

Eberhard Schneider's Cinematic Machinery (A SURVEY)



by
Soterios Gardiakos

October 1, 2011

UNIGRAPHICS INC

2010

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<http://www.bioscope.biz/>
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UNIGRAPHICS INC

Aurora, Illinois. U.S.A.

Kalamata, Messinias, Greece

EBERHARD SCHNEIDER 1868 - 1919

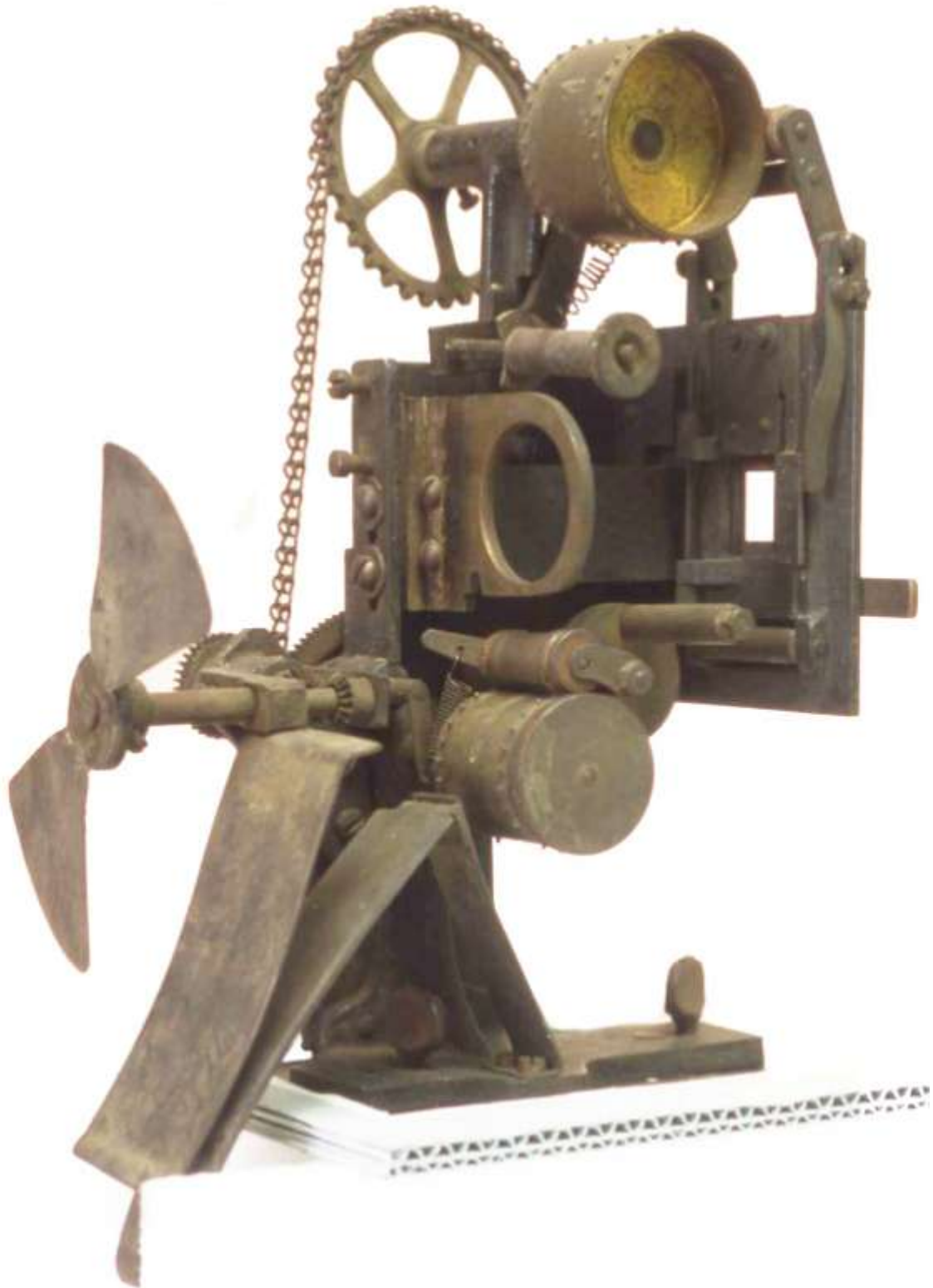


EBERHARD SCHNEIDER

Eberhard Schneider
March 15, 1868 - Jan 24, 1919

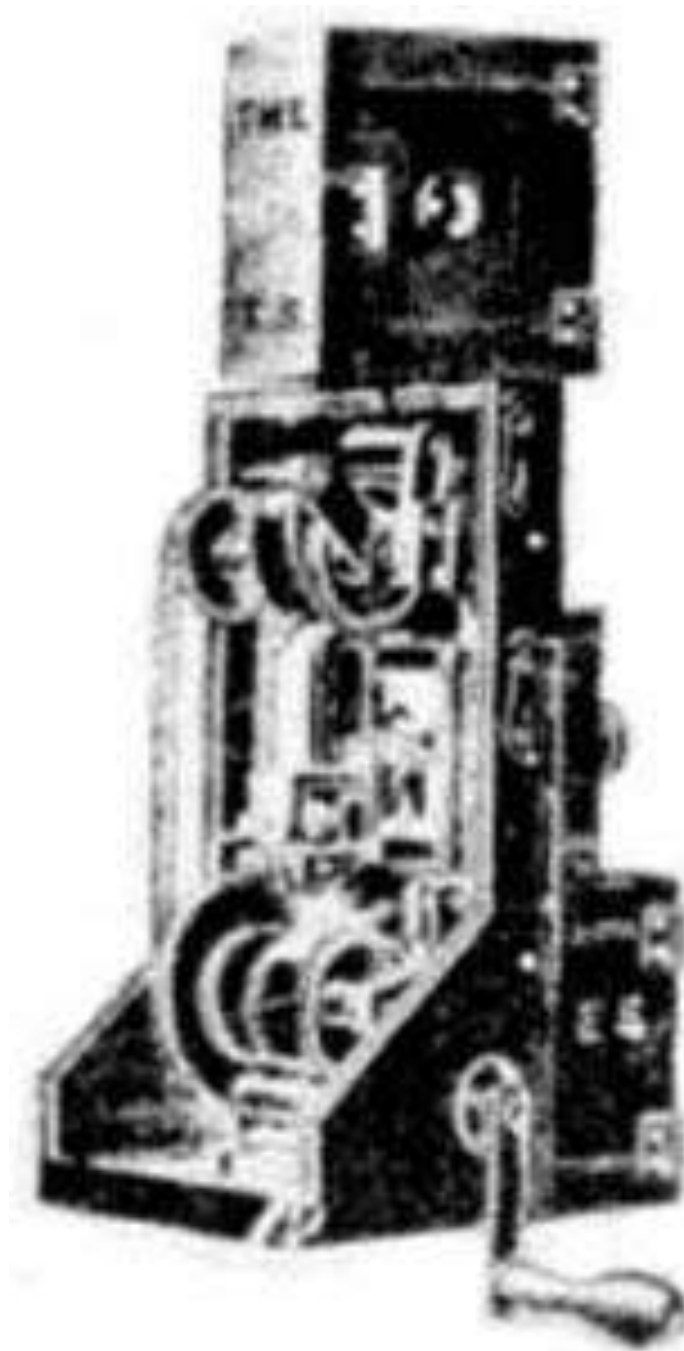
THE MACHINES: PROJECTORS

THE MACHINES - PROJECTORS



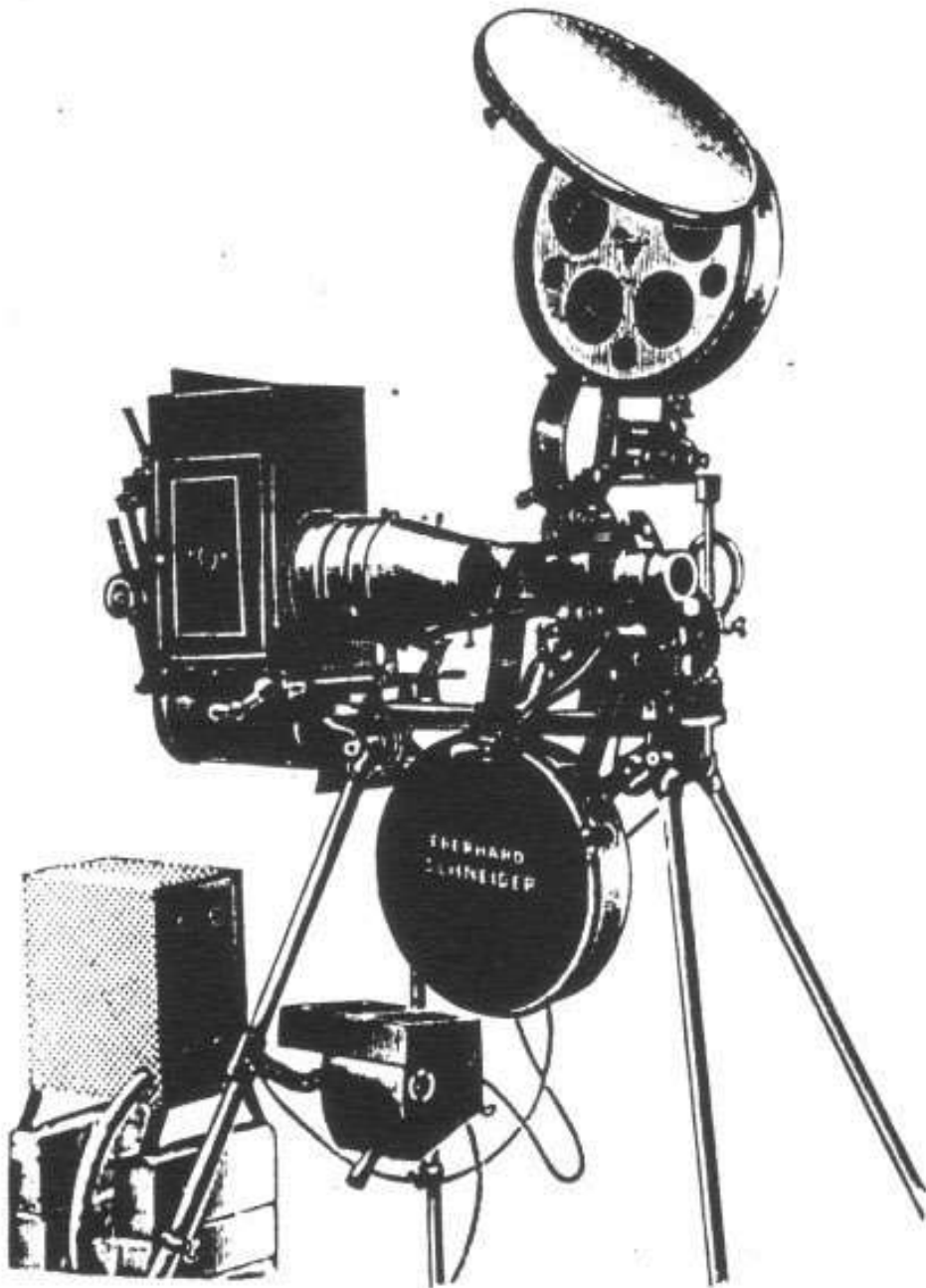
Eberhard Schneider's very early Vitascope projector
Courtesy The Smithsonian Institution

THE MACHINES - PROJECTORS



An early Eberhard Schneider projector from the catalog in the Rutgers University Library
Courtesy Rutgers University Library

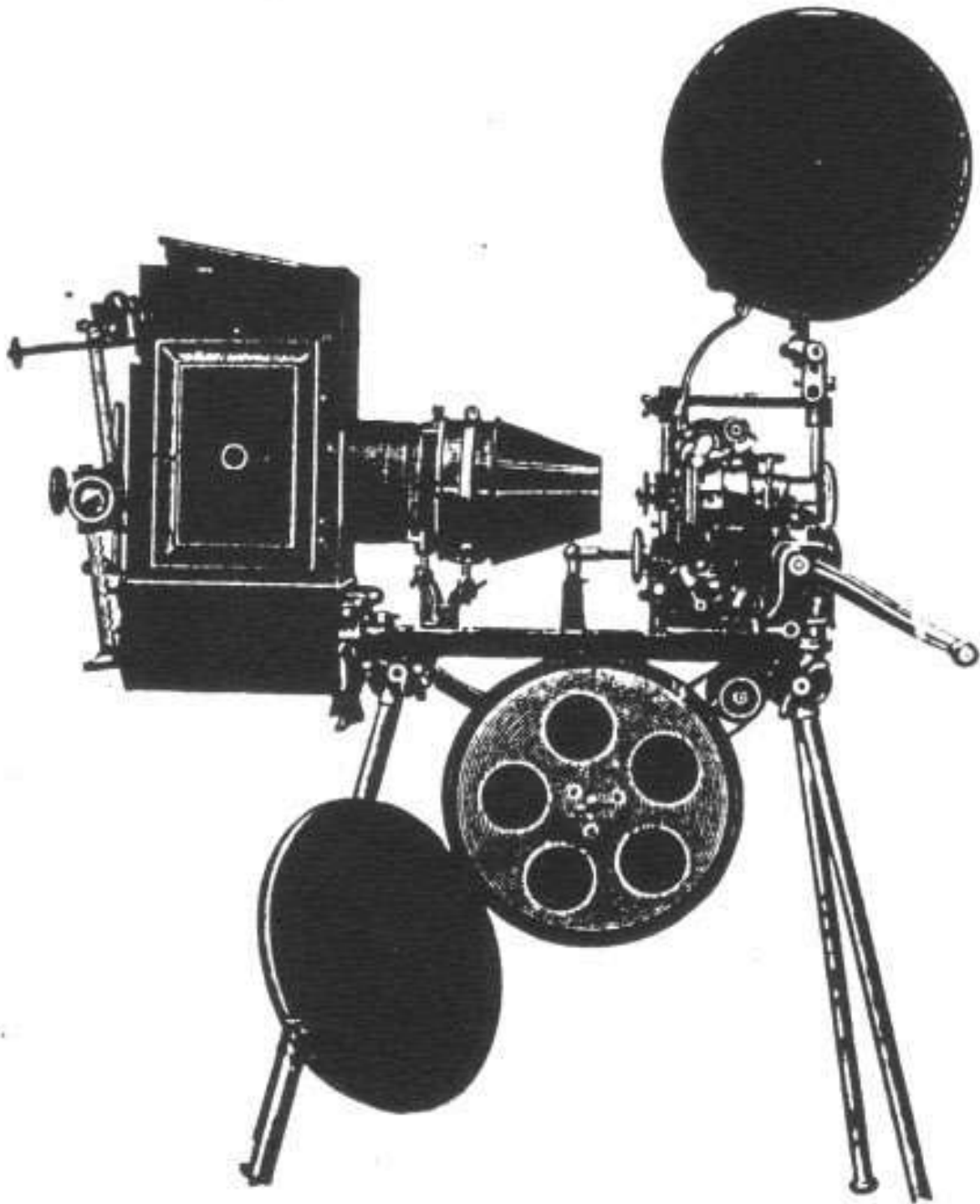
THE MACHINES - PROJECTORS



Complete Miror Vitae showing handy
Operator Table with Switch attached, also
our new Model 110-125 Volt Rheostat.

Eberhard Schneider's Miror Vitae
Courtesy Tom Wilson

THE MACHINES - PROJECTORS

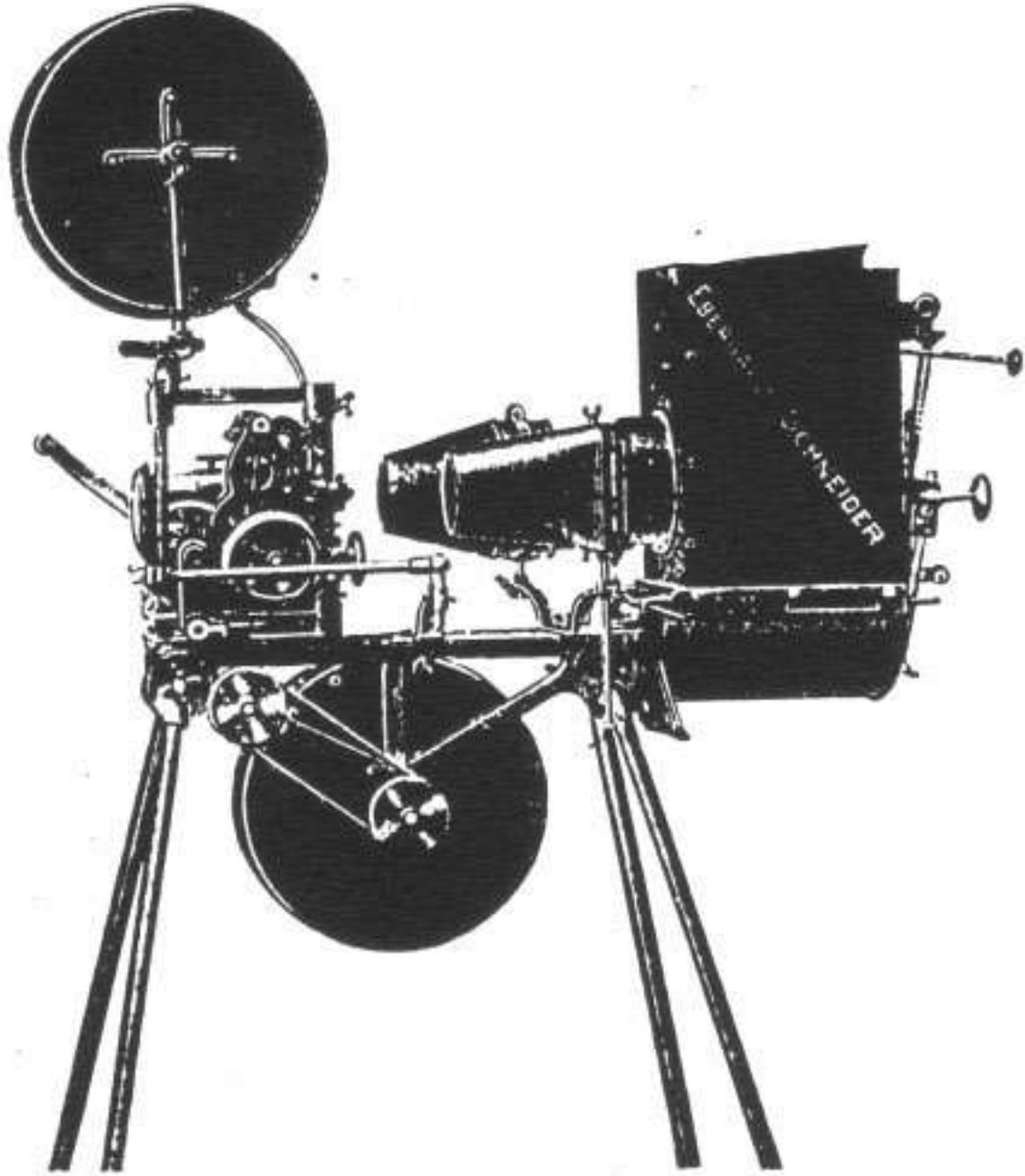


Full View A of the Miror Vitae

Eberhard Schneider's Miror Vitae

Courtesy Tom Wilson

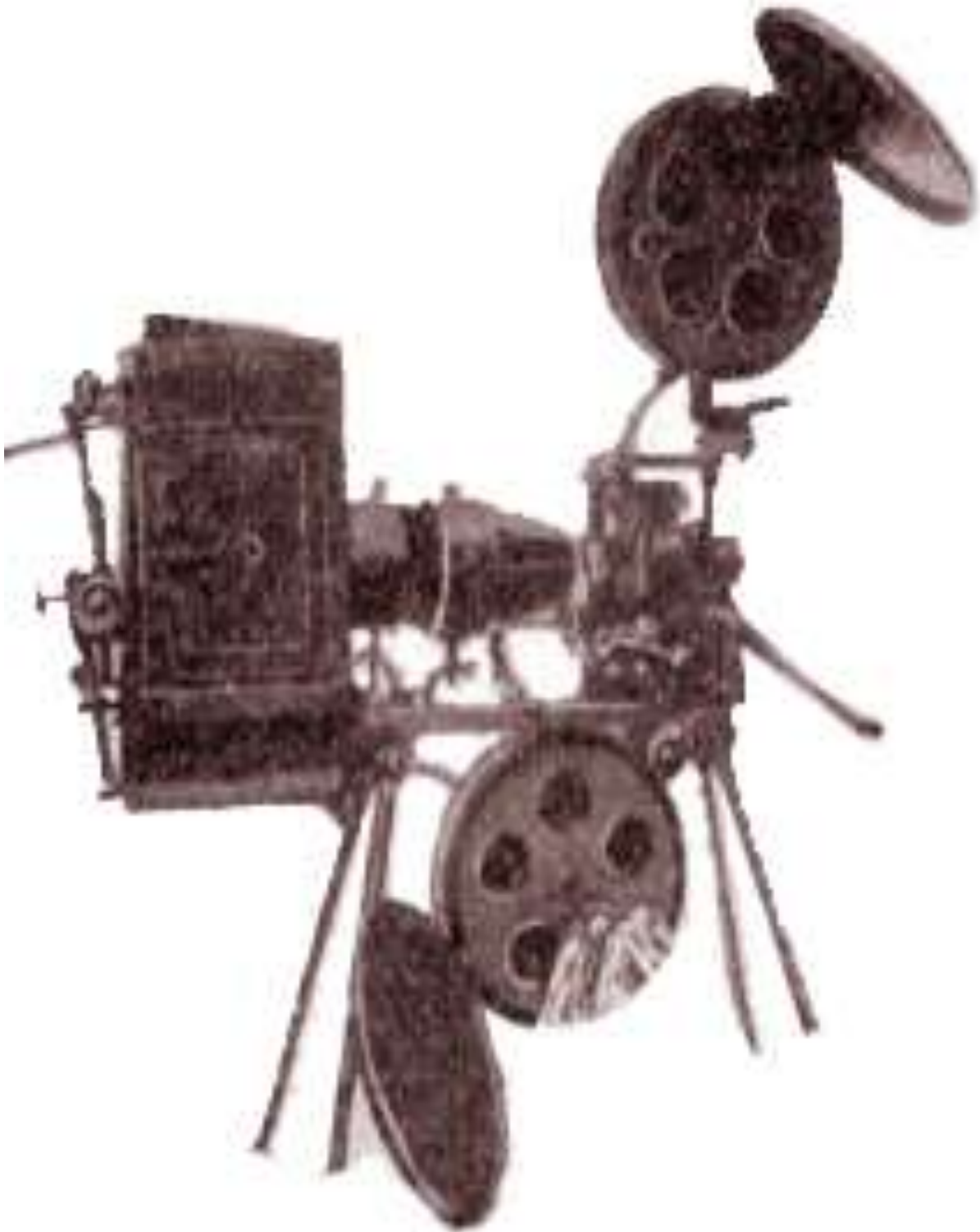
THE MACHINES - PROJECTORS



Full View B of the Mirror Vitae.

Eberhard Schneider's Mirror Vitae
Courtesy Tom Wilson

THE MACHINES- PROJECTORS



Eberhard Schneider's Miror Vitae, from an advertising engraving

Source: <http://www.eberhardschneider.com/Inventions.html>

THE MACHINES: CAMERAS

THE MACHINES - EARLY CAMERAS



Early 35mm movie camera, Serial number 9
Collection Carey Williams

THE MACHINES - EARLY CAMERAS



Early 35mm movie camera, Serial number 9
Collection Carey Williams

THE MACHINES - CAMERAS



The "Junior C Professional Camera" serial number 42
Collection Carey Williams

THE MACHINES - CAMERAS



Source: <http://www.eberhardschneider.com/Inventions.html>

THE MACHINES CAMERAS



The "Junior Professional Camera"

Source: <http://www.eberhardschneider.com/Inventions.html>

THE MACHINES -CAMERAS

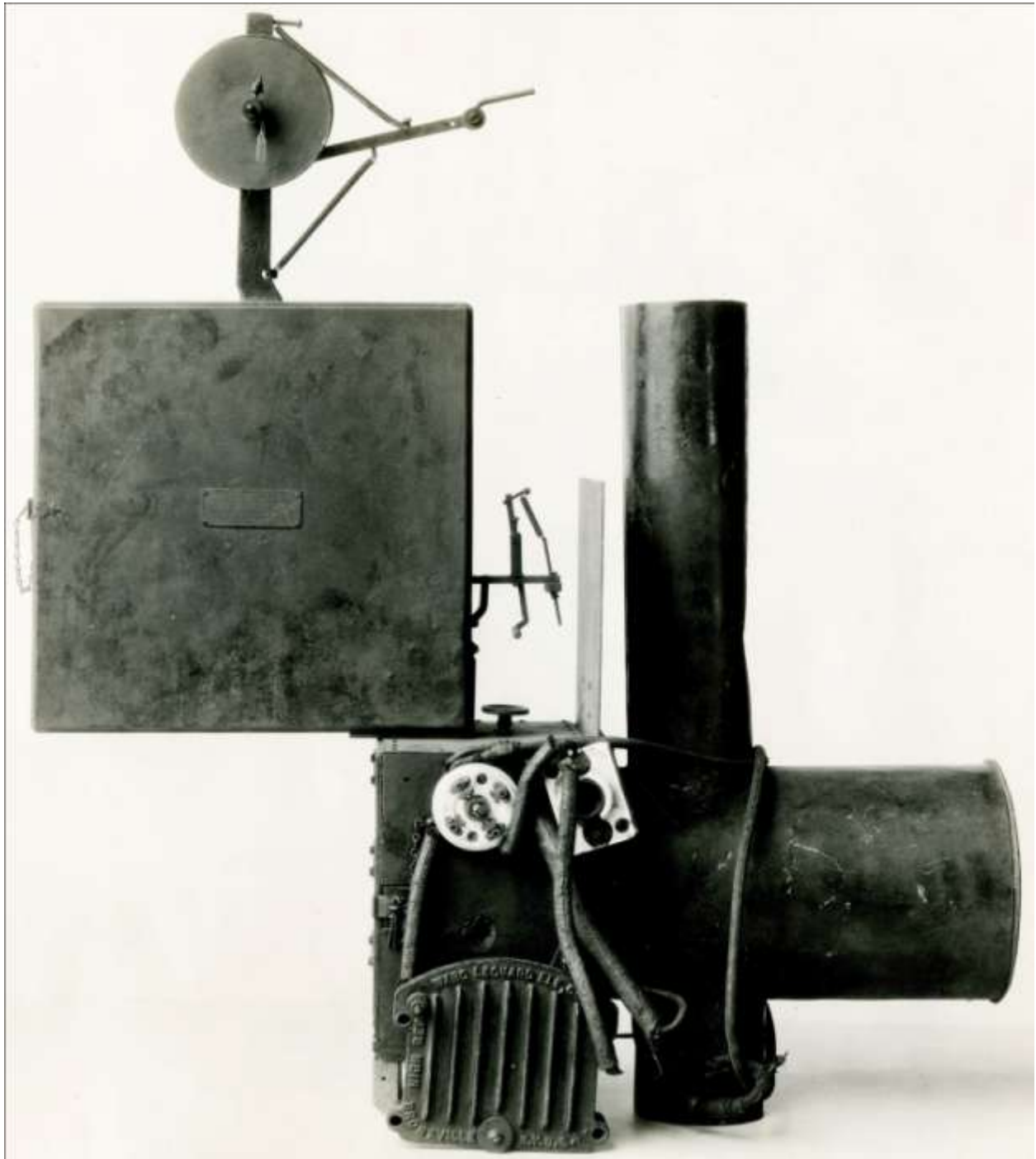


The "Junior Professional Camera"

Source: <http://www.eberhardschneider.com/Inventions.html>

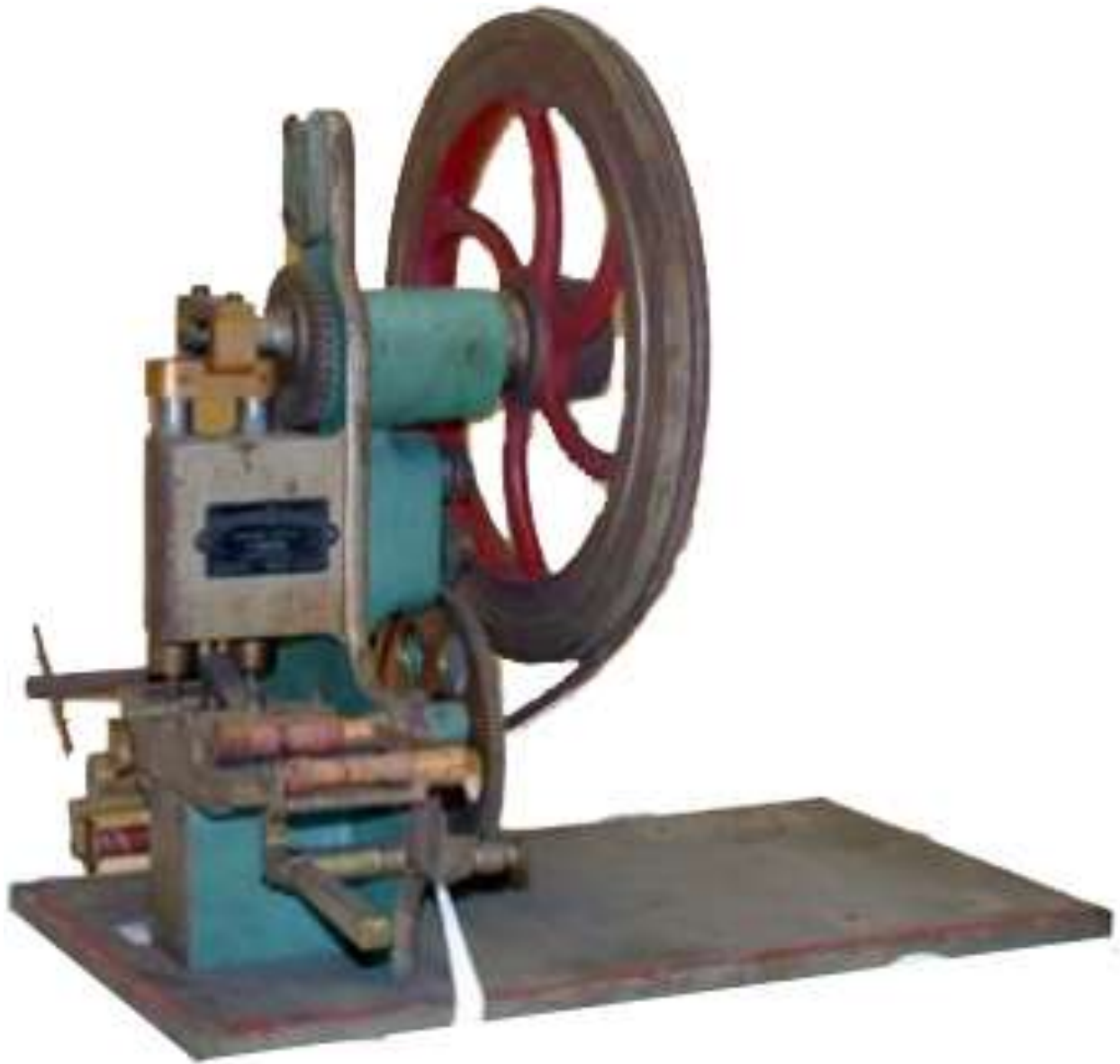
THE MACHINES:
MISCELLANEOUS

THE MACHINES - MISCELLANEOUS



Courtesy The Smithsonian Institution

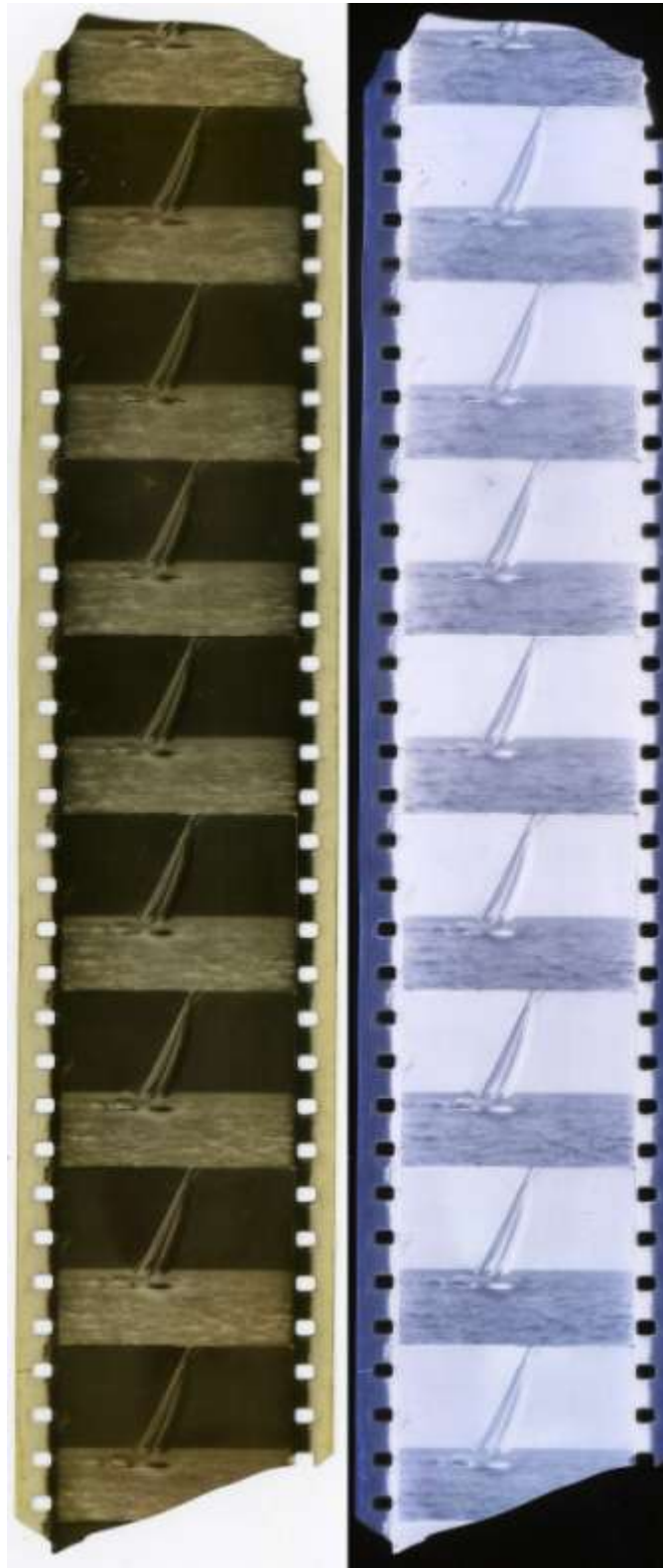
THE MACHINES - MISCELLANEOUS



Source: <http://www.eberhardschneider.com/Inventions.html>

FILM

Film



Courtesy The Smithsonian Institution

THE MACHINES



Courtesy The Smithsonian Institution

CATALOGS

Early Catalog - Miror Vitae


EARLY CATALOG

MAY 9 1897

★ *Dr. J. S. Billings* *Photographer*

MIRROR VITÆ.

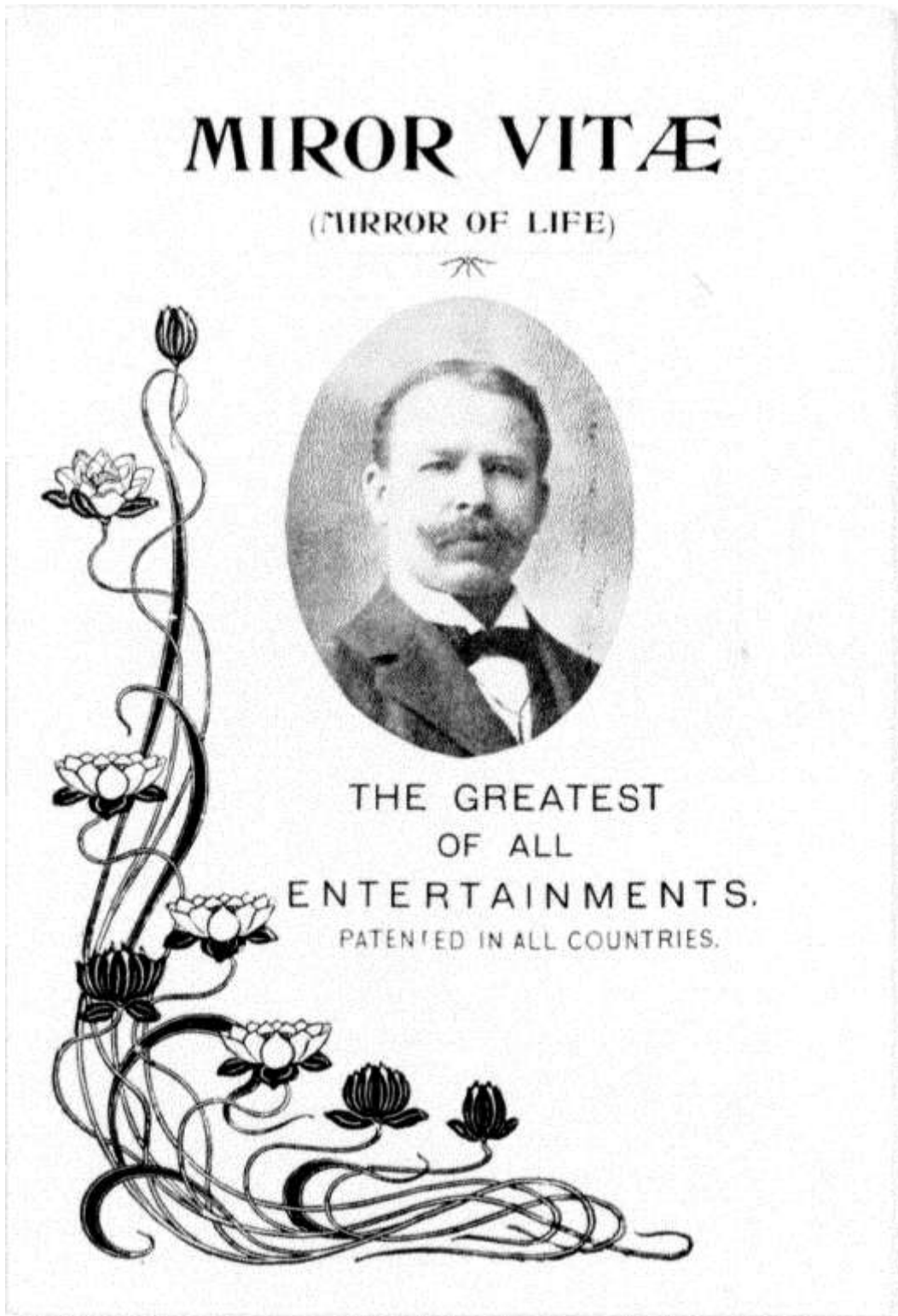
COMPLIMENTS OF



EBERHARD SCHNEIDER'S
American Cinematograph & Film Co.
WORLD'S GREATEST
ANIMATED PICTURE MACHINE.
OFFICE AND LABORATORY:
No. 175 EAST 96th STREET,
NEW YORK, U. S. A.

American Cinematograph & Film Co, undated early catalog, front cover
Courtesy Rutgers University Library

EARLY CATALOG



American Cinematograph & Film Co, undated early catalog, page 1
Courtesy Rutgers University Library

EARLY CATALOG

HAVE A
MOVING PICTURE
ENTERTAINMENT
BY THE
CELEBRATED
'AMERICAN CINEMATOGRAPH'

WRITE OR CALL AT
175 EAST 96TH STREET,
NEW YORK CITY.

American Cinematograph & Film Co.
EBERHARD SCHNEIDER,
MANAGER.

EARLY CATALOG

IMPORTANT NOTICE.

Are you a theatrical manager, or are you the president of a society, club or lodge? Do you belong to the amusement or arrangement committee of a festival in view? You all know the great importance of a well-selected programme, suitable to entertain and amuse your audience.

OUR MOVING PICTURES

have always proven a good drawing card.

In this little pamphlet we will try to put your attention on the merits of the PEER of all the picture machines in the world. We are the oldest moving picture exhibition company in the world. Our machines are called the *American Cinematograph*, which name we adopted early in 1896, and we have carried this name on ever since. Our public debut was made at the New York Eden Musee in the same year, which was the first successful moving picture entertainment since the development of reproduction of objects in motion. Go over the contents of this little book, read it carefully, open your mind, and engage this act. You will see how we will fill your house with joy.

For theatres, open air picnics, clubs, churches and societies, parlors, etc., our moving picture apparatus, the *American Cinematograph (Mirror Vitae)* guarantees you great benefit and satisfaction. There is no other show like this! Put our show as the last act on your programme and you will hold any audience through the most tiresome performance—they all want to see the Moving Pictures. We are the oldest Moving Picture exhibiting firm in America. We have our own patents. We increase our stock daily and we have a selection to suit anybody.

EARLY CATALOG

For churches institutions, etc., we will recommend our religious series of moving pictures and slides, Life of Christ—Passion Play, etc.

We show the largest, the steadiest and the most brilliant picture in light and definition. The picture combination of our programme, the lifelikeness and correctness of our working gives the most surprising, startling effect.

Our success gave birth to many imitations, often offered to the general public. It is inferior work, not worth the price asked. We have set our prices to a limit to give smaller concerns the advantage of a good Moving Picture show; do not deceive your audience, don't throw money away for imitations. Our work is known. We have the best references from first-class New York theatres and clubs; we also want yours. Do not run chances, get the *Best*. Write us or call. We will fix you up with a sparkling programme, up to date, interesting and satisfying, for the lowest possible price.

Hoping to be favored with an engagement,

We very respectfully remain yours,

**American
Cinematograph and Film Co.**

TERMS, HOW TO ORDER.

Cash with order or C. O. D. to responsible parties on receipt of 25 per cent of the full amount.

For moving picture entertainments, or any other talent a deposit of 10 per cent is due on the day the contracts are signed.

Remit by bank draft, post office or express money order. Do not send personal check unless certified.

EARLY CATALOG

WORK DONE IN OUR LABORATORY.

Our laboratory for taking, developing and printing of moving pictures is equipped with the newest precision apparatus (our own patents). We perforate, take, develop and print moving picture films, any gauge. We print any gauge film upon standard American gauge film by our new process. We make announcement slides for picture subjects. We make microscopic work, enlarging and reducing. We manufacture electrotypes, half tone and line type cuts, and make stereopticon slides from negatives or prints. We coat glass plates with our own negative or positive emulsion. We also coat films and cut them in any desired width. We prepare and furnish any formulae developer for films or plates, and we use "aqua destilata" exclusively. We develop, print and mount for amateurs at lowest prices, and we also give instruction in photo and chronophotographie. We manufacture pure oxygen and hydrogen gas for hygienical and illuminating purposes. Electroplating in copper, nickel, silver or gold.

Our Workshop for Mechanical, Electrical and Optical Work.

We have a new model of a moving picture machine with stereopticon combined of the same character as our exhibition machines. It is an apparatus for the profession made to please your audience and to recommend its owner and manufacturer. The lamp houses are made of best aluminum, to avoid oxidation. We furnish either calcium or electric lamp, or both. Objectives and lenses are imported from first-class foreign manufacturers.

We also have a new model of electrical resistance coils (rheostats). We wire them to any voltage and amperage in Krupp steel, german silver or iron wire, adjustable or unadjustable,

EARLY CATALOG

in single or double series. We manufacture automatic and hand-feed arc lamps—a modern pattern, adopted after long years' experience—our own patent. We remodel and repair moving picture machines, stereopticons and supply.

We put your inventions and new ideas to life. For model making and experimenting we charge very moderate prices. In the construction and repairing of electric heat, light and power plants as well as in the installation and repairing of fire and burglar alarms, telephones, bells, storage batteries, automobiles, etc., we secure you experienced workmanship and satisfaction by our long years' practice. Diagrams and estimates are furnished free of charge.

We manufacture condensers and objectives for moving picture machines and stereopticons. Are you in trouble with your objectives? Call and we will make you the right combination for any size picture, at any distance, to cut sharp and to illuminate bright.

We do circular glass cutting, any diameter of circle.

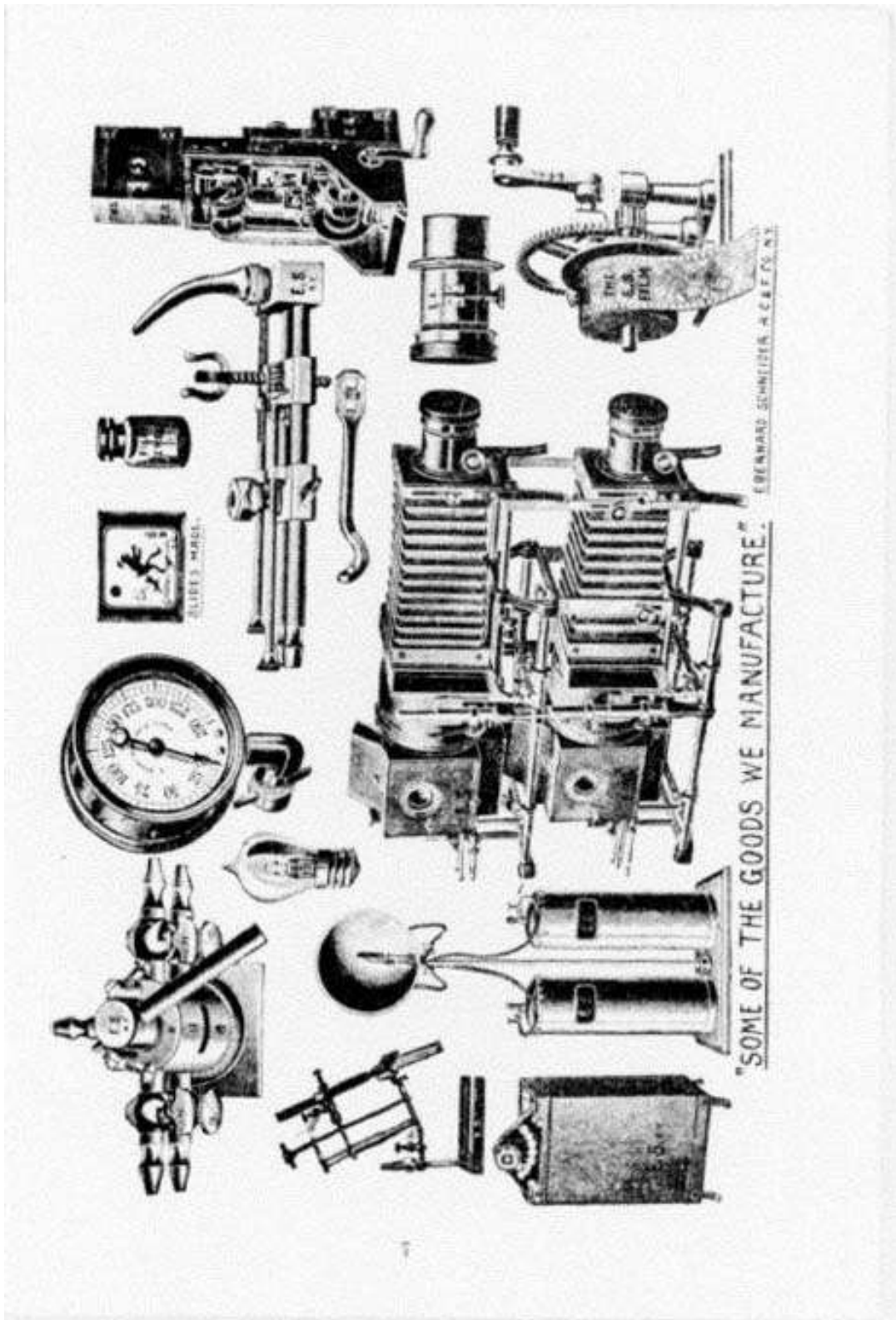
BUYING AND SELLING.

Have you moving picture films, stereopticon slides, picture machines, stereopticons, lenses, calcium or other supplies in this branch for sale, call or write. We will pay you the highest possible prices. A film list of our second-hand pictures, machines and supplies is always on hand. We dispose of them at a very low price.

DRUMONT'S CALCIUM LIGHT.

We manufacture hydrogen and oxygen gas, lamps and jets, stands, color-screens, desolving keys, valves, ganges, lines and reflectors and other supplies for the illumination of halls, stages, parades, etc. We furnish calcium apparatus, tanks, and a competent operator for entertainments, balls and masquerade balls, advertisements, hospitals, political demonstrations, etc.

EARLY CATALOG



American Cinematograph & Film Co, undated early catalog, page 7
Courtesy Rutgers University Library

EARLY CATALOG

ILLUSTRATED SONGS.

We have the finest color effects. The prices are low.

In combination with our moving picture and stereopticon shows we often furnish illustrated songs. We keep in touch with the best singers (lady or gent). We have the latest song hits. We illustrate them by beautiful colored glass slides.

We make song slides for new songs. Prices are moderate.

OTHER TALENT FURNISHED.

Beside our moving picture entertainments, we can furnish you with any other talent as: Actors, comedians, acrobats, dancers, aeronauts, pyrotechnics, wire workers, punch and judy, etc. We also furnish music, from a piano player to a full orchestra, at lowest terms.

About our Patents, Mechanics, Artists and Operators.

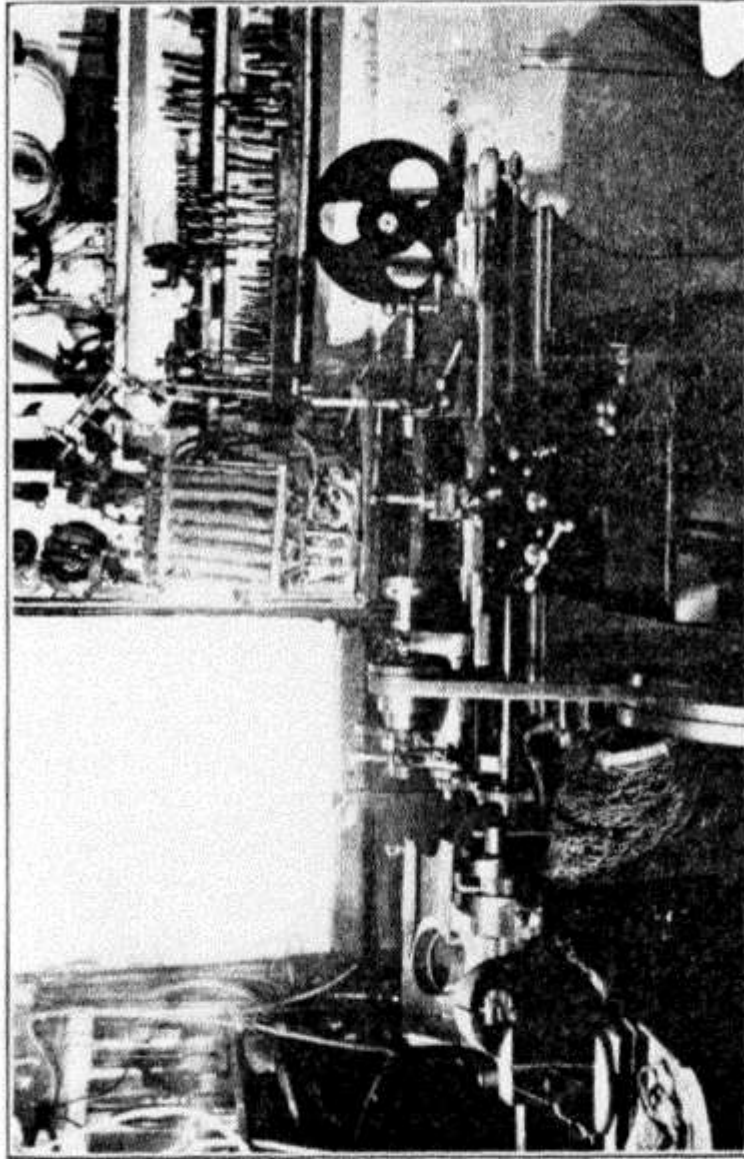
Since the development of animated photography we hold the cup of superiority in machines, films and shows. There is no machine, no film and no show better than ours. We have our eyes open. We improve all the time, and the patents granted to us by the U. S. Government are numerous.

Our machines for the taking, perforating, printing, developing and exhibiting of moving picture and mechanical skill, and are also protected in Germany, Russia, France, England and Belgium.

The chemicals and compounds used in our laboratory are not patented. The formulas are secrets, in order to have them absolutely safe. Our most principal patents are numbered:

No. 647,529, No. 647,530, No. 666,396, No. 30,-

EARLY CATALOG



PART OF MECHANICAL WORK SHOP.
American Cinematograph and Film Company.

EARLY CATALOG

825, No. 151,657, No. 393,180. Other patents pending.

Infringements will be dealt with to the full extent of the law.

We employ first-class workmen only in the various branches of our business. Our mechanics are experienced men in drawing and mechanical construction.

Our moving picture shows are given by excellent operators, who are practical mechanics and electricians. During the day they work in the workshop testing and overhauling the machines and preparing everything for the shows to be given at night.

A breakdown or a discontinuance of a show never occurred. For the taking, developing and making of moving picture films and stereopticon slides we employ men—experts in photography pose and praxis. In the coloring of films and slides our artists take great pains in color combination and detail. They are prepared for the most difficult work in new designing and dark stage effects.

About our Moving Picture Film Stock.

We send our moving picture cameras to all important occasions and we are able to reproduce pictures five hours after the time they were taken.

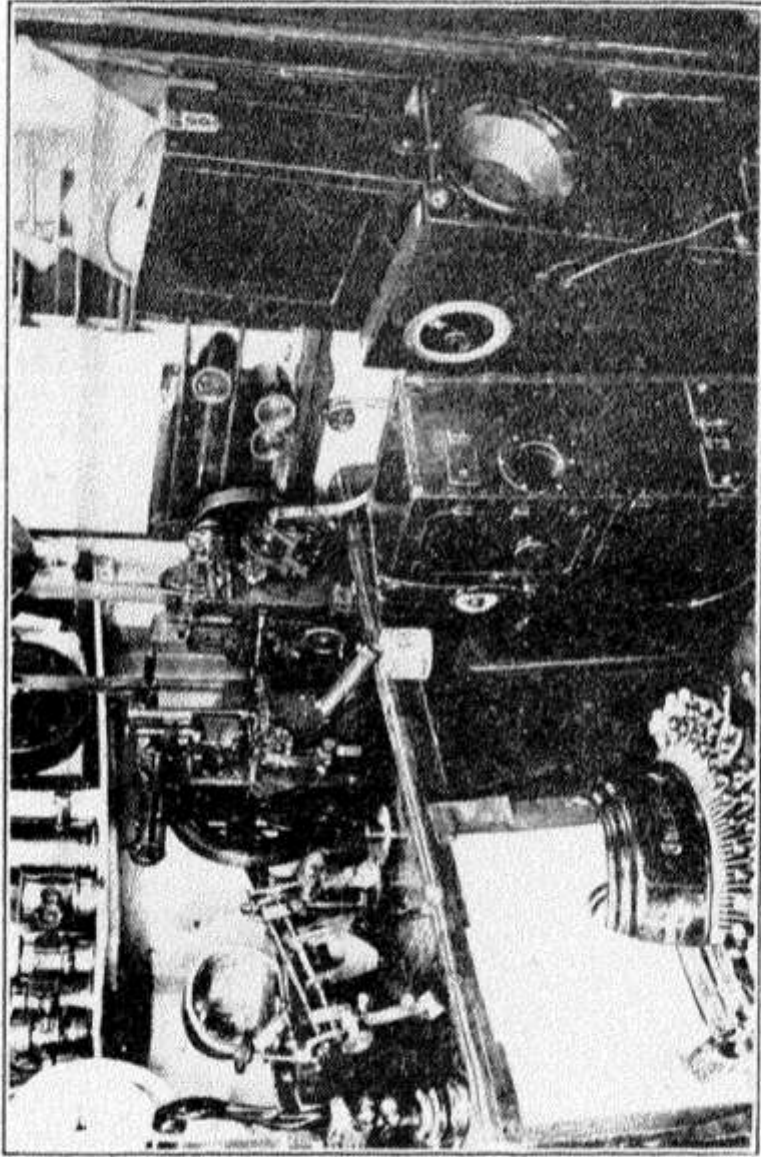
Besides our own make we have all the latest and best subjects manufactured by Edison and the Biograph Co., N. Y.

In foreign pictures we have the latest art of E. Mester in Berlin; Melies, Lumiere and Pathé Frères in France; R. W. Paul and the Warwick Trading Co. in London, and other well-known manufacturers in Europe.

Our actual moving picture stock consists of more than one thousand subjects—pictures to fit any kind of entertainment, religious, instructive or amusing.

We are agents for all the named film manu-

EARLY CATALOG



MOVING PICTURE CAMERAS, REFRIGERATING AND PROJECTING MACHINES.
American Cinematograph and Film Company.

EARLY CATALOG

facturers and sell their goods at the lowest possible prices. We also buy and sell second-hand moving picture films.

War, Military and Patriotic Pictures.

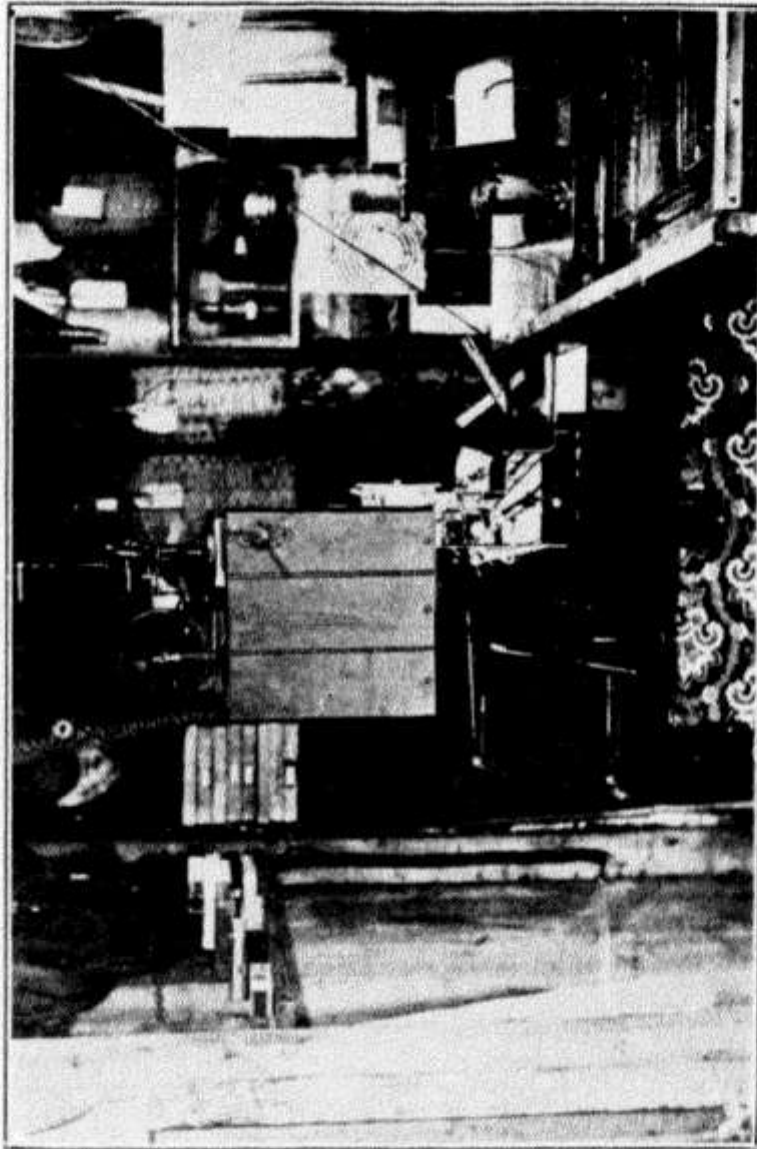
We carry a full line of moving pictures and slides, pictures of infantry, cavalry, artillery and marine troops in war and peace, from all nations. War pictures of the Civil war, the Franco-Prussian, the Turko-Grecian, the Spanish-American, and the Boer-Bruton war. Bombardment and storming of strongholds, the war in China. His royal highness Prince Henry of Prussia visiting America. The arrival of the liner, "Kronprinz Wilhelm." The launching of the Kaiser's yacht, "Meteor." Arrival of Prince Henry at Shooter's Island. Prince Henry at the German Embassy in Washington. Prince Henry at West Point, and Prince Henry's farewell on board the "Deutschland." Kaiser Wilhelm II. inspecting the warft "Vulkan" in Stettin. Kaiser Wilhelm, King of Bavaria and Grand Duke of Baden in Carlsruhe. Parade march of German troops returning from China, inspected by Kaiser Wilhelm and the Empress of Germany at Wilhelmshaven.

We also have stereopticon pictures of crowned heads and their families from America, German Empire, England, France, Russia, Austria, Italy, Sweden and Norway. Any special picture can be made on shortest notice.

Panoramas, Railroads and Sporting Pictures.

Moving panoramas taken from great squares, trains and ships. From Bremerhaven to New York on the big German Lloyd steamer "Kronprinz Wilhelm." Pictures of cities, world-renowned buildings and monuments. Scenes from life at bathing resorts. Scenes from mountains and oceans. Polar expeditions. Trip through

EARLY CATALOG



FILM PRINTING AND SLIDE MAKING.
American Cinematograph and Film Company.

**JUNIOR PROFESSIONAL
CAMERA**

Bulletin No. 3

Eberhard Schneider

JUNIOR PROFESSIONAL CAMERA

BULLETIN No. 3

The "Junior Professional Camera"

FOR THE TAKING & MAKING OF SCENES IN MOTION



FOR THE SCHOOL, SCIENTIST, TRAVELER,
AND SHOWMAN AT LARGE.
FOR THE PHOTOGRAPHING OF MOVING OBJECTS,
AND OTHER SPECIAL EVENTS OF VALUE.
IN MINUTE DETAILS

BY

EBERHARD SCHNEIDER
219 SECOND AVENUE
Near 14th Street NEW YORK
CABLE ADDRESS "MIROVITA" N. Y.

Eberhard Schneider, The "junior Professional Camera" Bulletin No. 3, undated
Collection Soterios Gardiakos

JUNIOR PROFESSIONAL CAMERA

Ordering film stock—money must be enclosed to cover the amount incl. postage—If ordered by telegraph you must wire the amount of money and postage—no checks accepted from strangers.

Chemicals for the making of 30 gallons developer of greatest quality \$7.50

All chemicals are pure ingredients of foreign manufacture, none better. Good for neg. and pos. film, plates, lantern slides, gas light paper, bromides etc. Only 4 gallon developer needed at a time with our developing outfit, 4 gallon will develop 600 feet of film, developer kept in two large demijohns will last and keep for years. (Special instruction sheet with the developing outfit) a child can do it. BULLETIN No. 16

DIRECTION HOW TO USE THE "JUNIOR" CAMERA

Open the doors on both sides of the camera by opening the locks with a screw driver or with a small coin, fill retort **B** in dark room with perforated, sensitive negative film **A** of reliable manufacture, close the cover and secure retort **B** with nut screw **V** into the camera box, lead film **A** through film gate **K** of retort **B** in a way that the emulsion side of film will be up in passing over guide roller **C**, now lead the film under guide roller **D** so the emulsion side of the film will lay against this roller **D** now lead the film over the Sprocket **R** under the two film pressure rollers **E** and be sure that the teeth engage the holes in the film and not between the holes, also make sure that the film lays straight over the large sprocket—you may now make a few turns of the sprocket to obtain more slack of film, lift pressure door **G** with the ring finger of your right hand and place the film straight into the aperture track, leave enough slack for loop **F** and let the door go, but make sure that the door presses on the film, now leave enough slack for under loop **H** and pass the film between sprocket and pressure rollers **L** through retort gate **K** on to bobin **M** of retort **N**—make another turn of sprocket **R** and see that the film is guided properly between all members and that the loops are there and that bobin **M** takes up the film—now place the cover on retort **N** and fasten same into the rear wall by rear screw **V** close all camera doors and set the film counter to zero.

The camera has either a fixed or a settable foci lens (the latter preferred) either lens has a diaphragm to open up when the light is bad and to close to a certain opening when the light is good, the diaphragm acts the same as the Eye lid and the Iris of the human Eye, with the difference that the human Eye acts by instinct and the lens diaphragm has to be set by the operator with a little judgement—the camera can be focused from the inside as well as from the outside—the focusing from the outside with the side focusing attachment is the most practical, the small square magnifying lense inserted in the tube enlarges the middle section of the image or aperture opening and the lens can be set sharp in an instant, it is advisable to open the diaphragm full for focusing but cut down to the right illumination shortly before taking.

The "Junior" Camera takes pictures on a rainy day as well as on a bright day—on a bright sunny day open the inside camera shutter **Z** 1/4 of its circle, on a rainy, cloudy day when the sun is not visible open the shutter about 1/3 of the circle and in the rain open the shutter as far as it will go, which is about 1/2 of the circle—the opening and closing of shutter **Z** can be performed by set screw **X**—do not take pictures of quick moving objects with a 1/2 opening on a rainy day, this opening will only answer for slow action as marches, parades, panoramic, scenery,—quick moving objects can only be taken on a bright day with a small shutter opening combined with the right opening of the diaphragm—never take pictures with the full diaphragm opening always stop down somewhat, no matter how bad the weather—for bad weather we have a special sensitive quick film which is sold at the same price as the regular—with this film pictures can be taken in a pouring rain. On a rainy day the lens must be hidden from rain drops, special lense protecting cones can be bought for this purpose at \$1.50 each—pictures can be taken against the sun if properly set and shaded and very beautiful light effects can be obtained, little known to the public, Never take the lens apart, send it here we will clean it for you—if after some time the take up belt should become loose—cut off a short piece and it will work again—clean the aperture track and pressure door each time you go out, small pieces of emulsion are likely to gather and scratch the film, wipe off the track and door with a wet handkerchief or pass a damp strip of cloth between the two, same as the film does pass—this will clean it, as stated before turn the crank about two turns per second and turn it as uniform as possible. After the film is exposed take it into the darkroom for development or send us the film and we will do your developing work and print a positive from it if you so desire.

PRICES FOR FILM FINISHING WORK

Developing your negative 3c per running foot, if your negative is a failure it is not our fault and only 2c will be charged to cover time, power and Chemicals.

Making a print from your finishing Negative incl. Positive Film Stock, which we furnish, at 9c per foot.

Film Titles: Including the artist work at \$1.00 per one 5 foot Title.

Aniline Tinting of Films, any color—1c per foot.

Chemical Toning of your Films, either green, brown or blue tones, leaving the highlights white—at 2c per running foot.

Film Perforating in small quantities 1/2c per foot, orders over 1000 feet 1/4c.

Enlargements made from Film images (negatives) on 8x10 paper 50c each.

Imported Film Water Colors—any Color 25c per one ounce bottle.

Flam and non Flam Film Cement—one ounce Bottle 25c.

Film Mending Machines \$5 and \$10.00.

Film Measuring Machines \$25.00 and \$45.00.

Extra Catalogues on latest Models of Mirror Vitae Projecting Machines, Perforators, Printers, Laboratory Outfits, and all other Supply of best Quality at lowest possible prices. READ LIST OF BULLETINS

GOODS CAN BE SHIPPED AT ONCE

25% of the amount must accompany the order, Balance C. O. D.

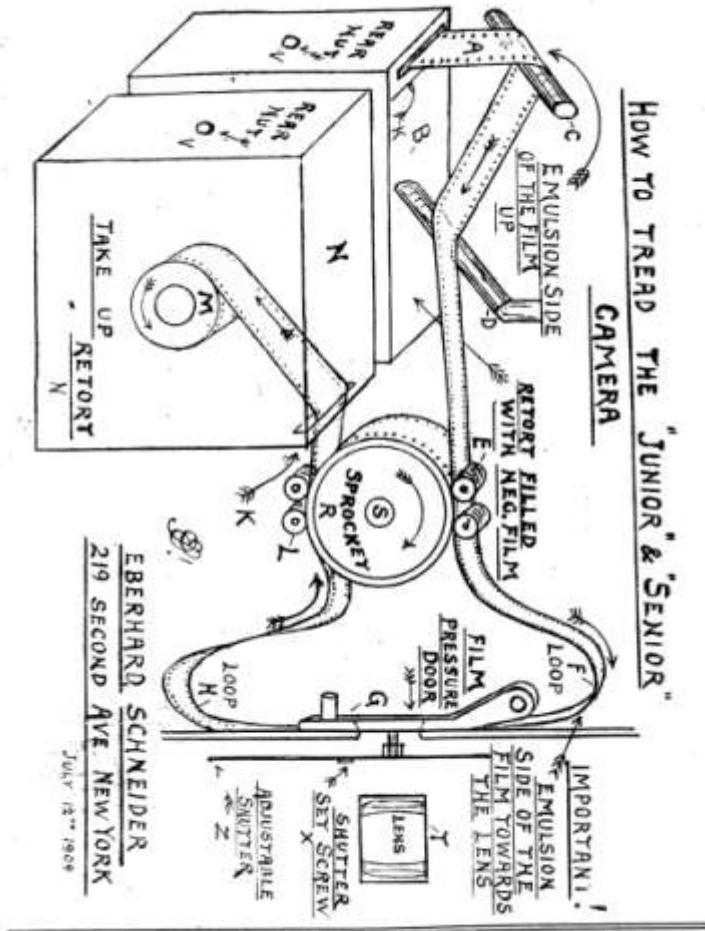
Order your Film Stock in time to have it on hand for special Events.

No Cameras, Film Stock or other Goods are sold on account.

No Collect Telegrams accepted. Plus the amount of exchange to out of City Checks—Checks from strangers must be certified. Remit by Postal Money Order, it saves time and charges.

How to thread the Junior and Senior Cameras: See Back Cover.

JUNIOR PROFESSIONAL CAMERA



NOTICE

Eberhard Schneider's

Latest and Greatest Novelty the "Mirror Vitae Film Projector Motion Picture Single Are Dissolving Stereopticon Combined."

THE MACHINE OF THE FUTURE

FULLY APPROVED,
WITH OR WITHOUT A FRAME OF LIGHT
AROUND THE MOTION PICTURE.

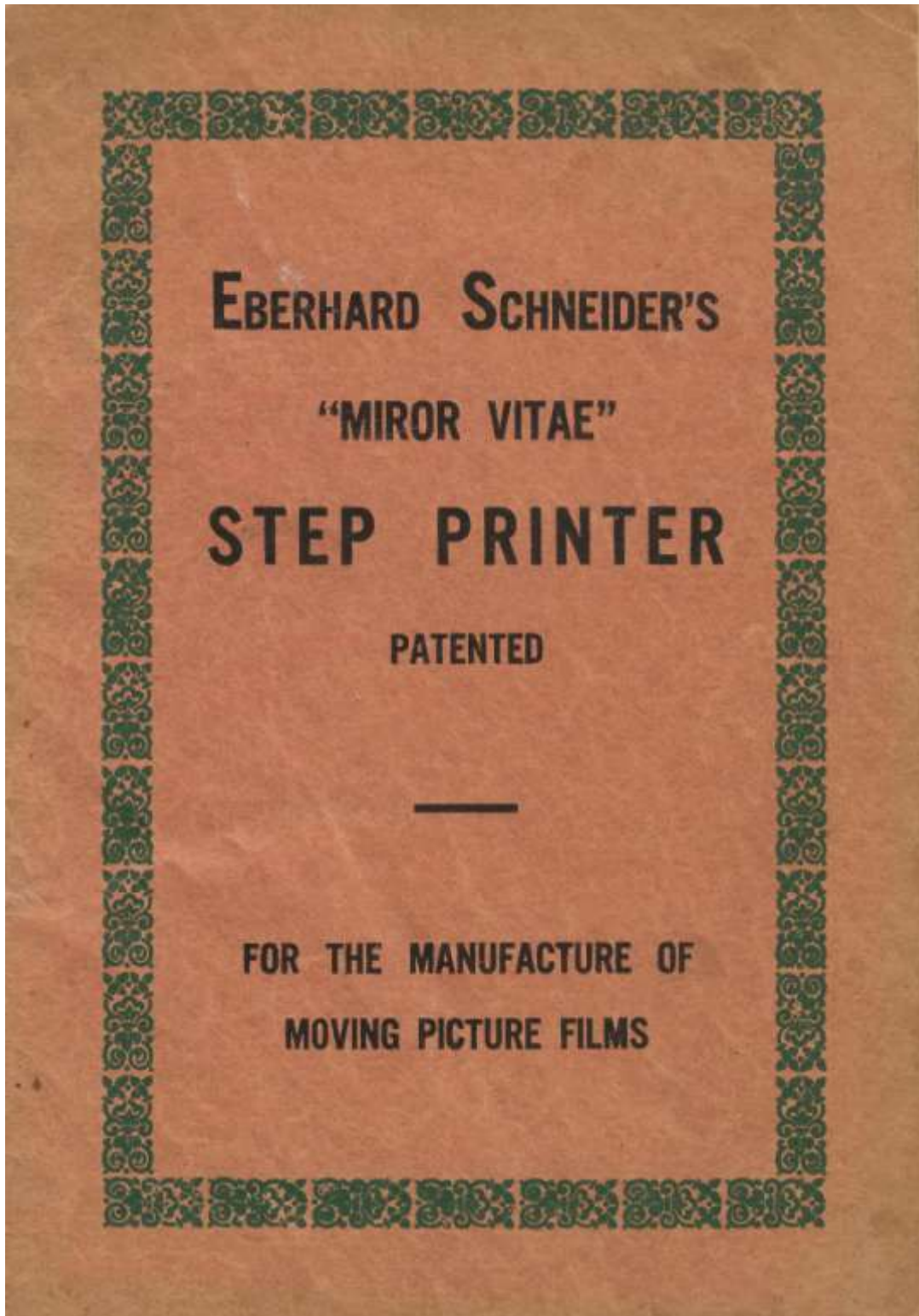
—GREAT—

ALSO THE SINGLE ILLUMINANT DOUBLE DISSOLVING
STEREOPTICON—GREATEST TESTIMONIALS
TO YOUR SERVICE.

ASK FOR SPECIAL CATALOGUE
BULLETIN No. 40-41-42

Eberhard Schneider
"Miror Vitae"
STEP PRINTER

STEP PRINTER




Eberhard Schneider step printer, undated catalog, front cover
Collection Soterios Gardiakos

STEP PRINTER

Y&A

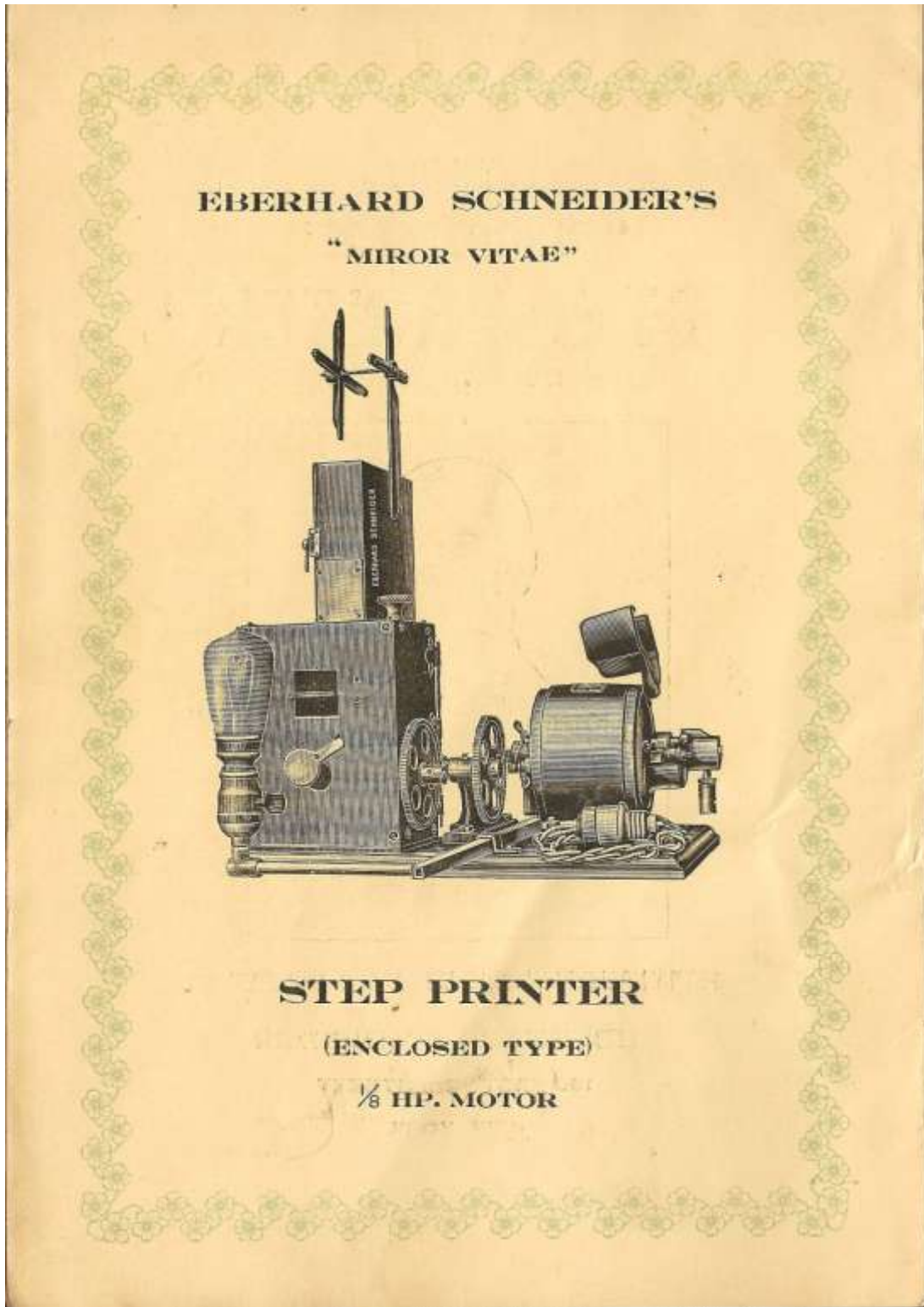
..THE..
"MIROR VITAE"
STEP PRINTER
MANUFACTURED BY



GERMAN-AMERICAN CINEMATOGRAPH AND FILM CO.
EBERHARD SCHNEIDER
109 EAST 12TH STREET
219 2nd Ave.
NEW YORK

Eberhard Schneider step printer, undated catalog,
Collection Soterios Gardiakos

STEP PRINTER



Eberhard Schneider step printer, undated catalog,
Collection Soterios Gardiakos

STEP PRINTER

THIS INTERMITTENT STEP PRINTER is especially designed for the Film Manufacturer, for a continuous every day run, for the Film Manufacturer large or small, for the lecturer, scientist, for colleges, universities and hospitals, where ever the highest grade of a film product is wanted, sharp, steady, well and even exposed, with the finest details to the edge and free of blur and diffusion.

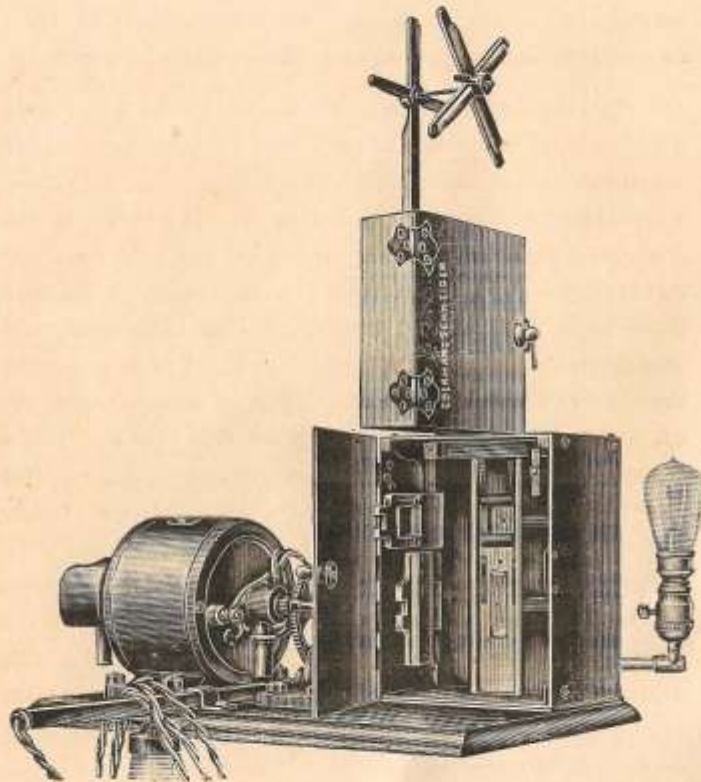
This machine differs from our sprocket printer Patent 666, 396 in many important details. but it embodies our great claim of the curved block or roller, which forms a curved face, that forms a curved back rest to the films, and bulges the portions of the films under exposure outwardly or toward the light opening—this is of great importance, as the film while being drawn over it will be so tightly seated that all folds or imperfections are straightened out, thus all the light will be forced to pass through the negative film and any lateral diffusion of light which might cause a blurred print, is prevented. The curved back rest is of a transparent, non actinic, non halation material (german potted ruby glass) with a 7 diobter cylinder, high polished surface. With this transparent back rest the light value can easily be judged while the machine is running and the operator is able to see if the negative is correctly spaced in the exposure gate, the advantage of these two arrangements will be greatly appreciated, a yielding frame, having an opposite concave curve acts as a mask to only print such portion of the film as necessary for sharp masking in the projector.

During the time the films are moved between the exposures, the light must be cut off from the film, this is accomplished by a pair of overlapping shutters, resembling exactly a pair of eyelids, covering intermittently the curved pupil (curved back rest,) this construction has proven so very successful in our former printer and projector that we can not be very well without it.

Eberhard Schneider step printer, undated catalog,
Collection Soterios Gardiakos

STEP PRINTER

**EBERHARD SCHNEIDER'S
"MIROR VITAE"**



STEP PRINTER

$\frac{1}{8}$ HP MOTOR (ENCLOSED TYPE)

SHOWING REAR DOOR OPEN
WITH CURVED BACK REST PLATE, PRESSURE CLEAT
AND YIELDING FRAME WITH GUIDE ROLLERS.

Eberhard Schneider step printer, undated catalog,
Collection Soterios Gardiakos

STEP PRINTER

The Movement is a fork movement receiving its up and down stroke by a crank and curlisse movement, the engagement and release of the fork teeth with the films are actuated by a cylinder with two opposite notches, mounted on the main shaft, a cylinder spring gives tension to the fork to follow the shape of a double cam below, this fork movement is an absolute novelty, it is sure and dependant and has never been used on printers or other moving picture machinery before.

During the time of exposure, at the moment the shutter intends to open and the fork pins intend to leave the film perforation, a pressure cleat, located below the fork travel and inserted in the film bed, presses the two films together,—by action of another notch on the above mentioned cylinder against the back pressure door; this is of valuable importance, the films at this moment not held in position by the fork pins have a natural tendency to slip, to slip upward which would cause a motion of the films in the open exposure gate, causing a blurry print, the pressure cleat of course could be left away and the films be held in tight seat by a velveted tension back door, but as this tension would always be there, also when the films are pulled down, too much of a strain would be on the perforation holes.

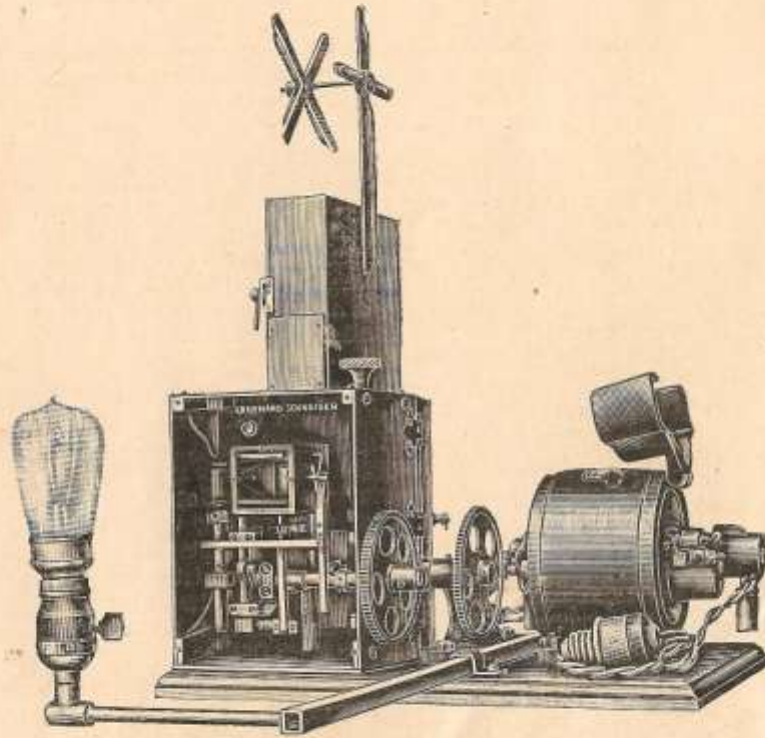
With this construction as I prefer it, the cleat presses the films while under exposure and will release while travelling down, the back pressure door serves as a backrest for the cleat only. On the upper part, where the films, the unexposed positive and the finished negative enter the printer, a pair of flat springs give tension to the negative, the positive runs without upper tension being pressed down only by the negative, this arrangement allows the positive to register while being pulled into position in the exposure opening, two little steel rollers, the size of the width of the film, located on top and below the back rest, helps the film to pass over the curve without any or much friction.

The Eyelid shutter receives its motion from a bracket, journaled on the track rod, which track rod also serves as a guide for the mechanism plate, the bracket has a horizontal and a vertical arm; on the upper end this vertical arm is provided with an inward pointing steel pin, and also with a flat steel spring and pin, pointing at the same direction, these two pins engage the crank arms of the eyelid shutters for opening or closing, they are adjusted to close the exposure opening when the films are moved down and to open when the films are at rest for exposure, a cylinder hub fastened to the main shaft gives motion to the bracket, a flat steel spring fastened to the front cover plate keeps the vertical arm in contact with the cylinder hub. This motion is unique and works the eyelids very rapid, allowing sufficient time for exposure

Eberhard Schneider step printer, undated catalog,
Collection Soterios Gardiakos

STEP PRINTER

EBERHARD SCHNEIDER'S
"MIROR VITAE"



STEP PRINTER
(ENCLOSED TYPE)
FRONT PLATE REMOVED, SHOWING
MECHANISM WITH EYELID SHUTTER
AND FILM CENTERING DEVICE.

Eberhard Schneider step printer, undated catalog,
Collection Soterios Gardiakos

STEP PRINTER

Most parts of the film actuating mechanism are mounted on the already mentioned, up and down adjustable mechanism plate. Negatives are taken with different kind of cameras and the side perforations don't always register alike with the image, therefore it is necessary to adjust the negative in the exposure gate; a strong side screw with knob, extending over the top plate of the printer carries the mechanism plate up and down and with it the mechanism of the film engaging fork, the mechanism travels $\frac{3}{8}$ of an inch, ($\frac{1}{4}$ inch is ample sufficient) turning the knob right or left will set the fork up or down and the negative can be regulated to suit, while running, to perfection, a light tight receptacle size 6x6x2 with door and safe lock will accommodate 400 feet unexposed film stock, this receptacle is secured to the top plate of the printer and has a slot on the bottom to pass the film downward.

The negative film to be printed from is held by an upright stud shaft and nut, secured to the top of the positive receptacle, a narrow chute on front of the positive receptacle leads the negative through the slot into the printer, this chute is 2 $\frac{1}{2}$ inches high and very narrow, about 1-16 of an inch to avoid any light to touch the positive. The exposure is made by an electric incandescent lamp of 25 candle power, of special make, this lamp is mounted in screw base with key, fastened to a sliding arm 28 inch long of square metal tubing, thus enabling the operator to set the lamp back and forth, according to density of the negative.

Printers for hand power have a heavy hand wheel with handle, printers provided with electric power have a good $\frac{1}{4}$ H motor, (direct or alternating) one countershaft with counter gears and a large 4 inch D. gear on the main shaft, the motor is connected direct with a spur gear on the motor shaft to the gear train of the countershaft, from here to the main gear, (no belting therefore slipping impossible) the motor and the exposure lamp arm are wired with strong lamp cord and attaching screw plug for electric service, the whole machine, including motor, is mounted on a heavy oak wood base. Printing machines should be ordered with motor power, as uniform speed is absolute necessary for even exposures. The printer should be set up in a dark room against one of the wooden walls, enclosing the room, - cut out a square hole of 6 inches high x 5 inches, middle of the hole from the floor about 50 inches and set the printer with the front plate against the hole in the wall, tighten the sides with some pieces of cloth or cotton to exclude any light, bore another hole for the sliding arm of the exposure lamp; it is also convenient to cut another hole into the darkroom wall, with a little door to close it again, of a size to let your arm pass, to center your film from the outside and to shut off the motor without going in the dark room, a two section box with a door or a cabinet will take the ready printed positive on one side, and the negative on the other till you are ready to wind it for development, it is far more practical to run the film into a box instead of rewinding it like in a projector, the tension of a take up sprocket and the tight winding on the take up reel may cause friction marks and streaks on the delicate photo emulsion.

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STEP PRINTER



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STEP PRINTER

The machine is now ready to prove our claims; we don't know of any machine of this character, here and abroad, embodying absolute steadiness, no halation, no slipping while under exposure, tight contact in the exposure gate [no contact glasses] no delicate mechanical parts, all strong and substantial, and a most high class mechanical layout and workmanship.

We consider the printing machine the most ingenious part of all film machinery, if a first class product is wanted. we have the experience, we were the first in the field, and are the only manufacturers of exclusive film manufacturing machinery under our own patents in America. The output of our costly experience is hereby offered to you, well worth its value many times; there is nothing better,—all machinery guaranteed.

The Miror Vitae Step Printer can be furnished either.

Open or enclosed type. Hand Power.....net **\$285.00**

Fitted with $\frac{1}{8}$ HP direct current motor and countershaftnet **310.00**

Fitted with $\frac{1}{8}$ alternating current motor and countershaft.....net **320.00**

Electric signal for printer, announcing by bell when either negative or positive film is exhausted and motor stopping device, two contacts, relay, motor and battery circuit breaker, etc..... **25.00**

Weight of Step Printer complete with Motor 38 pounds.

Size of base plate 11 x 16.

Special Film Boxes made to order from**\$10.00** up.

Special Incandescent Lamps for printing, each..... **.75**

Extra back rests with curved surface [ruby], each..... **2.50**

Motors for any other potential as 110, 115, 125 or 104 Volt on application.

**Step Printer without pressure clutch, but with Velvet Bed
10 per cent less list.**

The same without curved back rest, 20 per cent less list.

**Valuable points and new secret developing formula to
every user of our machinery.**

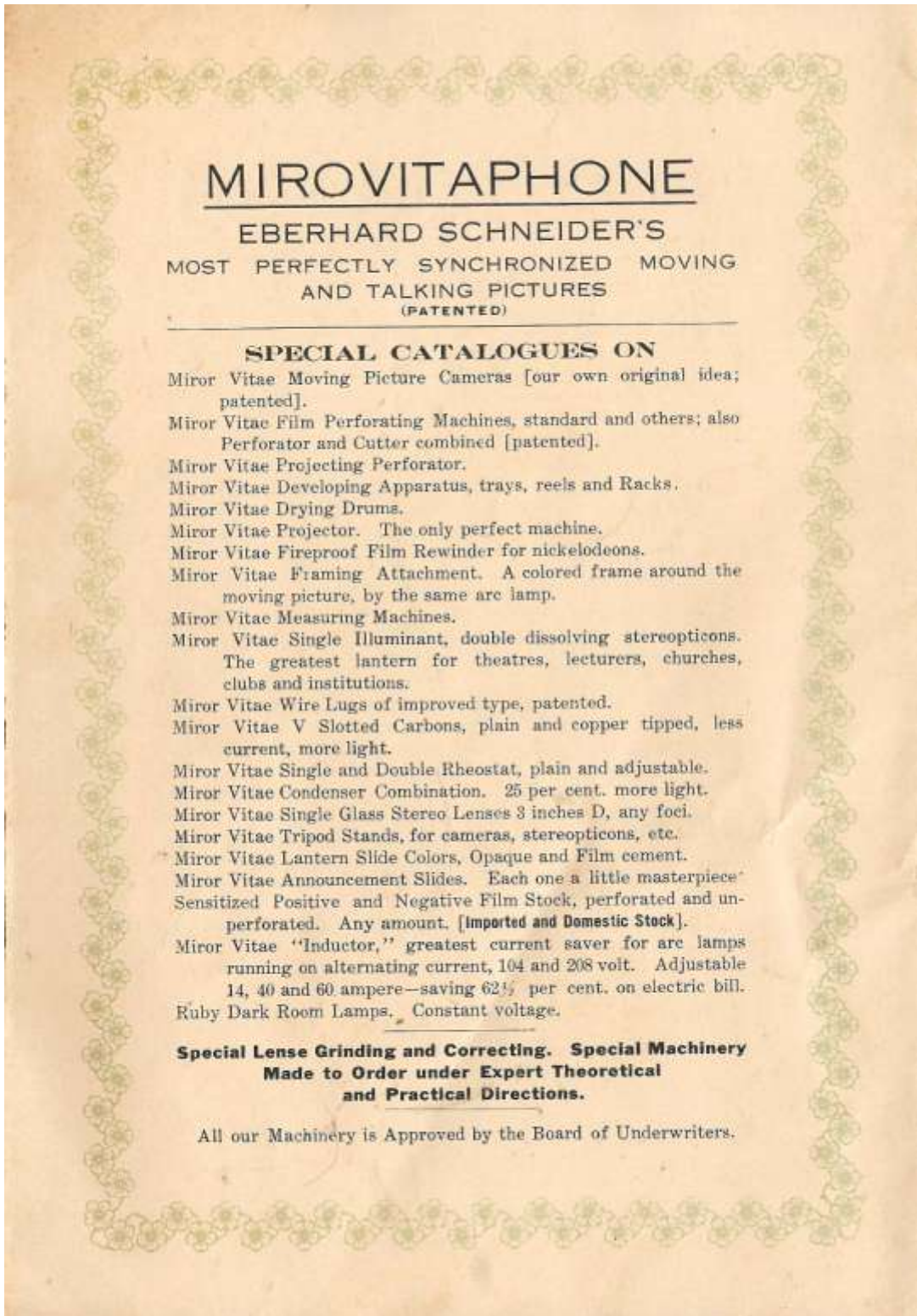
**Our "MIRROR VITAE JUNIOR" Step Printer, \$150. For
Class A work.**

CAPACITY FROM 500 TO 1000 PER HOUR.

Above Prices are Strictly Net. No Discount.

Eberhard Schneider step printer, undated catalog,
Collection Soterios Gardiakos

STEP PRINTER



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STEP PRINTER

Department of Film making.

We can make your Films if you don't care to buy your own apparatus.

OUR PRICES:

Perforated negative or positive stock, with absolute steady and evenly spaced perforation, 5c. per foot
Developing and doctoring negative - - - 3c. "
" Positive Film - - - - - 2c. "
Printing " " - - - - - 1c. "
Tinting " " - - - - - 2c. "
Intensifying positive or negative - 3c. "
According to above scale, we can furnish
positive prints from your own good
negative, at - - - - - 8c. "
Film titles, 3 feet long - - - - \$1.25
Any additional foot 12c.

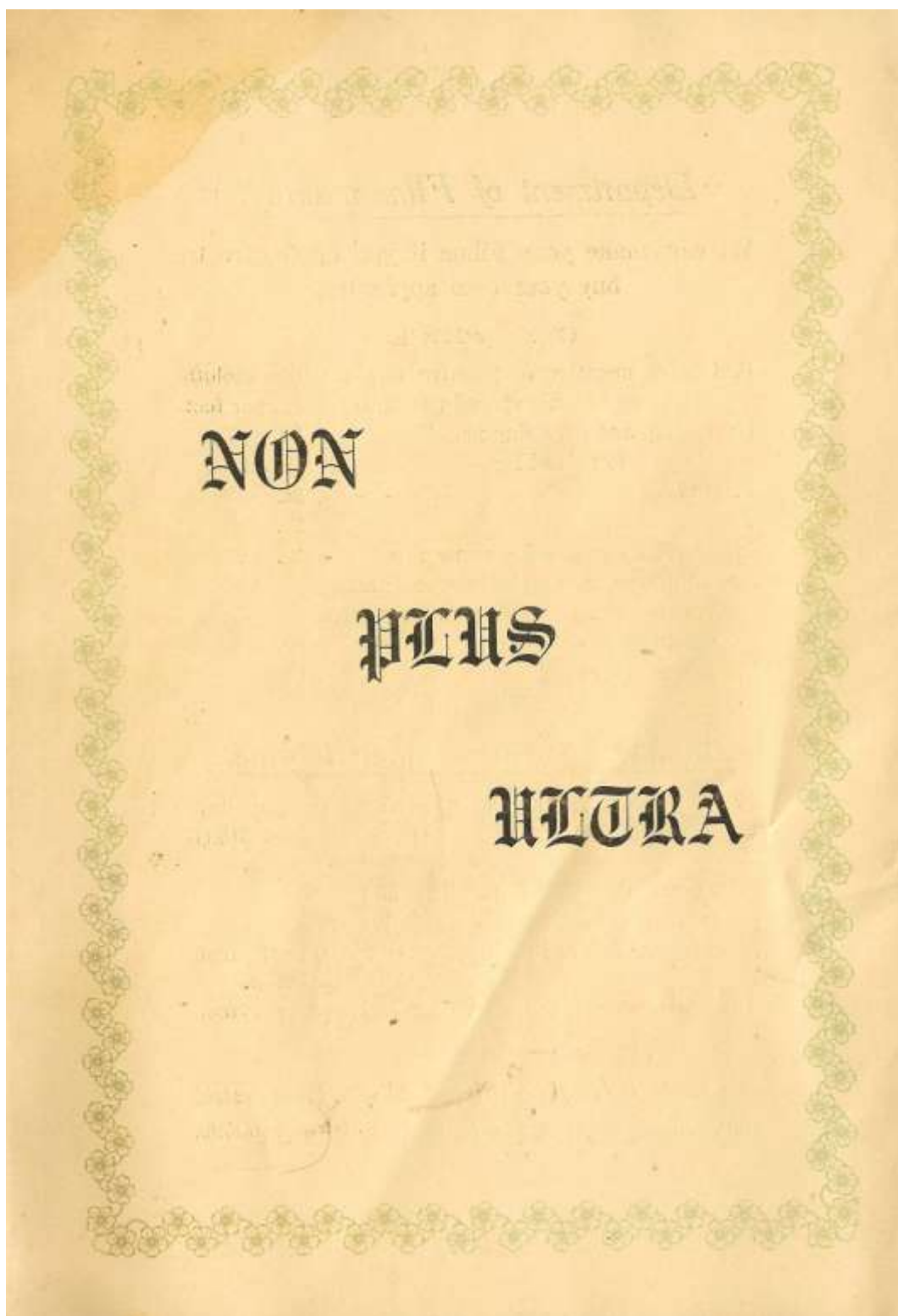
Animated Pictures taken to order.

Skilled operator and special camera sent out per day,
or part of day - - - - - \$15.00
Plus expenses.
Film stock, developing negative and
positive and delivering the negative
with one finished positive print \$20.00 per 50 feet.
Minimum charge.
Any additional prints from your negative 8c. per foot.

We handle the best imported and domestic Films in stock only, therefore your picture making is a certainty.

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STEP PRINTER



Eberhard Schneider step printer, undated catalog,
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BOOKS AND MONOGRAPHS WRITTEN BY SOTERIOS GARDIAKOS

February 7, 2013

16 Books Relating to Movie Machinery

Cinematic Machinery Collection of Soterios Gardiakos, 2002, ISBN 0-9777537-3-5, August 25, 2011, 227 pages

A Warwick (Baucus & Maguire Ltd.) spoolbank Projector ca 1897 In the Collection of Soterios Gardiakos, Photographs by Katerina Nike Gardiakos. 2001, ISBN 0-9777537-0-0, June 1, 2008 49 pages

Pre 1900 American Made Movie Projectors. 2002. ISBN 0-9777537-4-3, June 30, 2010, 143 pages

A Compilation of Greek made Movie Projectors and other Cinematic Equipment. From information provided to Soterios Gardiakos by Nikos Theodosiou. 2002. ISBN 0-9777537-2-7, June 20, 2009, 60 pages

Kinematic Peephole Machines Using a Continuous Strip of Film or Paper, 2002
ISBN 0-9777537-5-1, June 22, 2010, 73 pages

LeRoy Projectors, An enigmatic pioneer in the quest to project motion pictures on the big screen.
ISBN 0-9777537-7-8, July 17, 2008, 48 pages

Optigraph 35 mm projectors, August 23, 2008 , 89 pages

The Peerless Kinetograph made by Geo. A. Knaak Co., of Oshkosh Wis. U.S.A. and the Veriscope Projector, *An Inquiry into an enigma*, September 30, 2011, 33 pages.

A Prototype 35 mm Movie Projector in the Collection of Soterios Gardiakos Made by Carl J. Lang (Lang Manufacturing works) of Olean, New York, March 15, 2010, 56 pages

Peep Show Phantoscope ca 1904-1905 made by C. Francis Jenkins in the Collection of Soterios Gardiakos, November 22, 2010, 34 pages

Spoolbank Projectors, 2001. ISBN 0-9777537-1-9, June 31, 2010, 82 pages

Selig Polyscope Movie Projectors made by William N. Selig – a compilation, September 25 2011, 62 pages.

Cineograph movie projectors and some cameras Made by Siegmund Lubin 1896-1916 *A checklist*,
October 25, 2011 62 pages

From the JENKINS PHANTOSCOPE to the ARMAT VITASCOPE Chronologically arranged,
June 25, 2011, 132 pages

Eberhard Schneider's Cinematic Machinery, 2010, 60 pages.

Power's Cameragraph Projectors, 2013, 73 pages

Works in progress relating to movie machinery

A Possible Classification of Thomas Edison's Kinetoscopes, 2002, (Incomplete, work in progress)

35mm Movie Projectors, A work in progress with over 1,300 pages so far. (Dec. 2006)

Relating to Numismatics

The Coinage of Modern Greece, Crete, the Ionian Islands and Cyprus, Chicago, 1969, ISBN 0-916710-02-5, 96 pp, + 16 plates, hardbound

The Coins of Cyprus 1489-1571, Chicago, 1975, ISBN 0-916710-19-X, 32 pp, fully Illustrated, paper cover

A Catalogue of the Coins of Dalmatia et Albania 1410-1797. Chicago, 1970
ISBN 0-916710-67-x, 32 pp, illustrated, maps, tables, paper cover

The Coinages of Alexander the Great, S. Gardiakos Editor. ISBN 0-916710-82-3, 1,007 pp, +157 plates, hardbound in three volumes

Books on Soterios Gardiakos and his collections

The Sculptures of Soterios Gardiakos, (From the Bronze age to the Modern Age) By Chryssafenia Gardiakos, Photographs by Brad Baskin and Katerina Nike Gardiakos. September 1, 2011, ISBN 0-9777537-6-X. featuring 140 sculptures, 167 pages

Selections from the collection of Soterios and Irlanda Gardiakos, September 20, 2011, 272 pages

Soterios and Irlanda Gardiakos collection of hospital prints formerly known as the William Bebb collection of hospital prints, 2012, 49 pages

The Soterios and Irlanda Gardiakos collection of prints and drawings, 2012. 110 pages

MY LIFE an illustrated photo album of me, my family and my friends, from the early twentieth century to the present. September 30, 2011,

Part A, 1944 to 1984, 272 pages

Part B, 1985 to the present, 268 pages

Site on Movie Machinery: <http://bioscope.biz/>

Site on Sculpture: <http://gardiakos.com/>

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