

THE FIRST BIOSCOPE PROJECTOR

MADE BY WALTER L. ISAACS

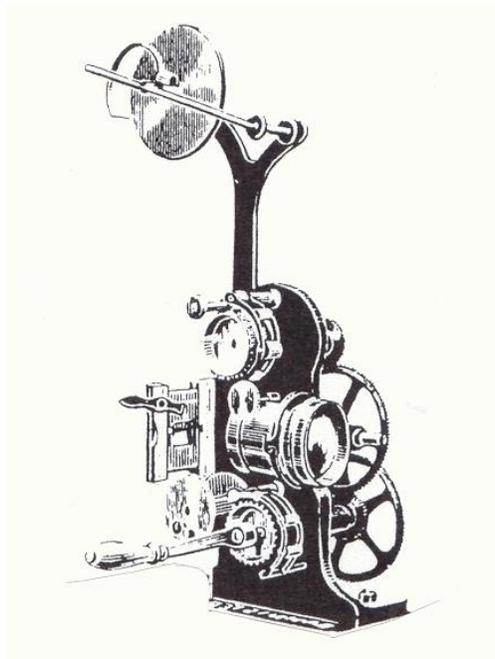
FOR CHARLES URBAN

1897

**Formerly titled: A WARWICK BAUCUS & MAGUIRE LTD.)
SPOOLBANK PROJECTOR Ca 1897**

**IN THE COLLECTION OF SOTERIOS GARDIAKOS
Photographs by Katerina Nike Gardiakos**

October 20, 2011



UNIGRAPHICS INC., 2002

Aurora, Illinois USA, Kalamata, Messinias, Greece

Copyright 2002
Soterios Gardiakos

<http://www.bioscope.biz/>
<http://gardiakos.com/>

ISBN 0-9777537-0-0

UNIGRAPHICS INC
Aurora, Illinois, U. S. A.
Kalamata, Messínias, Greece

The Bioscope – American or English.

I have always believed, as I am sure many have, that the Bioscope was an English made machine. However when one reads John Barnes *The Rise of the Cinema in Great Britain* more carefully it would appear that this particular Bioscope, the first Bioscope, was made in the United States, and not in England. Let me quote:

“It was in July that Maguire & Baucus Limited of Dashwood House, 9 New Broad Street, E. C. announced they would shortly be introducing to the English market a new cinematograph of American manufacture, said to be superior to anything as yet produced in the United States. It was to be called the Bioscope. By September, it had reached the market accompanied by such slogans as ‘Absolute Steadiness’ and ‘Freedom from Flicker.’”

Page 155

As to who actually manufactured this machine, was unknown to me. However as to who may have been instrumental in its procurement for Maguire and Baucus and who may have contributed and even invented this Bioscope, Barnes has the following to say:

“Moreover, Urban may have played some part in securing the Bioscope projector for them and may even have been connected in some way with its manufacture, if not its invention. He eventually claimed the invention as his own and later models of the projector bore his name as inventor on each casting.”

Page 159

This was my knowledge as to the origins of the Bioscope. Turn to the next page for more information.

The Bioscope – American or English

Mr. Robert Doran has been kind enough to direct me to that monumental work *A Million and one Nights* written by Terry Ramsaye in 1926 which I believe clarifies and establishes the American origin of Urban's Bioscope. Let me quote directly from that book.

“In New York Urban looked up Walter Isaacs, an acquaintance of phonograph days, and arranged with him to make in his New York shop a number of the new hand-driven projectors, to be known as the Urban Bioscope.”

Back in Detroit Urban cut loose from the Michigan Electric Company and turned to selling the Bioscope. This machine was in all probability the first of its type, which soon became widely distributed. The Bioscope went as fast as they could be delivered. This machine offered the possibility of taking the new motion picture out into the small towns and lumber camps. Dozens of lecturers went out equipped with Bioscopes and a stock of Edison films, which Urban continued to handle.

“The successful salesmanship of Urban and his rapid orders for film led Maguire and Baucus to call him into New York and offer him the management of their London office.”

Page 363

Ramsaye goes on to say that because of Anti-American propaganda in London Urban changed the name of the company to *Warwick Trading Company* a “very English name”

The Story does not end here. On December 7, 1897 Thomas Edison filed suit against a plethora of individuals & firms charging them with infringement on his motion picture patent. Again a direct quote from Ramsaye's book:

“...on March 22, (1897) it was considered time to stop the activities of Walter S. Isaacs of New York, phonograph mechanic, who had made Urban's portable Bioscope and was now making machines for anybody.”

Page 382

The Bioscope – American or English

These comments of Ramsaye and Barnes open many questions that perhaps someone reading this small paper may possibly hold the answers in some obscure and rare catalog of the period or other documents or even examples of the Urban-Isaacs projectors built for “anybody”.

Since it appears self evident that Edison felt threatened by the Isaacs Bioscopes why are they never included in lists and collection of American projectors. When it is stated that the Bioscope became widely distributed even before Charles Urban went to England, what numerically, does “widely distributed” mean, in what numbers was this machine made, and did all of Isaacs projectors look the same as the Bioscope projector in this paper, or where the projectors made for “anybody” look different as not to conflict with any agreement he may have made with Urban. And of course the most tantalizing question of all, why are these machines not found in America. It is also interesting to note that Charles Urban later on claimed the Bioscope as having been invented by him. Was Isaacs still alive when Urban made this claim?

Much research remains to be done on the Urban-Isaacs Bioscope and the Bioscopes made for “anybody”. As a matter of fact much work remains to be done on all early movie projectors.

Charles Musser, in *The Emergence of the Cinema*, page 168 states:

“Charles Urban, who had a phonograph parlor in Detroit and later toured the Midwest with a projector, had Walter Isaacs manufacture a modified Lumiere Cinematographe and then sold it as a bioscope.”

No source for this information is given. I do not think this is the projector sent to England as the Lumieres had filed for a British patent in April 1895.

The Bioscope – American or English

Well I finally had figured it all out. A little work, a little research and all falls into place. Charles Urban got together with Walter Isaacs and they produced my Bioscope, presented in this paper. Charles Urban took *this* Bioscope to England and the rest is history, or so I thought.

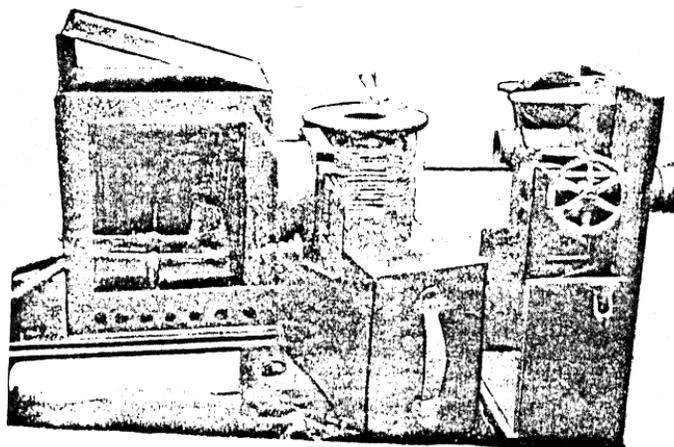
I called the Dean of all projector collectors, Carey Williams and propounded my proposition and proudly cited the sources. I felt a great deal of hesitation in Carey's voice "he had" he said "a photocopy of a Charles Urban bioscope of 1897 built in New York City by Walter Isaac" and would send me a copy. I anxiously awaited, it finally arrived. It is presented in the next page, but is unfortunately of very poor quality.

The source of this photocopy is from the Ray Bryan collection of several loose-leaf binders full of information on movie projectors. Ray Bryan died in the 1960's and donated his collection to the Projectionist Union, which in turn donated to the American Image museum located in Astoria New York.

It is obvious that the projector in this paper and the projector in the photocopy are two entirely different projectors. So back I went to the drawing board no longer with a clear-cut solution but with questions and some hypothesis. Here is my thinking.

ONE: The 1897 Urban-Warwick projector has a certain English look to it, so therefore, it cannot be American. Maybe so but is it possible that this "American" projector set the standard as to what an English projector should look like. After re-examining Barnes first two volumes I could not find any English projectors that had the "Bioscope look" other than the Prestwich No. 1 model which was for amateur use.

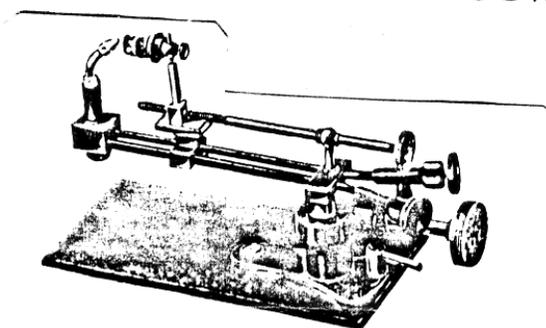
The Bioscope – Walter Isaacs



CHARLES URBAN'S
"BIOSCOPE"
of 1897

PLYTON

BUILT IN N.Y.C. BY WALTER ISSAC



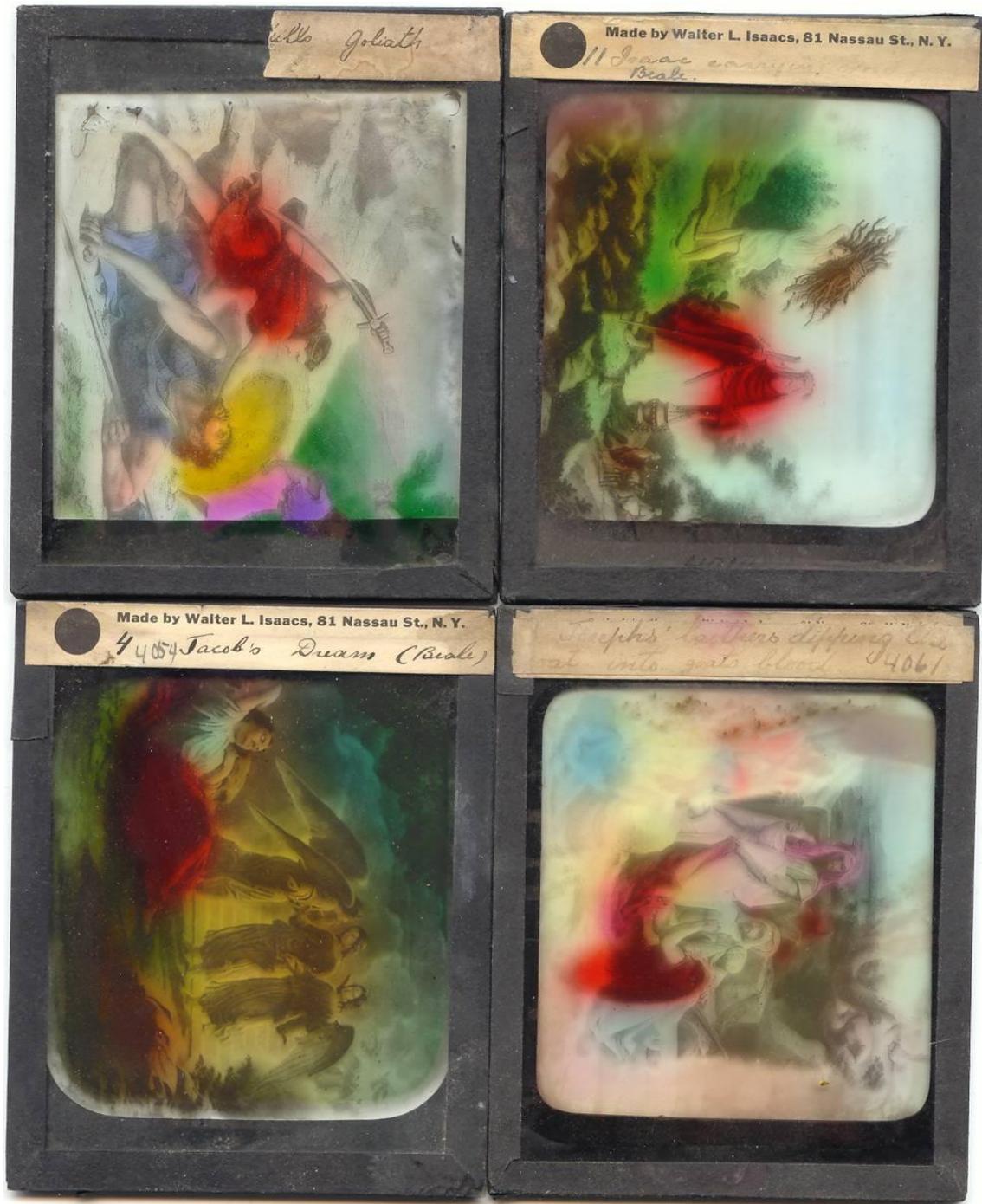
R.R.L.

URBAN FIRST USED THE LIME-PIN BURNER
IN A MOTION PICTURE PROJECTOR

This machine looks more like a copy of the Edison Kinetoscope and is probably the reason Edison included Isaacs in his lawsuit. I think that Isaacs made two machines, the one pictured above and the Bioscope discussed in this paper.

Source: Ray Bryan Binders located at the *American Image museum* located in Astoria New York. (Photocopy from Carey Williams)

The Bioscope – Walter Isaacs



Slides made by Walter Isaacs Collection Soterios Gardiakos

The Bioscope – American or English

TWO: In late 1896 or early 1897 Walter Isaac and Charles Urban got together and planned the Bioscope. Urban placed an initial order for 50 machines, using the Demeny beater movement. Unfortunately I do not have available the machine in the photocopy to know what kind of movement was used. Is it possible that Isaac made the Urban Bioscope as in my collection and then went on to make more projectors to sell to “anybody” but had to be different than those he made for Urban. Keep in mind that Charles Urban was a very sharp businessman and that he would surely had a written agreement with Isaac restricting the manufacture of the Urban Warwick projector.

THREE: Sometime in the summer of 1897 Charles Urban signed up with Maguire & Baucus and by the end of August he is in England. It seems unlikely that Charles Urban started work with English manufacturers at this time and by September 2, 1897 (date in which the bioscope projector first appeared in *The Optician* magazine) had an operating projector; the time frame is too short. We know that Bioscope projectors had already arrived in England before him and the staff there could not make them work and were anxiously awaiting Charles Urban’s arrival to show them how to properly operate these American made projectors.

FOUR: In a letter from John Barnes dated 30 August 2002 he writes **“There can be little doubt that the example you have is one of the first American models.”**

Bioscope Projector

(Made by Walter Isaacs for Charles Urban)
Type one (L bottom casting)

Complete Spoolbank machines Known: None

Projector Heads Known:

1) Soterios Gardiakos, Aurora, IL, U.S.A.

English made Bioscope (?)

Type two (upside T bottom casting)

Projector Heads Known:

1) Cinematheque Francaise Musee du Cinema, Paris, France.

BIOSCOPE



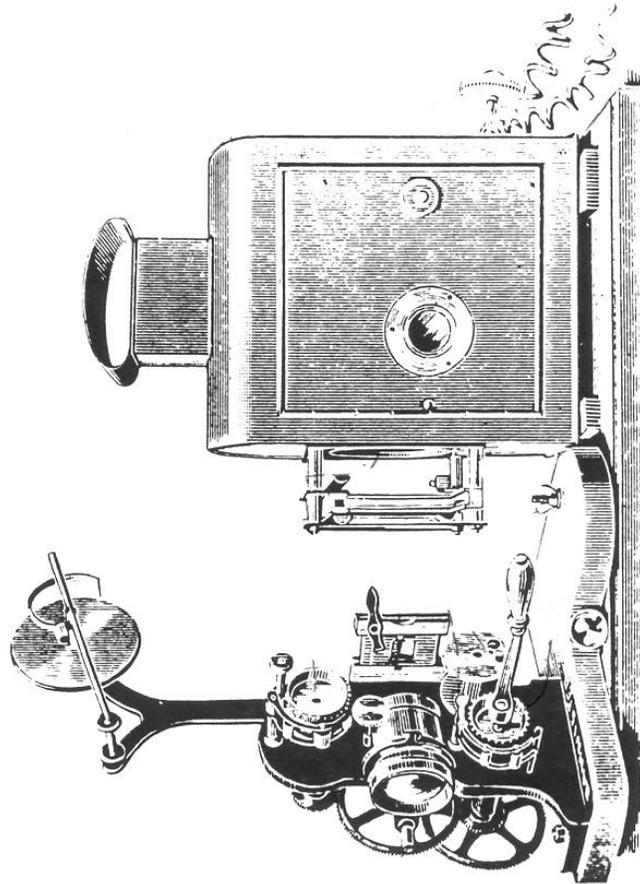
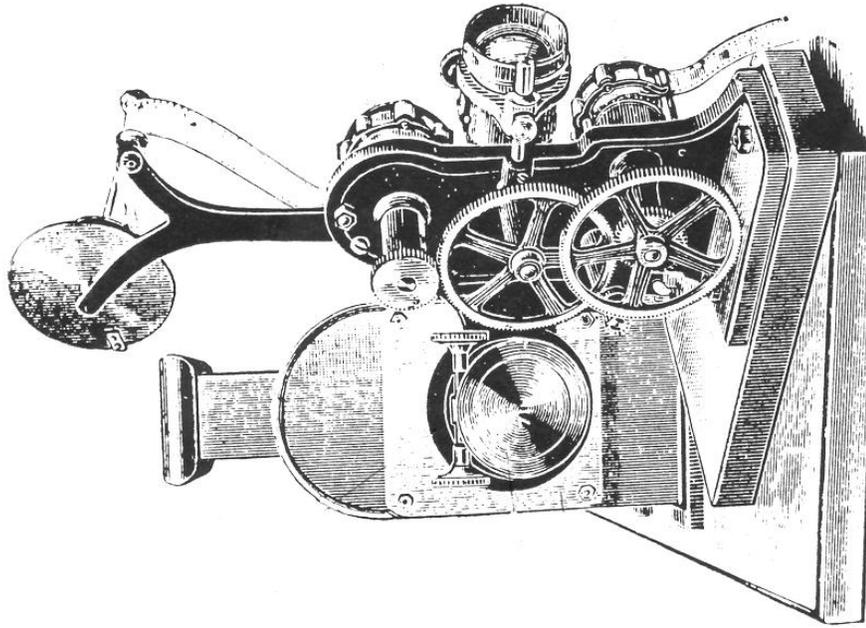
This is how the bioscope projector looked like when I bought it.

The shutter arm is obviously not the original part. It was clearly added later. The manufacturer may have sent it out or it may have been sold as an after market attachment. The stereopticon attachment may or may not have been original equipment. In the early line drawings no such attachment is shown. It is known that in 1898 Cecil Hepworth added a shutter to this Bioscope to eliminate the *rain effect* that was present without said shutter.

BIOSCOPE

All the parts I have made are easily removable so that this projector can be returned to its original state as purchased or if original parts are ever found they can be used to replace what I have made. No holes or any other machining has been done on this machine so as to maintain its Integrity. The parts made are based on line drawings of the period, with the exception of the shutter in which the 1900 Warwick projector shutter was used as a guide. I have no photographs of the Hepworth shutter.

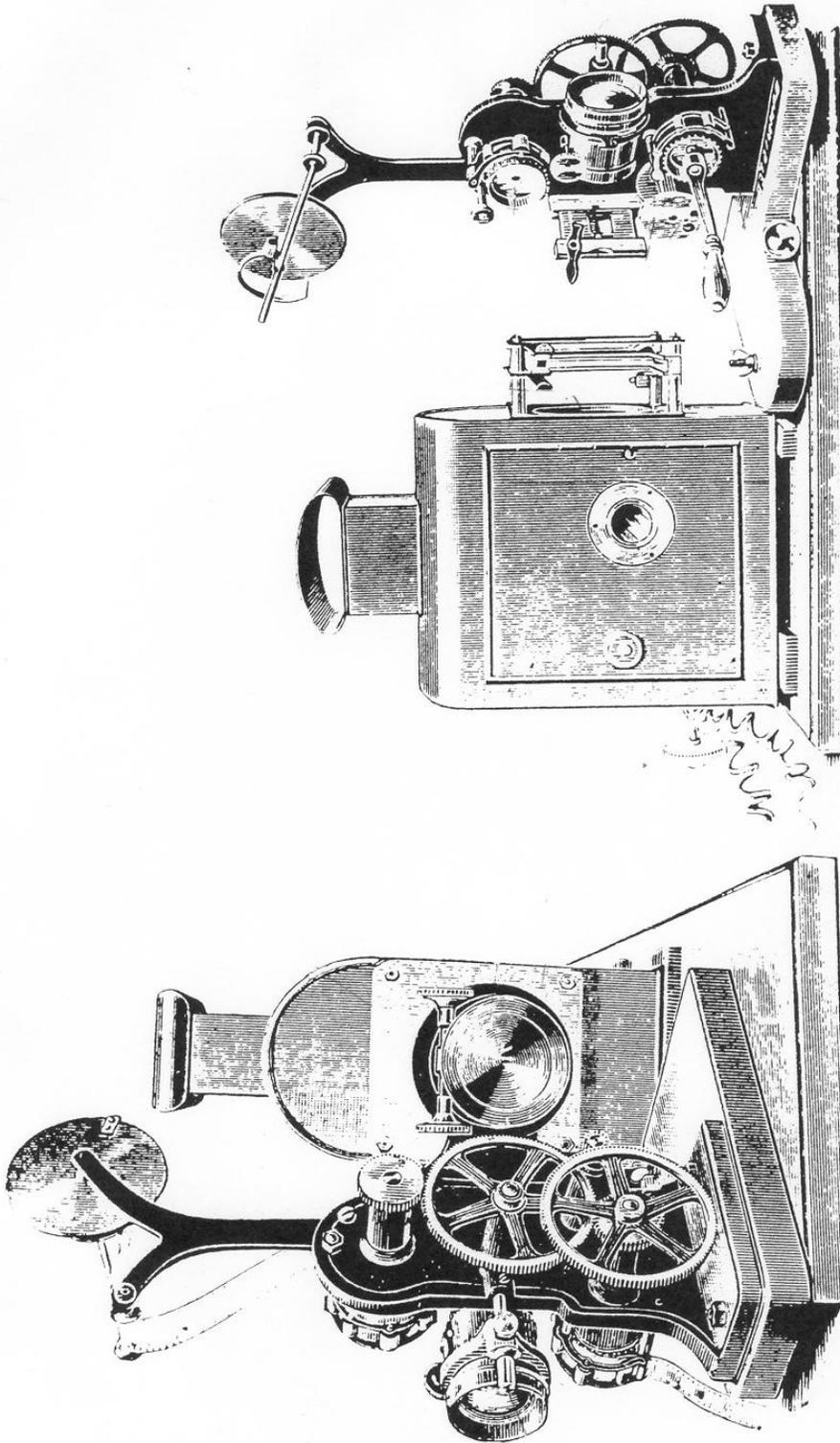
BIOSCOPE



82 The Bioscope 35mm Film Projector (1st model) Introduced into Gt Britain in 1897 by Maguire & Baucus Ltd (*Barnes Museum of Cinematography*)

Courtesy Robert W. Gutteridge
The Optician Vol. 13, 1897, p. 422

BIOSCOPE



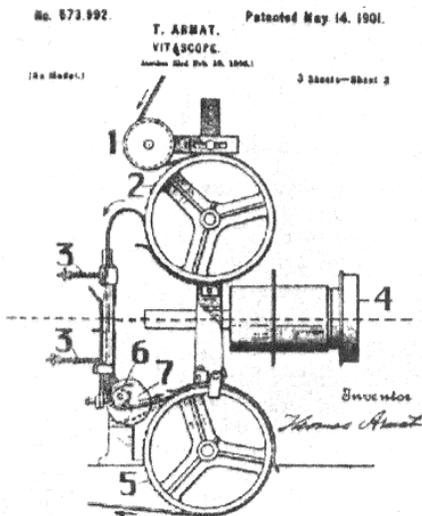
The same plate from Gutteridge (reversed) which I think is the correct view and matches my projector.

Courtesy Robert W. Gutteridge
The Optician Vol. 13, 1897, p. 422
Courtesy Robert W. Gutteridge
The Optician Vol. 13, 1897, p. 422

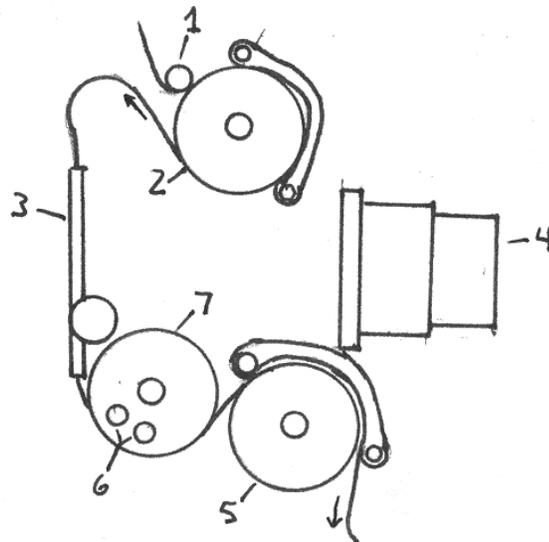
Vitascope and Bioscope Similarities

If we accept that the Warwick Bioscope was made in America we must then search for its roots. Since the Bioscope appeared in London in August or September of 1897 we must look to see what American projectors were then current and in use in America that most closely resemble the operation of the Warwick Bioscope, the granddaddy of all moving picture Bioscopes. The one I believe more closely fits this criteria is the Vitascope. See the similarities below.

- 1) Beater movement operation
- 2) No shutter in either machine
- 3) Gate and frame mechanism needs to be compared.



The Vitascope



The Bioscope

Invented by C. Urban. N.Y.

The KING OF CINEMATOGRAPHS.



CAMERAS & PROJECTORS

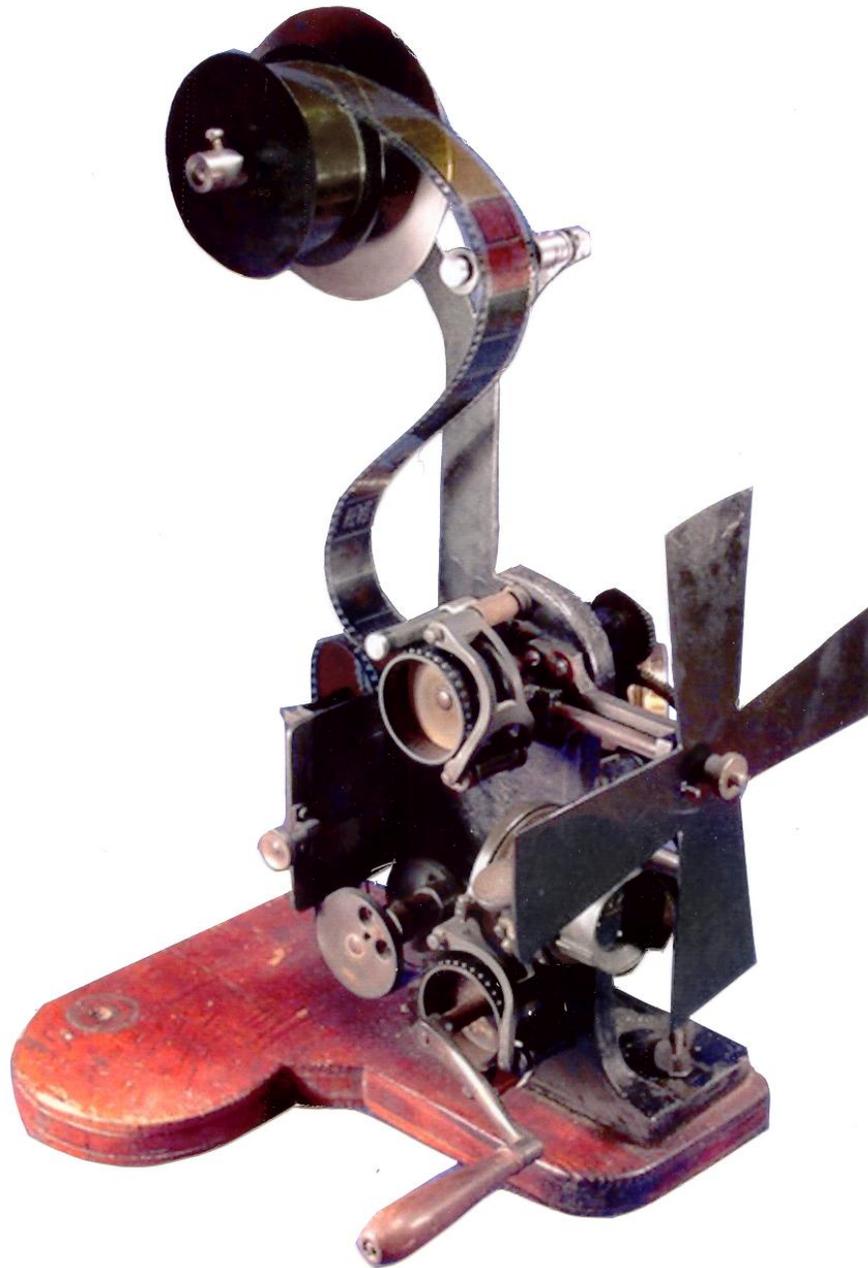
Recently I was fortunate in acquiring a copy of Henry V. Hopwood's *Living Pictures – Their History, Photo-Production and Practical Working*, published in London in 1899. In the advertising section of the book there is a *Warwick Trading Company* ad which features the logo illustrated above, indicating Charles C. Urban as the inventor, and New York as the place of the invention and therefore the origin of the Bioscope. Charles Urban's role in the invention must have been significant as there are no known challenges to his claim of been the inventor of the Bioscope. It is possible that Charles Urban may have been more inventive than is generally believed and quite possibly a reappraisal may be due on this pioneers contributions to the development of cinema.

Conclusion

When all the evidence is weighed I believe only one conclusion can be reached and that is that **the Bioscope illustrated in this paper was made in New York City.** Further that Charles Urban played a significant role in its design and it was made by Walter Isaacs. I think it was probably originally made for the U.S. market but as Charles urban relocated to London he took this machine with him. It may in fact have been this projector that clinched his new job with Baucus & Maguire Ltd. I think this was the earliest Bioscope as the shutter mechanism seems to have been added at a later time rather than been an original factory installation.

If I have seemed to be of two minds it is because I have tried to be as objective as I can possibly be. It is a known fact that when one possesses an object his view of it is altered. I have seen this many times with a collector's wishful thinking that their "thing" is something more than it actually is. A good example of how reality can be altered is in medical tests, the inventor of some new medicine cannot really objectively test his own medication so therefore a double blind procedure is set up to fully evaluate the new medicine. I have therefore tried to do this with the Bioscope illustrated here, and hope that I have succeeded to this end. If my conclusion does not agree with the readers' conclusion I would very much like to hear from you and the reason for your differing opinion. I am not dogmatic in my conclusion. I have no academic reputation to uphold so that I am fully open to changing my conclusion should the facts so dictate.

BIOSCOPE



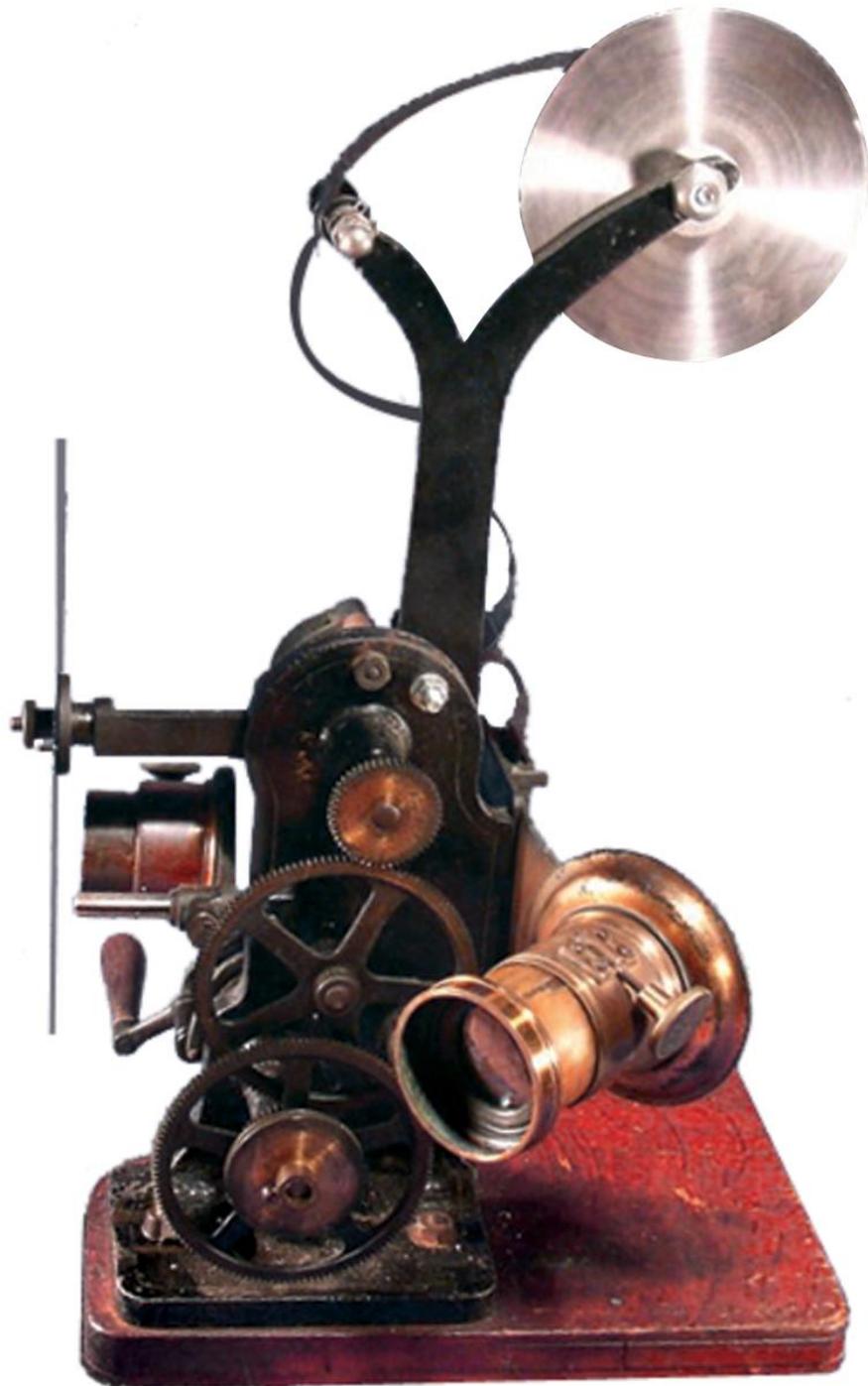
Collection Soterios Gardiakos
Photo: Katerina Nike Gardiakos

BIOSCOPE



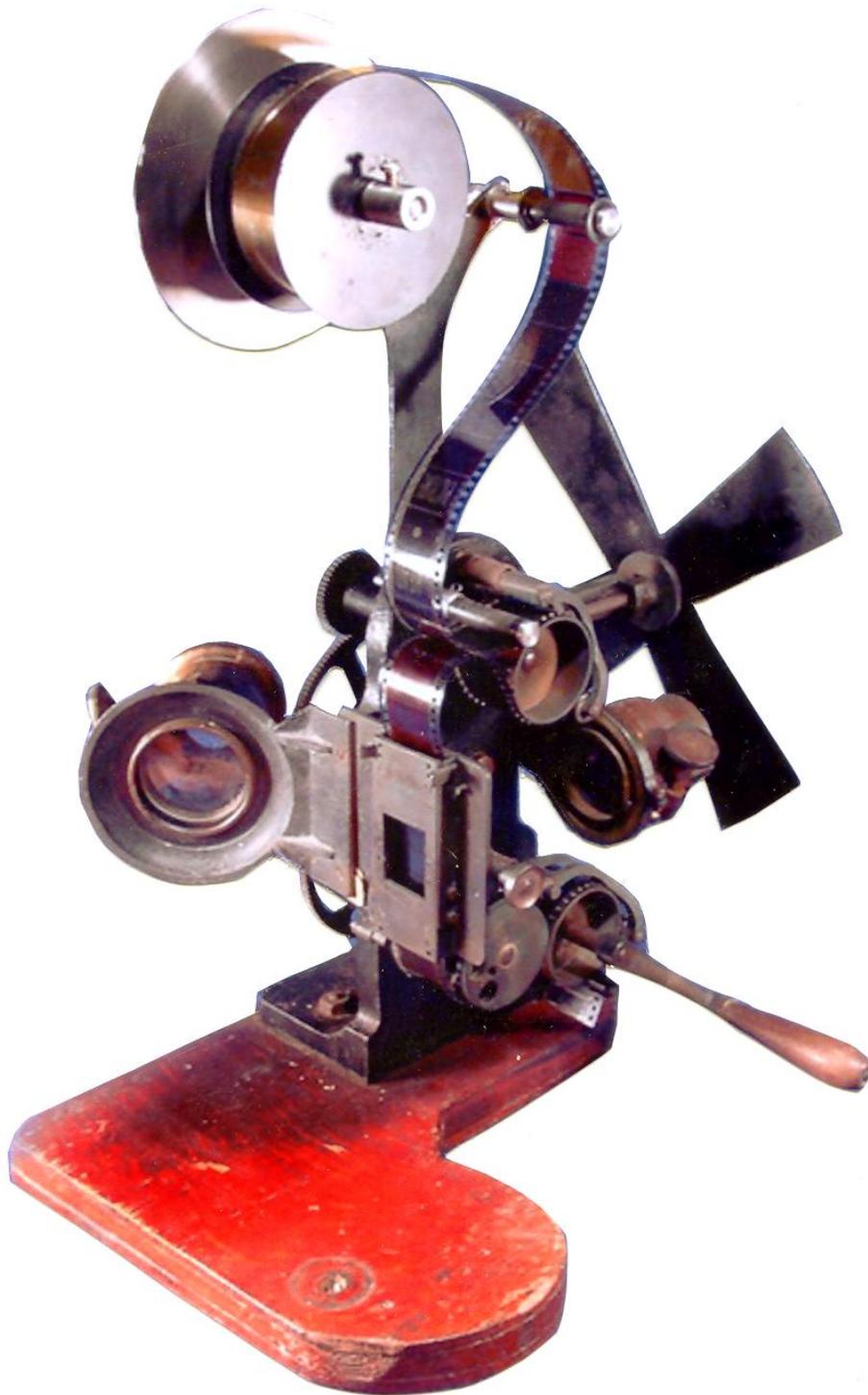
Collection Soterios Gardiakos
Photo: Katerina Nike Gardiakos

BIOSCOPE



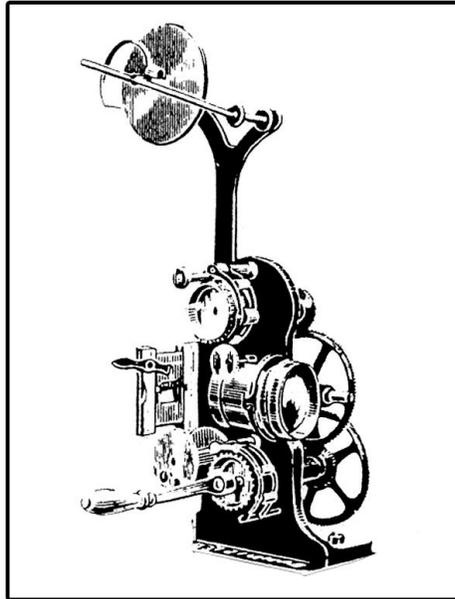
Collection Soterios Gardiakos
Photo: Katerina Nike Gardiakos

BIOSCOPE

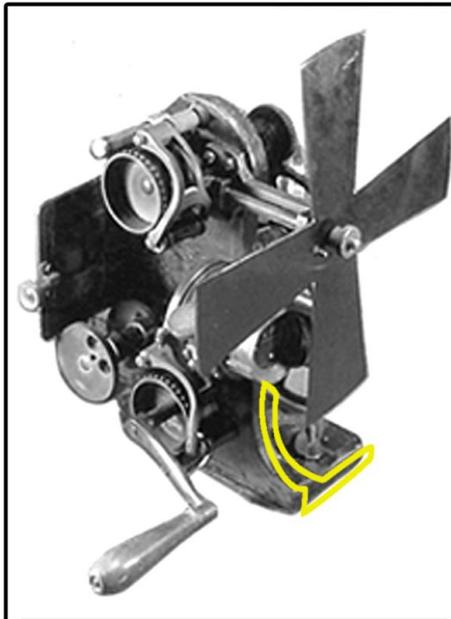


Collection Soterios Gardiakos
Photo: Katerina Nike Gardiakos

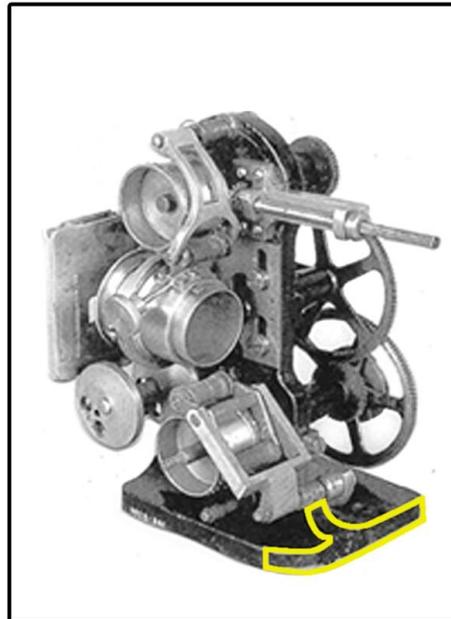
BIOSCOPE



1897 Maguire & Baucus Ltd. Catalog

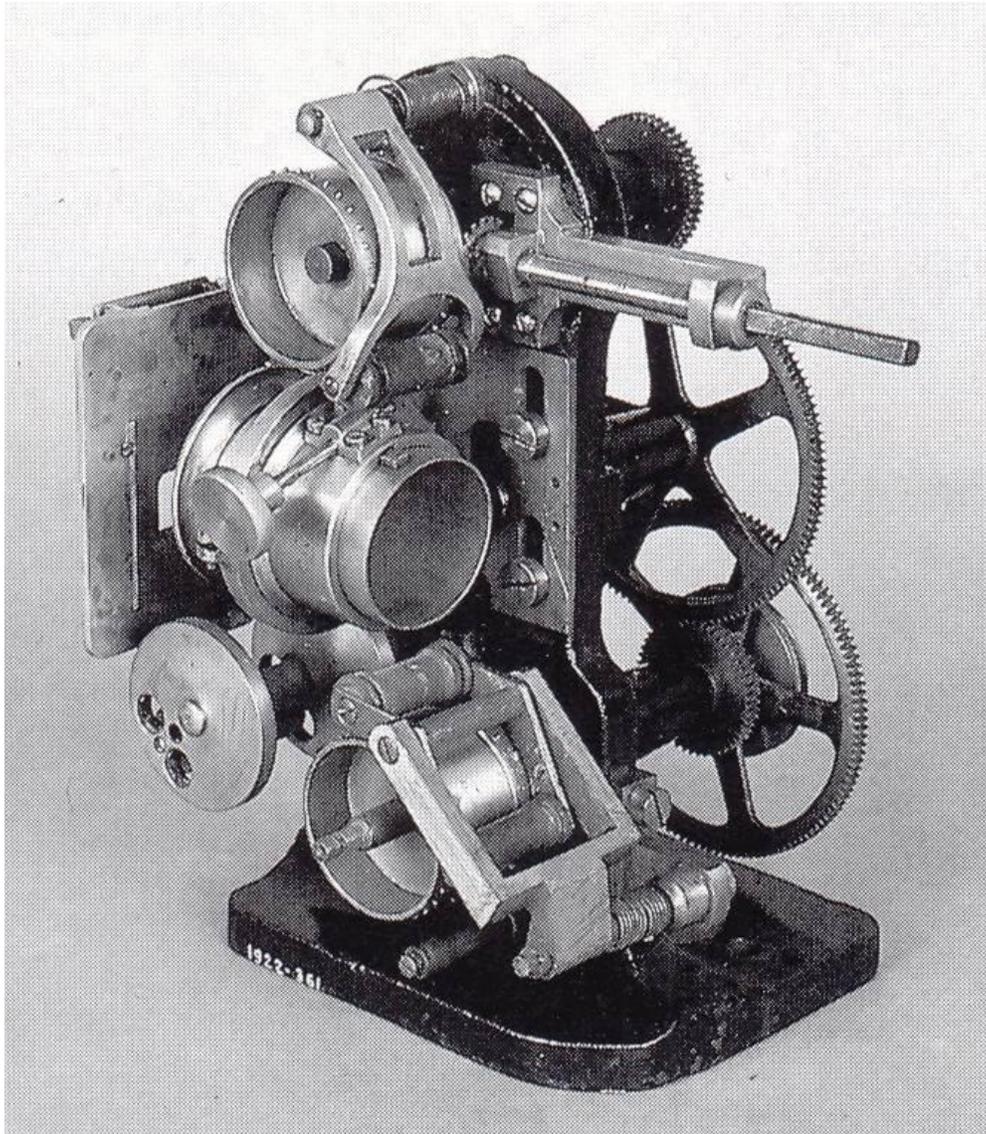


L BASE
Type One American Made/ Bioscope
Made by Walter Isaacs



T BASE
Type Two English Made Bioscope
Made by Prestwich

BIOSCOPE



English made (?) Bioscope. Note difference in base which is wider than previous model and does not match the type illustrated in *The Optician*.

Collection Cinematheque Francaise Musee du Cinema, Paris, France.

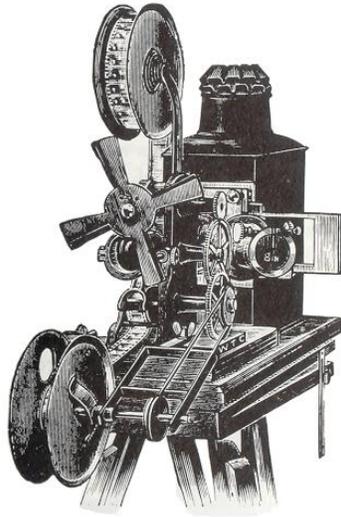
Some Later

URBAN BIOSCOPES

And

URBAN'S KINEMACOLOR PROJECTOR

BIOSCOPE



Bioscope model C
Warwick cinematographic equipment advertised in *Photograms*
Of the year 1899 (October 1899)

John Barnes, *the Beginnings of the Cinema in England 1894-1901*, Volume 4, Exeter 1996. Page 171

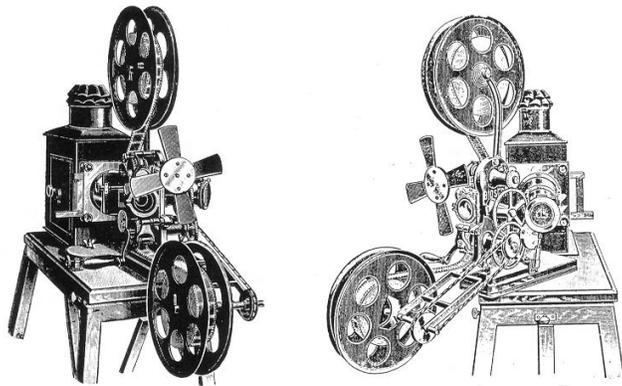
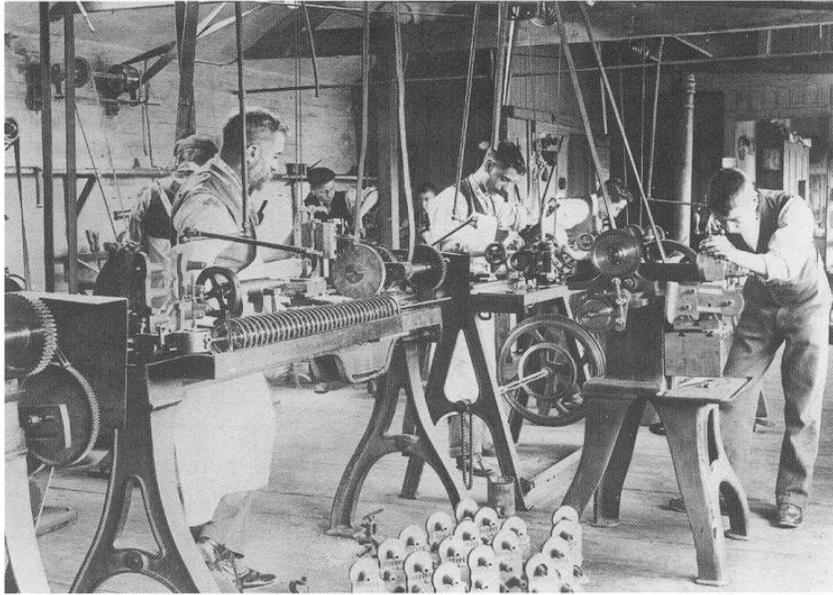


Plate 64 The Warwick Bioscope 35 mm Projector (Model E). Note the enlarged film spools in this 1900 version (*Barnes Collection*)

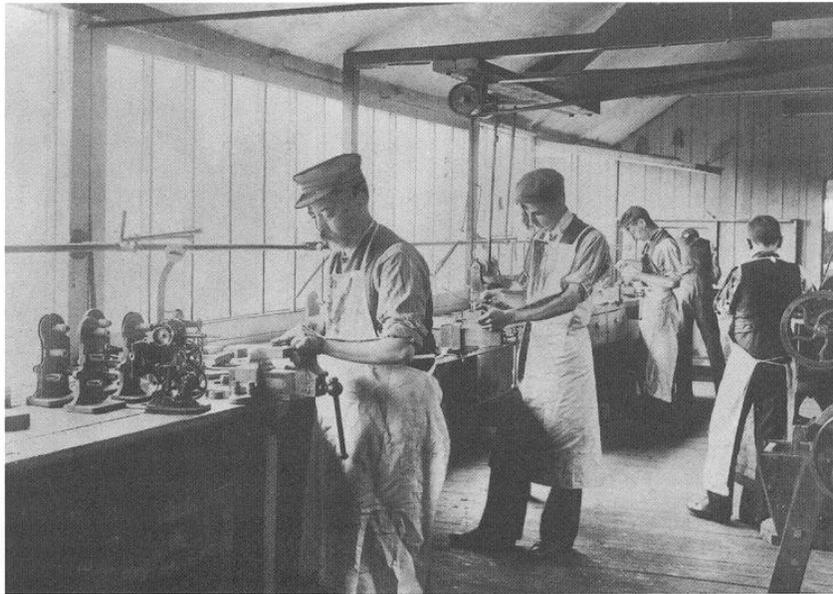
Bioscope Model E

John Barnes, *The Beginnings of the Cinema in England 1894-1901*, Volume 5, Exeter 1997, page 90.

BIOSCOPE



(a)



(b)

Plate 65 Assembling Warwick Bioscope Projectors at Prestwich's Lansdowne Works at Tottenham
(*Science Museum, London*)

John Barnes, the Beginnings of the Cinema in England 1894-1901, Volume 5, Exeter 1997, page 91.

BIOSCOPE

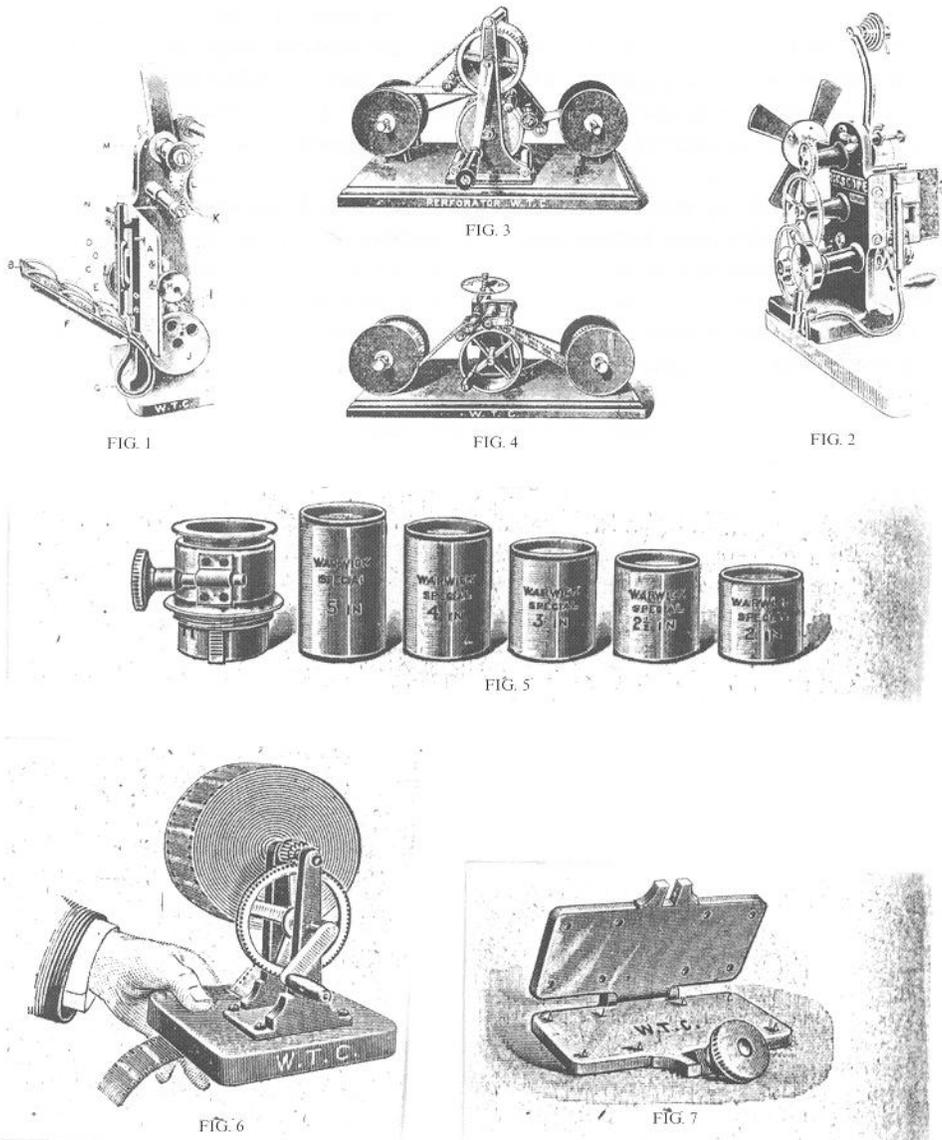
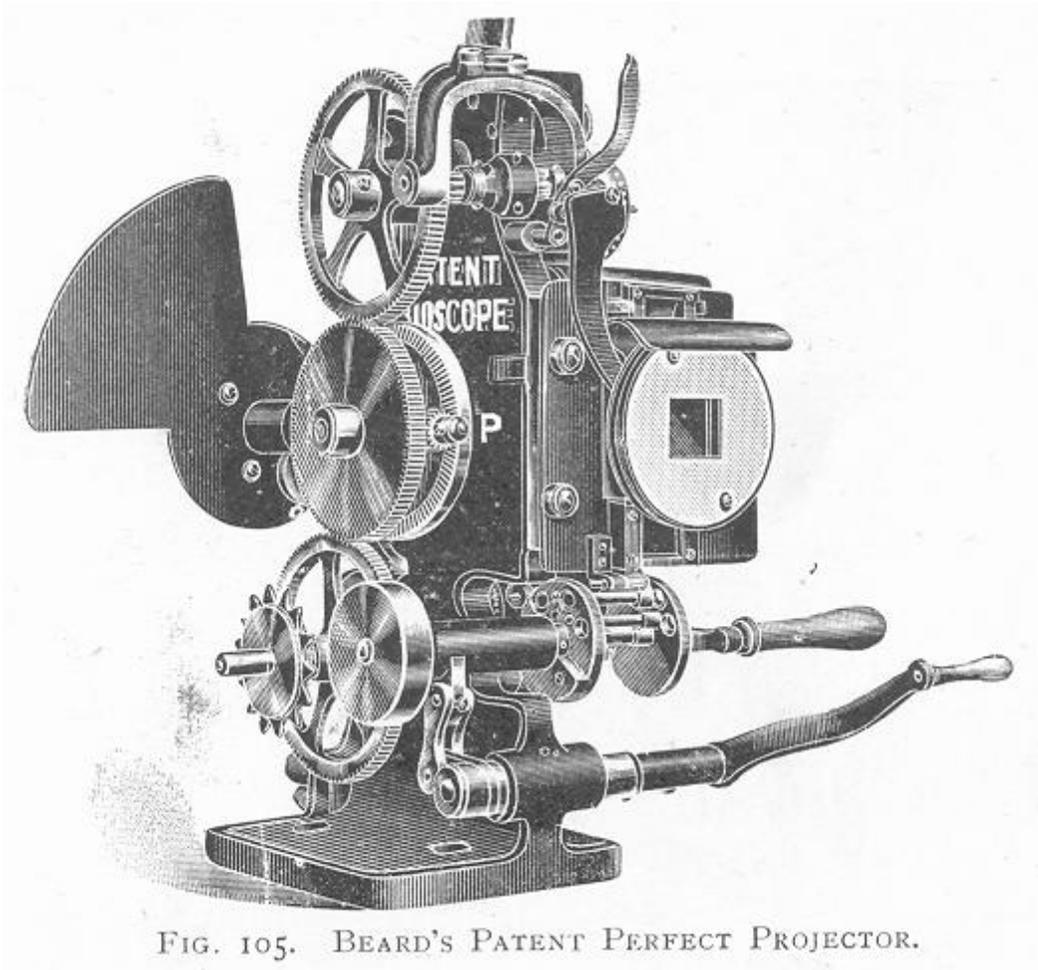


Plate 67 Warwick cinematographic accessories (1900). (1) Improved film-gate for Bioscope projectors; fine steel springs replace the former velvet pressure pads (2) Pneumatic automatic light cut-off (3) Rotary film perforator (4) Film measuring machine (5) Rack and pinion lens tube and lenses (6) Film winder (7) Film splicer (*Barnes Collection*)

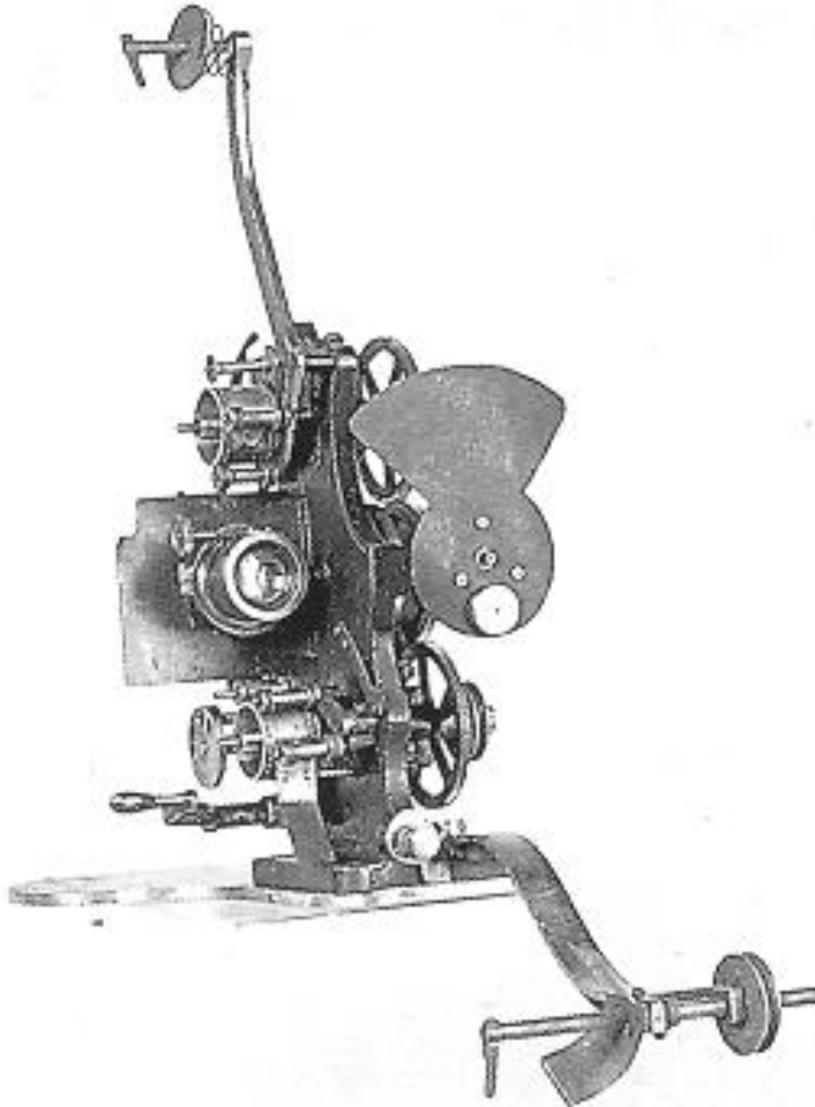
John Barnes, *the Beginnings of the Cinema in England 1894-1901*, Volume 5, Exeter 1997, page 93.

BIOSCOPE



Patent Bioscope made by Beard for Warwick Trading Co.?
Colin N. Bennett, *The Handbook of Kinematography*, London
1913, page 131

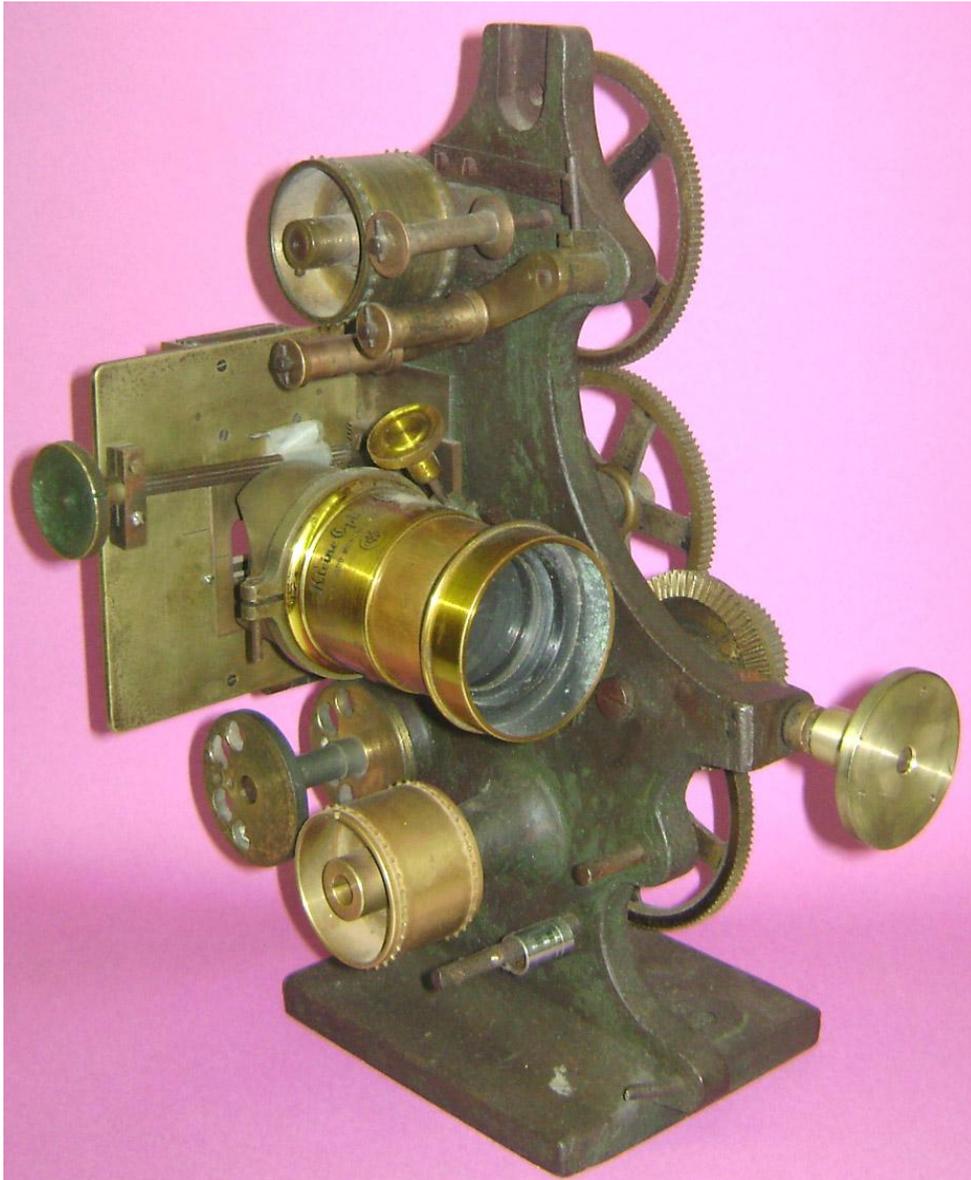
BIOSCOPE



Patent Bioscope Made by Beard, no model type stated in Mannoni catalog.

Laurent Mannoni, *Le Mouvement Continue*, Paris 1996, page 382, cat. No. 1289. Serial number 29

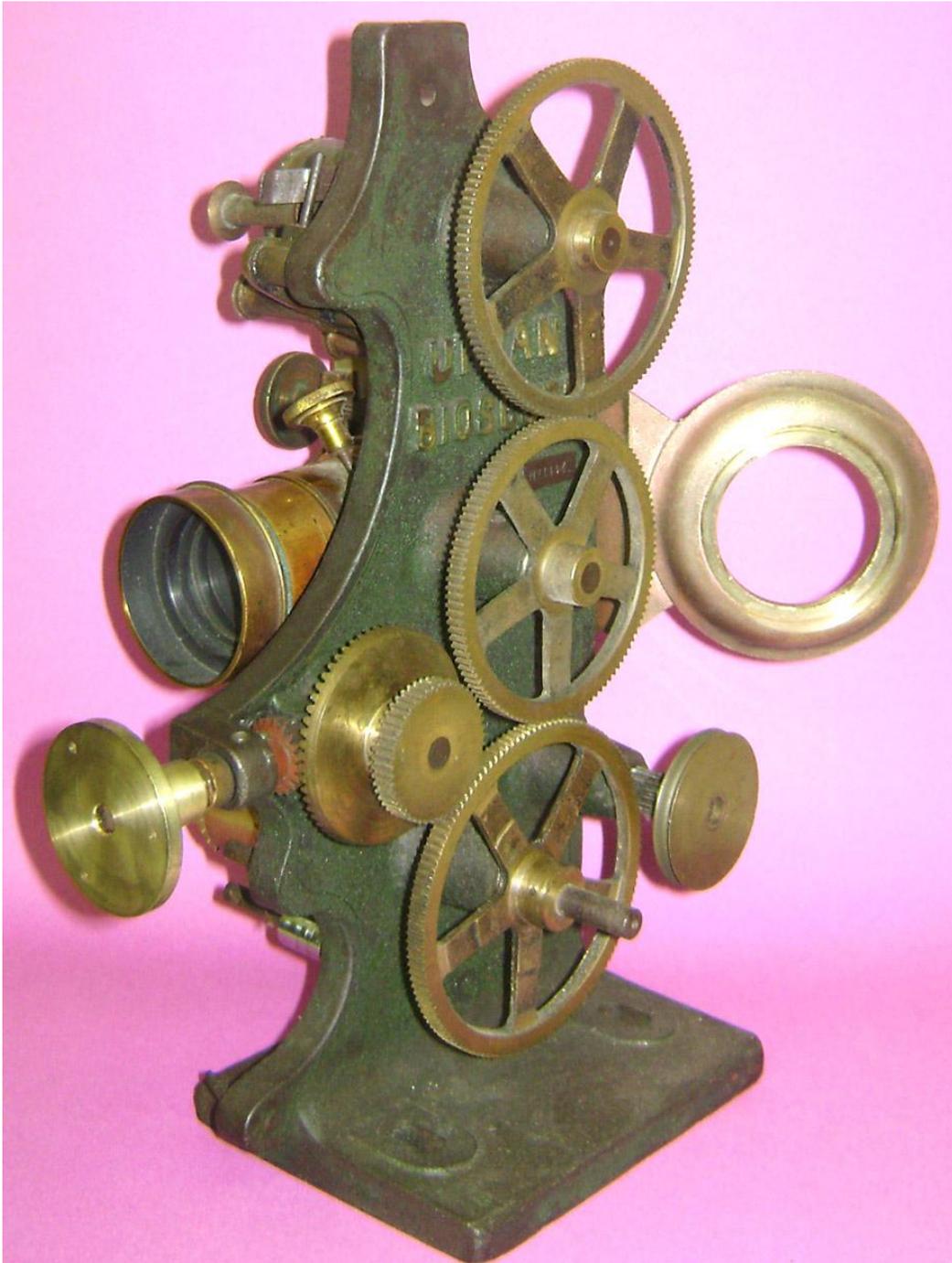
BIOSCOPE



This Bioscope was made by Charles Urban after he left the Warwick Trading company to found his own company. With a serial number of 1142, assuming that the starting number was 1001 would make this a very early 1900's projector. I have in my possession a copy of a 1906 catalog in which this particular projector is illustrated. It is possible that they were made prior to 1906, but certainly this particular projector was made in 1906 or earlier.

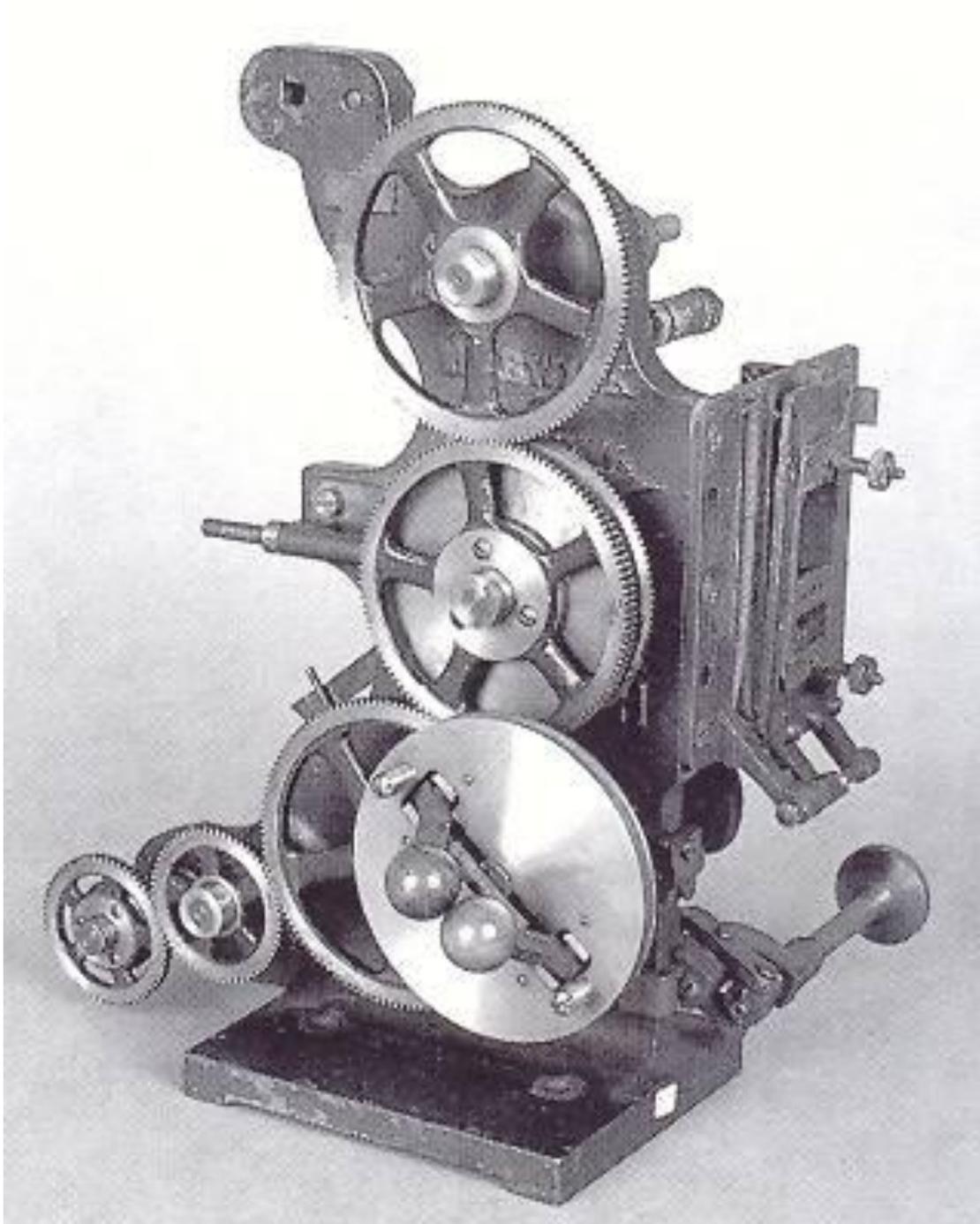
Collection Soterios Gardiakos

BIOSCOPE



See previous page for comments, Lantern lens attachment is a bronze reproduction made from the American made Bioscope in the author's collection.
Collection Soterios Gardiakos

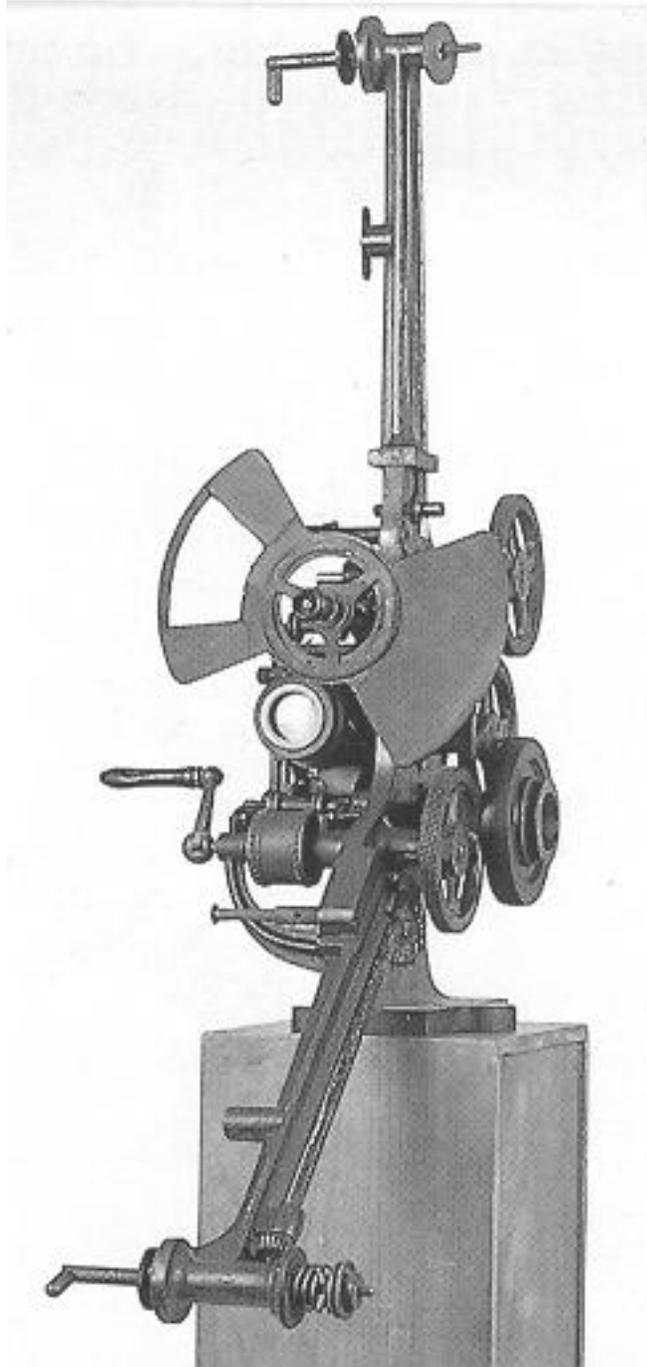
BIOSCOPE



Bioscope model H made by beard

Laurent Mannoni, *Le Mouvement Continue*, Paris 1996, Page 384, cat. No. 1297

BIOSCOPE



Bioscope Model H made by Beard
Laurent Mannoni, *Le Mouvement Continué*, Paris 1996, page
388, catalog No. 1312

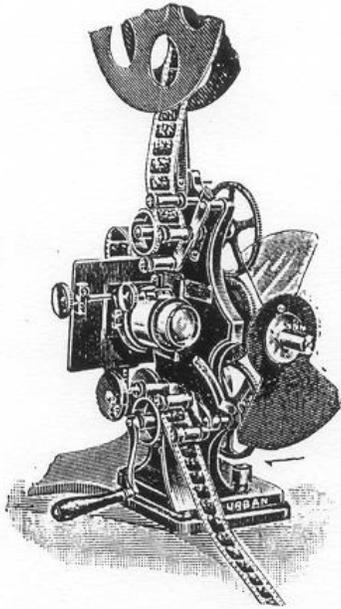
BIOSCOPE

THE "URBAN" BIOSCOPE. MODEL "H."

(PATENTED.)
(MECHANISM ONLY).

FITTED with one Cylindrical Objective (any focus) and Brass Mount (for interchangeable lenses) with Rack and Pinion Adjustment.

Fully protected under Demeny Patent,
No. 24,457.



Price (with 1 Lens (any focus) and Mount) **£17**

Code Word: "BIODOT."

Price (without Lens and Mount) **£16**

Code Word: "BIODONT."

NOTE.—This is the same type mechanism as used by the ALHAMBRA, PALACE, HIPPODROME, COLISEUM, LONDON, and by the principal Theatres and Halls IN THE PROVINCES, COLONIES, and CONTINENTAL EUROPE, including 20 MOSS-STOLL EMPIRE THEATRES, WEST'S "OUR NAVY," &c., &c.

The Frame and Bearings are solid steel castings, finished in green enamel and gold striping. The shafts are stub steel; the gear and sprockets, film holder, eccentric and lens supports of highly finished hard brass and bell metal, all accurately cut.

The Shutter is adjustable to the use of any focus objective and is equipped with the translucent violet blade which eliminates all flicker.

The Objective furnished herewith is an Urban Special Cylinder Lens, with brass lens mount, to fit any focus.

Fitted with extra interchangeable film trap Spring Plate and extra set of six springs.

The Upper Film Reel Support with tube and disc for use with single films (if so desired).

All metal parts are highly burnished, and the entire machine is of handsome and business-like appearance.

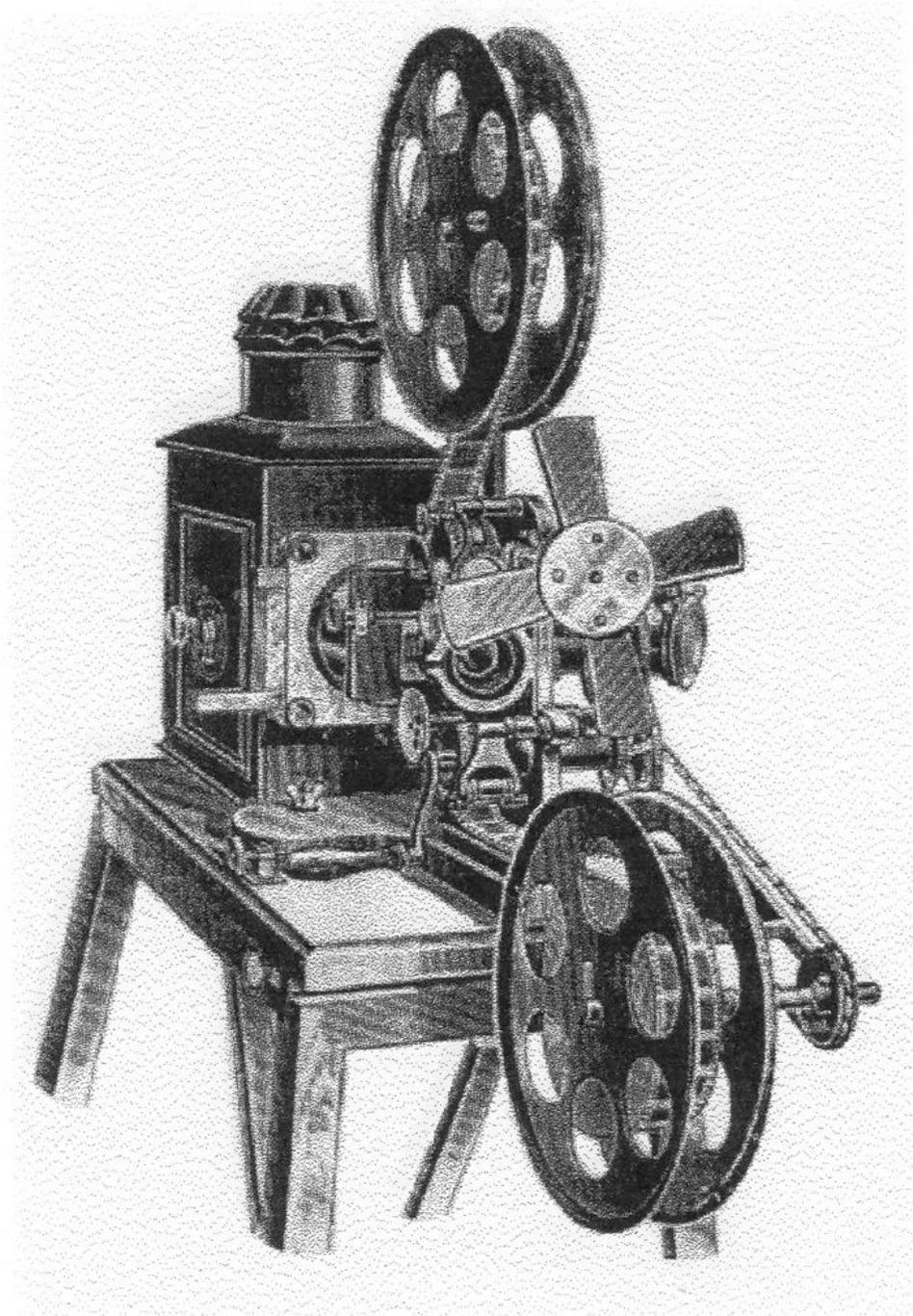
Metal-Asbestos backed Cooling Plate attached to back of Film trap, absorbs all heat from lanterns and keeps Film-trap cool.

Every "Urban" Machine is guaranteed. All the parts are most carefully made, accurately finished, and scientifically constructed.

As the success of the resulting pictures depends solely and entirely on the accuracy of the mechanism, it is very obvious that to obtain the best and most perfect results, the most accurate instrument is essential.

Source 1906 The Charles Urban Trading Co., Ltd., catalog
Courtesy Carey Williams

BIOSCOPE



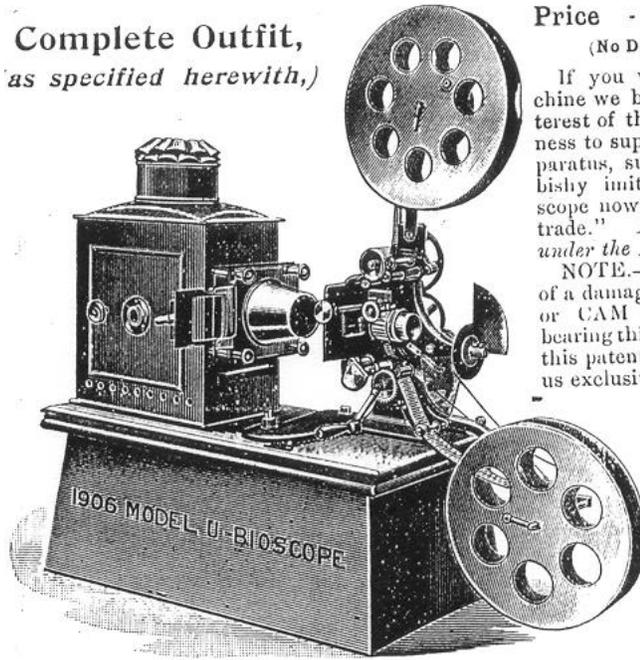
Bioscope projector c.1900

Courtesy Luke McKernan

BIOSCOPE

1906 MODEL "U" BIOSCOPE OUTFIT.

Complete Outfit,
(as specified herewith,)



Price - £15. Net to Everybody-
(No Discount to the Trade)

If you want a cheap-priced machine we believe it to be in the interest of the Film Exhibition Business to supply you with a good apparatus, superior to the many rubbishy imitations of the Urban Bioscope now offered by many "in the trade." *Every machine is licensed under the Demeny patent.*

NOTE.—You are running a risk of a damage claim by using a DOG or CAM Movement Machine not bearing this licence, the licence under this patent having been acquired by us exclusively.

We now offer you a safe and high-class Bioscope Outfit, at a price our competitors cannot touch.

The Outfit comprises: The "U" Model Bioscope Mechanism (black enamel) built on the Urban Bioscope Model of best workmanship.

Lens and Rackmount any focus required.

Standard Russian Iron Lantern, best quality.
4-inch Meniscus Condenser in special cell.
Highly Polished Oak Base Board with swivel fitting. Automatic Film re-winding Gear, will take up 2,000 feet film. Two 12-inch Brass Reels. All Metal Slide Carrier, &c., &c., &c.

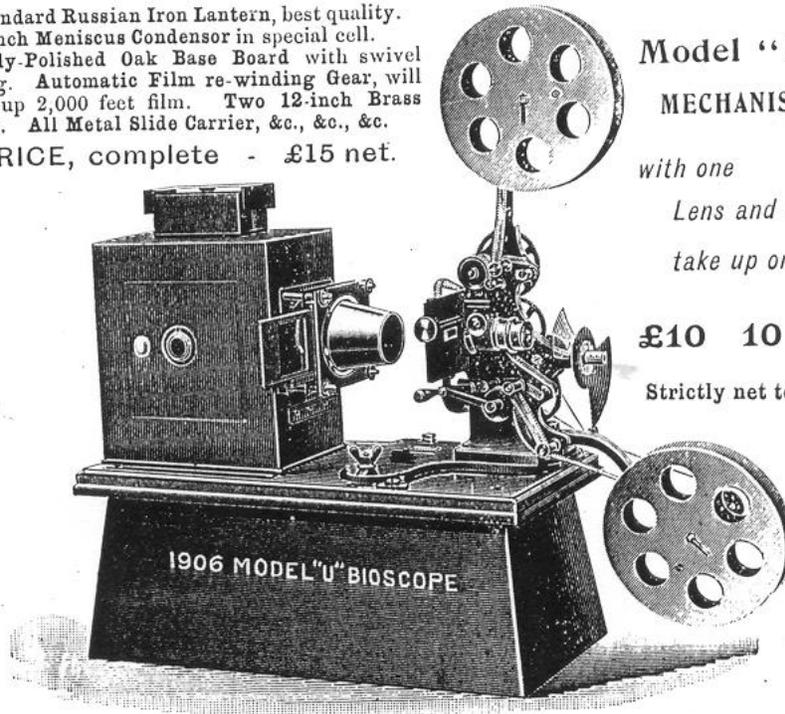
PRICE, complete - £15 net.

Model "U" MECHANISM.

with one
Lens and Film
take up only.

£10 10 0

Strictly net to all.



Source 1906 The Charles Urban Trading Co., Ltd., catalog.
Courtesy Carey Williams.

BIOSCOPE

28

The URBAN "PERFECTION" OUTFIT.

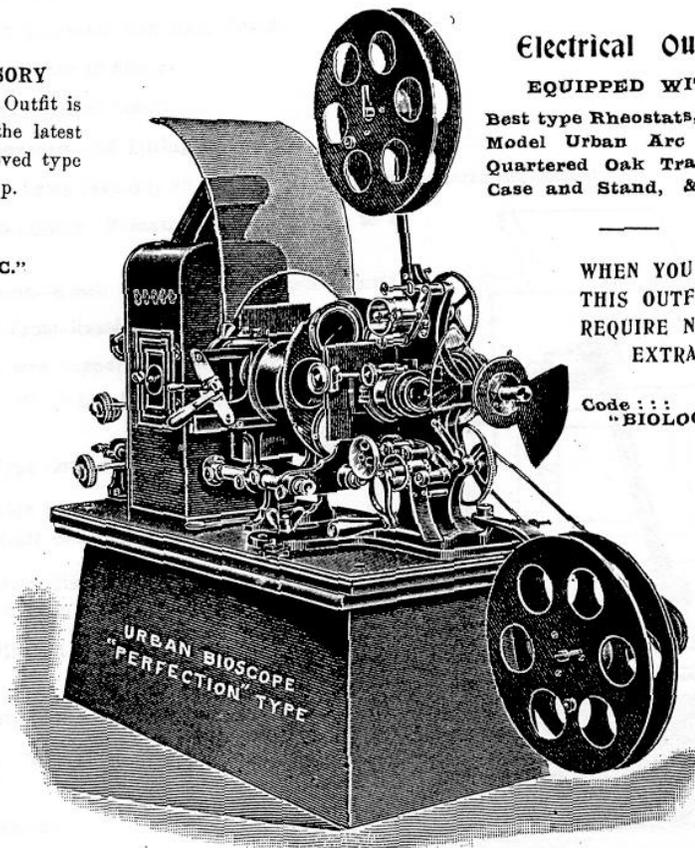
Especially constructed for the Projection of every class
of Picture in any Climate.

EVERY ACCESSORY

Included in this Outfit is
absolutely of the latest
and most approved type
and workmanship.

Code Word,
"BIOLOGIC."

Price,
COMPLETE,
£50.



Electrical Outfit

EQUIPPED WITH

Best type Rheostat, latest
Model Urban Arc Lamp,
Quartered Oak Travelling
Case and Stand, &c., &c.

WHEN YOU BUY .
THIS OUTFIT YOU
REQUIRE NO . . .
EXTRAS.

Code : : :
"BIOLOGIC."

The Lime-Light Equipment.

Adapted for use with Perfection Outfit, consisting of the most powerful Gwyer Jet, and
special Mechanical Tray (Model "C") complete.

PRICE £4 10s.

Source: 1906 and 1910 Charles Urban Trading Co., Ltd.,
Catalog.

Courtesy Carey Williams.

BIOSCOPE

28

The URBAN "PERFECTION" OUTFIT.

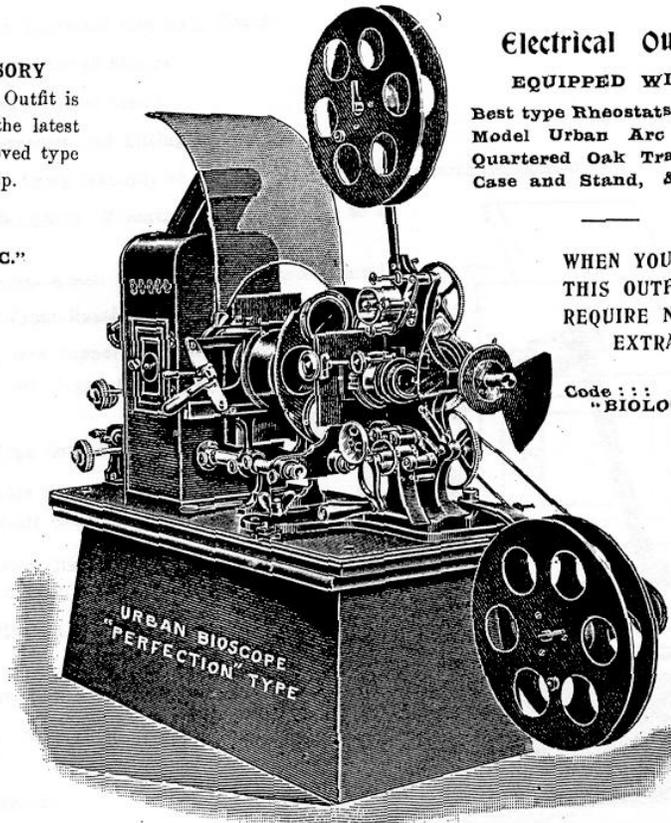
Especially constructed for the Projection of every class
of Picture in any Climate.

EVERY ACCESSORY

Included in this Outfit is
absolutely of the latest
and most approved type
and workmanship.

Code Word,
"BIOLOGIC."

Price,
COMPLETE,
£50.



Electrical Outfit.

EQUIPPED WITH

Best type Rheostats, latest
Model Urban Arc Lamp,
Quartered Oak Travelling
Case and Stand, &c., &c.

WHEN YOU BUY .
THIS OUTFIT YOU
REQUIRE NO . . .
EXTRAS.

Code : : :
"BIOLOGIC."

The Lime-Light Equipment.

Adapted for use with Perfection Outfit, consisting of the most powerful Gwyer Jet, and
special Mechanical Tray (Model "C") complete.

PRICE £4 10s.

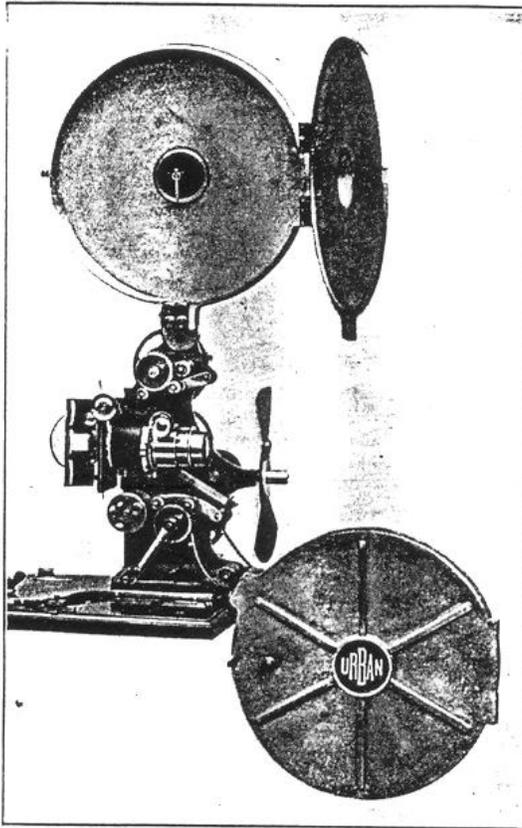
Source: 1906 and 1910 Charles Urban Trading Co., Ltd.,
Catalog.

Courtesy Carey Williams

BIOSCOPE

Urban Bioscope, Latest Model, "K."

For Description, see pages 20—24.



MECHANISM

FITTED WITH THE

**Urban-Joy Patent
Fireproof Gate,**

Take-up Chain,

Chain Tension Clutch,

ONE PAIR (top and bottom)

**Aluminum Fireproof
Boxes,**

complying with the L.C.C.
Regulations,

ONE LENS (any focus)
and MOUNT.

Price, complete = = = £26.

CODE WORD "BIOSAFE."

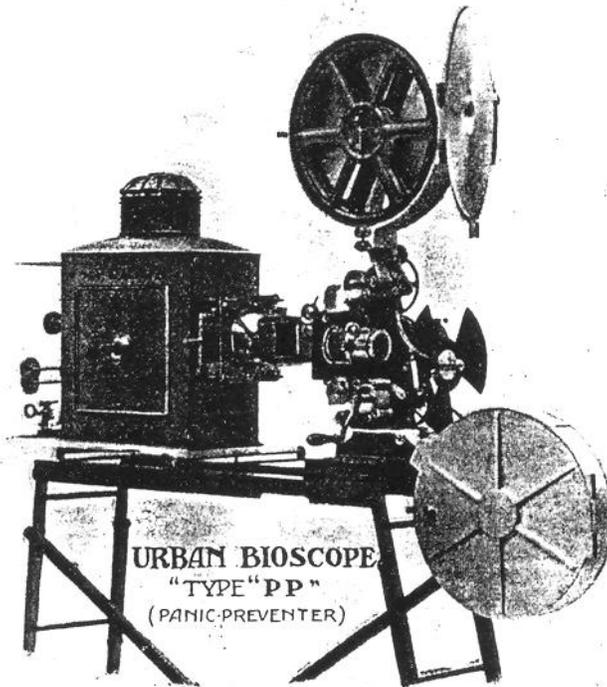
Source 1910 Charles Urban Trading Co, Ltd., catalog
Courtesy Carey Williams

BIOSCOPE

The New Urban "P.P." (Panic Preventor) Projector.

This machine may be termed the "last word" in projectors. The bioscopes which have made the Charles Urban Trading Company world-famous seemed already perfect, but, piling Pelion on Ossa, improvements have been added which in their turn will add popularity to its instruments.

While it is the proud—and reasonable—boast of this Company that an accident or panic has never been caused where its machines have been used, through falling into line with Parliamentary and County Council agitations and requirements, it has, by sundry devices which add little to the cost, further strengthened its position and its machines for fire or panic preventions, by means which secure even smoother working, which will gain the confidence of the whole trade. The appended blocks of the new projector, which define the additional movements and devices, have been carefully prepared, but the following notes and explanations may prove of interest.



Smooth Working.—Total absence of vibration is brought about by the careful balancing of every revolving part, particularly the "Dog" and shutter shafts, to an extent not found in any other "Dog" machine. Some manufacturers claim this result, but the balance in most cases is not carefully made. In the Urban machine, the dog shaft is balanced to a grain, of which there are 480 to an ounce. It is essential that this balance should be even, and only by laying the dog-shaft on carefully levelled knife edges (an engineering term), and also by accurately cut gears and sprockets can steadiness of projection be obtained.

Source 1910 Charles Urban Trading Co., Ltd., catalog.
Courtesy Carey Williams.

BIOSCOPE

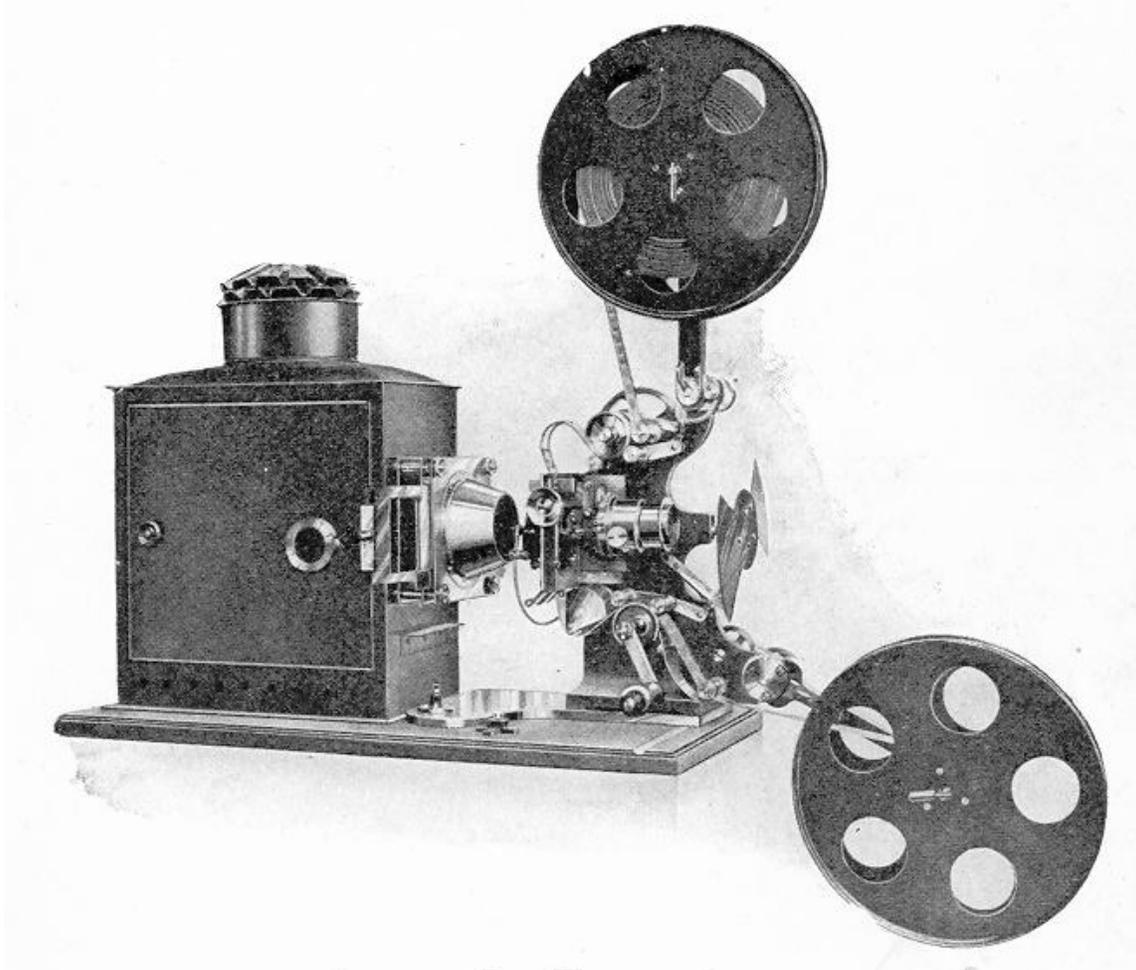
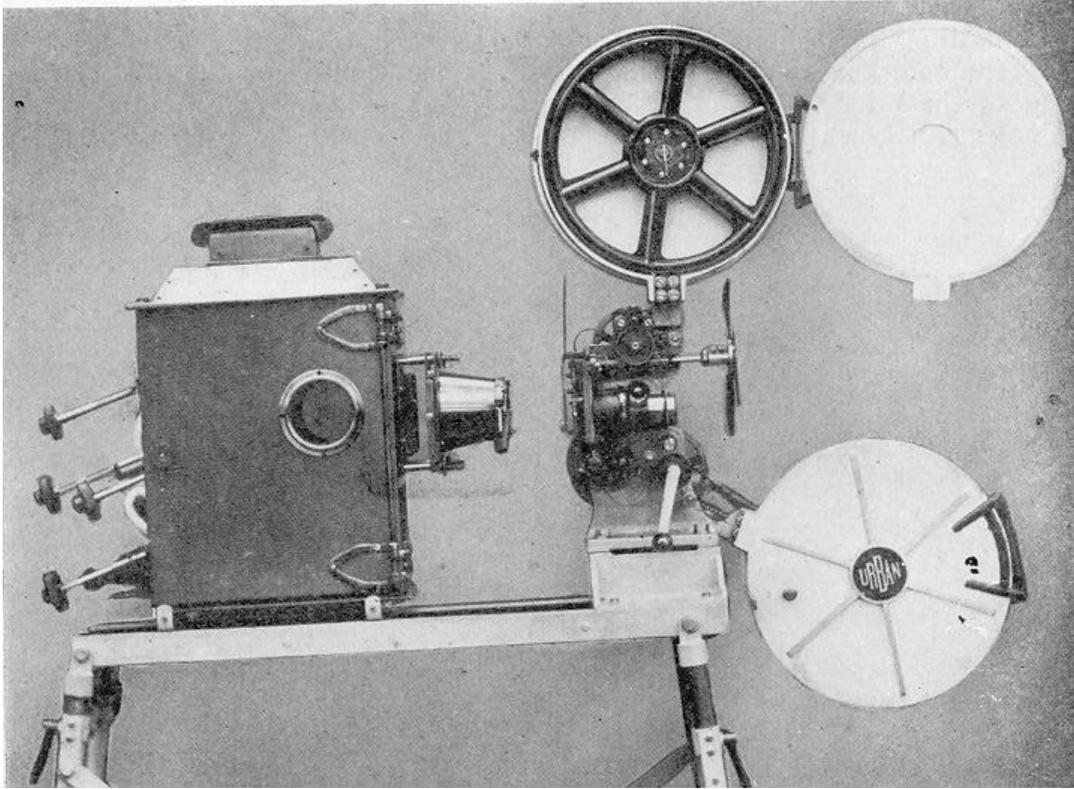


Figure 122. The Warwick Projector.

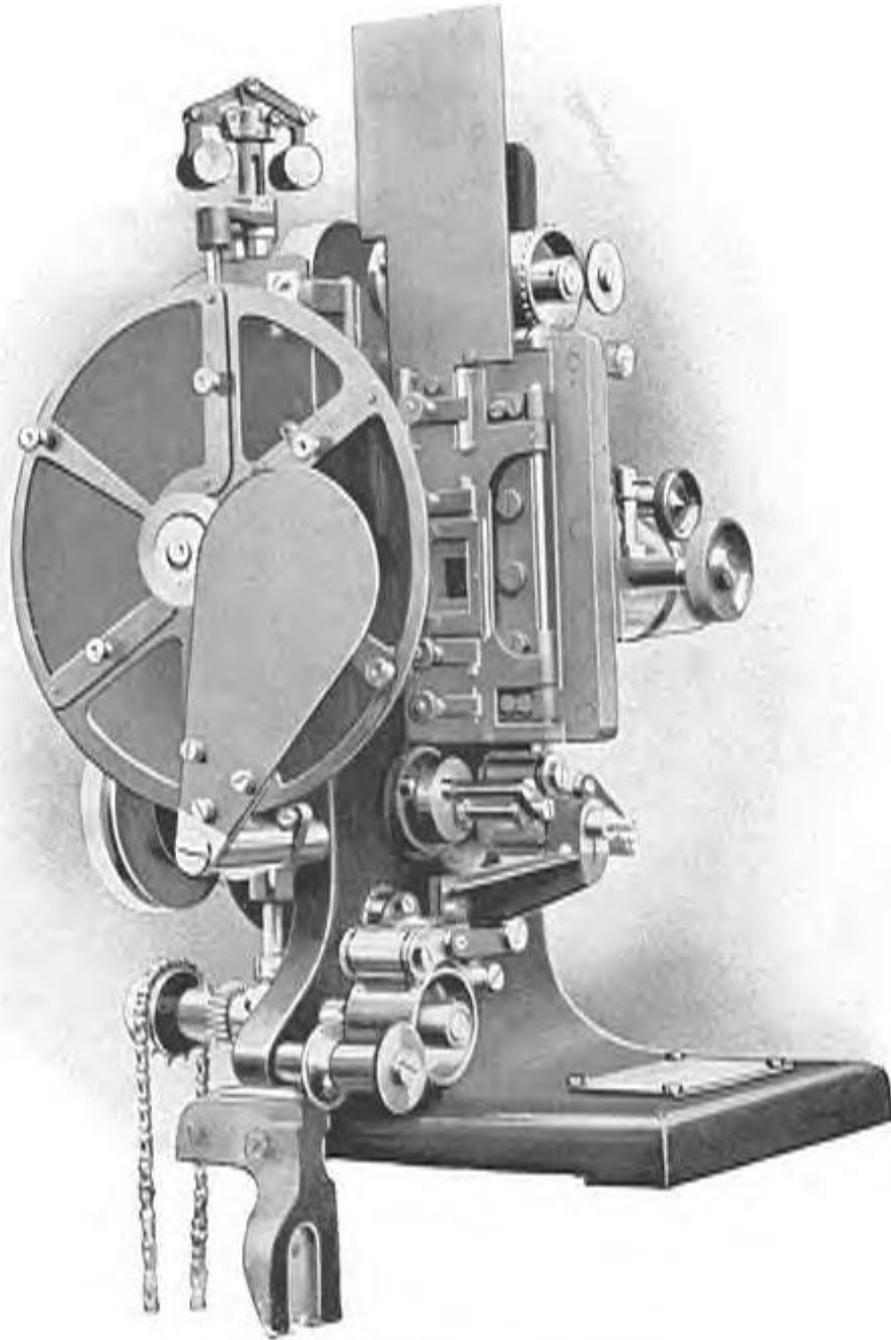
Source: Colin N. Bennett *The Handbook of Kinematography*, second edition, London 1913.

BIOSCOPE



The Urbanora Silent Knight Projector
Source: Colin N. Bennett, the *Handbook of Kinematography*,
second edition, London 1913, page 148.

BIOSCOPE



KINEMACOLOR PROJECTOR MECHANISM

Kinemacolor Projector

BIOSCOPE



Charles Urban's Spirograph of 1923
Source: Alan Kattelle, *Home Movies*, page 60

OTHER BIOSCOPES

(Not made by or for Charles Urban)

OTHER BIOSCOPIES



One of the many Bioscope type projectors made for a variety of companies in England as well as Germany, (Schneider & Sohn of Essen-see page 167 of Herbert Tummel, *Deutsche Laufbildprojektoren*). It is extremely difficult to attribute them to any particular company. I believe the British Bioscopes were mostly made at Prestwich's Lansdowne works at Tottenham England (see John Barnes, *The Beginnings of the Cinema* Vol. 5 page 91.

This "bioscope" has a bronze plate bolted to the main body with the inscription "THE GAUMONT CO./5 & 6 SHERWOOD ST./PICCADILLY" serial number 202. Crank is a reproduction.

Collection Soterios Gardiakos

BOOKS AND MONOGRAPHS WRITTEN BY SOTERIOS GARDIAKOS

October 1, 2011

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 , 49 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, 73 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

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

The Sculptures of Soterios Gardiakos, (From the Bronze age to the Modern Age)
By Chryssafenika 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, 218 pages

MY LIFE an illustrated photo album of me, my family and my friends, from the early twentieth century to the present. July 30, 2011, 389 pages

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

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

Email: [sgardiakos \(omit\) @aol.com](mailto:sgardiakos (omit) @aol.com)

**UNIGRAPHICS INC.
64 South Water Street
Aurora, Illinois 60505**