 35	,
25		, I 40	,
30		1 68	3
31		1 75	5
Vonte	al Ova	late of Potassium in boxes, per lb., \$0 25	
		ate of Iron	
		e of Sodium	
		of Potassiumper ounce bottle,	
		trate 60	
		No. 8, per lb. bottle, 20c.; 2 lb. bottle, 32c;	'
		nogen Developing Powders, specially adapted	,
	I DIOI	ide Paper 50	'

The California Automatic Print Washer.

WILL H. LEIGH. Inventor



The principle on which the Automatic Washer is constructed provides for a constant and complete change of water with an upward and circular motion from being forced through the small holes, and an automatic rocking of the tank gives the entire body of water exactly the same motion that separates the prints in the ordinary tray by rocking. With this apparatus prints never settle to the bottom of the tank, but float in the water and move

gently from side to side.

The face of each print is in this way presented to the moving water and imperfect washing is an impossibility.

Prints require no watching nor handling with this washer, thus saving its cost in labor alone.

They are furnished in three sizes, and made and finished for service and wear.

12 x 12 inches, \$7 oo | 20 x 20 inches, \$8 50 | 25 x 25 inches, \$10 oo

Leigh's Combination Photograph Printing Frame.



To quote the words of Mr. W. H. Leigh, the inventor, we would say that "the important point we claim for this frame is the doing away with joint lines, and equalizing the space between subjects for combination photographs, without cutting down negatives, thus often ruining them for future orders for single

Prints from ten inches to ten feet in length can be made from as many negatives as desired. The prints can be made side by side, or one above the other. Nothing makes better display work, nor attracts the public eve more than the Combination Photograph.

We furnish two styles of frames, one to open in the regular way, taking paper the narrow way of the frame, and the other with lengthwise opening, taking the paper as shown in the illus-

PRICES FOR EITHER STYLE COMPLETE.

For sale by dealers.

Accessories for Printing, Toning, and Fixing.

Statue Pictures Made Easy.



The above photo-engraving represents the statue picture printed on Osborne's Statue Pedestal,

The negative furnished for statue pictures is a paper negative of a pedestal, which can be adjusted to the negative of the salject you wish to represent as a statue.

To produce the statue pictures the subject should be draped in white, have the hair powdered, and be taken on a black or very dark background.

After the negative is taken and varnished, the film is scrape! off around the figure, cutting off the body as shown above, after which the pedestal negative is adjusted, fastened, and then

This negative is reversible, and can also be used for different subjects. Full directions and samples sent with each negative

Price, for Cabinet or Boudoir size.....\$1 00

Scovill Squeegees.

Velvet Rubber.

6	inch																					\$0	2
8		 									 												5
12						 		 		 													5

Scovill Print Roller and Squeegee.

SUPERIOR TO ANYTHING IN THE MARKET.



The Scovill Print Roller and Squeegee is especially designed to be used in the place of the ordinary squeegee in working film and paper negatives, bromide prints, for removing surplus water from albumen prints before mounting, etc.

It is neatly constructed with black walnut handle, brass trimmings and a heavily covered rubber roller.

It will be found a very handy tool alike to the professional and amateur photographer.

> No. 1, 8-inch, - - - \$1.00 each. No. 2, 12-inch, -1.50 each.



Accessories for Mounting, Burnishing, and Mailing.

Acme Flue-Heating Rotary Burnisher.

One Hand Wheel Adjustment. Even Tension. Acme Thermometer Attached



Patented May 31, 1890, and March 31, 1891.

Knurled Roll. Full Nickel Finish.

PRICE LIST. inch, Oil, Gas or Alcohol Heater\$25 00

Acme Improved Rotary Burnisher.



8 inch Rotary, with Alcohol, Oil or Gas Heater,\$13 00 11 inch Rotary, with Alcohol. Oil or Gas Heater, 20 00 15 inch Rotary, with Alco-

hol, Oil or Gas Heater, 25 00 No smell. No sweat. No smoke. Thermometer. Full

Acme Stationary Burnisher.

Patented '70, '86, '88, '90. Finest Stationary Burnisher Ever Made. No Smoke! No Sweat! No Soot! Simple Well Made. Guaranteed.

Wheel Adjustment Thermom. ter attached.

				REVISE	D P	RICE L	ST.		-	-				
6	inch.	with	Alcohol,	Gas or	Oil	Heater		 	 		 		\$10	00
	,		,						 		 	 	18	00
					,			 	 		 	 	22	00
1								 	 		 	 	40	00
6								 	 		 	 	60	00
				_	_									

Acme Print Trimmer.

Cuts a Whole Sheet at Once.



Absolutely Accurate. Patented Aug. 26, 1890. Never gets out of adjustment, Self-sharpening. Simplest Trimmer ever made. Pre-

> PRICE LIST. No. 1. 33/x53/s in., 16 to sheet\$12 00 No. 2. 37/s x 6 in., 12 to sheet 12 00 Any special size to order.

Acme Aristo Burnisher.



			PRICE	LIST.										
th	Gas.	Gasoline	or Oil	Heater									\$30	00
													40	00
													50	00
													60	

Special sizes to order. The above cut represents our latest production. Too much cannot be said about this machine. Just note that it has a purchase gear—the strongest possible, and answers the purpose of six gears with no backlash whatever.

11 inch, wit

It is heated by gas, gasoline or oil.

The Gas Heater is simple and easy to operate; anyone can

The Gasoline Heater is easily handled; a novice can work it when directions are followed.

This Oil Heater we wish to call special attention to, as the

heating capacity of this Burnisher with oil heater has been more than doubled over our 1894 Roll Heater. It is the only heater of the kind made—it is the simplest heater possible—heats direct—heats in ten minutes—a beautiful burnisher and so simple that any photographer can use it without any instruction whatever. You can't afford to be without one

The adjustment on this Burnisher is the latest-by turning the screw the most delicate adjustment possible can be attained.

Place a card between the rolls the thickness of picture intended to burnish, push down on adjustment bar, spin the nut up and it is ready for work. The simplest and best adjustment

ever put on any Burnisher.

The bearings of polishing roll are of steel, the roll is made of very heavy material and will hold the heat a long time. The rolls cannot be brought so close together as to mar the polishing roll. It is easy to do the very finest work on this machine.



Patent Pending.

The above cut shows gasoline burner attached to Burnisher.

Accessories for Mounting, Burnishing, and Mailing.

Parlor Paste.



½ pint jar \$0	25 1 quart bottle\$0 5
I	45 I gallon 2 00
I quart	65 1/2 1 2
I pint bottle	35 1 / 2 00

This Paste is the only really good paste sold ready prepared for mounting photographs. It will not sour, discolor, mould or separate; and is always ready for use.

"Non-Cockle."



"Non-Cockle" is a preparation for mounting photographs, ferns or delicate fabrics, and is the best mountant ever invented. Photographs mounted with "Non-Cockle" will not warp or cockle the mount.

Prints when mounted with it retain the glace finish so much desired.

"Non-Cockle" will keep in any climate. It never sours, and will not stain the most delicate fabric.

It is put up in 6 oz. wide-mouth bottles, with metal screw-top.

Glue.

Glue is the gre Put up in jars.		

Waterbury Card Board.

This is the best board in the market for photographic purposes, as it is entirely free from the hypo used in the bleaching process of other brands

				P	RIC	ES	1	PE	R	0)N	E	I	I	UÌ	NDRE	D.			
9	Size.														I	Extra	No.	I. No	D. 1.	No.z.
25	x 30		 	 												\$10	00			
22	x 28		 	 													50	\$5	25	\$4 75
20	x 24		 	 							٠.		٠.			. 6	00	4	25	3 50
18	X 22	1														5	25	2	75	3 25
17	X 21	1	 	 •				•	•		•			•	•	,	-3	,	15	
16	X 20															4	50	3	00	2 75
15		1								10	•					7	30	,		1
14	x 18	1.	1													3	25	2	25	2 00
14	X 17															-	-			
13	x 16		 	 												3	25	2	25	2 00
12	x 14	1																		-
11	X 14															7	88		31	I 20
10	X 12																50	I	05	90 So
9	XII																25		88	
	X IO																00		70	60
61	x 8																75		55	3
7	x 9		 	 					٠.					•			85		60	50

Scovill Print Roller and Squeegee.



Superior to anything in the Market.

The Scovill Print Roller and Squeegee is especially designed to be used in the place of the ordinary Squeegee in working film and paper negatives, bromide prints for removing surplus water from albumen prints before mounting, etc.

It is neatly constructed with black walnut handle, orass trimmings and a heavily covered rubber roller.

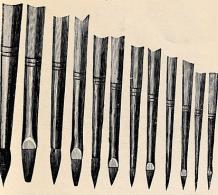
It will be found a very handy tool alike to the professional and amateur photographer.

Price, 8 incheach,	\$1	00
, 12 ,	I	50
Columbia Print Mounter	I	00

Accessories for Mounting, Burnishing, and Mailing.

Red Sable Brushes.

IN TIN FERRULES, CEDAR HANDLES.



For fine painting in oil colors, or for coloring ferrotypes.

Nos. Per Gross. 1 \$8 00	Per Doz. \$0 80	Each. \$0 07	Nos. Per Gross. 7\$21 25	Per Doz. \$2 121/2	Each. \$0 18
2 8 30	83	08	8 23 15	2 35	20
3 9 90	1 00	09	9 24 80	2 50	22
4 II 40	1 15	10	10 28 20	2 85	. 24
5 12 90	I 30	12	11 34 75	3 50	30
6 14 46	1 50	15	12 42 90	4 35	38

Bristle Brushes.

Size.	Per Doz. .\$1 20	Each. \$0 12	Size. 2½ inch	Per Doz\$3 00	Each. So 30
11/2	. I 80	20	3	3 60	. 40

Camel's Hair Brushes.

Siz	e.	Per	Doz.	Each	Size.	Per Doz.	Each.
t in	ich	 .\$2	25	So 20	21/2 inch	\$5 62	\$0 50
11/2		 2	35	30	3	6 75	60
2		 4	50	40	31/2 "	12 00	I 12

Rubber Bands.



Eighteen gross 11/2 inch bands in a 1/2 lb. box. Put up nicely	
in 1/4 lb. boxes. Use them instead of twine. 2,592 bands (count	
'em) in a ¼ lb. box.	
Per ¼ 1b. box\$1 00	
Per rog boy	

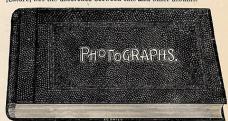
The "Alpha" Cabinet. Pure Rubber Elastic Bands.



Howard Albums.

With Interchangeable Leaves.

The Howard Album, with interchangeable cards, is the latest novelty in the way of an album for mounting photographs. In handsomely embossed covers are bound 25 of Collins' cards, which are chemically pure from all matter that would injure the photographs. In the mode of binding, and their interchangeable feature, lies the difference between this and other albums.



To each card are attached two small metallic binding loops, of astened that they act like hinges; through the projection of these loops a binding cord passes, which fastens at the back with a tie; thus each card is bound in the cover independently, and may be taken out and returned or replaced with case. This method of making an album affords the amateur the best means of preserving the results of his labor, because each picture may be finished before putting the card in the album. The arrangement of the pictures may also be altered at will—if a single card is spoiled, the whole album is not ruined. If a picture is taken out, it can be quickly and readily done without injury to the volume.



Accessories for Mounting, Burnishing, and Mailing.

Howard Albums .- Continued,

PULL CLOTH, EM	BOSSED, GOLD LABEL,	WITH A. M. COLLINS MIFG. C	D. S NO. I CARDS.
		With	25 Collins Cards.
	ards, for 4 x 5 pho	otographs	\$1 25
" 2. 7 X 10	5 X 8		I 50
" 21/2. 8 X 10	" 6½ x 8½	"	2 00
" 3. 10 X 12	" 6½ x 8½	**	2 25
" 4. II X 14	" 8 X 10	**	
	Y France Con	LD FINISH, WITH A. M. COI	Man Cala
MOROCCO, HALF			LINS MFG. Co. S
	CARI	os, Boxed.	*****
		With 25	With 50
		Collins Cards.	
		tographs\$2 00	No. 11. \$3 50
" 6. 8 x 10	" 6½ x 8½	2 10	12. 4 00
" 7. 10 X 12	" 6½ x 8½	" 3 00	" 13. 4 75
" 8. II X 14	" 8 X 10	" 3 50	
" Q. 14 X 17	" 10 X 12 OF 11 X 14		
" 10. 16 X 20	" 11 X 14 OF 14 X 17		
		HOWARD ALBUMS, MOUNTED	

Eclipse None Such Album.



INTERCHANGEABLE LEAVES, SPRING BACK.

Is the most perfect Album manufactured. The interchangeable feature is superior to all others. It contains twenty-four leaves. Each leaf is distinctly independent, and may be taken out and returned or replaced with the utmost ease without having to disturb any other leaf or part of the Album. The arrangement of the picture may be altered when desired, and if a single leaf is spoiled the whole album is not ruined.

DIRECTIONS FOR REMOVING THE LEAVES AND MOUNTING

Photographs.

Read carefully the following:
The leaves of the Eclipse Album are fastened by means of a small rod or "pintle." as will be seen by the above cut. At the back of the Album, in the inside, is a slot or cut expressly made. by means of which you can readily grip and remove the pintle. The pintle thus removed will give you an instrument with which you can remove the others. A pin or hairpin also answers admirably. Place the flat or upper end against the flat end in the leaf and press it out, thereby removing both the leaf and the pintle.

FINISHED IN MOROCCO, HALF LEATHER BOUND. Round-cornered leaves and enclosed in a neat box.

No.	1.	6	x ;	size,	24	leaves	for 4	x	5 P	rints,	2	on each	leaf		 		 	 		12	2	5
	2.	7	X IC	::	24		612	X	7		2			::								
4.	4.	11	X I	**	24	**	0/2	X	7		4		**					 		4	5	0
**	5.	11	X I	"	24	"	4	X	5	"	8		"		 			 	••	4	5	0
						- 12		T		-		Dans										

These books are full leather bound, seal grain padded. Covers and leaves round cornered. They are made for the fine trade. No. 6. 6 x 7 size, 24 leaves for 4 x 5 prints, 2 on each leaf.....

Round Cornered Leaves

FOR ECLIPSE NONE SUCH ALBUM.

No	. I.	6 x	7 size.	white or	gra	ydoz., \$	0 5
**	4.	7 X 1	0 "	**			2
	2.	TO X I	2 44				1 2
	4.	10 X 1	4 "	44		four 5 x 7 on leaf"	1 5
	5.	HXI	4 "		66	four 5 x 7 on leaf	1 5

The Eclipse Albums, Interchangeable Leaves. Spring Back.



The Eclipse Album is the most perfect album manufactured The Sciipse Album is the most perfect album manutactured. The interchangeable feature is superior to all others. It contains twenty-four Collins' Best Cards, which are chemically pure and free from all matter that would injure c photograph. Each leaf is distinctly independent, and may be taken out and returned or eplaced with the utmost ease without having to disturb any other leaf or part of the album. The arrangement of the picture may be altered when desired, and if a single leaf is spoiled the whole

Directions for Removing the Leaves and Mounting Photographs.

Read carefully the following:
The leaves of the Eclipse Album are fastened by means of a small rod or "pintle," as will be seen by the above cut. At the back of the album, in the inside, is a slot or cut expressly made. by means of which you can readily grip and remove the pintle.

The pintle thus removed will give you an instrument with which you can remove the others. A pin or hairpin also answers admirably. Place the flat or upper end against the flat end in the leaf and press it out, thereby removing both the leaf and the pintle Each pittle than the pintle and press it out, the proper is the pintle and promited on the card

and burnished before putting the card in the Album.

Photographs should under no circumstances be mounted with the ordinary photographer's paste or the many scented "paste preparations" sold by dealers generally.

We confidently recommend "Non-Cockle" as being the best

preparation manufactured for mounting purposes.

In mounting the pictures it is very important to have them

dry thoroughly between blotting paper, under pressure.

The Eclipse Album, as a sample book, especially for mounting samples of fine stationery, satins, delicate laces, etc., is pronounced by the best judges as having no equal.

Improved Spring Back with Twenty-four Collins' Cards.

Vo.	I											6	x	7	7										\$2	2	5
	2								٠.			7	X	IC)										2	5	0
è	4					 						II	X	14	1					٠.	٠.	٠.			4	2	5
	5											14	X	17	7										7	C	0
	-		-															c		1.	. :						

The Eclipse Albums are handsomely finished in Morocco, half leather bound, with gilt title, and enclosed in a neat box. Nos. 2½, 3½, 4½ and 5 have round corners; Nos. 4½ and 5 are extra gold finish.

FULL LEATHER BOUND.

These books are full leather bound, seal grain, padded covers, and round corners. They are expressly made for the finest class of trade. Prices as follows:

No.	21		6 x	7		83	00	No.	231/2		.12	x	IO		\$ 6	00
,	22		7 X	10		3	50		24		.II	x	14		 6	00
,	221	2	10 X	71/2		4	50		241/2	í	.14	x	113	4	 8	00
	23		IO X	12		5	50		25		.14	X	17		 9	œ
					1	Ex	TRA	LEAV	ES.							

	White and Gray.	Best Quality. I Dozen in a Box.	
o. 1	6 x 7	.\$0 50 No. 31/2 10 x 12	

710	. 1 0 2 /	20	110. 3/2	~
			* 4½ II x 14 I	
	21/2	05	* 4½)	
	3 IO X 12	80	, 5 I4 x 17 I	75

Accessories for Mounting, Burnishing, and Mailing.

The Waterbury Album

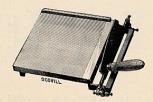
Is the latest thing on the market in the way of an Interchangeable Leaf Album.

EMBOSSED BLACK CLOTH COVERS.

WHITE LEAVES.

NOTE THE LIST PRICE. 10 X 12, - \$1.60

The Scovill Revolving Trimmer.



Has the many advantages, which its name implies, as follows:

It cuts the paper for the print without removing it from the board or sliding it thereon.

The knife is always in position and sharp, being self-sharpened by the motion which the revolution gives.

It is very light and attractive-looking and is perfectly suited to the uses of both professional and amateur photographers.

PRICE (SIZE OF KNIFE TEN INCHES,) ONLY \$4.00.

Accessories for Mounting, Burnishing, and Mailing.

ARE YOU USING

The "World"
Special Photo
Finish . . .

Blotting Paper?

AND WILL NOT LINT...

+

ASK YOUR DEALER FOR IT.

+

Try It!

Every sheet of the genuine bears embossed water mark of "World" Blotting.

Price per Ream, - \$20.00
" " Dozen, - - .60

The Acme Reversible Cabinet Mailing Envelope.

For Mailing at Reduced Rates of Postage.



PATENTED MAY 6TH, 1890.

Cabinet size, 5 x 7½, made from the finest grade of Highly-Calendered 8o-lb. Manilla Paper.

We claim it is unquestionably the best paper, the most secure of all fastenings—the clasp is made from Tempered Sheet-Brass and will not give way.

A trial will convince you that it is the best Envelope made for Photographers' use.

Price per 1,000.....\$10 00

The Acme Cabinet Mailing Envelope.

For Mailing at Reduced Rates of Postage.



PATENTED MAY 6TH, 1890.

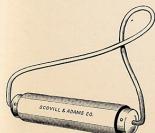
Cabinet size, 5 x 7½, made from the finest grade of Highly-Calendered 50-lb. Manilla Paper.

We claim it is unquestionably the best paper, the most secure of all fastenings—the clasp is made from Tempered Sheet-Brass and will not give way.

A trial will convince you that it is the best Envelope made for Photographers' use.

Price, 1	per	1,000									\$	9 00
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The Simplex Print Roller.



The latest ingenious device in print rollers is the "Simplex," recently introduced by The Scovill & Adams Co. of N. Y., of which the accompanying illustration gives a very good idea.

Its name is particularly appropriate, as the print roller is simplicity itself. We recommend our readers to adopt it. One of the objections to the print rollers which have heretofore been on the market is their unwieldy bulk as well as their greater cost. The "Simplex" is cheap as well as effective.

PRICE, 50 CENTS.



Accessories for the Reception Room.

The Studio Register.

(COPYRIGHTED.)



Use it a week and you would not be without it for ten times the price.

It is complete, economical, simple, handy. It keeps a complete record of your business. Every Gallery should have a Studio Register.

FORM OF SHEET.

Date Ordered.	NAME.	RESIDENCE.	No. Nega- tive.	No. Ord'd.	Size and Style.	When Prom- ised.	Proof Sent.	Amount Paid.	Amount Due,	When Delivered.	Remarks.
	~										

Twenty lines to each page. These books are well bound, with leather backs and corners, and cloth sides. Size of leaf, 8½ x 14 inches. Each book has an index n front.

No. 2.—160 page Studio Register, 3,200 Names. \$2.75 | No. 4—320 page Studio Register, 6,400 Names. \$4.25 3.—240 , \$600 , 5.00 Sample Leaf sent on application.



Flash Light Materials.

Magnesium Flash-Light Photographs.

How Obtained.

Since the introduction of the Scovill Magnesium Cartridges, photographs are made instantaneously, which could not otherwise be secured without great expense, trouble, and danger, in caves, tunnels, mines, and other places where daylight does not penetrate.

These are now made in the evening, with the valued surroundings, under the happiest auspices which but a short time ago the most skilled photographer would not have thought it possible to secure. Among other occasions where this can be used to advantage are: Family Groups, Dinner, Private, Theatrical and Fancy Dress Parties, Club and College Dinners, Companies, Weddings, Church Fairs, Pienie Parties, Lodge Meetings, etc. The novelty for the public, and consequent advertisement of this method of photography, will be at once apparent to the intelligent and progressive photographer, aside from the fact that there are many special occasions constantly presenting themselves, where a picture made in the ordinary way could not be obtained, owing to the impossibility of securing proper light.



The Scovill Magnesium Cartridges unite the very excellent quality of extremely actinic light, with conveniency of ignition and perfect safety as to its non-explosive nature, and absence of poisonous or other objectionable elements. The compound is prepared in different quantities and put up in boxes, so that the light may always be at hand in convenient shape for using. The cap, too, which fits neatly over the cartridge, protects it from dampness, so that the light may be employed out-of-doors on a damp day, or even during a gentle rain. A fuse is inserted at the bottom of the cartridge, so that there is no danger of a premature explosion with a consequent burning of the hand, as is often done when a charge of the powder is ignited by a match or short taper. The combustion is instantaneous, with no detonation, and there follow no poisonous or otherwise obnoxious gases or vapors from the burning. Out-of-doors, with the cap on, the combustion is quite as instantaneous, and the light nearly equal in its intensity.



DIRECTIONS.—It is an easy matter to photograph in the dark by means of the Scovill Magnesium Cartridge. Any one can do it, the requirements are so simple. Focus by means of a candle or lamp held close to the subject,

Focus by means of a candle or lamp held close to the subject, if a portrait, to one of the central members of a group; or, if in an interior, to a place where detail is prominent, as wall paper or carnet.

For the exposure, select the size cartridge most suitable for the subject. Place the cartridge on a saucer or metal plate, and behind it the screen, to reflect the light on the subject. The cartridge should be supported about the height of the camera from the floor, and behind the camera, to one side. Remove the cap of the cartridge before lighting the fuse. Out-of-doors the cap may be left on

Develop the negative in the same way that any instantaneously exposed plate is treated.

PRICE OF THE SCOVILL MAGNESIUM CARTRIDGES.

		III OHVEL I a	per	птарре.		Pkge.	Per Gre	oss.
No.	1Small Size,	in packages	of :	six	\$0	25	\$6	00
	2Medium,		-			40	9	00
	21/2Large,	,				60	13	00
	3.—Largest,					75		00
	These cart	ridges can b	e se	nt by ma	ail in tir	cans		

The Scovill Magnesium Compound, With Silver Paper Label,

Is entirely free from poisonous ingredients. In order to demonstrate this, quantities have been eaten at various times. It has often been pounded in a mortar to show that it does not explode. The results obtained by using our Magnesium Compound have never been surpassed.

"It seems almost incredible that any one should continue to use compounds which are known to be of an explosive nature. The various substances used to make actinic Magnesium light are no secrets; some are easily explosive, some are dangerously poisonous, and yet, for some fancied advantages which they offer in a compound, manufacturers are willing to put them upon a confiding public, and photographers seem ready to risk their lives, or at least the danger of severely injuring themselves by using them. Even when great caution is used, an explosive compound is always dangerous, and had better be left untouched. If there were no good compounds which were free from dangerous properties, there might be some excuse for adhering to the use of those which are known to be explosive and poisonous, but such is not the case."—Photographic Times.

Has been tried with safe "flash" mixtures like the Scovill Magnesium Compound, and invariably has given successful results. There is no device intended to accomplish the same purpose which is so convenient and portable. In fact it folds so compactly that it has been styled the "pocket flasher." A still more important consideration in its favor is that it may be so held as throw the light downward, and thus avoid shadows. This is very important when flash photographs are made where there are light langings and wall in the background. Some expert photographers attach a piece of cardboard to the handles of this flasher to serve as a reflector. The Asbestos plates furnished and the use of fuse serve as additional safeguards to the operators.

The "Safety" Flash Igniter.

This Igniter can be used either for dash compounds, magnesium cartridges, or pure magnesium powder on bed of gun-cotton. It is safer and more reliable in its working than any similar apparatus heretofore used. No unsteady, dangerous and expensive alcohol flame. Mo premature explosion of powder. The only Igniter that burns without a flame. The flash can be controlled by operator of the form his camera without any assistance and from any distance, as the Igniter is equally reliable with any length of tabling. Two or more flashes can be ignited at exactly the same instant by using two or more igniters in connection with double neck bulb or forked tube



Price of Safety Flash Igniter, including box of scented carbons, rubber bulb and three feet of rubber tubing,

complete in wooden box

Extra boxes of prepared and scented carbons, enough for

over 100 exposures.

Extra rubber tubing, in length of 12 feet, including brass connections.

25

Flash Light Materials.

Lightning Storage Flash Lamp.

This magnesium flash lamp differs from all others in that it produces a broad vertical sheet illnminant flame, in size about 6 x 6 inches.

The powder being projected upward into the combustion flame, in a thin, broad sheet, it is most thoroughly consumed, thereby producing an intense light, and also greatly lessening the smoke nuisance; and besides the sheet flame is a much more effective



The powder is stored (see cut) in the cylindrical chamber which is filled from top by removing cap, and by means of an air blast from the lungs, air bulb, or other source—several lamps may be connected with a reservoir of compressed air—the column of owder is undermined and driven through the fan shaped projector into the-wood, or pure alcohol-combustion flame.

Repeated short flashes or a continuous one (until storage chamber is emptied, may be made, the force and duration of air blast regulating the flash. The powder feeds entirely automati-cally, and if finely powdered and dry, will never fail to feed

Properly.

A sheet tin, cardboard, or other suitable reflector, is attached a sheet tin, cardboard, or other suitable reflector, is attached to the cardboard, or other suitable reflector, is attached to the cardboard, or other suitable reflector, is attached to the cardboard, or other suitable reflector, is attached to the cardboard, or other suitable reflector, is attached to the cardboard, or other suitable reflector, is attached to the cardboard, or other suitable reflector, is attached to the cardboard, or other suitable reflector, is attached to the cardboard, or other suitable reflector, is attached to the cardboard, or other suitable reflector, is attached to the cardboard, or other suitable reflector, is attached to the cardboard, or other suitable reflector, is attached to the cardboard, or other suitable reflector, is attached to the cardboard, or other suitable reflector, is attached to the cardboard, or other suitable reflector, is attached to the cardboard, or other suitable reflector, or other suitable reflector, is attached to the cardboard, or other suitable reflector, or other suitabl able to base of lamp, by clamping nut on tube nozzle. Dotted line on cut show were provision is made for sliding lamp on a one-quarter inch stand-rod and securing it in place by binding screw. An extinguishing cap is provided, also five feet of three-sixteenth rubber tube.

The lamp is thoroughly well made of brass and is nickel-plated.

The Standard Flash Lamp,



This lamp gives a continuous or intermitting flash, and having an Argand flame box insures the complete consumption of powder with minimum smoke. It is for amateur or professional use. Two or more of these lamps can be flashed instantaneously

Price......\$4 50

The Standard Triple Flash Lamp.



This lamp gives a continuous or intermitting light of intense power and brilliancy, and is for lighting theatres or large halls.

Price......\$7 50



The Little Giant Repeating Flash Lamp.

PATENTED SEPTEMBER 2, 1890.)

Safe, Convenient and Powerful.

Embodying the same principle as the Standard Lamp, and producing a number of in tensely brilliant flashes from one charge.

Price, boxed \$2 50

The Vulcan Vest-Pocket Magnesium Flash-Light.

A Wonderfully Brilliant Light.

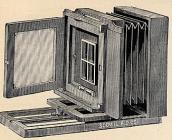
The Little Vulcan will illuminate a radius of 40 feet. It can be flashed with perfect safety, or if preferred set in a slot on bottom of the small carrying box.

It can be used with the bulb, or without a bulb, by blowing through the tube. The igniting flame is supplied by two Vulcan or Wind Matches. The box contains, besides the lamp and bulb, a bottle of magnesium powder and a box of matches.

Price......\$1 50

Cameras, and Outfits for Ferrotypers.

Acme 5 x 7 Standard Victoria Cameras.



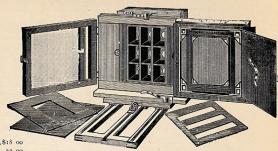
No. 515.—Without Lenses
516.—With four 1/4 Lenses on a brass plate33 00
The newest pattern of the standard quality of Victoria
Cameras, which produces 9 and 18 pictures on a 5 x 7 plate, is called the

Ferretune Plates

refrotype rates.		
Champion, Box of 200 to x14 Egg-shell, Black or Chocolate. \$2		
Glossy	12	00
Union, Box of 200 to x 14 Egg-shell, Black or Chocolate 1	5	00
Per doz		90
Centennial, Box of 200 10 x 14 Egg-shell, Black only 1	0	00
Per doz		60
	7	50
Per doz		50
Rival, Box of 200 to x 14 Egg-shell, Black only	7	00

Acme Multiplying Victoria Cameras.

(THE FERROTYPER'S CAMERA.)



No. 517.-The Acme Multiplying Victora Camera will make nine or eighteen Gems on 5 x 7 plate, using 9 1-9 Gem Lenses. It has Sliding Holder, and admits of cabinet work on 5 x 7 plate and two pictures on that size or smaller when gem fixtures are removed and single.

Price, without Lenses......\$25 00

When ordering one of the above Cameras, please state whether rabbeted or solid glass corner Holder is desired.

Scovill Ferrotype Outfit.

Complete for Work in a Small Gallery.

1 5 x 7 New Haven Standard Victoria Camera, making 1 on		100 No. 15 Ferro, Envelopes	\$0 40
Plate 2 x 21/2 inches; I on Plate 31/4 x 41/4 inches; I on		100 No. 4 " "	20
Plate 23/4 x 31/4 inches; 1 on Plate 5 x 7 inches; 4 on		I No. I Queen Oil Stove	1 80
Plate 5 x 7 inches; 8 on plate 5 x 7 inches	818 00	1 Drying Rack	50
4 ¼ Gem Lenses	16 00	ı Varnish Pot	50
1 ½ Portrait Lens	17 50	ı oz. C. P. Nitric Acid.	20
1 ½ Excelsior Camera Stand		½ lb. Nitrate Silver (1 bottle)	6 00
I Tall S. P. C. Head Rest		2 8-oz. Bottles Phenix Collodion	
I Back Support for Head Rest	75	2 8-oz. " Varnish at 50c.,	1 00
1 4 x 6 (Background)		ı oz. Resub. Dry Iodine	35
1 7 x 10 Glass Bath in Box		ı lb. P. S. Iron (ı can)	15
1 No. 5 I. R. Dipper	45	1/2 lb. Cyanide of Potassium	45
1 7 x 9 Deep Agate Tray	1 25	1/2 Pint Parlor Paste	25
1 4-Ounce Graduate	33	ı ı-inch Bristle Brush	12
18 " "	45	ı Dozen Gum Paper	25
1 1-Quart Glass Funnel	20	1/4 lb. Absorbent Cotton	30
2 1-Pint " at 15c.,	30	2 lbs No. 8 Acetic Acid	40
r Pair 9-inch Shears	I 00	r 4-oz. Collodion Vial	20
I Box Anderson's Dry Colors, fitted with Colors, Brushes,		r Package No. 25 Round Filters	35
and Gold Saucer	1 75	1 Book Litmus Paper	5
1 2 inch C. H. Duster	50	r Set 6-inch Scales and Weights	85
ı Copy "Ferro. Guide"	75	I Sliding Arm Chair, Terra Covering, 6-inch Fringe,	8 00
2 Dozen 10 x 14 Ferro. Platesat 90c.,	1 8o	I Pint Alcohol	50
100 No. 11 Ferro. Envelopes	20	Price, complete\$100.	100

Sundries.

No. 1.] By Der Majesty's



This Gelatine is especially prepared for Photographic purposes; there are two qualities:

Number One is suitable for Autotype or Carlon Printing, the Wootlary and Ebarneum processors

per, Mounting and Enamelling Photographs, and other purposes where a ready soluble Gelatine is required. Sold in Half-pound Packets, price 3/- each.

Number Two suitable for the Heightyn and Photo-mechanical Printing processes, Transfer Paper in Carbon Printing, Salted, and other purposes where a less soluble article is required.

Sold in Half-pound Packets, price 2/8 each
TRADE MARIN Guillen.

By Royal

, 2 ,



Letters Batent.

NELSON'S TRANSPARENT SHEET GELATINE.

(BEST QUALITY.) 1-lb. Packet.

X Amber Photo. loose, in cases, 112 lbs. . . . 1 20

Special X Patent Opaque, loose 2 50 Dry Colors. Anderson's Paper Boxes, fitted with 14 round boxes Colors, Gold Saucer, 4 Brushes, for Ferrotypes, per box ...\$1 75 Wood Boxes, fitted with 8 bottles Colors, 3 Sable Brushes, 1

Gelatine. Nelson's No. 1 Photo. Gelatine, shred, in 1/2 lb. parcels \$1 38

Duster and I Gold Saucer, for Ferrotypes, per box I 75
Separate Colors, each I0
Gold Saucers, medium, each I5

Webster Colors, per box 1 00

Liquid Water Colors.

For Photographs. Dresden, per box, 6 bottles.....\$1 00 Japanese Colors, per box 1 50
Japanese Concentrated, per bottle 10

The New Acme Water Colors

Manufactured by G. NELSON, DALE & Co., LONDON.

Tinting Colors. They are more simple in application than liquid colors, more convenient, of greater permanency, more powerful, and are certainly the most economical, as they will neither freeze, precipitate nor spill. In matters of permanency, quality and quantity they are unrivaled.

The artist will also find them admirably adapted for drawing and painting on silk, satin or paper. The photographer will find them indispensable, not only for coloring purposes, but for spotting and covering up blemishes. There will be no trouble in burnishing over all the tinting colors. We could give many valuable testimonials as to the value of the Colors, but it is not deemed necessary.

Price of New Acme Water Col-

ors, per box, 18 colors ... \$2 50
Orange Medium for Acme Gloss
Compound 35
Any Tinting Color, in separate

Amateur, 6 colors, per box 1 oo

Egyptian Chemical Colors.

Triple Strength.

We take pleasure in calling your attention to the Egyptian Chemical Colors, prepared expressly for coloring photographs, either on plain or albumenized paper.



These Colors are something new and far superior to anything

These Colors are something new and far superior to anything of the kind heretofore used by photographers and others for the above purpose. The art of using them is so simple that the most inexperienced person can color photographs with entire satisfaction. Photographers who have tested these Colors say that the Blue, Brown, Rose and Plesh Colors are indispensable and worth the price of the whole set. Each bottle is labeled with full instructions for their use and how to obtain good effects. Burnish ing the photograph after it is colored does not in the least disturb the colors, but softens down and improves them.

A box of these Colors by careful usage ought to color three thousand photographs.

These Colors are put up in polished wooden boxes labeled "Egyptian Chemical Colors."

Box No. 3, Egyptian Chemical Colors, \$1,50.

Box No. 2 contains 9 half oz. bottles of the following Colors:
Lemon Yellow, Dark Emerald Green, Orange or Gold Color.

Lemon Yellow, Dark Emerald Green, Orange or Gold Color. Blue, Dark Brown, Rose, Violet and Flesh. Price, \$2.00.

Box No. 1 contains fourteen 1 oz. bottles of the following Colors: Dark Emerald Green, Orange or Gold Color, Blue, Dark Brown, Rose, Violet, Flesh. Lemon Yellow, Magenta, Salmon, Vermillion, Terra Cotta, Maroon Brown, Transparent Black, including a 4 oz. bottle of the Egyptian Transparent Compound.

Separate bottles of Colors and Compound can be obtained. The Egyptian Transparent Compound.

This article is a transparent Cement, used in connection with the above Colors, for adhering to flat or convex glass a colored unmounted photographic print. Price, per bottle ... \$0 75

Sundries.

Kuhn's Improved Vignetting Attachment.

(FOR VIGNETTING THE NEGATIVE.)

Light, Strong and Durable.



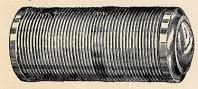
Patent allowed.

It is perfectly reliable and quickly adjusted to any lens by means of a thumb screw. It can be raised or lowered at will to any position desired by the operator by simply pulling a cord, without leaving his position behind the camera.

Price, each\$3 50

Developers and Chemicals in Solution Transported Safely in Corrugated Protecting Cases.

Supplied with cut glass bottles, and graduated tumbler to measure liquids.





Corrugated Protecting Cases are a great convenience to the landscape photographer and amateur picture-taker when away from home. Though made of thin metal, the corrugation makes them so strong as to resist crushing. Being nickeled and finely finished, the external appearance of these Cases is decidedly tasteful; indeed, one would be more inclined to place them in a satchel than in a packing case. Whether carried about in a horizontal or vertical position, the locking ring affords perfect protection for the liquids contained in the bottle.

No. 1.—Diameter, 1 56 in.; length. 3½ in.; weight, 4½ oz. Furnished with 1 oz bottle....\$0 50

No. 3A .- Diameter, 2 in ; length, 5½ in.; weight, 7¾ oz. Furnished with 4 oz. bottle, with tumbler, making 1/4 pt. flask, 85

No. 4A.—Diam., 2½ in.; length, 7 in.; weight, 14 oz. Fur-nished with 8 oz. bottle, with tumbler, making 1/2 pt. flask, 1 10

No. 13A.—Diam., 27% in.; length, 6 in.; weight, 17 oz. Fur-nished with 8 oz. bottle, with tumbler, making 1/2 pt. flask, 1 20

Drawing-Room Transparency Frames.

These Frames can be described or characterized by one



Scovill's Etched Ground Glass.

With handsome designs on border. For transparencies.

							Per	Light.
							picture\$0	
614	X	81/2	}-	41/4	x	61/2,	5 x 7 and 5 x 8 picture	42
8			-	61/2	x	81/2	picture	50
0	X	12		8	X	10		62

Plain Ground Glass for Transparencies.

							I	èc	r Li	ght.					P	er Lig	ght.
	x	5									E	61/2	x	81/2		\$0	28
1/	x	51/2								12		8	x	10			35
1/4	x	61/2								13		10	X	12			50
		8								15		II	X	14			90

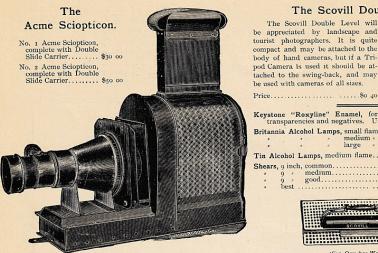
Ruby and Golden Fabric.

A Substitute for Orange and Ruby Glass.

Ruby, per yard, 37 inches wide\$0 50							
Golden, 37 " 60							
One thickness of Golden Fabric is used for indoor work, or two thicknesses for outdoor work.							
Translucent Ruby Paper in sheets, 25 x 20\$0 25							

Are not a liquid, but are put up in cups in moist form, 18 Colors constituting a set. Seven of these are Surface, and eleven are

Sundries.



After experimenting with most of the lanterns in the market, we have come to the conclusion that for parlor or small hall exhibitions, chemical and optical experiments, etc., the Acme Lantern affords, at a moderate price, the greatest number of ad-vantages, and from its simplicity and non-liability to get out of order, gives, even in inexperienced hands, results superior to all

The No. 1 Acme Sciopticon when packed for carrying, in its own Russia iron case, measures 15 x 10 x 6 inches, and weighs 12 pounds; the case serving as a convenient stand when the lantern

The Case and Body of the Lantern are of Russia iron, and neat and compact in form. That part of the body which surrounds the lamp is double, the outer cover being ornamentally perforated so as to allow a constant current of air to circulate and keep down the temperature.

The lamp is of the triple-wick variety, and so constructed that the three flames combine and by the draught of a ten-inch chim-

ney give a brilliant flame.
The Condenser is four inches in diameter, neatly mounted in brass, thoroughly ventilated, and arranged with screw flange so that the lenses may be separated and cleaned when required.

The Cone, which carries the objective, and the mount of that lens are nickel-plated. The objective is a double achromatic lens of one and a half inch inch clear aperture and five-inch focus, so that at a distance of twelve feet from the screen it gives a brilliant picture on disc six feet in diameter. The focus is roughly obtained by sliding the front, carrying both cone and lens; and fine

tamen by snaing the front, carrying both cohe and leafs, and mad-adjustment by a rack and pinion on the objective.

The No. 2 Acme Sciopticon measures, when packed in case for carrying, 18½ x 12 x 8½, and weights 19 pounds. The objective is a double achromatic lens of 1½ inches clear appeture and 5½ inches focus, so, that at a distance of about 12 feet from the screen it shows a brilliant picture on disc eight feet in diameter. The lamp has five wicks and is correspondingly more powerful than the lamp with the No. 1 Sciopticon.

Keystone	Lantern Slide Mats, with gilt line around opening, per 100, 75c.; in packages of 25	25
	mg, per 100, 75c., in packages of 25	-5
,	Adhesive Binding Strips for Slides, per 100	20
	Thin Crystal Cover Glass, 31/4 x 4, per dozen. (Subject to change.)	35

Yellow Color Screens, for use with orthochro-matic plates, made of two cemented plate-glass;

The Scovill Double Level.

The Scovill Double Level will be appreciated by landscape and tourist photographers. It is quite compact and may be attached to the body of hand cameras, but if a Tripod Camera is used it should be attached to the swing-back, and may be used with cameras of all sizes.



Keysto tra	ne "	Roxyli encies a	ne" E	namel,	for Us	varnish ed cold.	ing po	bottle.	5 0 7
				, small f					6
				mediur	n =				7
				large					I 2
Tin Al	cohol	Lamps	s, med	ium flan	ne				6
Shears	, o inc	h, com	mon						2
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	best							51 50 to	2 5



(Cut, Ormsbee washer.)	
Ormsbee's Photo. Washer\$8	o
Troxell's Silver Erasive Soap, per cake	I
French Pipettes, each	10
Syphon Pumps, 7/8 x 35, 7/8 x 40, 11/4 x 40, each	00
Common Sense Print Cutter 5	00

Brownell's Patent Boxes fitted complete with

Materials for Chromo-Photography.

PATENTED JULY 17th, 1877.

These boxes are prepared expressly for Chromo-Photo work and materials. They are provided with a clamp easel to hold the glass, while painting, in a way that allows an unobstructed passage of light through the work.

The lid and bottom of the box can be also used as an easel by placing the object in the grooves, the weight of the lid serving



Patented July 17th, 1877.

No. 1 Box. Black walnut, size 83/ x 61/2 x 11/2 in., each.... \$2 50 Containing. Clamp Easel and Palette, nine Tubes of Oil Paints, one 1 oz. bottle Adhesive Preparation, one 1 oz. bottle Diphanous Liquid, one 1 oz. bottle Drying Liquid, one No. 1 Bristle Oil Color Brush, one No. 2 Bristle Oil Color Brush, one No. 2 Bristle Diphanous Brush, one Soc. 2 Bristle Diphanous Brush, one Soc. 3 Bristle Diphanous Brush, one Soc. 3 Bristle Diphanous Brush, one Shoet a Brush, for water colors, one Camel's Hair Pencil, one Smoothing Tool, six Water Colors, one Sheet Surmand Paper, one Sheet Sand Paper Colors, one sheet Gummed Paper, one sheet Sand Paper, one Pamphlet, Directions for the Art.

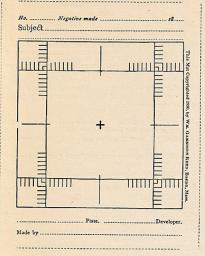
Sundries.

The Boston Mat.

(Copyrighted 1890,)

Has been designed for the purpose of simplifying the task of mounting slides so that when done they shall be well done; and to help the lantern operator to project them to the very best advantage

THE BOSTON MAT



There are several points pretty generally conceded, viz.:

1.-All upright lines in the view and straight sides of the mat should be perpendicular; and horizontal lines of view and mat level at the instant they become visible to an audience. The rocking motion on the screen, when an after adjustment is necessarv, does not add to the effect.

2.-Harmony in size of view shown-this is obtained, whatever shape of opening, by making its longest way between two of the outside lines of the diagram.

3.-Absolute Register. Mercantile slide plates are labeled 31/4 x 4 inches. As a matter of fact they are seldom of exact size, and the variation often exceeds 1/8 of an inch larger or smaller, either way. By first trimming on the dotted line which is to be on top when the slide is held upright, and then cutting the opening equally on each side of the central marks, the horizontal center line will always be thrown on the same place. To bring the perpendicular center always in the same place:-First trim the left hand end of the mat by the dotted lines; that is exactly two inches from the center; cut the sides of the opening equidistant from the center; then by placing a "stop" on the lantern or carrier, all slides so matted will "register."

The Boston Mat is printed, for general sale, on gray paper. Any other easily obtainable kind, quality, or color will be used on special orders for six hundred or more, without extra charge.

Clubs or societies that select a special paper will have such reserved for their use only.

Price, plain, per hundred.....\$0 50 Including 100 Lantern Slide Numbers.

The Magic Vignetter.



Patented May 31, 1887.

For Producing the Popular Black Background or Ebony Photographs.

No more trouble or expense than in making plain photographs. Can be easily attached to the diaphragm of any Camera by the means of two screws. It is telescoped so it can be used with either a long or short focus lens. Every one guaranteed. The opening can be adjusted to the proper size by simply turning the ratchet, focus and expose as usual.

Price......each, \$8 00 To get the best result with the Magic Vignetter, it is necessary to use a black felt ground, so placed that it will reflect no light in the Camera. We have secured for this purpose a superior felt, which we can furnish at the following prices:

Size, 3 x 3.....\$0 80 4 x 6.....\$2 00 6 x 8.....\$4 00 3 x 6..... I 50

Backgrounds.

We are introducing a new line of Oil Grounds. No gloss; don't crack, crease or buckle up when rolled. These grounds are superior to all other for the Caswell or other Background Holders.

Interior, Landscape, Park and Marine Backgrounds.

In Oil , , 20 , 30 ,

Profile cabinets, columns, mantels, cottages, windows, boats, rustic walls, etc., painted in oil for safe transportation and dura-

Accessories.

Balustrades	.from \$10 up to \$35 00
Rustic Fence	7 50
Large Rock	9 00
Medium *	6 00
Small	2 00
Set of three Rocks	15 00
Combination Group Stump	8 00
Fine Garden Seat, new design	10 00
Stairways, etc	

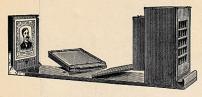
When sending for samples describe the style and price of

Rembrandt, cloud, and shaded grounds, in water color, 15 cents per square foot; in oil, 20 cents. Foregrounds painted in oil, on stout linen, 15 cents per square foot. Continuous grounds, etc.

Sundries.

The Hyatt Stamp Portrait Apparatus.

PATENTED JULY 12, 1887.



With this wonderful little instrument the photographer is enabled to reproduce from a cabinet photograph 25 small pictures, the size of a postage stamp, on a 5 x 7 plate, by simply placing



MINETTE PHOTO.

the picture to be copied on the easel behind the mat or border and exposing and developing the plate in the usual manner.

No focusing is required, all the lenses are accurately adjusted

Stamp Photographs are very popular and useful for many purposes, such as trade marks, business and society cards, campaign badges, letter heads, and a thousand and one other purposes Made in sheets like postage stamps, gummed and perforated, or cut apart, and readily attached to any article.

Every live photographer will readily see the great importance of this useful invention, and the means whereby he can advertise and increase his business, as his name may appear on every stamp. Every instrument thoroughly tested and guaranteed.



Stamp Photo, size for 25, on 5 x 7 plate, including 2 borders.....\$50 00 Minette Photo, size for 8, on 5 x 8 plate, including 2 borders..... 40 00 Perforators for perforating same under our Stamp Patent (also issued July 12, 1887)...... 35 00

Coolidge's Photo-Caricature Foregrounds,



We wish to call attention to Coolinge's PHOTO-CARICATURE FOREGROUNDS. By investing a small amount in them you will be enabled to give your customers a vast amount of enjoyment and add ma-

terially to your cash account.

In photographing caricatures, the card-board foregrounds are simply held up under the sitter's chin, as observed in

PRICE LIST.

For Single Foreground, mailed secure on roller......\$2 00 For Four Foregrounds, mailed se-cure on roller..... 10 ∞

From among one hundred and fifty designs we note the following, being some of the most popular ones, for you to select from, although any practical design suggested by you will be furnished at regular price :

I-A man riding a donkey, of course producing a very lively picture, entitled. "I am coming."

3-Man flying through the air on a goose, titled, "Out on a

6-Man riding in donkey cart, evidently having an enjoyable time. "Have a ride?"

7-Person fishing from bank of stream. Hook about to be taken by a monster fish.

9-Represents a gentleman with bag and cane about to depart, entitled "Good-bye, Sweetheart."

11-A fat man. A good subject for a lean man to select.

13-" No one to love." Man with handkerchief in hand, weeping. 16-Girl promenading.

17-" When I joined the club." Fellow trying to ride a goat. Good for all Order men.

18-Holding the baby. Baby is crying and subject is walking the floor with it. Good for family men. (See cut above.)

10-The bachelor. Man sewing on buttons. Good for a bachelor to send to a lady friend.

20-Man drinking a glass of lager. Taking among the Teutons. 21-" Put me in my little bed." Person in night gown with candle in hand.

23-A modern swell. Very captivating.

25-The base-ball player. Taking among fellows fond of the sport.

27-" Coney Island." Man bathing.

31-"I paddle my own canoe." Man in canoe.

38-" Only a chicken." Man or woman with chicken's body.

44-Correct style. Man with high collar, mostly collar.

51-" I'm engaged !" Lady with ring on finger.

54-The Bicyclist. Very popular.

56-" I travel with the Circus." Man riding on elephant.

63-" Fresh from Cork." (Irish.)

67-" Will you love me when I'm old?" By placing on the subject an old hat and eye-glasses, an exceeding humorous caricature is obtained.

68-My Dog Cart. Man drawn by diminutive dog.

60-" Wait for me !" Agent running with bags.

99-Down in Florida. Man riding crocodile.

105-A Champion Pugilist.

116-" Hot Day." Man with fan.

110-The Serenader. Fellow singing and playing the banjo. 120-A Man Tobogganist.

121-Young lady riding a donkey in fine style. Good companion

Sundries.

Merck's Pyrogallic Acid



will be found, upon comparison, to be superior in every respect to all other brands on the market. Its distinctive points of superiority are:

IST.-ABSOLUTE PURITY

20.-PERFECT CRYSTALLIZA-

30.-IMMACULATE WHITENESS

4TH.—EXTREME LIGHTNESS

5TH.-MODERATE COST

(Its price is not higher than that of any other

Merck's Pyrogallic Acid

produces the highest intensity to be desired in a photographic plate, and, at the same time, the finest detail in light and shade required for the most perfect printing negative.

Under ordinary precaution, it retains all its superior qualities undiminished for an indefinite length of time.

WHEN ORDERING SPECIFY "MERCK'S."

One lb. can. 1/4 lb. can. 1/6 lb. can. Oz. glass. Oz. can. \$4.67 each. \$2.40 each. \$1.25 each.

