Eberhard Schneider's Cinematic Machinery
(A SURVEY)

by
Soterios Gardiakos
October 1, 2011

UNIGRAPHICS INC
2010
Eberhard Schneider
March 15, 1868 - Jan 24, 1919
THE MACHINES:
PROJECTORS
THE MACHINES - PROJECTORS

Eberhard Schneider's very early Vitascpe 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
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 Miror Vitae.

Eberhard Schneider's Miror 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
Early 35mm movie camera, Serial number 9
Collection Carey Williams
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"
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THE MACHINES - CAMERAS

The "Junior Professional Camera"
Source: http://www.eberhardschneider.com/Inventions.html
THE MACHINES - MISCELLANEOUS

Courtesy The Smithsonian Institution
THE MACHINES - MISCELLANEOUS

Source: http://www.eberhardschneider.com/Inventions.html
FILM
THE MACHINES

OUR FILM WORK SINCE 1895
SAMPLES & RELICS

Courtesy The Smithsonian Institution
CATALOGS

Early Catalog - Miror Vitae
American Cinematograph & Film Co, undated early catalog, front cover
Courtesy Rutgers University Library
MIROR VITÆ
(MIRROR OF LIFE)

THE GREATEST
OF ALL
ENTERTAINMENTS.
PATENTED IN ALL COUNTRIES.
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.
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 Museum 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 (Miror Piala) 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.
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 lifeliness 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.
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,
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, gauges, lenses 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.
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.

Besides 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, films are masterpieces of theory, workmanship, 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

825, No. 153,657, No. 303,180. 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 Pathe Freres 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-
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 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
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 “MIBOVITA” N.Y.

Eberhard Schneider, The “junior Professional Camera” Bulletin No. 3, undated
Collection Soterios Gardiakos
The "Junior" Camera is the lightest camera known, made of best imported well seasoned Mahogany, polished black and nickle plated trimmings, top and bottom Tripod nut, leather covering straps in aluminum base plate for mechanism, all bearings phosphor bronze bushed, steel mechanism with an absolute steady spring hinge pin movement, adjustable brass shutter well balanced and black oxidized, steel aluminum sprocket, with heavy steel spindle for the crank, aluminum antifiction proppge door. Film rewind attachment with steel spring, two film returns of each 200 feet film capacity, (returns not included), one side on the back of the camera, therefore ever ready, two return binding screws, the returns are also provided with the automatic film gate which closes the gate when the film is taken, the returns have the new concealed flash wind up spindle with a cross shaped dog for the engagement pin on the rewind gear.

A new sieve focusing attachment with self closing spring door with a powerful magnifying glass to focus direct on the film is a great novelty and enables the operator to focus sharp in almost no time without opening the camera doors and loss of several feet of film, it also can be used as a view finder at the same time—a special view finder with corresponding aperture opening is secured to the top of the camera box—the camera takes 8 pictures per crank revolution or 5 feet, two crank revolutions take 35 pictures or one foot-speed of camera about two turns per second—a 50 feet negative will require about one minute to turn the crank crank—a large dial film counter on the left side of the crank will show how much film you took and how much there is left in the return. The returns have a white celluloid label on which you can mark with lead pencil the kind and length of subject you took.

The "Junior" is a masterpiece of mechanical and optical craftsmanship. It takes ready, contrast, sharp and well defined negatives and does not suffer from haloing and static marks which are so objectionable with other cameras. The "Junior" is a better Camera as some of the professional Film Manufacturers are using for their weekly releases and we put the "Junior" against any of them and do claim, will prove and guarantee “Superiority in Quality” of Product: Far Distant as well as Close by pictures can be made with the "Junior", Trick Pictures, Disappearing Scences, Marches, Parades, Scenery, Animal Life, Microropsis, Botanical Action, in Surgery, Chemistry, in fact we have never been able to find any object in Motion, the "Junior" Camera will fully answer the demand. It will never fail to work it treated with little care.

The Price of the "Junior" is very low which should not mislead. We guarantee the Junior to take a picture of the same quality as the experienced Mignon and we guarantee it as if your more expensive "Senior Camera" with the difference that the "Junior" will be smaller, lighter, less capacity returns, a smaller mechanism and therefore less to to manufacture. But the film product, the main point of all—is class A—a number one.

The Price of the "Junior Camera" as above described without lens, new described camera has as there are several kind of lenses and sometimes a customer has a Motion Picture Camera Lens of his own, we offer the camera without lens at the fixed and strictly net price of $150.00.

F. O. B. New York.

SUITABLE LENSES FOR OUR CAMERAS

The most handy lens of highest quality is the Zeiss Tessar F 3.5 this lens can be furnished in two focal lengths.

- 50mm $30.00 net
- 75mm $35.00 net

These new focus mount lenses have an adjustable mount and focus of lens can be set at will according to distance of object these lenses also indicate an infinity point at which the lens takes sharp from 25 to 1000 feet distance. The following distances are marked on the lens barrel: 3.4-4.10.25-50 feet and up to infinity.

If customers want to focus the lens, we will mount the 50mm Tessar lens in the camera for the price of the lens and will not charge for special extension tube necessary to bring the lens at the proper distance from the film this is a very particular work and requires some time to do it correctly—for the mounting of any additional degrees of different focus $5.00 will be charged outside the price of the lens.

What lens shall I use in the "Junior". The 50mm lens is a wide angle, used for close by pictures like taking parades from the sidewalks of a street. The 50mm lens takes in more scenery than a 75mm does at the same distance, the figures with a 50mm lens are smaller and the figures with a 75mm lens are larger—the 75mm lens is used more for stage, groups, single persons, large plants and for films this is a very particular work and requires some time to do it correctly—for the mounting of any additional degrees of different focus $5.00 will be charged outside the price of the lens.

Carrying cases for the Junior Camera, black fibre covered box wood, red flannel lined with one compartment, leather handle, lock and key, small case, room for one extra retort and lens—$1.50.

The Junior Tripod with solid top to fit the Junior Camera—$3.00

The Junior Tripod with a prismatic turn table and crank—$5.00

For other accessories see "Exhibitors Local Moving Picture Making Outfit!"
JUNIOR PROFESSIONAL CAMERA

Ordering film stock—money must be enclosed to cover the amount incl. postage—If ordered by telephone 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 modern manufacture, none better. Good for neg. and pos. film, plates, lacquer slides, goa 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 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 sprocket—you may now make a few turns of the sprocket to obtain more slack of film, fill pressure door G with the ring fingers 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 roller L through retort gate K on to bobbin 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 bobbin 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 lye 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 with a little judgment—the camera can be focused from the inside as well as from the outside—the focusing from the outside with the side focusing apparatus is the most practical, the small square magnifying lens 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 fully 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—open the inside camera shutter Z 1/4 of it’s 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 about 1/2 of the circle—the opening and closing of shutter Z can be purchased by set screw K—do not take pictures of quick moving objects with 1/2 opening on a rainy day, this opening will only suffer for slow action as marches, parades, panasonic, 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 half 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 film can be taken in a pouring rain. On a rainy day the lens must be hidden from rain drops, special lens protecting case R can be bought for this purpose at $1.50 each—pictures can be taken against the sun if properly set up 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 bolt 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 cloth over the two, same as the film does pass—this will clean it, also clean slightly before turn the crank about two turns per record 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. Festive 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—2c per running foot.

Film perforating in small quantities 1c per foot, orders over 1000 feet 3c.

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

Imported Film Water Colors—One color $25 per one ounce bottle.

Flame and non flame Film Cement—one ounce Bottle 25c.

Film Padding Machines $5 and 100.00.

Film Measuring Machines $25.00 and $45.00.

Extra Catalogues on latest Models of Miro 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

25c 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 Camera: See Back Cover.

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

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

Eberhard Schneider’s
“MIROR VITAE”
STEP PRINTER
PATENTED

FOR THE MANUFACTURE OF
MOVING PICTURE FILMS

Eberhard Schneider step printer, undated catalog, front cover
Collection Soterios Gardiakos
EBERHARD SCHNEIDER'S
"MIROR VITAE"

STEP PRINTER
(ENCLOSED TYPE)
⅛ HP. MOTOR

Eberhard Schneider step printer, undated catalog.
Collection Soterios Gardiakos
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, 336 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 diober 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 eye-lids, 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.
STEP PRINTER

Eberhard Schneider step printer, undated catalog,
Collection Soterios Gardiakos
The Movement is a fork movement receiving its up and down stroke by a crank and pinion 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 safe and dependent 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 a 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.
STEP PRINTER

Eberhard Schneider step printer, undated catalog,
Collection Soterios Gardiakos
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 3/4 of an inch, (1/4 inch ample sufficient) turning the knob right or left will set the fork up or down and the negative can be regulated to suit, with the same precision, a light tight receptacle size 6x8x2 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 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 handles, printers provided with electric power have a good 1/2 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, (so 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 absolutely 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 the 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.

Eberhard Schneider step printer, undated catalog, Collection Soterios Gardiakos
Eberhard Schneider's
"MIROR VITAE"

STEP PRINTER
(OPEN TYPE)
BASE PLATE WITH FILM INSERTING SLOT
PLATE SHOWS HOW TO INSTALL
PRINTER AGAINST THE DARK ROOM WALL.
FILM BOX AND DOOR DIMENSIONS

Eberhard Schneider step printer, undated catalog,
Collection Soterios Gardiakos
The machine is now ready to prove our claim; 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 Mirror Vitae Step Printer can be furnished either
* Open or enclosed type. Hand Power..................net $285.00
* Fitted with \( \frac{7}{8} \) HP direct current motor and countershaft ..................net 310.00
* Fitted with \( \frac{7}{8} \) 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 15.
Special Film Boxes made to order from ............$10.00 ap.
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 110 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

MIROVITAPHONE

EBERHARD SCHNEIDER'S

MOST PERFECTLY SYNCHRONIZED MOVING
AND TALKING PICTURES
(PATENTED)

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Miror Vitae Moving Picture Cameras [our own original idea; patented].
Miror Vitae Film Perforating Machines, standard and others; also Perforator and Cutter combined [patented].
Miror Vitae Projecting Perforator.
Miror Vitae Developing Apparatus, trays, reels and Racks.
Miror Vitae Drying Drums.
Miror Vitae Projector. The only perfect machine.
Miror Vitae Fireproof Film Rewinder for nickelodeons.
Miror Vitae Flaming Attachment. A colored frame around the moving picture, by the same arc lamp.
Miror Vitae Measuring Machines.
Miror Vitae Single Illuminant, double dissolving stereopticons.
   The greatest lantern for theatres, lecturers, churches, clubs and institutions.
Miror Vitae Wire Lugs of improved type, patented.
Miror Vitae V Slotted Cartons, plain and copper tipped, less current, more light.
Miror Vitae Single and Double Rheostat, plain and adjustable.
Miror Vitae Condenser Combination. 25 per cent. more light.
Miror Vitae Single Glass Stereo Lenses 3 inches D, any focal.
Miror Vitae Tripod Stands, for cameras, stereopticons, etc.
Miror Vitae Lantern Slide Colors, Opaque and Film cement.
Miror Vitae Announcement Slides. Each one a little masterpiece. Sensitized Positive and Negative Film Stock, perforated and un-perforated. Any amount. [Imported and Domestic Stock].
Miror Vitae “Inductor,” greatest current saver for arc lamps running on alternating current, 104 and 208 volt. Adjustable 14, 40 and 60 amperes—saving 62½ per cent. on electric bill.
Ruby Dark Roen Lamps. Constant voltage.

Special Lense Grinding and Correcting. Special Machinery
Made to Order under Expert Theoretical and Practical Directions.

All our Machinery is Approved by the Board of Underwriters.

Eberhard Schneider step printer, undated catalog,
Collection Soterios Gardiakos
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.

Eberhard Schneider step printer, undated catalog,
Collection Soterios Gardiakos
STEP PRINTER

Eberhard Schneider step printer, undated catalog, Collection Soterios Gardiakos
16 Books Relating to Movie Machinery


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 0-9777537-8-8, July 17, 2008, 48 pages

Optigraph 35 mm projectors, August 23, 2008, 89 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


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


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 Soteros Gardiakos and his collections

The Sculptures of Soteros 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 Soteros and Irlanda Gardiakos, September 20, 2011, 272 pages

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

The Soteros 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/

Email: sgardiakos (omit) @aol.com

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