

# **SPOOLBANK**

# **PROJECTORS**

Compiled by Soterios Gardiakos  
with an introduction by  
John Barnes

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

<http://gardiakos.com/>

UNIGRAPHICS INC

Aurora, Illinois. U.S.A.  
Kalamata, Messinia, Greece

# **SPOOLBANK**

# **PROJECTORS**

## INTRODUCTION

Collectors of early cinematograph projectors are a rare breed. There are many more collectors of ciné cameras than there are collectors of projectors. This is perhaps understandable as cameras are lighter and more compact and easier to store than the heavy metal projection equipment. Furthermore, cameras are much rarer than projectors. Obviously, many more of the latter were made in order to supply the countless exhibitors of films that appeared during the first decade of the cinema's history, whereas there were relatively few cinematographers.

Owing to the hold Thomas A. Edison had over the cinema industry in America, the number of different manufacturers of cine apparatus was relatively small compared with countries such as England, France, Germany and Italy, where inventors and manufacturers had a free rein.

So far, very little research has been done by film historians into this aspect of cinematography. I myself have made a start by examining the apparatus available in England during the last years of the 19<sup>th</sup> Century. Almost nothing has been accomplished along these lines in the United States, that is until Soterios Gardiakos recently entered the field and shown a rare passion and expertise for this subject. The present monograph examines the Spool Bank Projectors that evolved from the Edison peep show Kinetoscope, which first made its commercial appearance in 1894.

Not only does Mr. Gardiakos illustrate and detail the various features of each machine that followed on from the Kinetoscope, but also tells us where extant models are to be

found, which is a wonderful boon to historians wishing to physically examine a particular model for themselves. Thus we learned that Mr. Gardiakos himself possesses the only known example of the first Urban Warwick Bioscope, a projector that soon transferred its origins from New York to London, where it's subsequently became an international success.

Mr. Gardiakos' research still continues and we can expect further surprises from him in this, as yet, little known field of optical projection.

St Ives- Cornwall- UK

September 2002

John Barnes, author of the 5-volume history of **The Beginning of the Cinema in England**, published by the University of Exeter Press.

## **SPOOLBANK PROJECTORS**

### The “Peephole” Kinetoscope connection

It is quite obvious that the Spoolbank Projectors that were made at the dawn of the moving picture owe this mechanism to Edison’s “Peephole” Kinetoscope. The most obvious has been the conversion of a “Peephole” Kinetoscope to project its film upon a big screen directly from this machine (Bacigalupi). In all, to the best of my knowledge there were at least seven and possibly eight movie projectors, made by different companies that were designed to support a Spoolbank attachment. If anyone else knows of any other Spoolbank, I would appreciate it if you could send me the pertinent information. All Spoolbank machines came with separate small reels of various types so that they could be used to project either a continuous joined film or one small reel of film not to run continuously

THE FIRST Spoolbank projector was the Vitascope invented by Jenkins and Armat, though the patent is in Armat’s name, and to help sales of this machine it was promoted as the Edison Vitascope. Vitascope sales did not go well. This machine was possibly discontinued as early as 1896 or 1897.

THE SECOND Spoolbank was the Phantoscope made by Jenkins for the Columbia Phonograph Company (which had supplied Jenkins and Armat Edison films early on when they were still working with Jenkins Phantoscope) after the break up with Armat. Jenkins also either supplied or helped Lubin make his first motion picture projector which was probably a Phantoscope.

THE THIRD Spoolbank was the Projectoscope or as is more commonly called the “Spoolbank Kinetoscope” was made by Thomas Edison. The reel for this machine was a ‘spiky’ device quite different than the reels used by other manufacturers. I am not sure if the type 2 Kinetoscope was ever intended as a Spoolbank but I am including it in this list as I have been informed that it was.

THE FOURTH Spoolbank was the Warwick Bioscope invented by Charles Urban of Detroit Michigan who eventually became an employee of Baucus & Maguire Ltd. Agents for the Edison films. Charles Urban was sent to England to promote said operations there. In 1898 the firm changed its name to the Warwick Trading Company and started making their own films, most were made by Charles Urban

THE FIFTH Spoolbank was probably the Cineograph of Siegmund Lubin. When Jenkins had left the Jenkins and Armat partnership he was very disheartened as he felt his Movie Projector invention had been taken away from him. It was at this time that Siegmund Lubin approached him and Jenkins sold Lubin “the whole outfit”. Jenkins continued to visit Lubin’s workshop and to advise him for a long time after their initial meeting. The first Lubin projector was basically a Phantoscope by a different name.

THE SIXTH and it may very well be THE FIRST was the Magniscope invented by Edward H. Amet of Waukegan Illinois. Very little is known of Amet and his machine but it is interesting to note that on one of the three Magniscope machines in the collection of Carey Williams, on the base is inscribed the date 1894. It is possible that this may very well have been the very first projector of them all. This projector used wide film of about 60mm. Kirk J. Kekatos is the authority on Edward H. Amet.

THE SEVENTH Spoolbank may or may not have been made. It is interesting that Hepworth in his biography makes no reference to it.

THE EIGHTH Spoolbank, the Demeny-Gaumont, came into being well after the Spoolbank had ceased being manufactured and for the most part in 1901, the audience would no longer be entertained by a 30-45 second show. These machines were made not to show motion pictures on the big screen but on etched glass for informative and educational purposes. I do not know of any such machines in existence.

THE NINTH, the Bacigalupi projecting Kinetoscope may or may not belong in this compilation but I thought it should be listed, because it shows the desire to show a moving picture on the big screen. No photos, or plans showing how an Edison Peephole Kinetoscope was used to project. I will leave this to my reader's imagination

The Latham Eidoloscope has been omitted as I do not have any evidence that it was ever used as a spoolbank.

This short paper is not meant as a history, nor does it pretend to any original research on early cinema, it is what its title states a *COMPILATION*. It started out with my purchase of Projectoscope (Kinetoscope) serial No. 16 probably made in very late 1896, released in February 1897. Then I purchased a Warwick projector which I have partially restored. After that I was hooked. And I started to look everywhere I could find information on Spoolbank projectors. In the end Carey Williams was the final authority in this matter and I wish to thank him for his support and his unflinching willingness to give me all he had in his archives as well as what was locked up in his encyclopedic mind. To my disappointment not all movie projectors collectors were willing to help without caveats and concern that somehow they would lose something if I put it in a paper. I must also thank Robert W. Gutteridge for his encouragement and help. I also wish to thank everyone listed in the credits at the bottom of the pages where their contribution is acknowledged.

Soterios Gardiakos

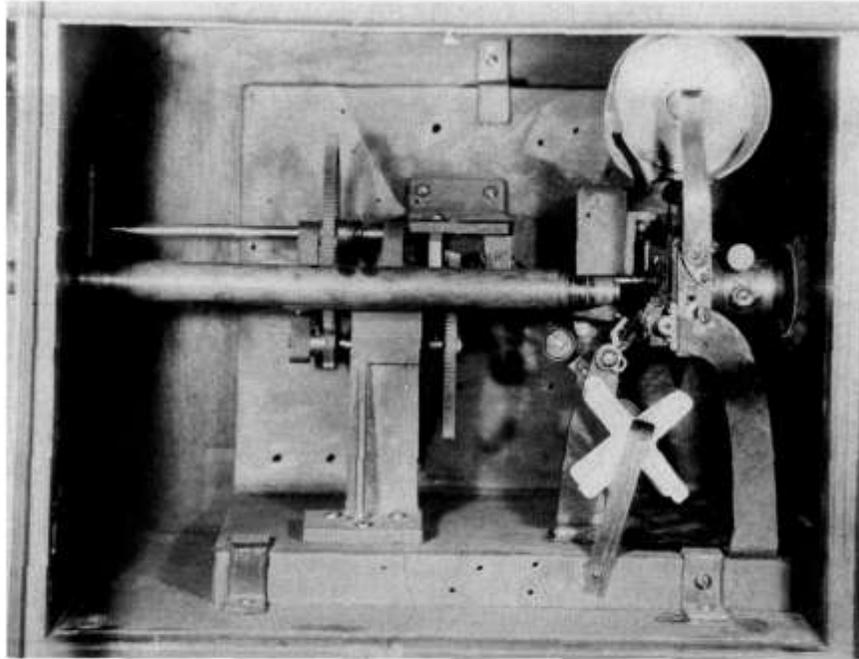


# **THE "PEEPHOLE" KINETOSCOPE**

(Some prefer the word "Peepshow")

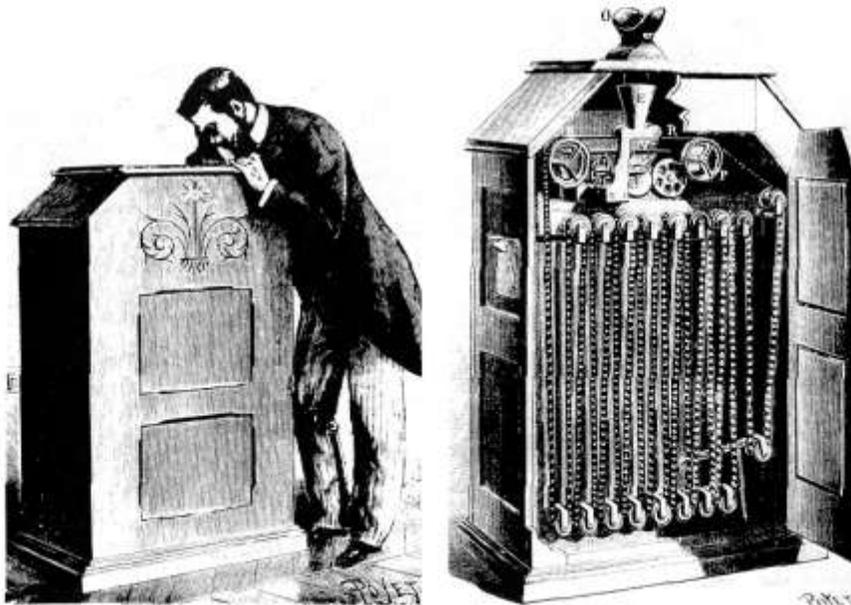
The original Spoolbank  
Or  
The Granddaddy of them all

## “PEEPHOLE KINETOSCOPE”



*The rebuilt Edison kinetograph (camera), now at the Henry Ford Museum, Dearborn, Michigan.*

*The kinetoscope.*



Charles Musser, *The Emergence of Cinema*, P. 76

**“PEEPHOLE KINETOSCOPE”**



Edison's Kinetoscope showing the spoolbank arrangement

## “PEEPHOLE KINETOSCOPE”



Edison's Kinetoscope

# **VITASCOPE SPOOLBANK**

Made by Thomas Armat  
(100 contracted by Armat to be made  
by Edison's US Phonograph Co.)

Complete Spoolbank machines known: None

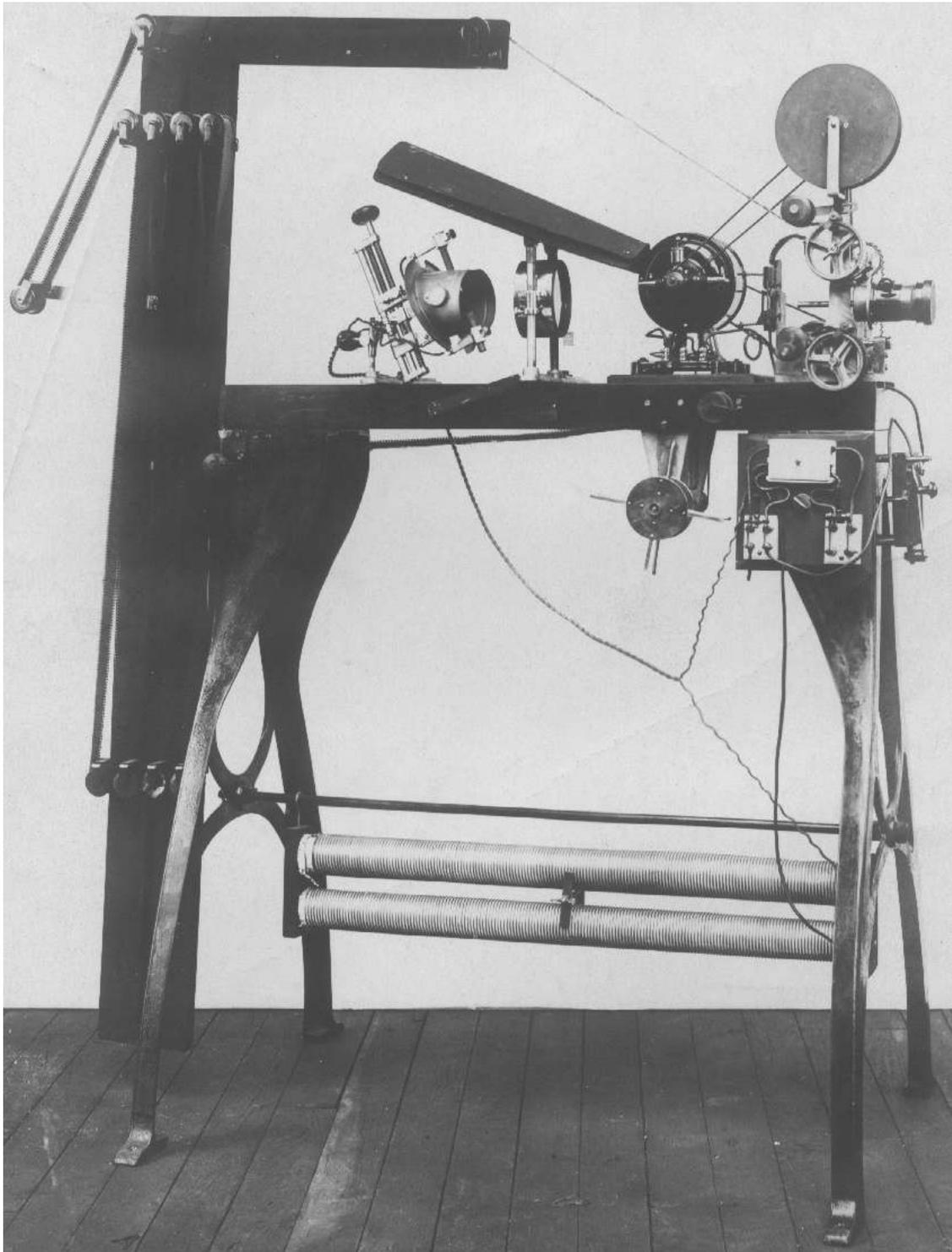
Complete machine (no spoolbank)

- 1) Franklin Science Museum, Philadelphia, PA., U.S.A.
- 2) Smithsonian Institution, Washington, D.C., U.S.A.

Projector head only known:

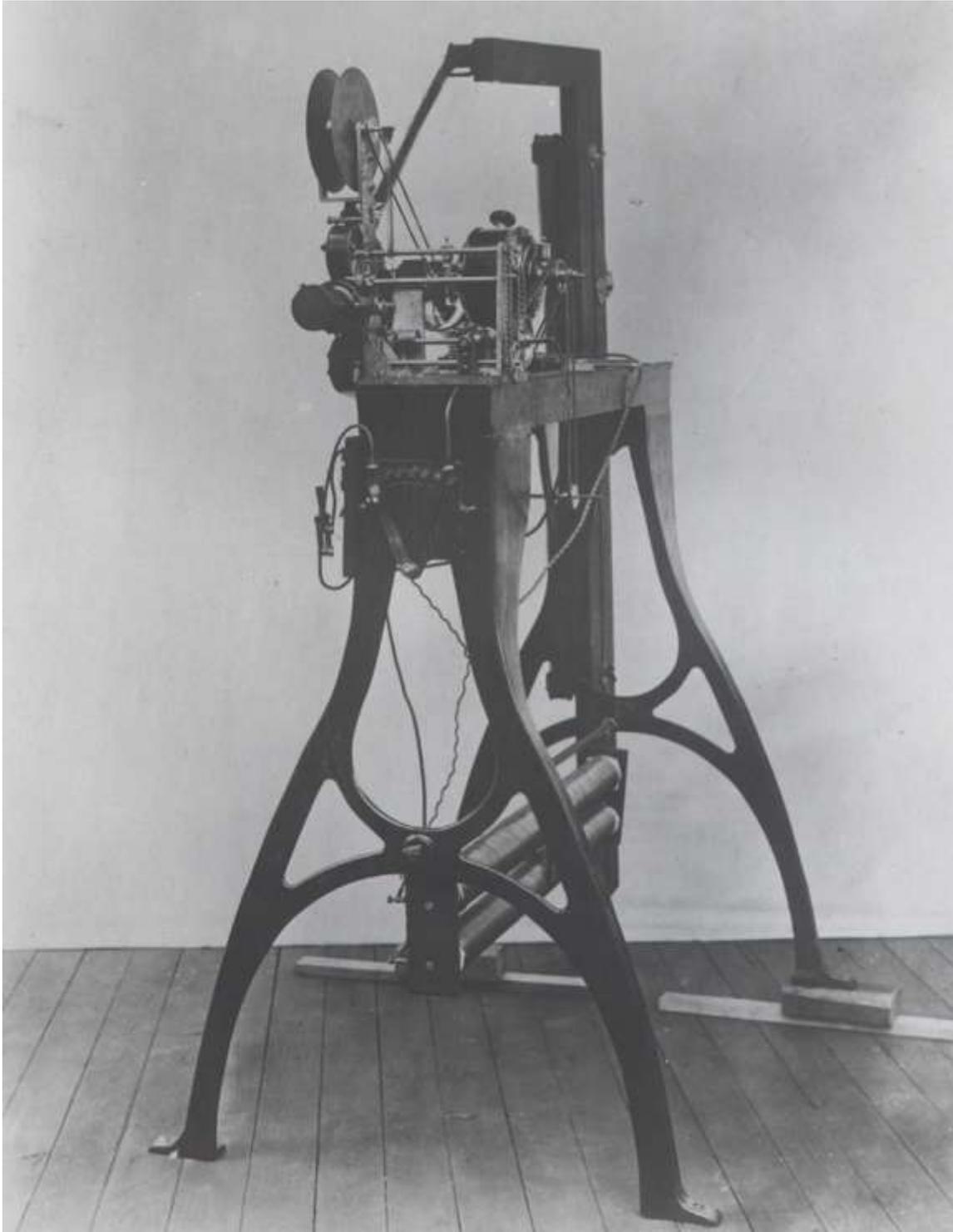
- 1) Smithsonian Institution, Washington, D.C., U.S.A.
- 2) Eastman House, Rochester, N.Y., U.S.A.

## VITASCOPE



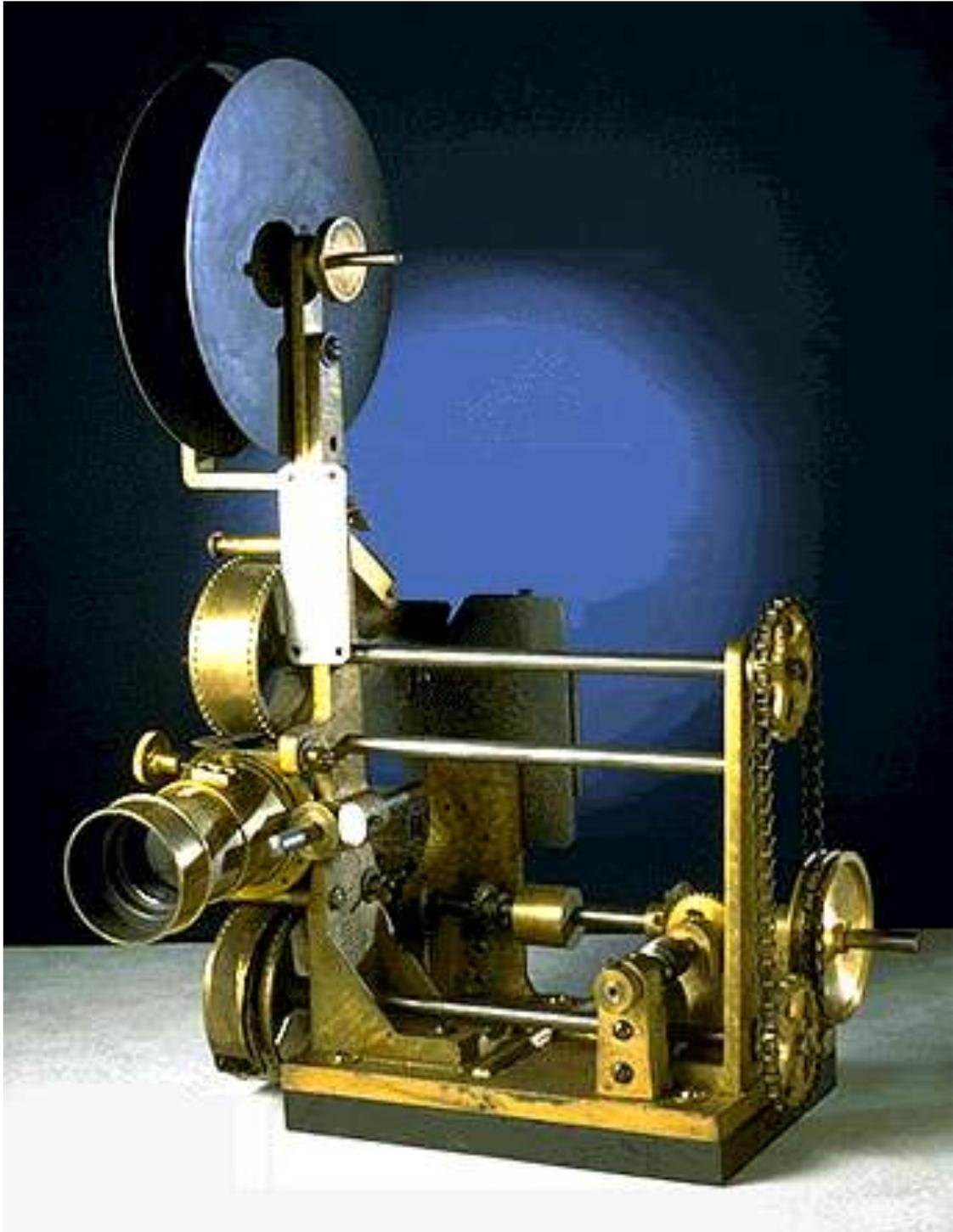
Vitascope projector with a Beater movement One of the first Vitascoes,  
U.S. Department of Interior. National Park Service. Thomas Edison National Historical  
Park.

## VITASCOPE



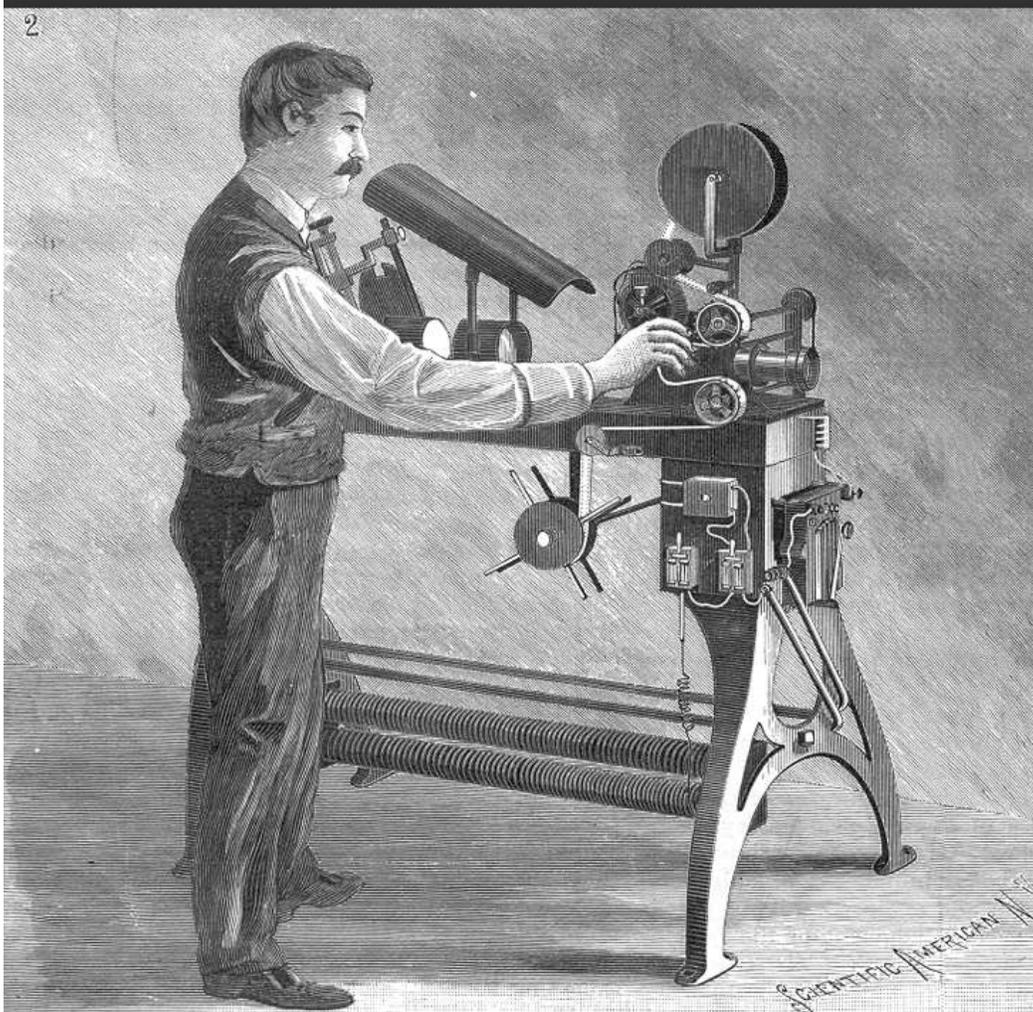
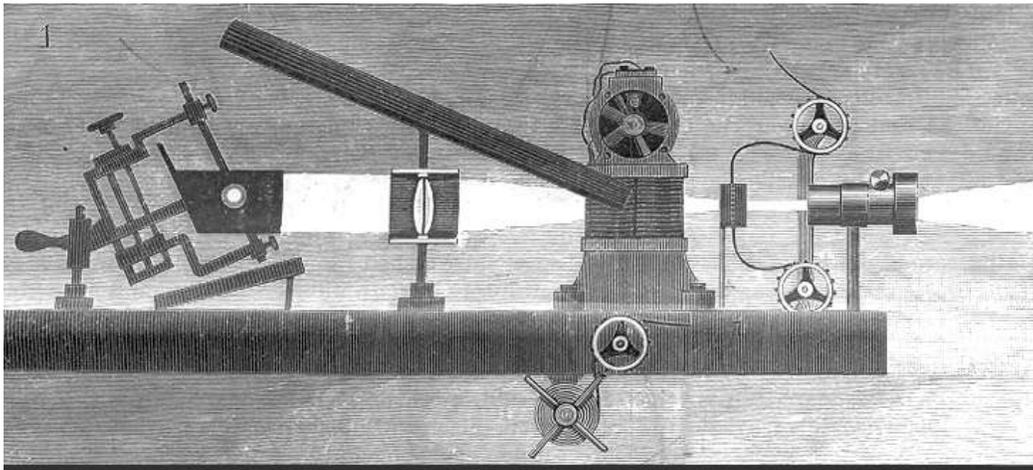
Vitascope projector with a Beater movement One of the first Vitascopes  
U.S. Department of Interior. National Park Service. Thomas Edison National Historical  
Park.

## VITASCOPE



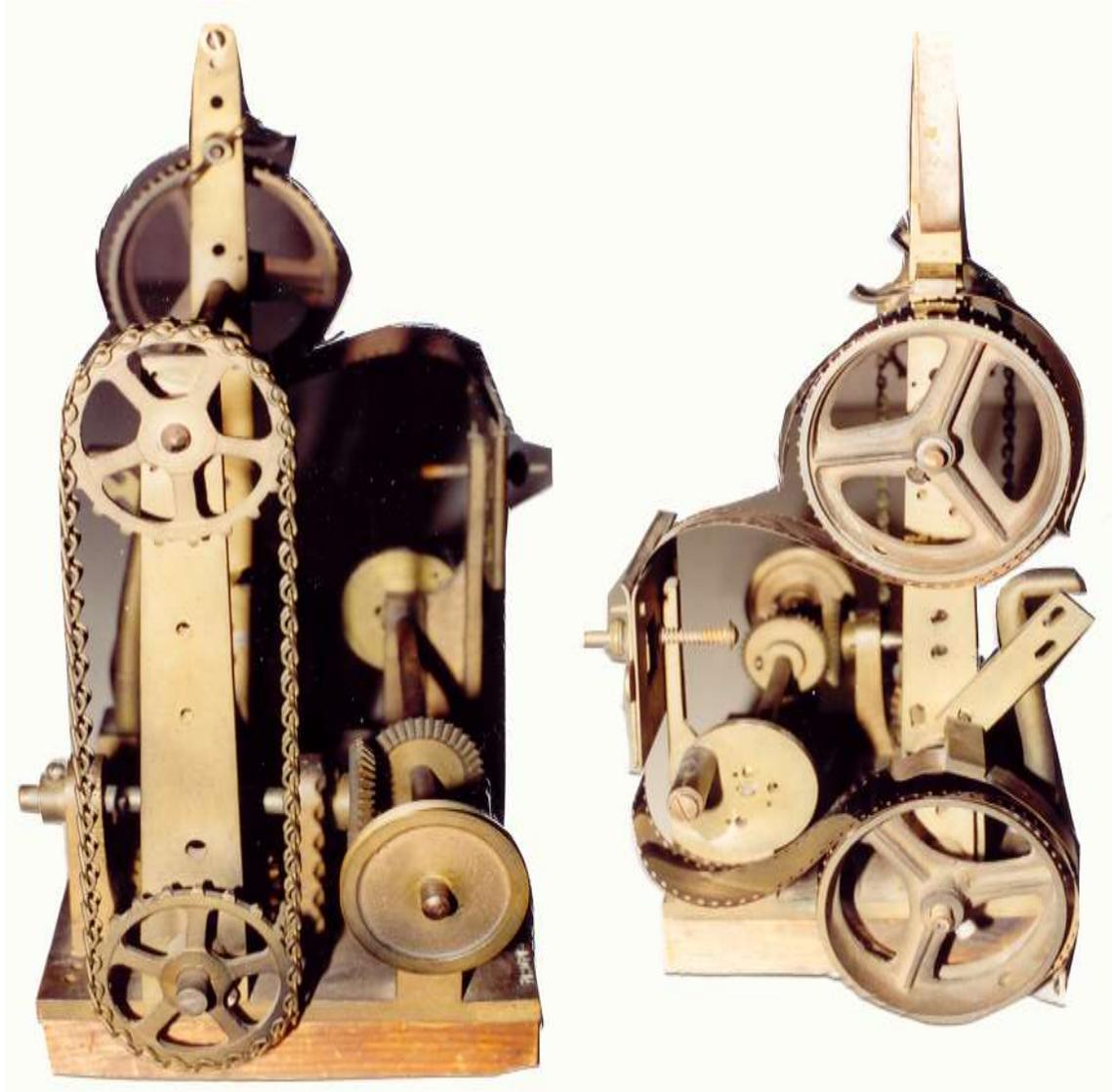
Vitascope, Smithsonian Institution

# VITASCOPE



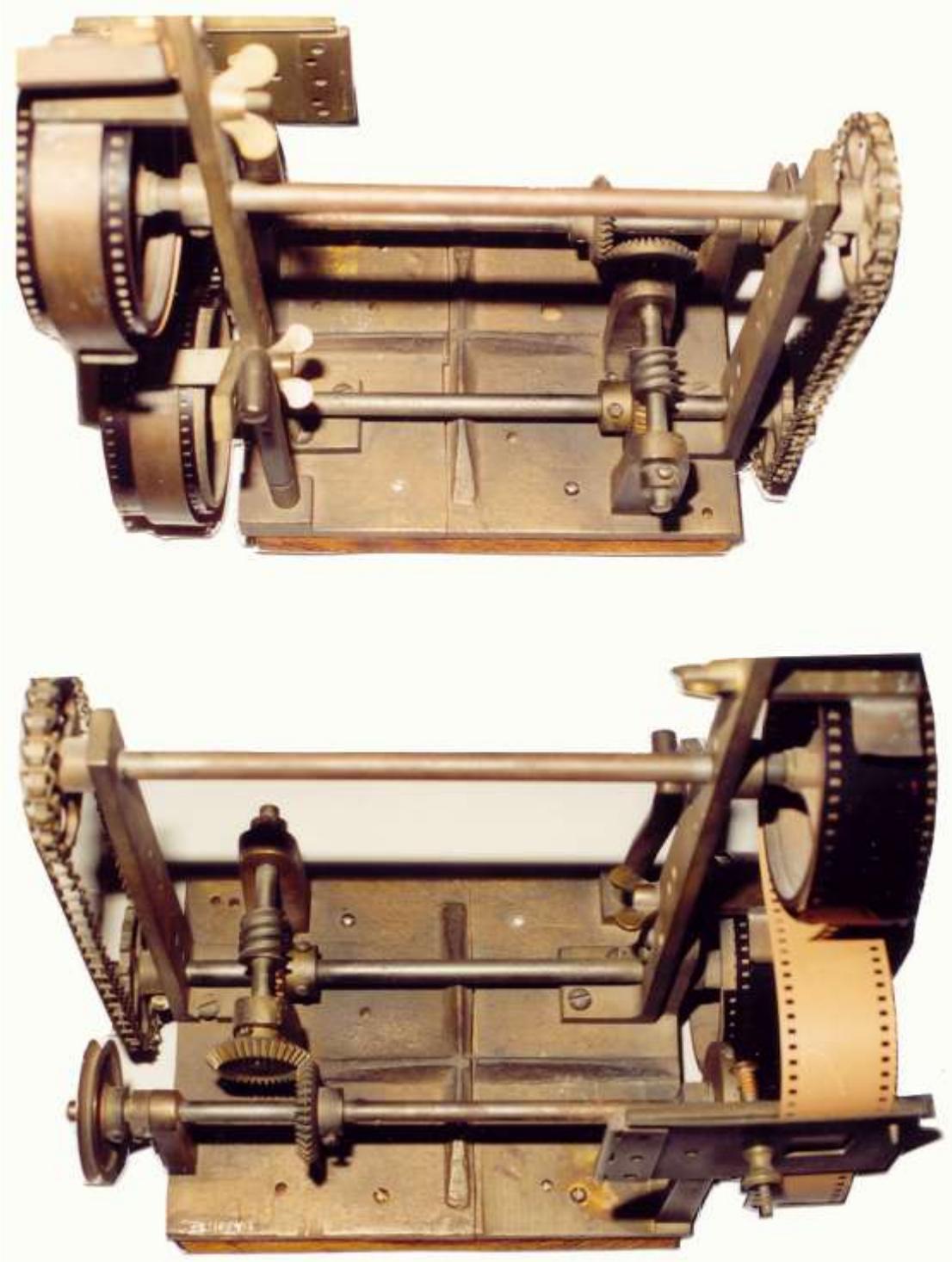
Armat Vitascope, Scientific American, October 31, 1896

## VITASCOPE



Armat Vitascope  
International museum of Photography, George Eastman House  
Courtesy Carey Williams

## VITASCOPE



Armat Vitascope  
International museum of Photography, George Eastman House  
Courtesy Carey Williams



# VITASCOPE

(No Model.)

4 Sheets—Sheet 2

T. ARMAT.  
VITASCOPE.

No 578,185

Patented Mar. 2, 1897

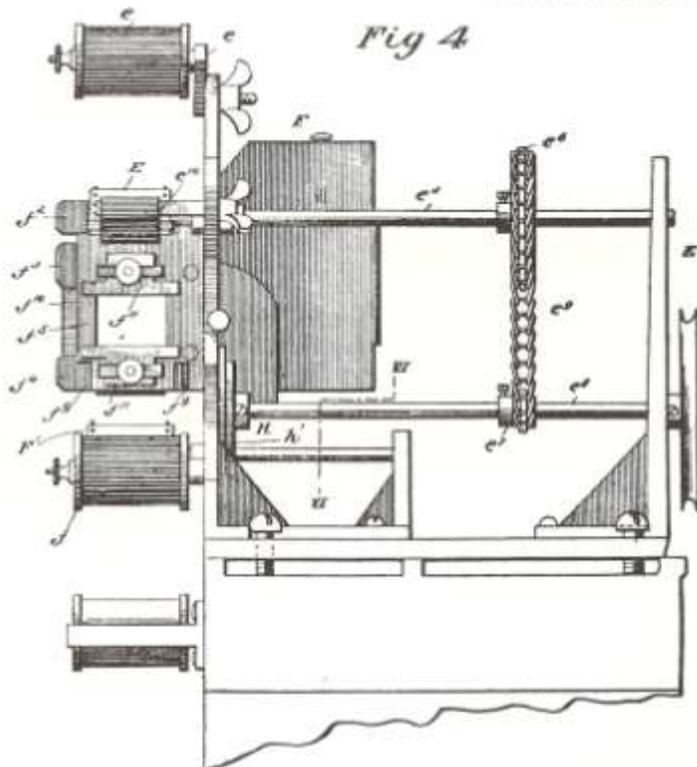


Fig. 4

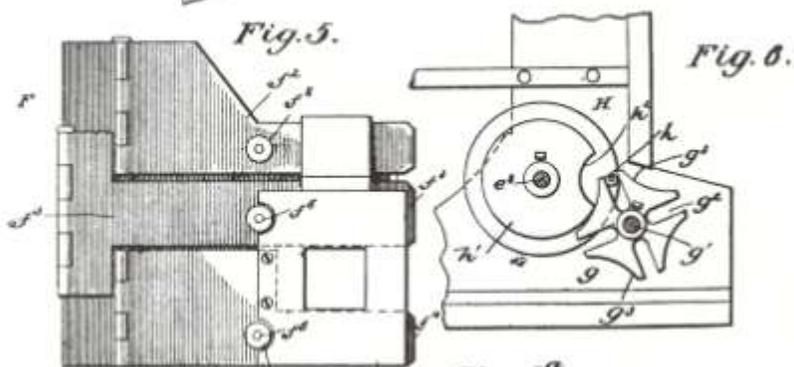


Fig. 5.

Fig. 6.

Witnesses  
 Cas. D. Durais Jr.  
 Charles E. Rendon

Fig. 5a

Inventor,  
 Thomas Armat  
 By *[Signature]*  
 W. Dowell  
 Atty.

Vitascope using a Maltese cross intermittent



# **PHANTOSCOPE SPOOLBANK**

Made by C. Francis Jenkins

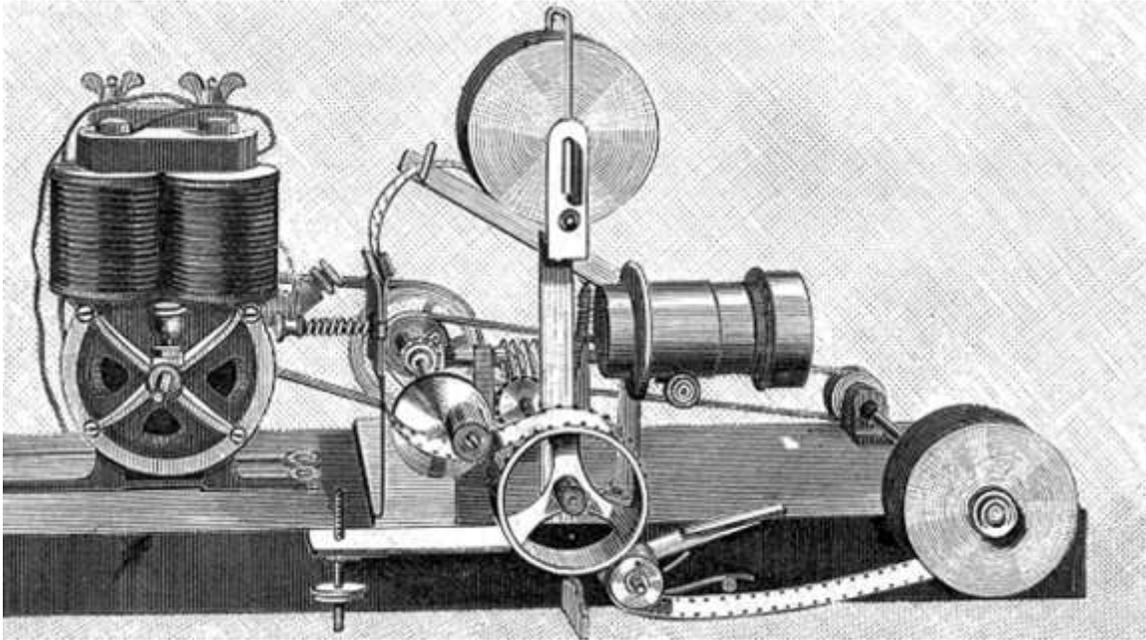
Complete Spoolbank machines known: None

Complete machine (no spoolbank): None

Projector head only known:

Charles Hummel, Wayne, New Jersey, USA

## PHANTOSCOPE



“The Jenkins Phantoscope”

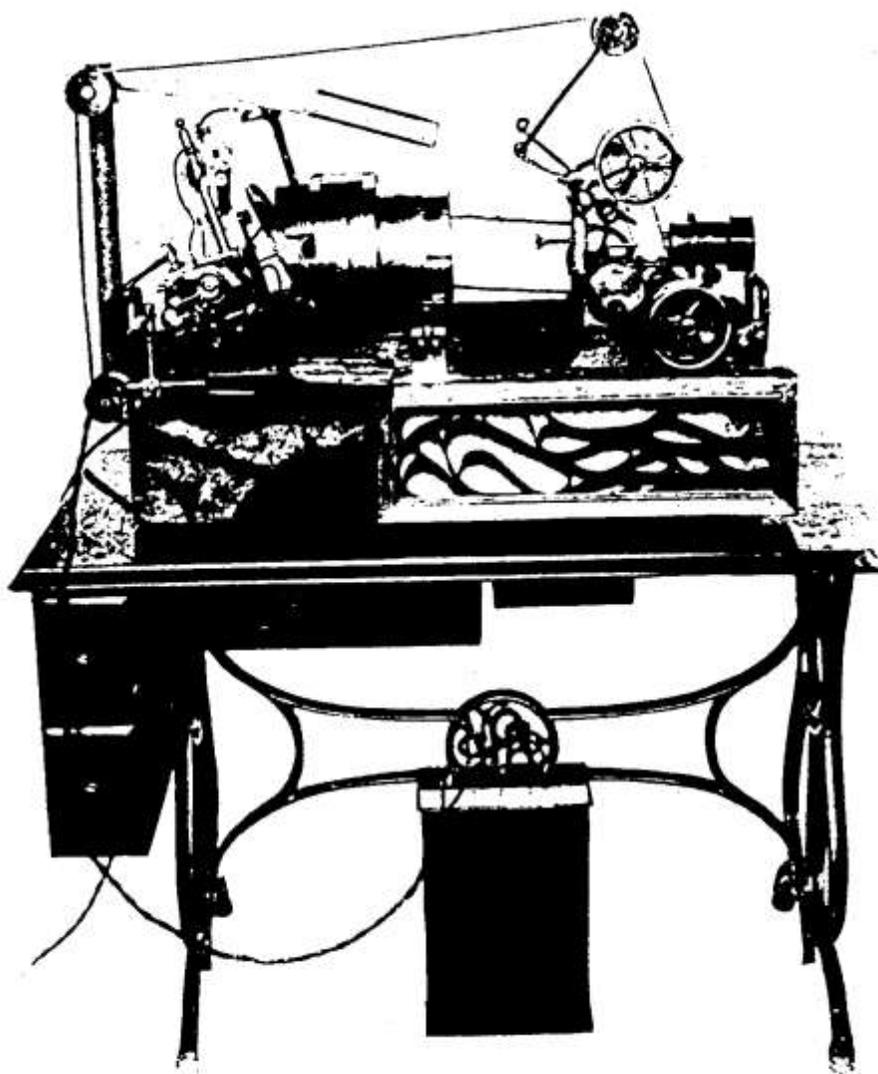
Source: *Scientific American* October 31, 1896, Volume LXXV, No. 18, fig 4

Source: Jenkins, *Animated Pictures*, 1898, page 89

## PHANTOSCOPE SPOOLBANK

(Made by Charles Francis Jenkins)

Only one machine is known to exist, in the collection of Charlie Hummel of Wayne, New Jersey,, U.S.A.

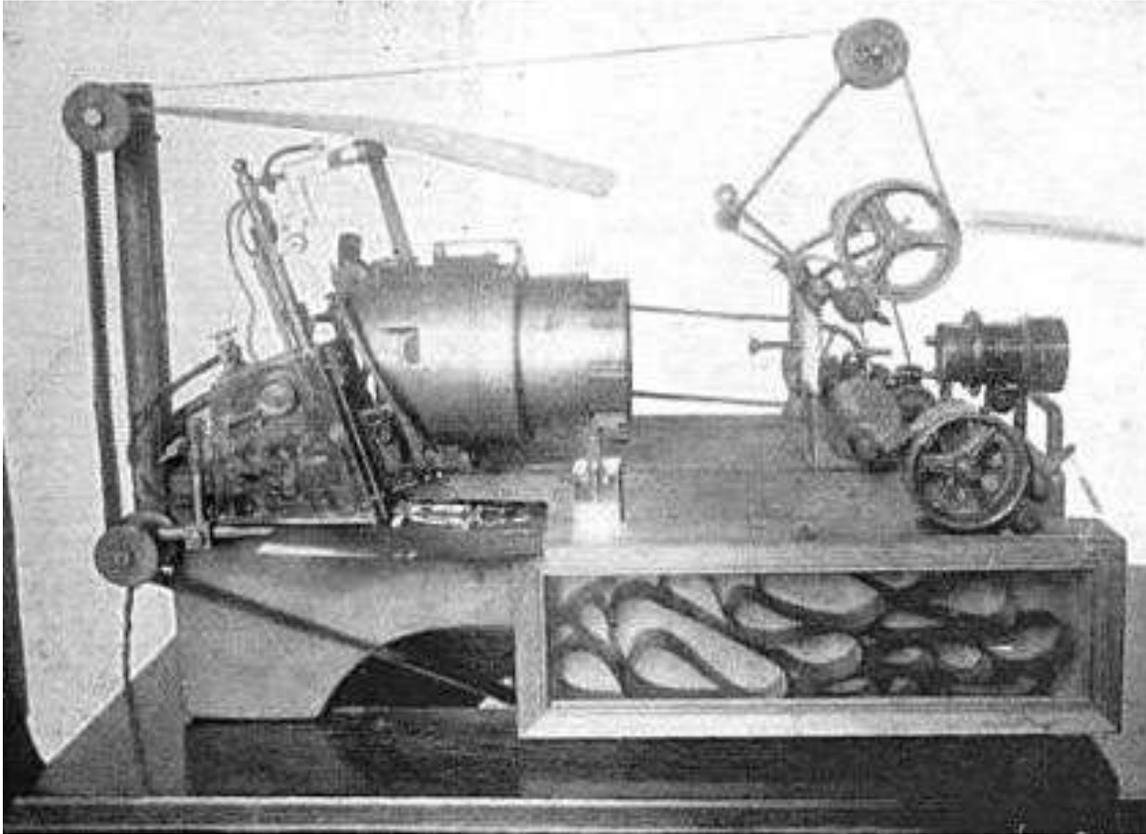


THE PHANTOSCOPE.

In this model the spoolbank mechanism has been replaced by the film being fed into a box and this allowed for continuous play the same as the spoolbank. This is very similar to, if not the same as the first Lubin projector. Jenkins worked closely with Lubin for an extended period of years.

Source: An undated catalog titled THE JENKINS PHANTOSCOPE  
(There is a handwritten notation "published 4-26-96")

## PHANTOSCOPE SPOOLBANK



“A later form Jenkins projecting Phantoscope”  
Source: Jenkins, *Animated Pictures*, 1898, page 89

# KINETOSCOPE SPOOLBANK

(Made by Thomas A. Edison)

Type 1 (app. 500-600 made)

## Complete known:

- 1) Cinematheque Musee de Cinema. No. 33. Paris, France
- 2) Thomas A. Edison Museum, No. \_\_\_\_ Ft. Meyers, FL. U.S.A.
- 3) Smithsonian Institution, No. \_\_\_\_ Washington, D.C., U.S.A.
- 4) \_\_\_\_\_ tag removed, Beaverton, Ontario, Canada.

## Spoolbank assembly only:

- 1) \_\_\_\_\_ No. \_\_\_\_ with wood rollers, Paris,  
France
- 2) \_\_\_\_\_ No. \_\_\_\_ with metal rollers, Paris,  
France

## Complete machine (no Spoolbank):

- 1) Charles Hummel, No. 491. Wayne, New Jersey, U.S.A.
- 2) Glen Grabinsky, no base. No. \_\_\_\_ Montville, New Jersey, USA  
U.S.A,

## Projector head only:

- 1) Soterios Gardiakos, No. 16. Aurora, IL. U.S.A.
- 2) Tom Wilson, No. 53, Clarksville, Ohio. U.S.A.
- 3) Eastman House, No. 345. Rochester, N.Y., U.S.A.
- 4) Tom Watson, No. \_\_\_\_ Park Ridge, IL., U.S.A.

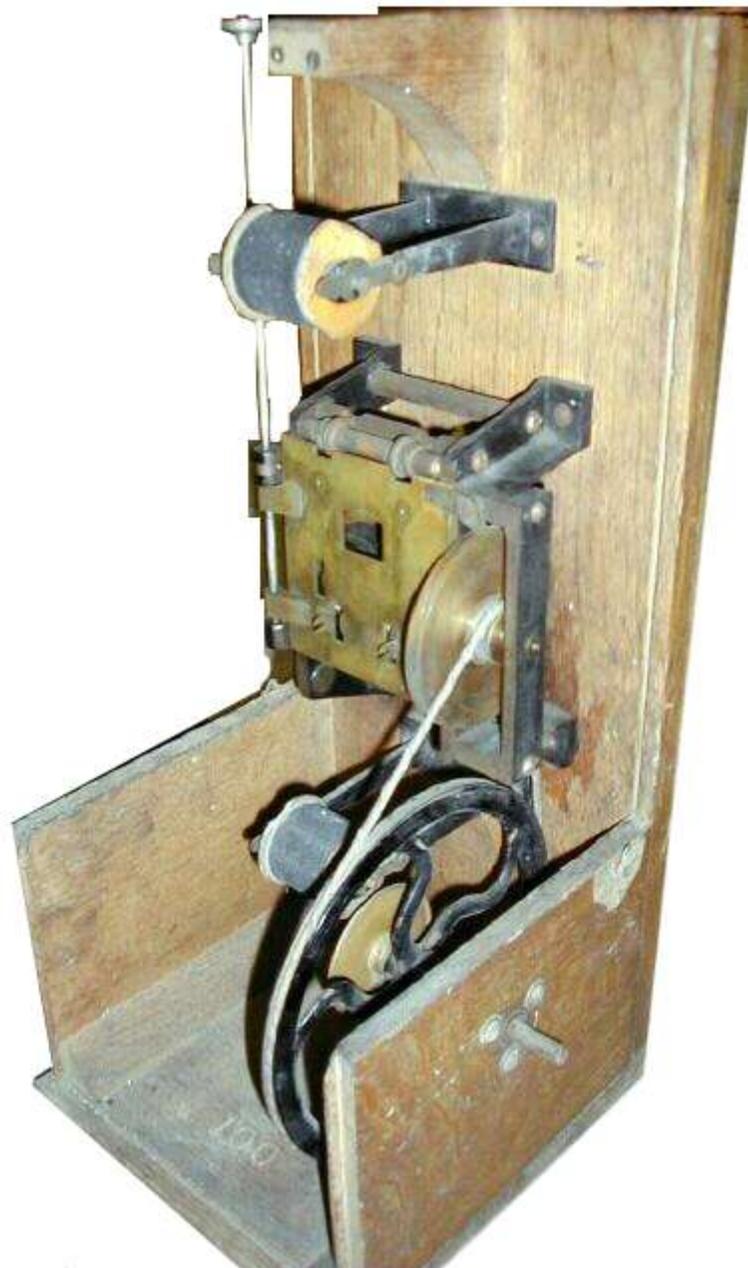
## Complete Base & Lamp House, No Projector

- 1) Erkki Huhtamo, Los Angeles California USA

This type 1 Spoolbank Kinetoscope was still advertised in January 1899 issue of *the Phonoscope*, a monthly journal, Volume III No.1, page 19.

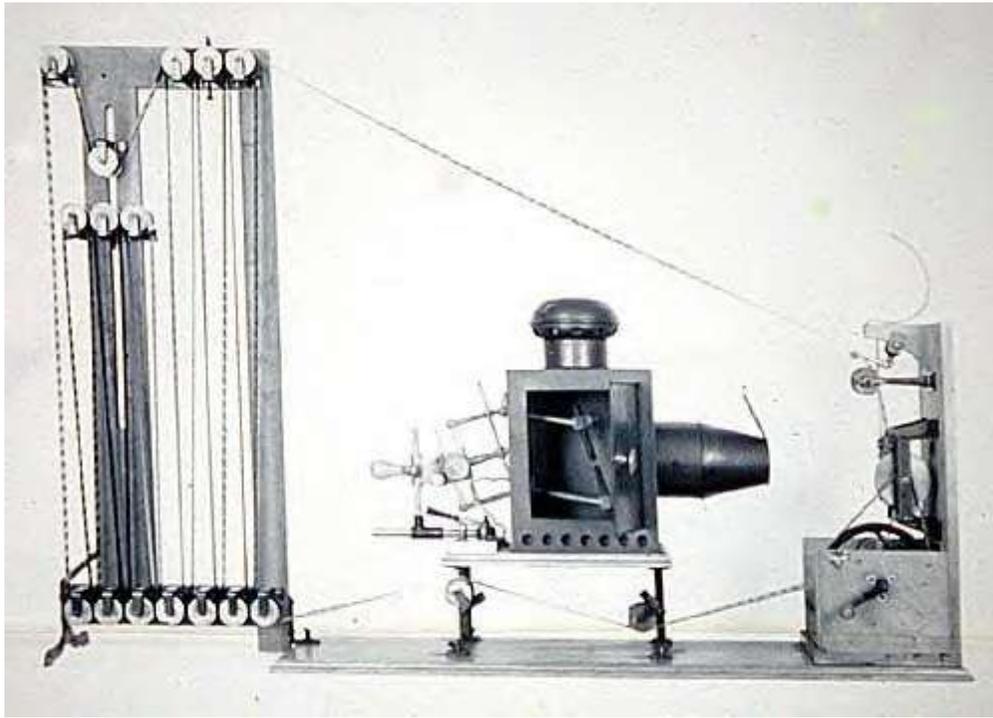
**KINETOSCOPE SPOOLBANK TYPE 1**

Projectoscope



Type 1 Projecting Kinetoscope  
Collection Soterios Gardiakos

## KINETOSCOPE SPOOLBANK TYPE 1



Beaverton Spoolbank Kinetoscope

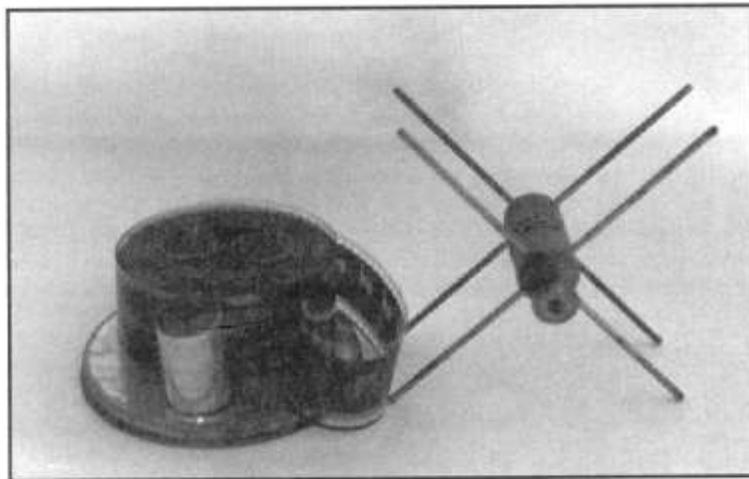
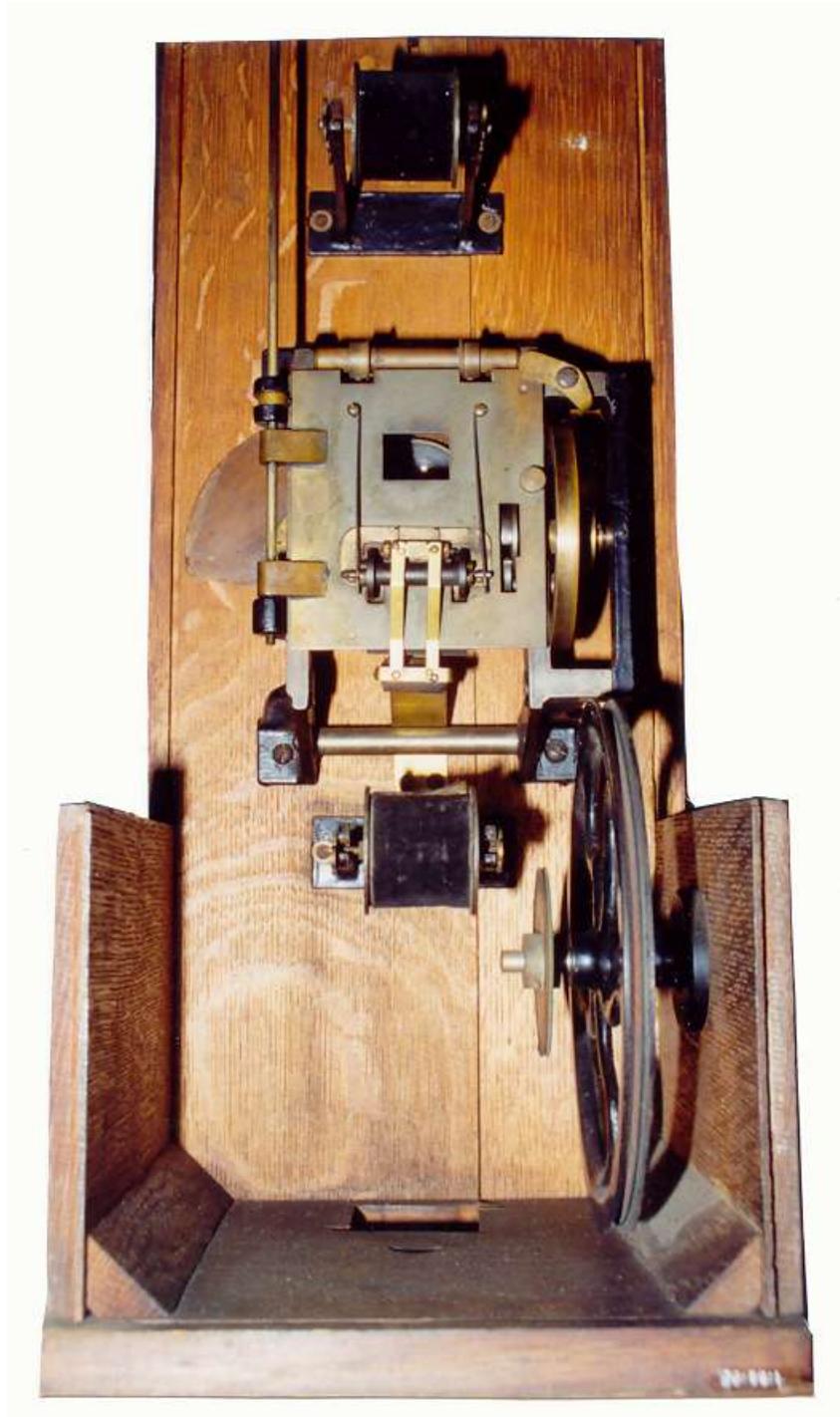


Fig. 67 This 'spiky' device is a so-called 'reel' for the Edison 'spoolbank' projector (Edison Projecting Kinetoscope). It could accommodate five or six film loops, such as the one shown at the left.

*Courtesy Vernon Flaherty*

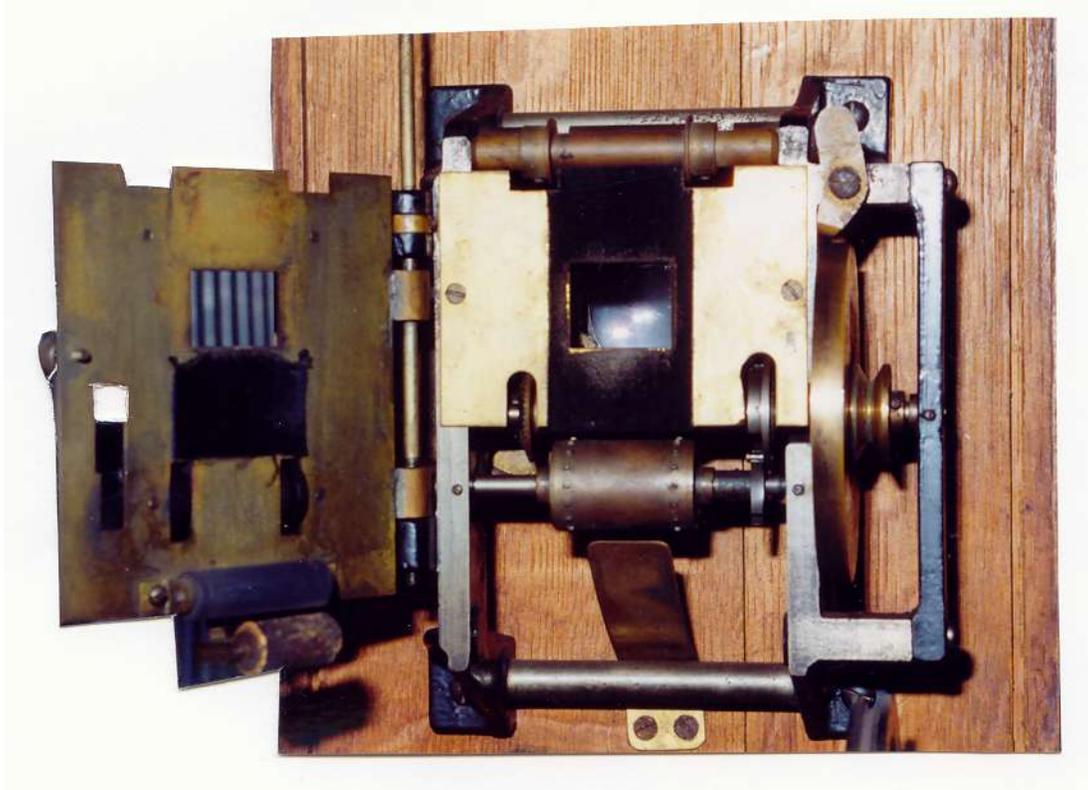
Kinetoscope reels, Courtesy Robert Gutteridge

## KINETOSCOPE SPOOLBANK TYPE 1



Type 1 Projecting Kinetoscope  
George Eastman House, Rochester, New York, formerly in the Malkames Collection.  
Courtesy Carey Williams

## KINETOSCOPE SPOOLBANK TYPE 1



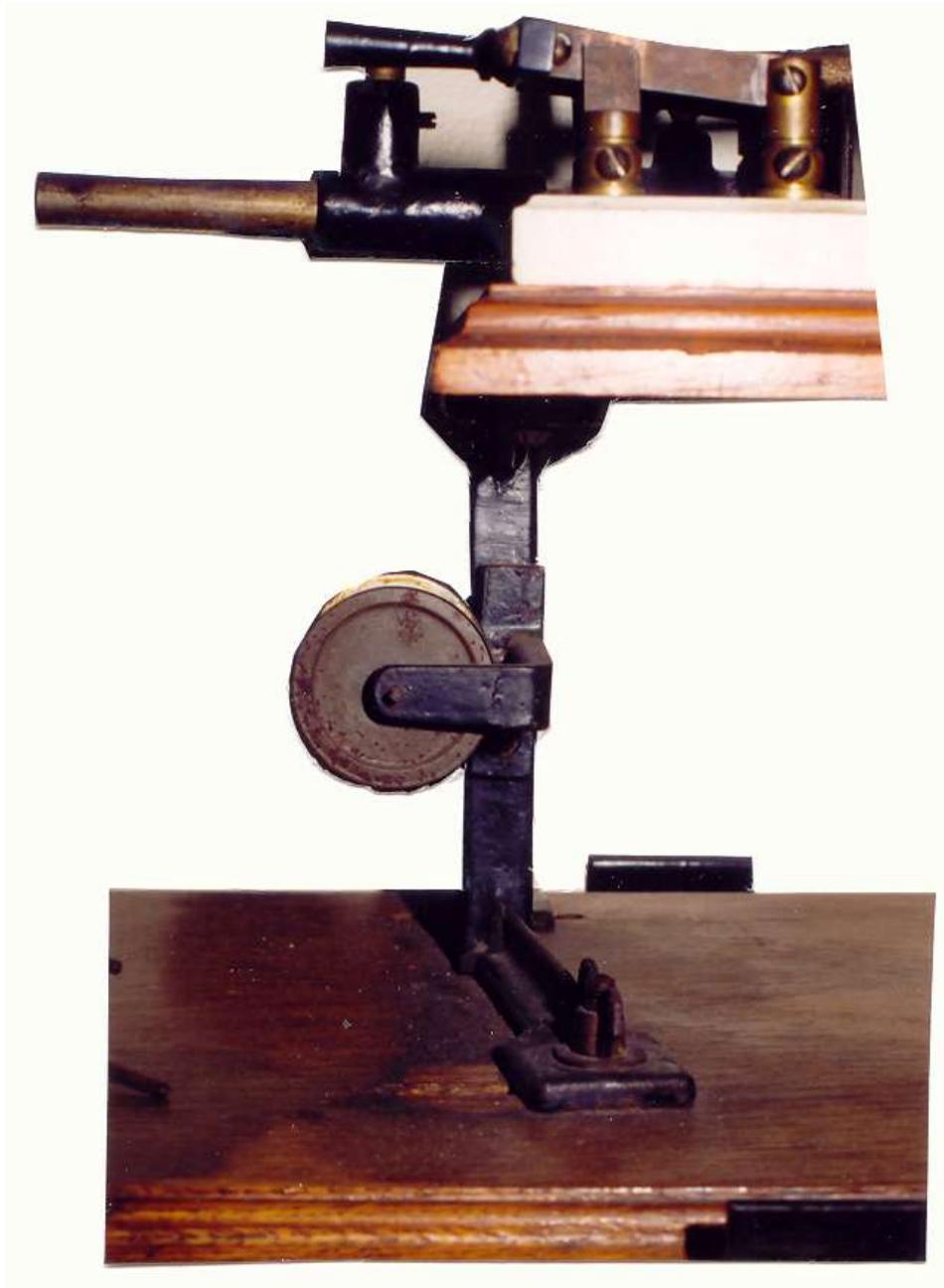
Type 1 Projecting Kinetoscope  
George Eastman House, Rochester, New York, formerly in the Malkames Collection.  
Courtesy Carey Williams

## KINETOSCOPE SPOOLBANK TYPE 1



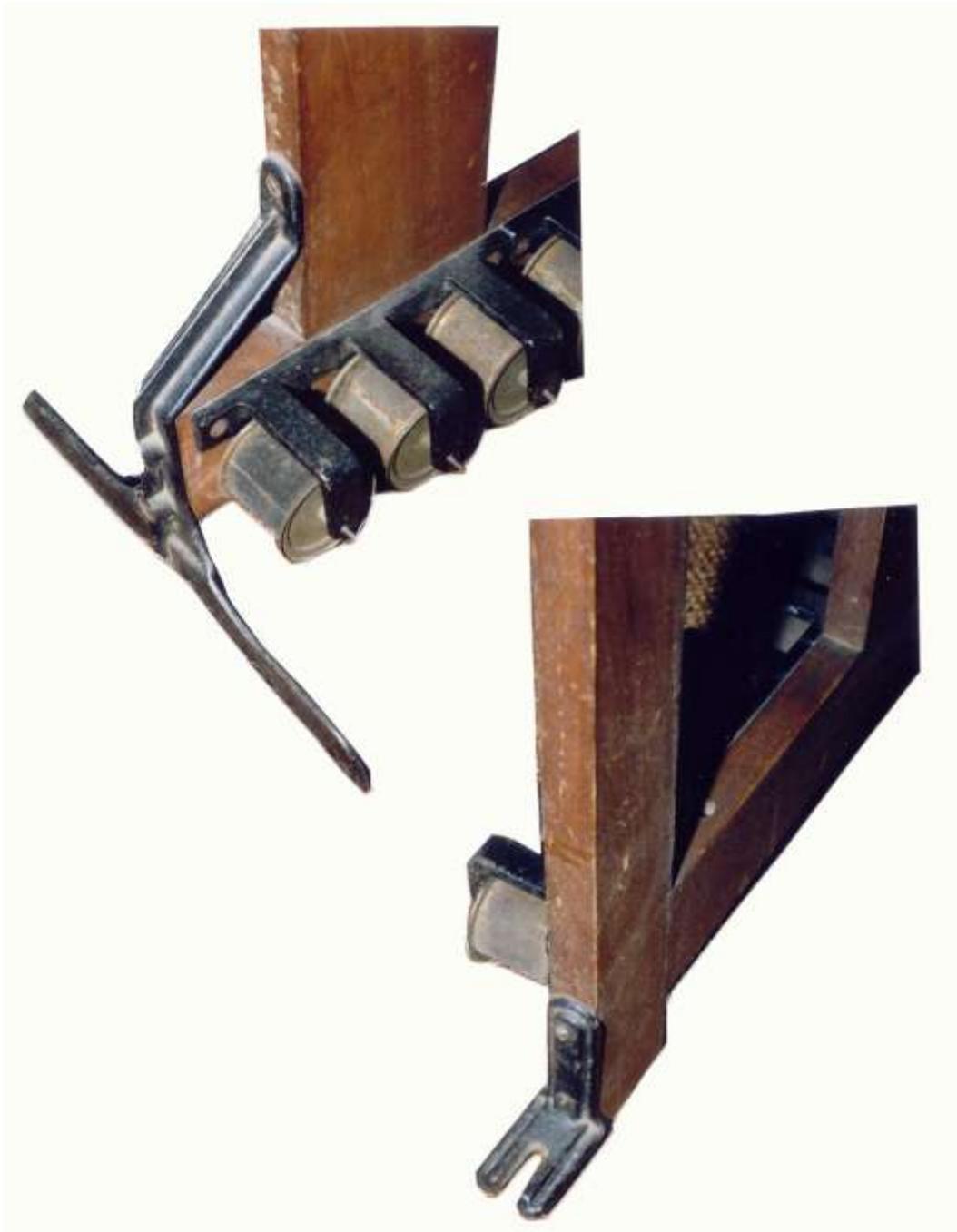
Type 1 Projecting Kinetoscope  
George Eastman House, Rochester, New York, formerly in the Malkames Collection.  
Courtesy Carey Williams

## KINETOSCOPE SPOOLBANK MECHANISM



Type 1 Projecting Kinetoscope  
George Eastman House, Rochester, New York, Malkames Collection.  
Courtesy Carey Williams

## KINETOSCOPE SPOOLBANK MECHANISM



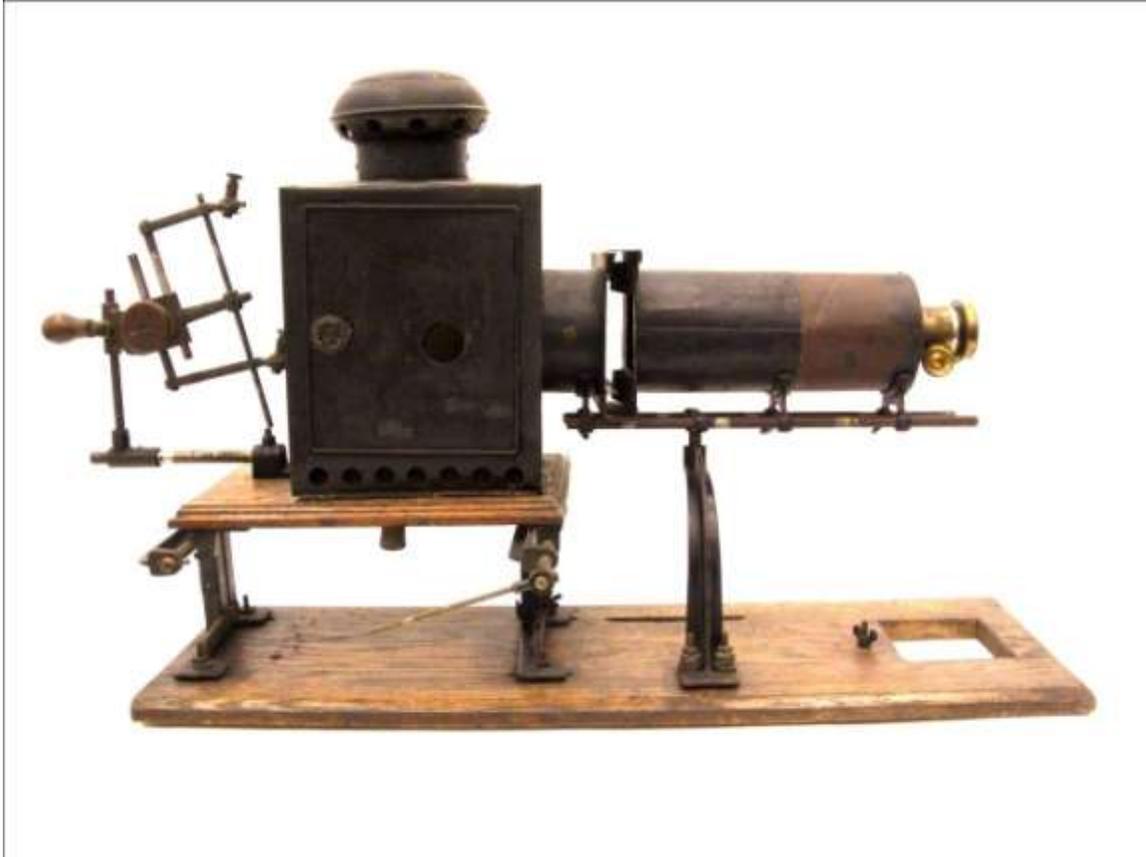
Type 1 Projecting Kinetoscope  
George Eastman House, Rochester, New York, Malkames Collection.  
Courtesy Carey Williams

## KINETOSCOPE SPOOLBANK MECHANISM



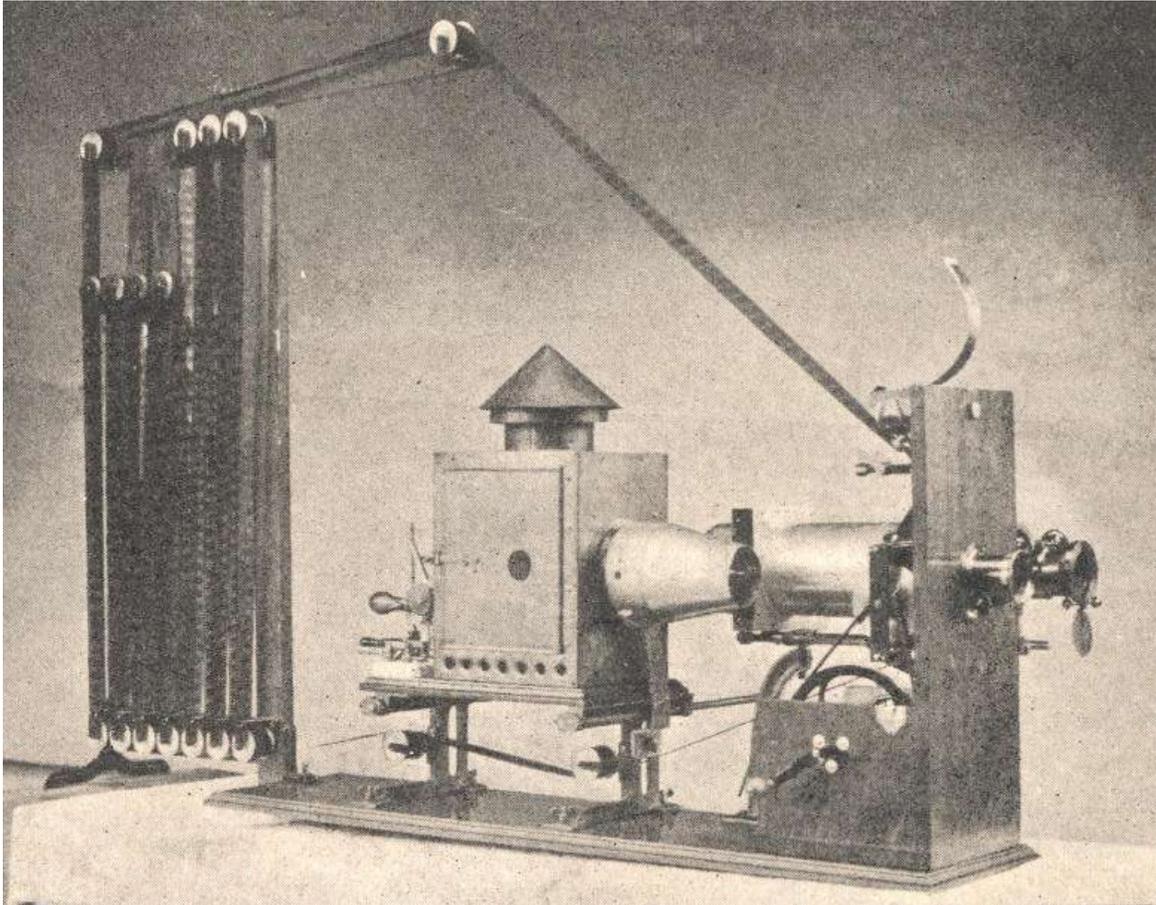
Type 1 Projecting Kinetoscope  
George Eastman House, Rochester, New York, Malkames Collection.  
Courtesy Carey Williams

## KINETOSCOPE SPOOLBANK TYPE 1



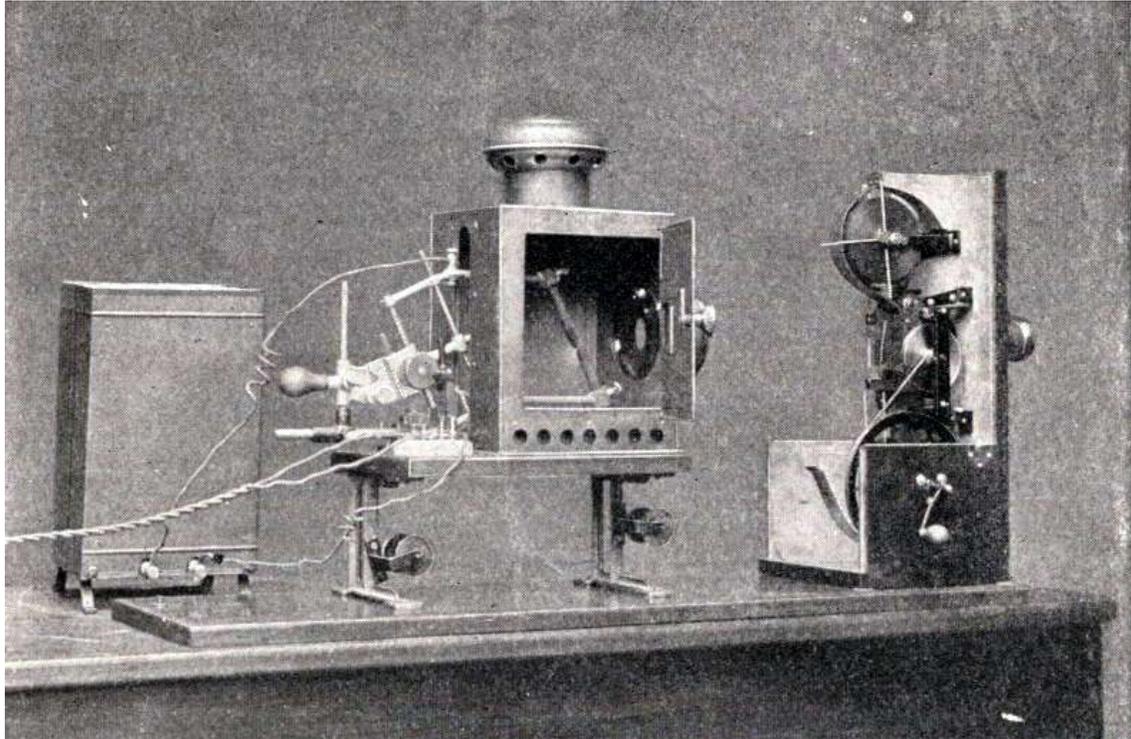
Type 1 Projecting Kinetoscope  
Collection Erkki Huhtamo

## KINETOSCOPE SPOOLBANK TYPE 1



Type 1 Projecting Kinetoscope Spoolbank  
Courtesy Allan Osborne

## KINETOSCOPE SPOOLBANK TYPE 1



Type 1 Projecting Kinetoscope used with reels  
Courtesy Allan Osborne

**KINETOSCOPE SPOOLBANK TYPE 1**



Type 1 Projecting Kinetoscope Spoolbank  
A spoolbank Kinetoscope with a phonograph to provide sound  
Courtesy, George C. Hall



# **KINETOSCOPE SPOOLBANK**

## **Type 2**

(Made by Thomas A. Edison)

(approximately 400 made)

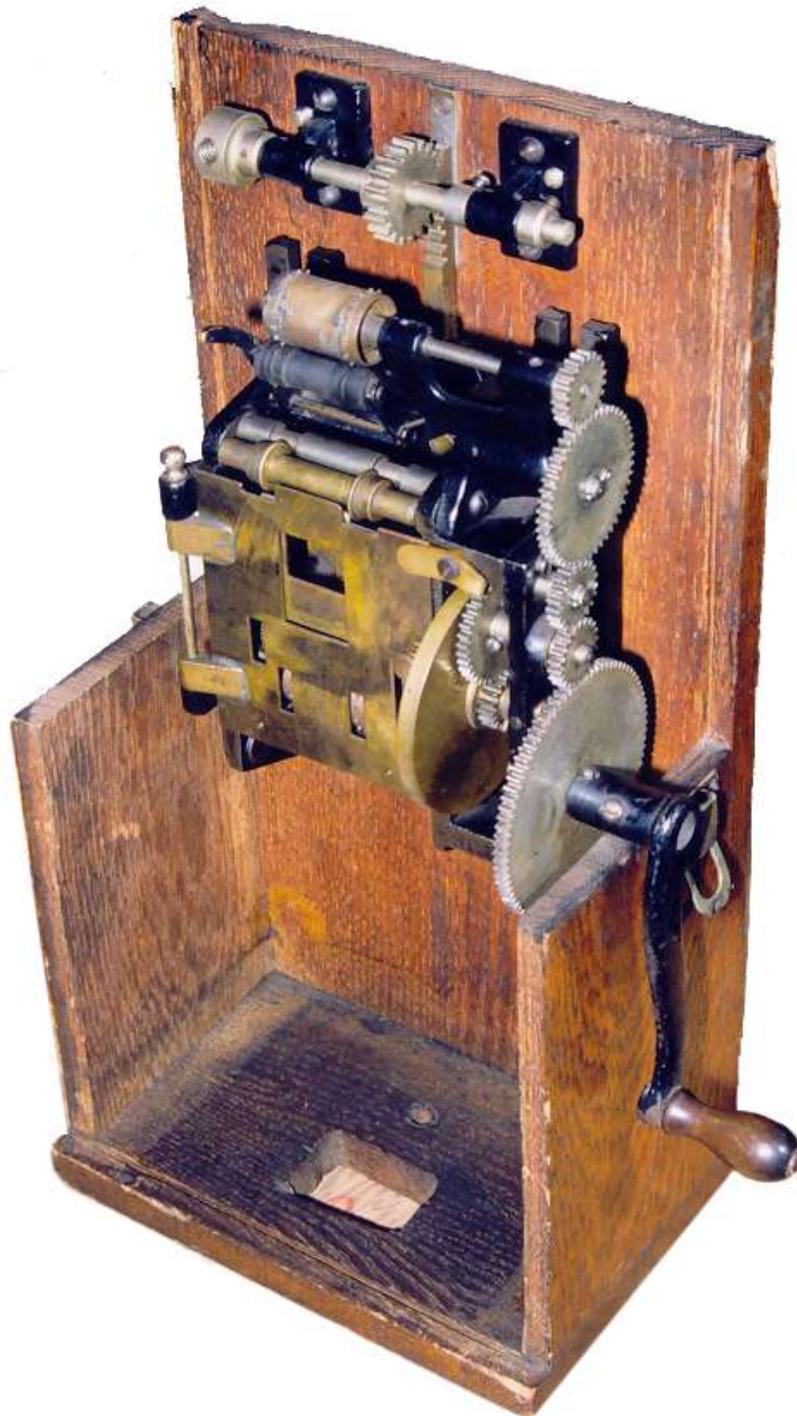
Complete Spoolbank: None

Complete machine (no Spoolbank): None

### **Projector head only**

- 1) Kirk Bauer, No. 611. Attleboro, Massachusetts, U.S.A.
- 2) Carey Williams, No. 721. Chicago, IL, U.S.A.
- 3) Robert Doran, No. 761. Silverdale, WA, U.S.A.
- 4) Robert W. Gutteridge, unknown, Whitby, Ontario, Canada
- 5) Tom Wilson, No. 1028, Clarksville, Ohio U.S.A.
- 6) Smithsonian Institution, No. 1,080. Washington, D.C., U.S.A.

## KINETOSCOPE SPOOLBANK TYPE 2



A Kinetoscope of the second type with a shorter wood front  
Collection Carey Williams, serial number 721

# **BIOSCOPE SPOOLBANK**

(Made by Walter L. Isaacs by and for  
Charles Urban)

Complete Known: None

Projector Heads Known:

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



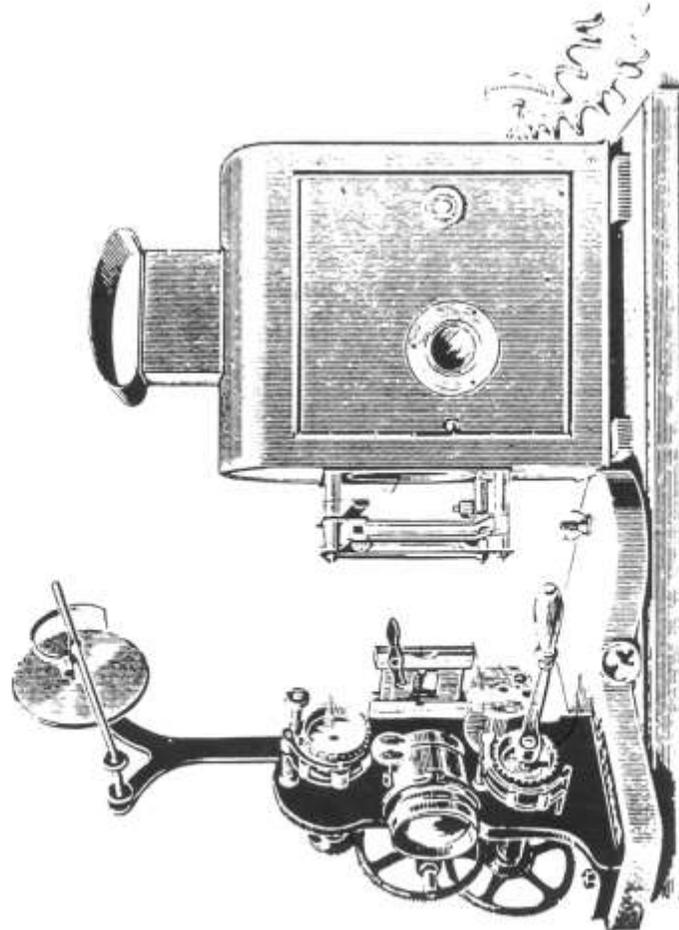
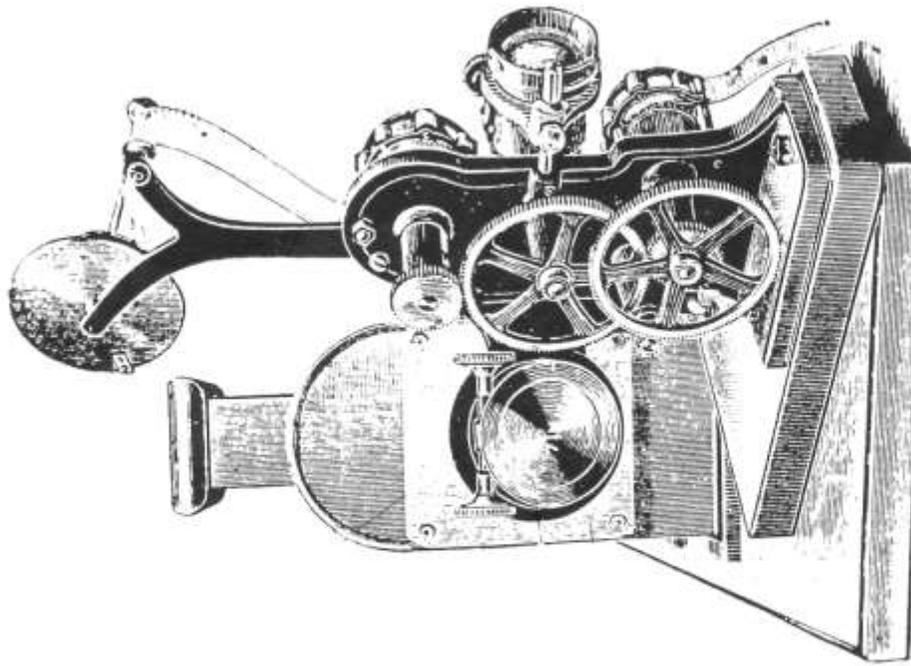
This is how the bioscope projector looked when I bought it.

The shutter arm is obviously not original equipment. It was apparently 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.

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 keep its Integrity.

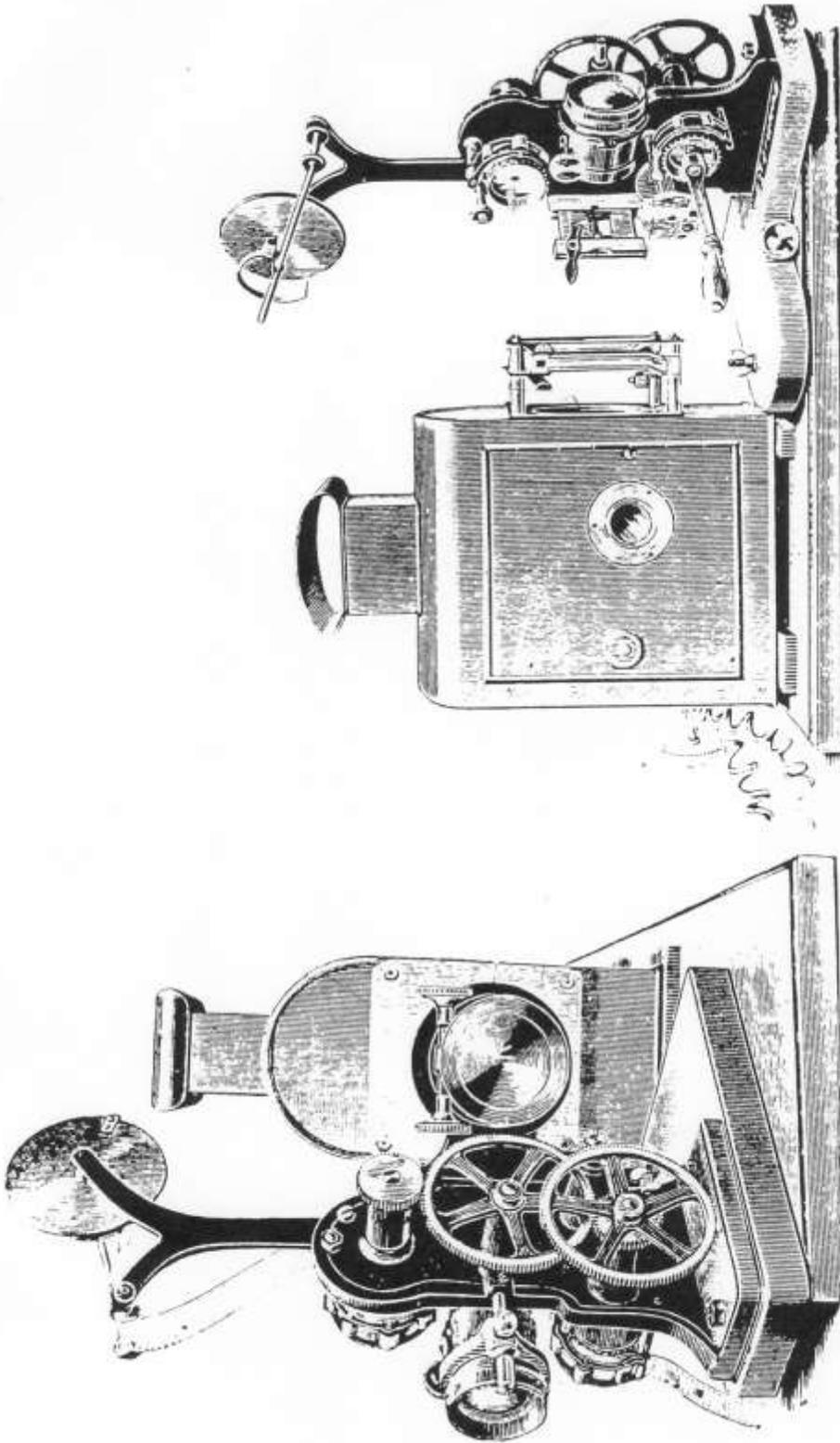
The parts made are based on line drawings of the period, with the exception of the shutter in which the 1900 Warwick projector shutter was used as a guide. I have no photographs of the Hepworth shutter.





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



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

## **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* it is quite clear that this an American made projector and 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

This machine was made by Walter L. Isaacs of New York City either under the direction of Charles Urban or in collaboration with him. Isaacs apparently made at least one other projector as shown in the Ray Bryan listing of projectors, which may have been the one that got him in trouble with Thomas A. Edison.

Robert W. Gutteridge, in his very erudite work *Magic Moments* provides the final word beyond any doubt that the machine illustrated here is the very first machine with his illustration of the Bioscope Spoolbank as illustrated in *The Optician* Vol. 13, of September 2, 1897.

## WARWICK BIOSCOPE



Bioscope  
Collection Soterios Gardiakos

## WARWICK BIOSCOPE



Bioscope  
Collection Soterios Gardiakos

## WARWICK BIOSCOPE



Bioscope  
Collection Soterios Gardiakos

## WARWICK BIOSCOPE



Bioscope  
Collection Soterios Gardiakos

# **CINEOGRAPH SPOOLBANK**

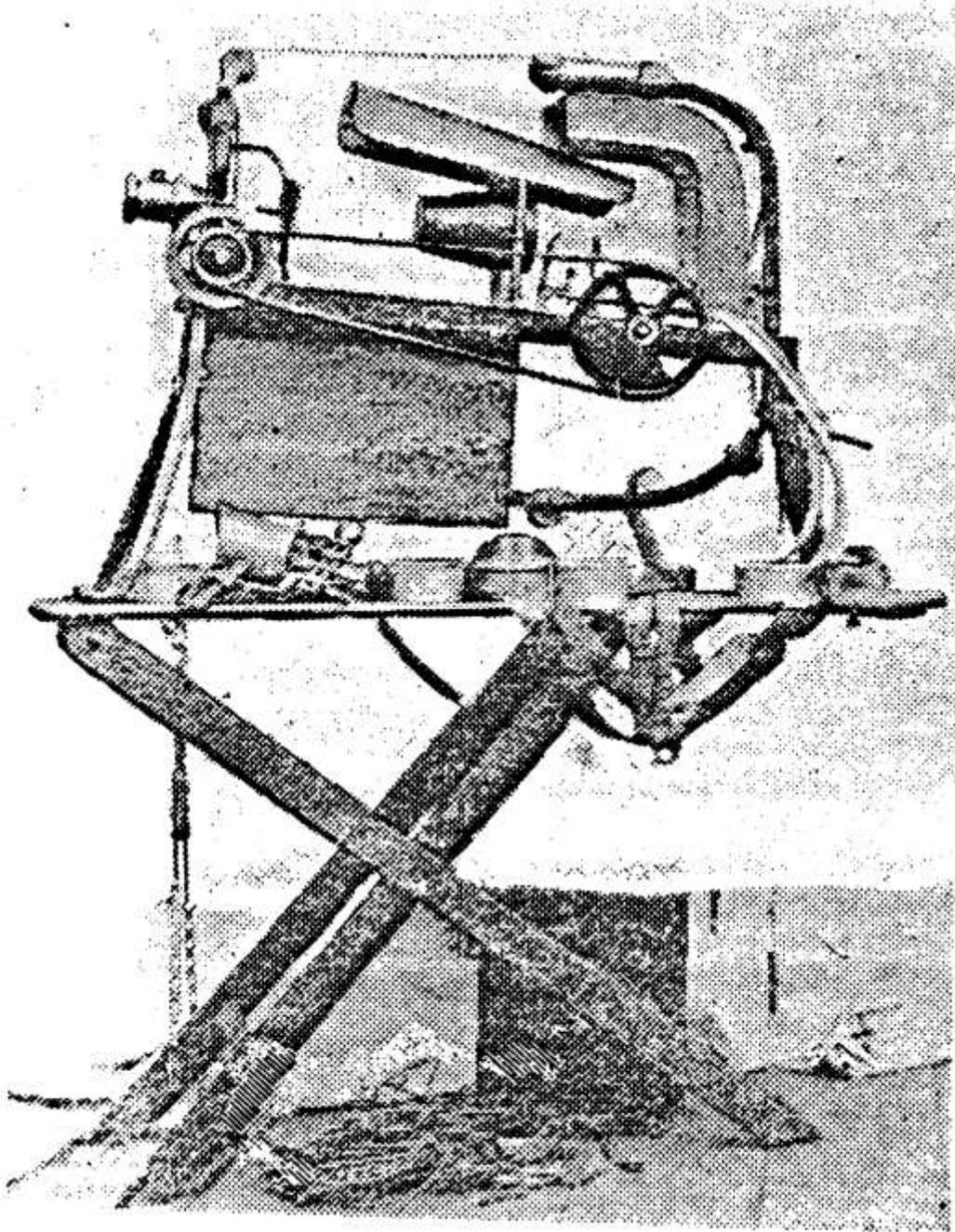
(Made by Siegmund Lubin with  
C. Francis Jenkins)

Complete Known: None

Complete machine (no spoolbank)

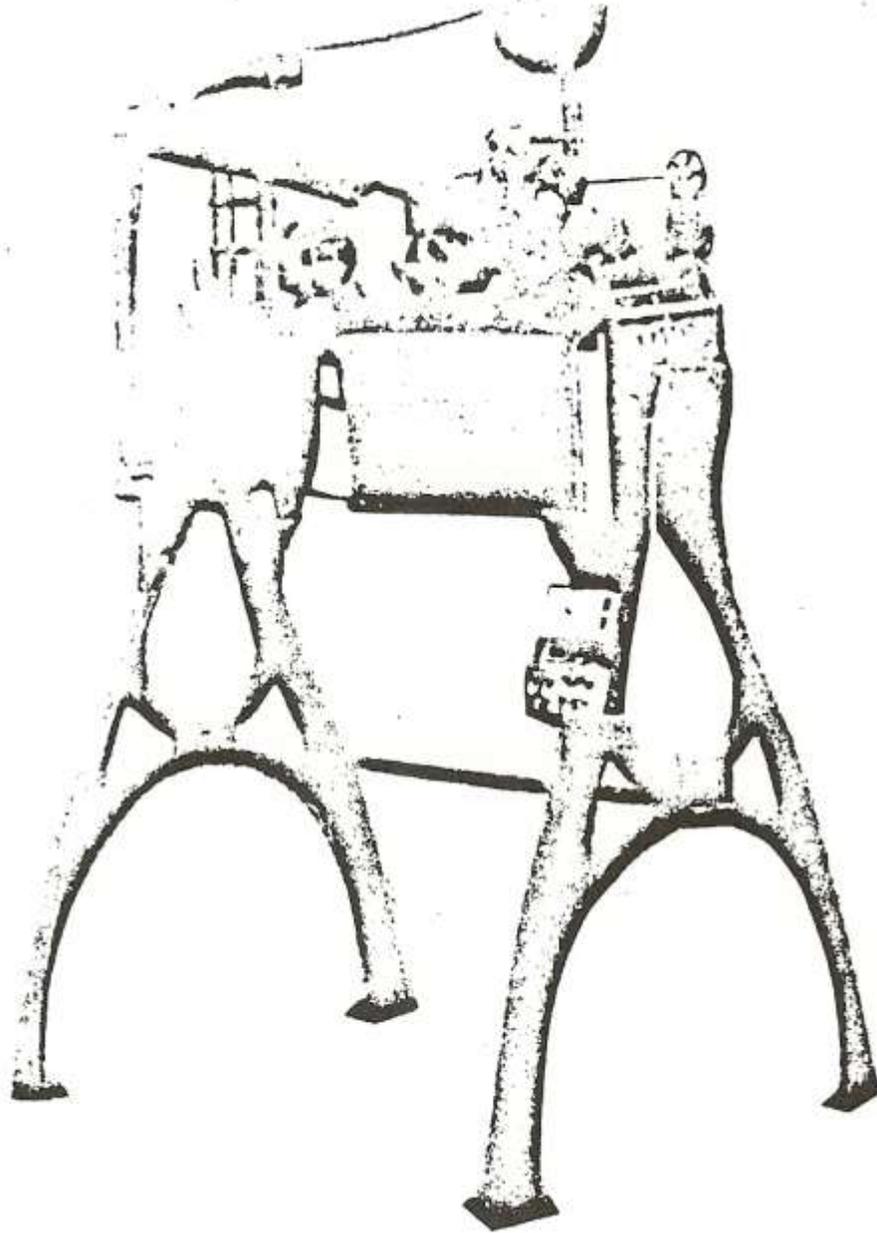
- 1) Jack Judson, 1898 model, Magic Lantern Castle, San Antonio, TX,  
U.S.A.

## CINEOGRAPH



Cineograph Spoolbank  
Lubin's first Spoolbank projector made with the help of Jenkins  
It is basically a Pantoscope  
Source: Ray Bryan files.

## CINEOGRAPH

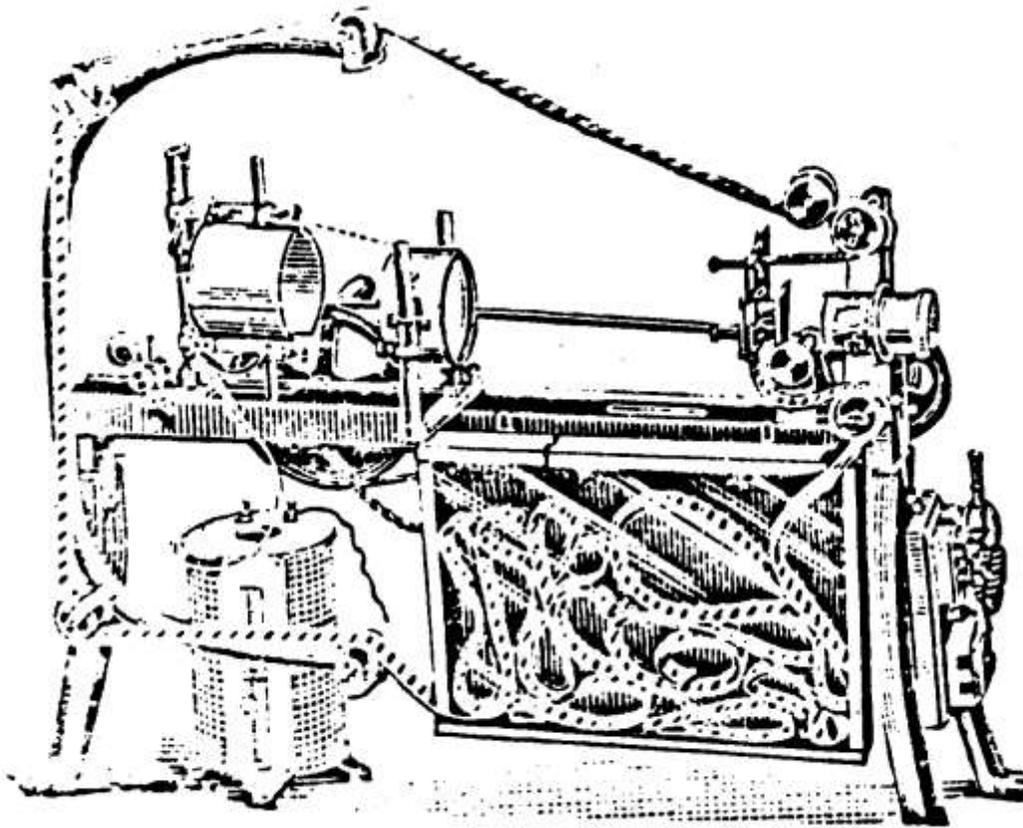


Lubin Cineograph Spoolbank

This was probably the first Lubin projector made by Lubin with the help of Francis Jenkins. Note the rectangular film box where the film would collect to run continuously as in a spoolbank.. The Stand is very similar to the one used by the Armat Vitascope.

*RAY BRYAN FILES* Museum of the Moving Image, Astoria, New York

## CINEOGRAPH



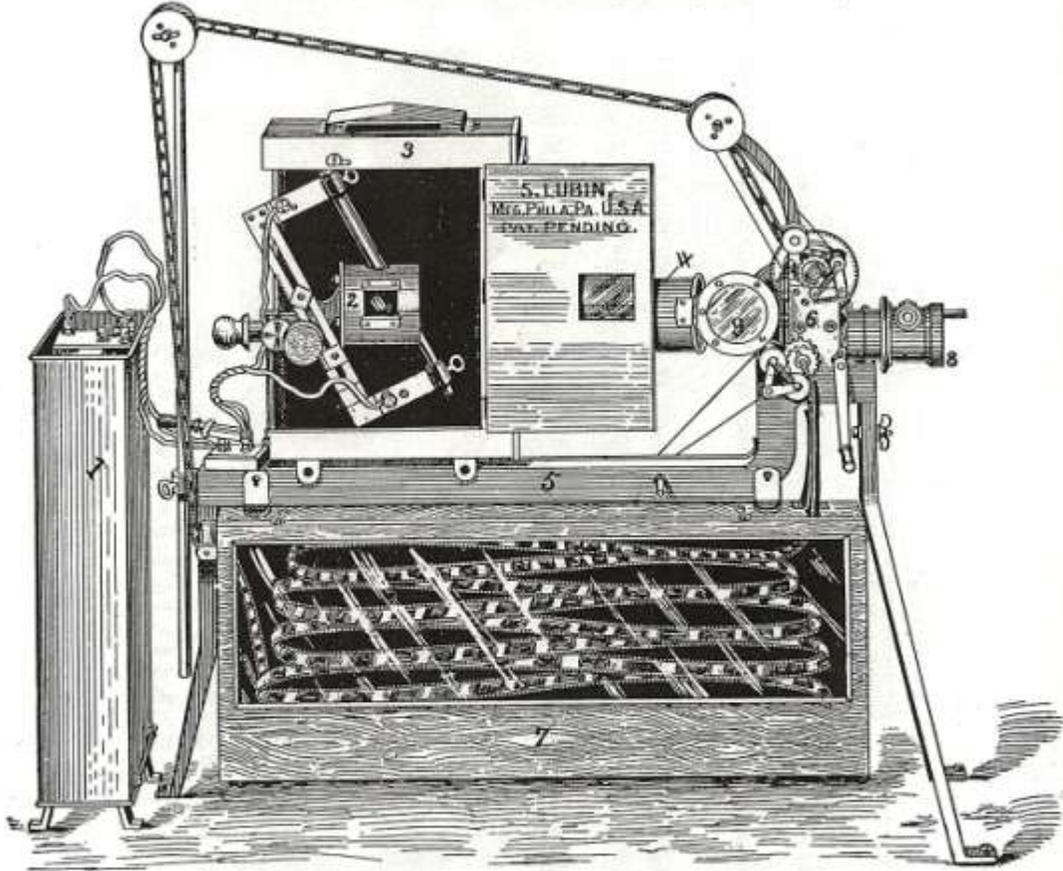
Lubin 1897 Cineograph Spoolbank  
possibly with a Jenkins Phantoscope head  
Source: Ray Bryan files.

# CINEOGRPH

## Side View of 1898 Model Cineograph Without Reels.

... OPERATED WITH FILM BOX ...

Reels are furnished with each machine, so that you can change from box to reels in a few minutes. (See engraving with reels.)



This is a descriptive engraving of our New Improved Portable Cineograph, where the film runs continually, and you can show the picture as often as you choose.

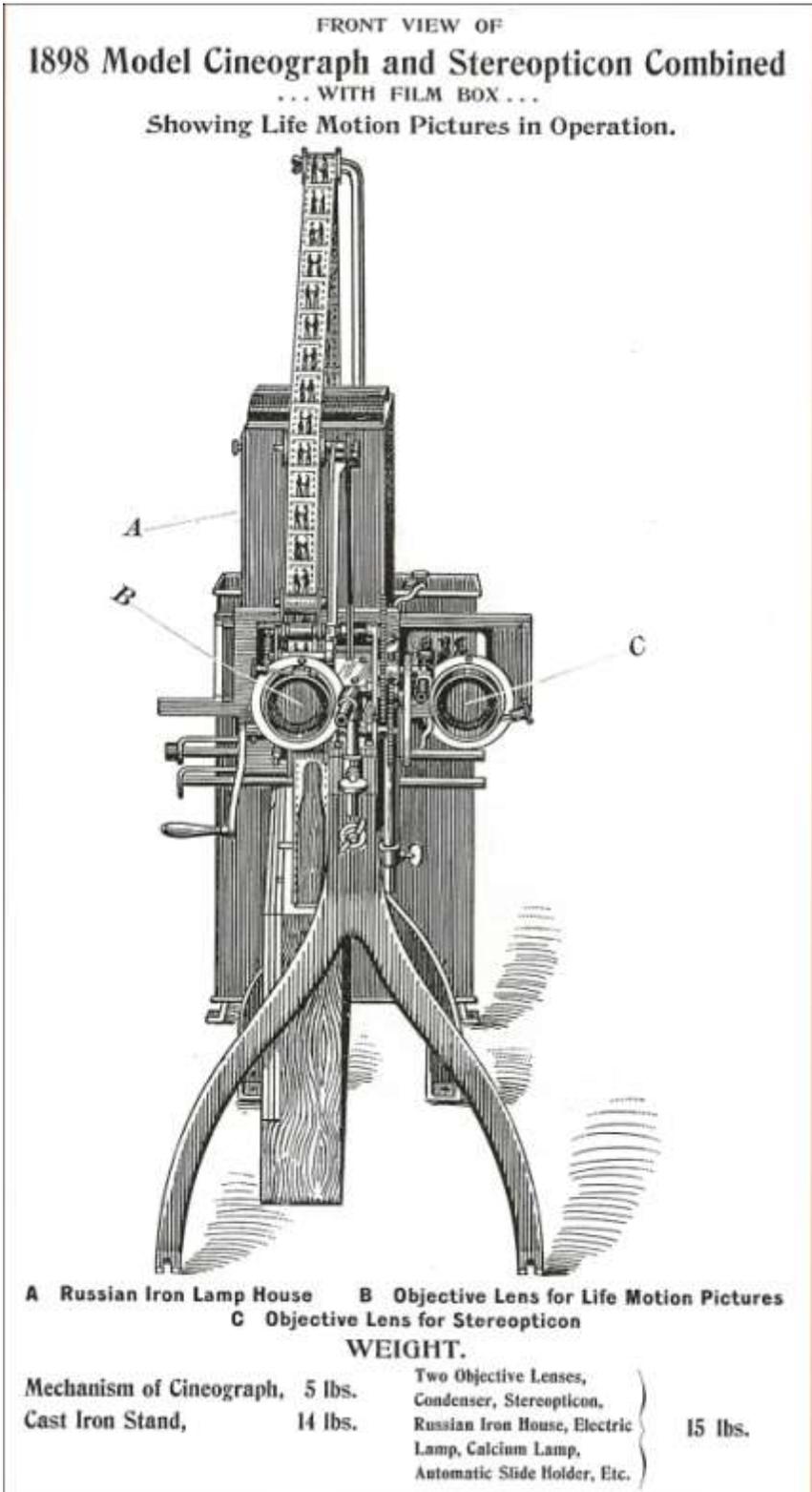
- |                           |                   |
|---------------------------|-------------------|
| 1 Rheostat                | 6 Head of Machine |
| 2 Electric Lamp           | 7 Film Box        |
| 3 Russian Iron Lamp House | 8 Objective Lens  |
| 4 Condenser               | 9 Isinglass Door  |
| 5 Cast Iron Frame         |                   |

### WEIGHT.

Mechanism of Cineograph	5 lbs.	Objective Lens, Condenser, Russian	} 9 lbs.
Cast Iron Stand	14 lbs.	Iron House, Electric Lamp and	
		Calcium Lamp, Etc., Etc.	

1898 Lubin catalog

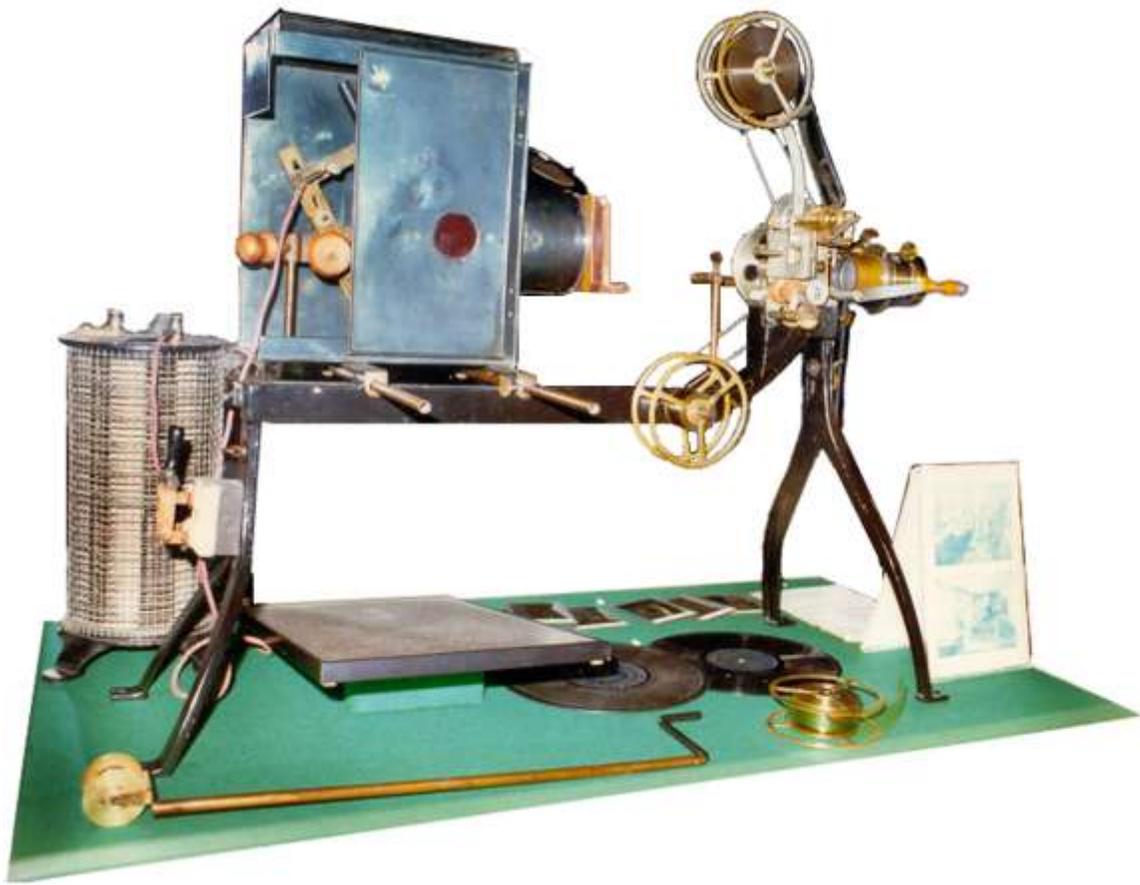
# CINEOGRAPH



1898 Lubin catalog

## CINEOGRAPH

The following article appeared in the January 1899 issue of *The Phonoscope, a Monthly Journal devoted to Scientific and Amusement Inventions appertaining to Sound and Sight*. The year 1899 was certainly the cutoff date of the spoolbank as far as Lubin's Cineograph was concerned. I think this was probably very close to the time when the spoolbank must have ceased being manufactured by all other projector makers as well. I have always believed that the era of the spoolbank was very short, and I believe this confirms my belief. I am very thankful to George C. Scott for this most important article as well as so much other information he has shared with me.



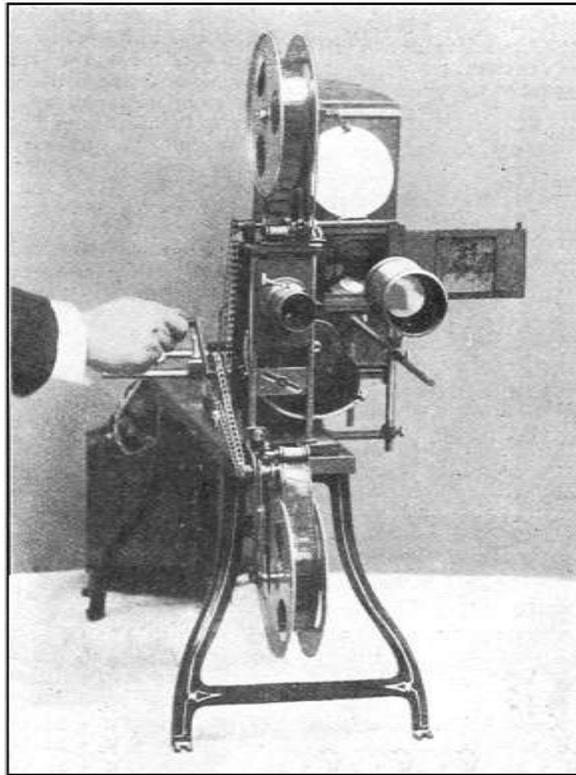
1898 Lubin Cineograph and stereopticon combined. The Jack Judson Collection at the Magic Lantern Castle Museum San Antonio, Texas

## CINEOGRAPH

We are pleased to illustrate a new animated picture machine which will be put upon the market this month. It will be known as the "Combined Cineograph and Stereopticon 1899 Model." This machine has entirely new principles which are not seen in any similar machine upon the American market. The absence of any spool bank is a marked departure. The reason of this is that the public is tired of seeing films repeated, and now require a large number of entirely different views. With the new Cineograph this is possible by joining the films together with a few feet of blank spacing film and rolling them upon one of the reels, which has a capacity of two thousand feet, enough for an entire entertainment or exhibition. Our illustra-

tion is a front view showing the machine operated by hand. There is but one lamp house and one set of condensers, while there are two lens, one for the animated pictures and the other for the Stereopticon views. The change from animated pictures to Stereopticon views can be made instantly. By an ingenious arrangement it is impossible for the film to jump upon the framing plate. This is an annoyance which has heretofore never been fully overcome. The lens is also arranged so that its field upon the screen may be changed with a satisfactory latitude, instantly. By means of a graduated rheostat different degrees or intensities of light upon the screen may be obtained. With this rheostat greater intensity of light and degree

of whiteness or brilliancy can be obtained than with any other. The new Cineograph is the lightest and most compact animated picture machine which we have yet seen. Mr. Prescott's advertisement on another page of this issue shows a side elevation of the machine and a good view of the new rheostat. We call attention to the advertisement of the National Gramophone in this issue. Although a comparatively new instrument, having been upon the market only about two years, it has been rapidly making for itself a large place in the talking-machine field. The records are made of vulcanite or hard rubber and are indestructible. They are not affected by the climate or various



temperatures of foreign countries. They are also small and compact, so that a dozen records can be packed in the space that would be required to pack two regular Phonograph wax cylinders. Owing to recent improvements the Gramophone records are becoming very clear and distinct in reproduction, there being an absence of any harshness which may have been noticed on the earlier records. An indestructible needle or stylet is also promised for the very near future. Mr. F. M. Prescott, the export agent, is desirous of establishing agencies all over the world, and we recommend all those who are interested in the latest things in the talking-machine line to write to him for further particulars.

Courtesy George C. Hall.

# **MAGNISCOPE SPOOLBANK**

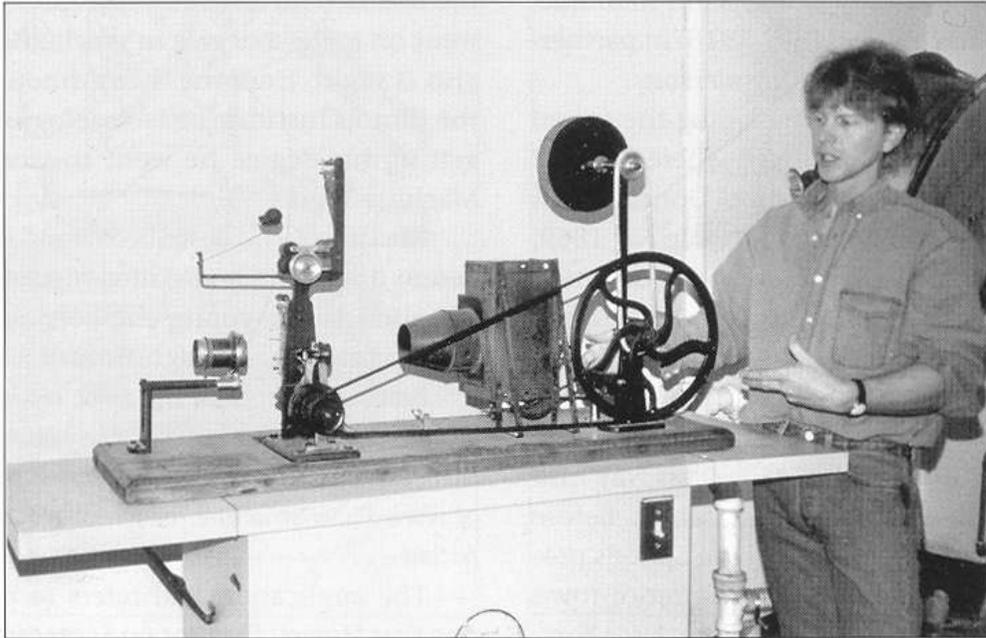
(200 made by E. H. Amet for Spoor)

Complete known: None

## **Complete Machine (no Spoolbank)**

- 1) Carey Williams, Chicago, IL, U.S.A.
- 2) Carey Williams, Chicago, IL, U.S.A.
- 3) Carey Williams, Chicago, IL, U.S.A.
- 4) Eastman House, Rochester, N.Y., U.S.A.
- 5) Thomas A. Edison Museum, Ft. Meyers, FL, U.S.A.
- 6) Museum of Science and Industry, Chicago, IL, U.S.A.
- 7) Astoria, N.Y., U.S.A.
- 8) Lake County Museum, U.S.A.
- 9) Smithsonian Institution, Washington, D.C., U.S.A.

## MAGNISCOPE



*Fig. 159. Carey Williams, noted collector, with a Magniscope in his collection.*



Magniscope, collection George Eastman House

# MAGNISCOPE

T. H. McALLISTER, MANUFACTURING OPTICIAN, NEW YORK.

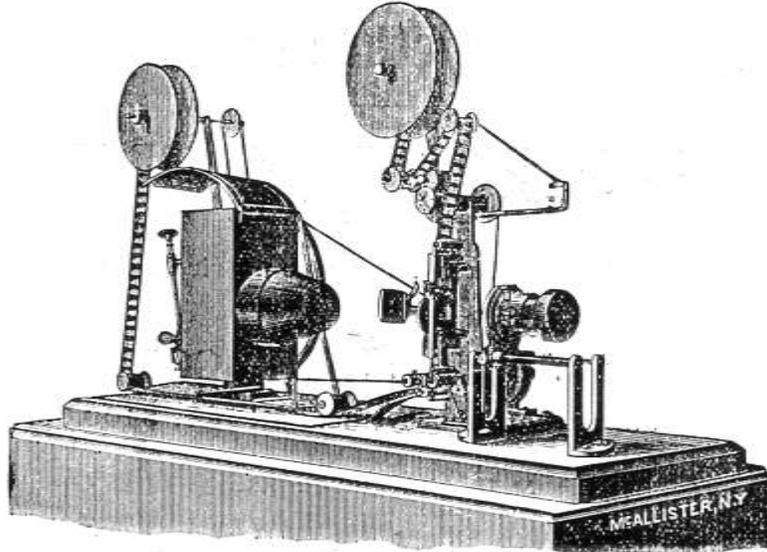


FIG. 1.

Fig. 1 shows the Amet Magniscope when using unjoined Films.

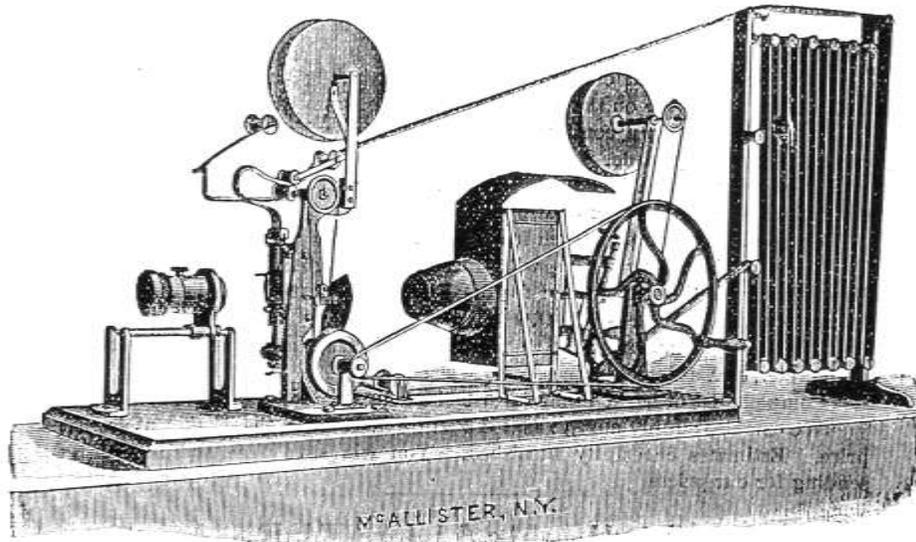


FIG. 2.

Fig. 2 shows the Amet Magniscope when using joined or continuous Films.

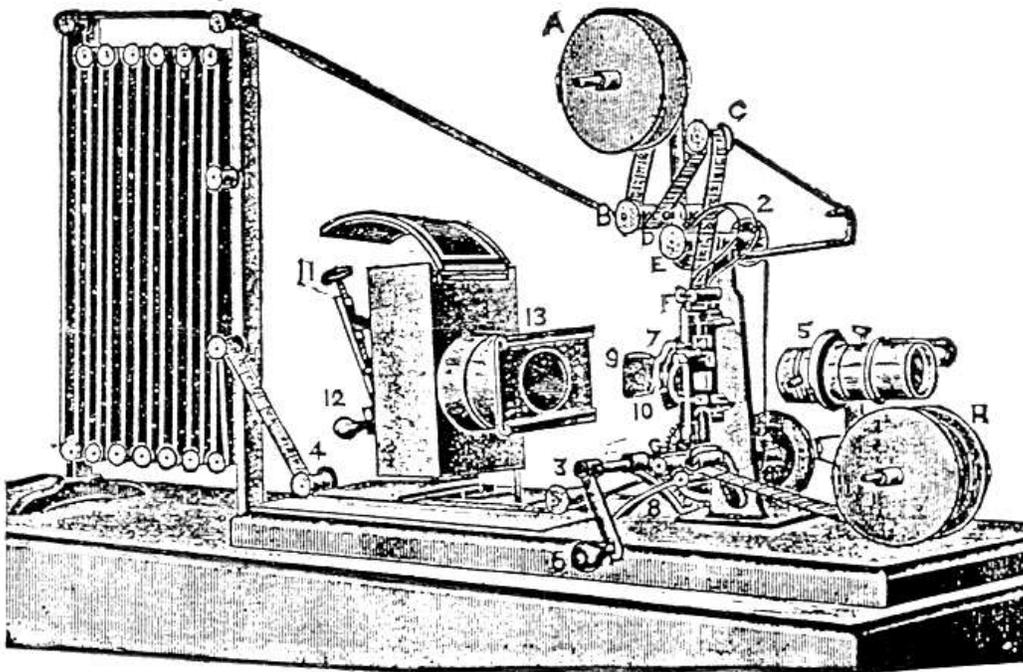
Magniscope Spoolbank  
From a E. H. Amet Waukegan, Illinois catalog  
courtesy Carey Williams.

# MAGNISCOPE

McALLISTER, MANUFACTURING OPTICIAN, NEW YORK.

# THE AMET MAGNISCOPE.

"MODEL 1898."

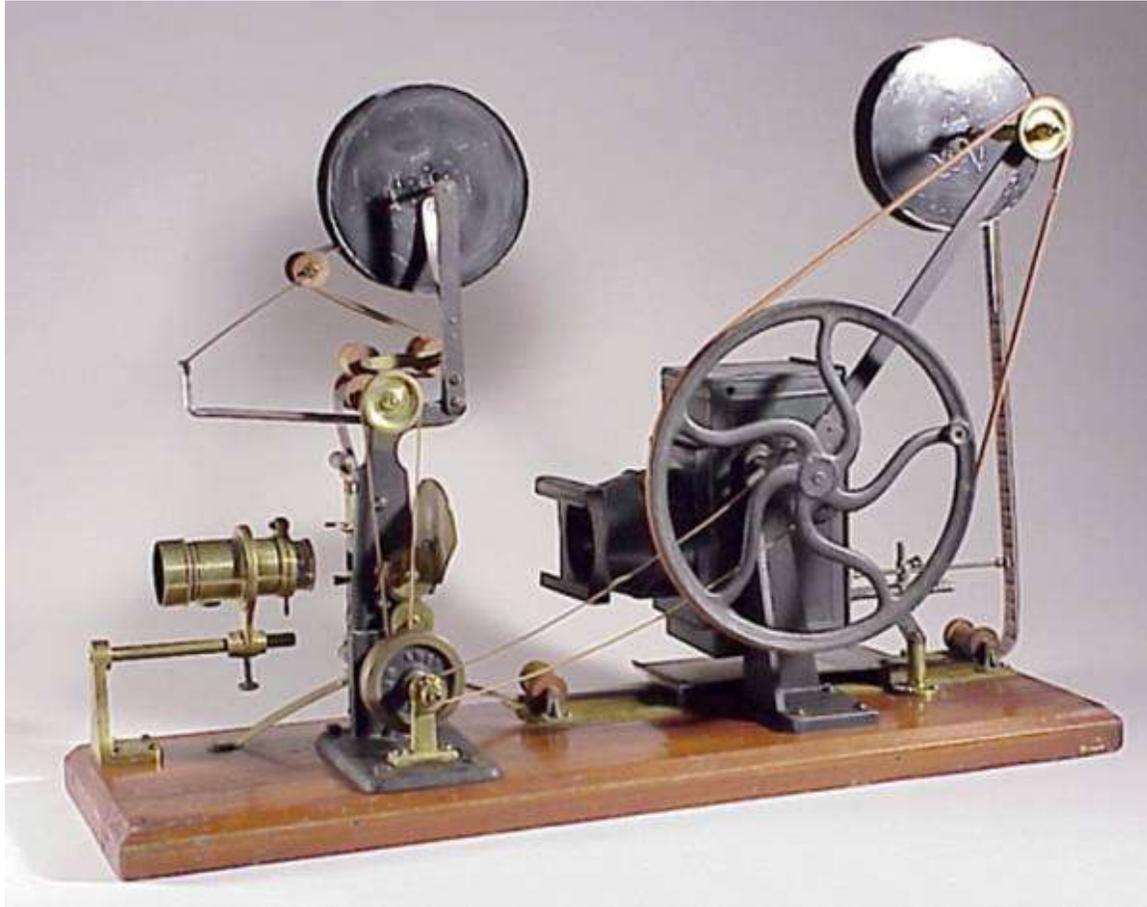


The most Perfect Apparatus for  
Producing Moving Pictures.

**\$100.00.**

Magniscope Spoolbank  
From a T. H. McAllister Manufacturing Optician, New York  
catalog, courtesy Carey Williams.

## MAGNISCOPE



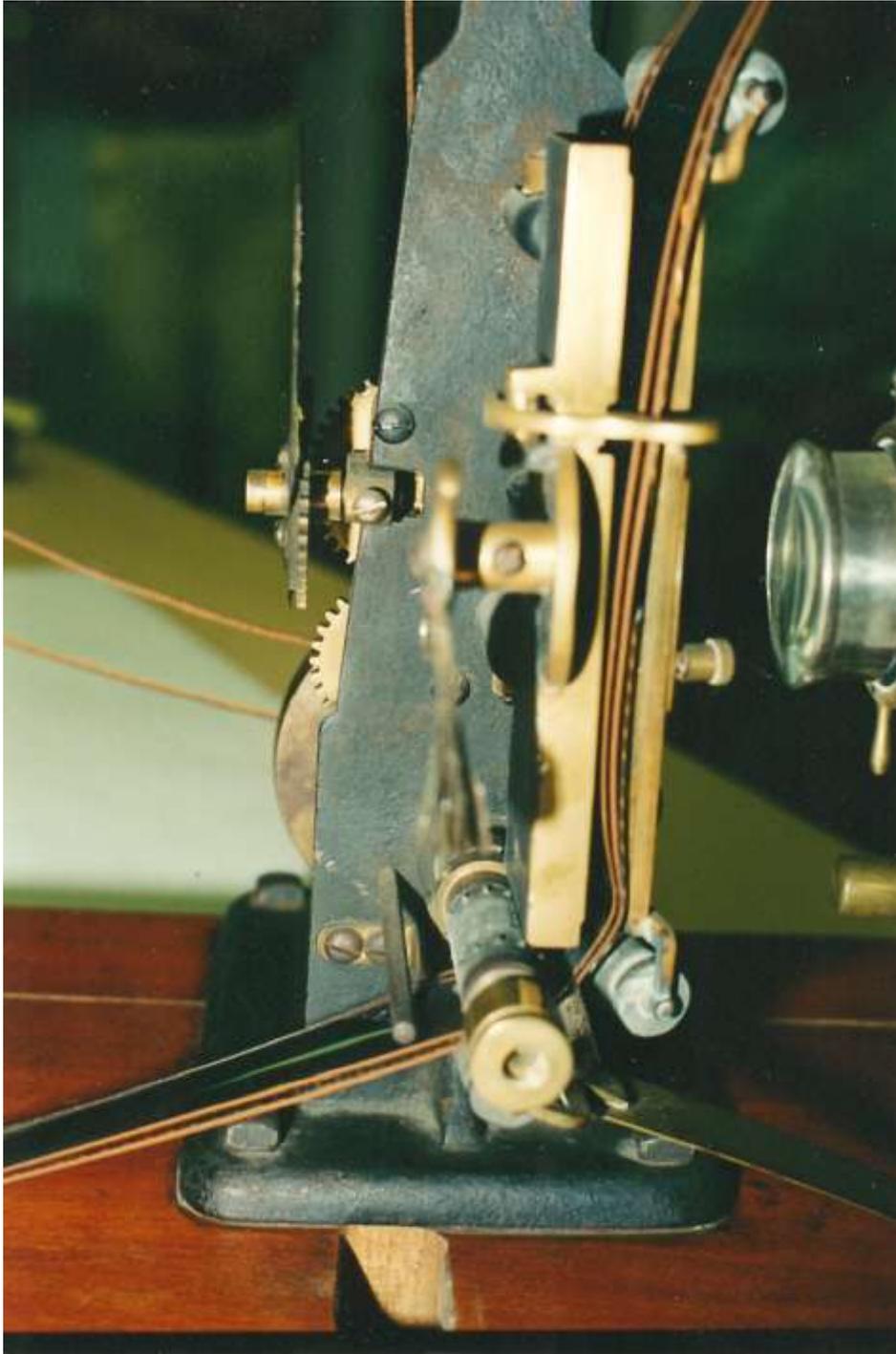
Magniscope in the collection of the Science and Industry Museum, Chicago, Illinois USA

## MAGNISCOPE



Magniscope in the collection of the Science and Industry Museum, Chicago, Illinois USA  
Photo courtesy Carey Williams

## MAGNISCOPE



Magniscope in the collection of the Science and Industry Museum, Chicago, Illinois USA  
Photo courtesy Carey Williams

## MAGNISCOPE



Magniscope in the collection of the Science and Industry Museum, Chicago, Illinois USA  
Photo courtesy Carey Williams

# **HEPWORTH SPOOLBANK**

No known Hepworth Spoolbank is known to exist and it is not even certain if this Spoolbank was actually ever made.

## HEPWORTH SPOOLBANK

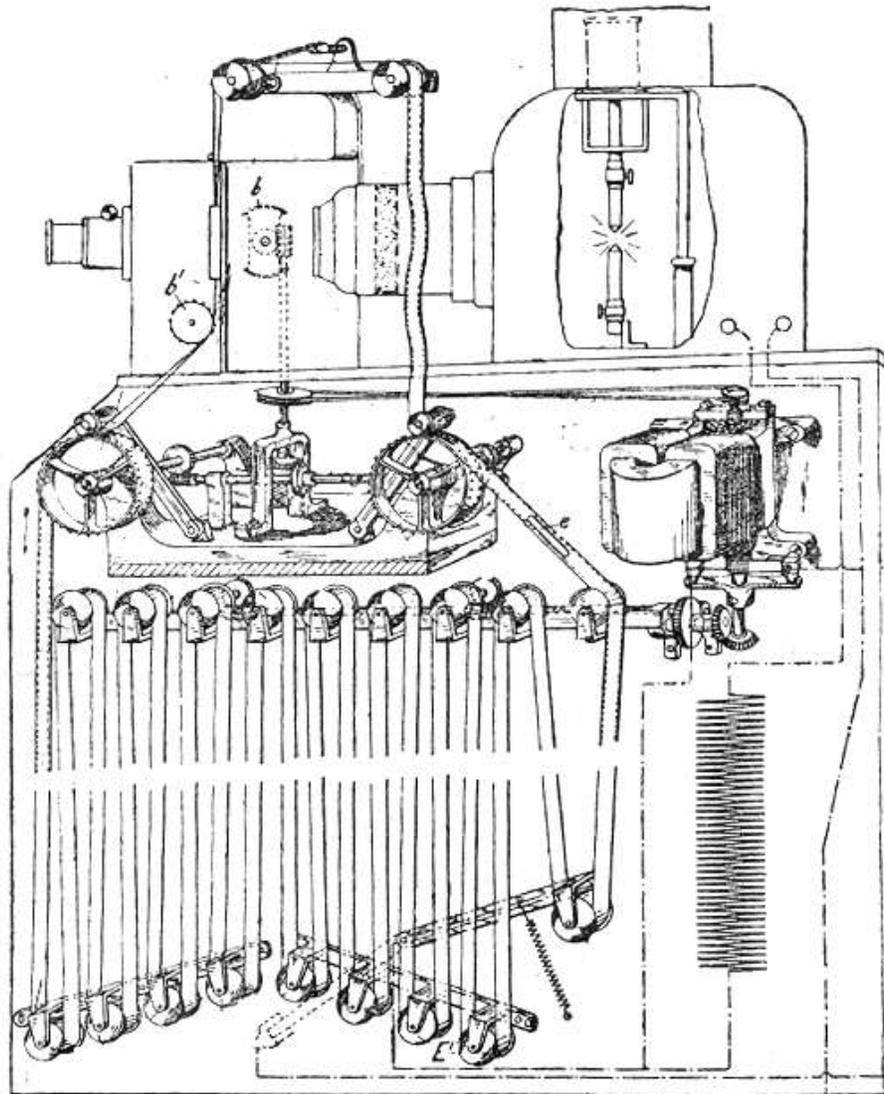


FIG. 241.

### Hepworth Spoolbank

Fig. 241 shows an apparatus designed by Mr. Hepworth, which dispenses with the continued presence of an operator. It will be seen that a spoolbank is employed as in the Kinetoscope, but the film is led upwards so as to pass between condenser and projecting-lens, the central shaft also being carried up to work the shutter. The whole arrangement is electrically operated, and a slot at *e* permits contact to be made in order to stop the machine at the end of a scene. A jockey-roller is also provided, so that if the film tightens by reason of some accident the roller rises in order to break the current.

Source: Henry V. Hopwood, *Living Pictures*, p. 222.

## **HEPWORTH SPOOLBANK**

The other reference to this spoolbank appears in John Barnes *The Rise of Cinema in Great Britain*, pp. 171-172. It is not clear if the machine was actually made or existed as an engineering drawing somewhere in the Hepworth office. All I can do is copy the relevant information for presentation here and hope someone has more information that they can forward to me for inclusion in this paper.

It was whilst at no. 22 that Hepworth patented a special projection apparatus capable of operating continuously without the presence of an attendant and intended principally for advertising purposes.

It consisted of a cabinet, not unlike the Edison Kinetoscope, in which were a series of pulleys at top and bottom and so arranged as to form a convenient spool-bank for holding an endless band of film. On top of this was the projecting apparatus adapted from one of the standard machines of the period. The film was led upwards from the spool-bank so as to pass between condenser and projecting-lens. The projector itself was connected by gearing and a shaft to the driving mechanism contained in the cabinet, and the whole was electrically driven and provided with a timing device which operated a mechanism for switching the machine on and off. A safety device was also included so that the electric circuit was automatically broken as soon as any undue tension was applied to the film and so bringing the machine to a halt. As far as is known, nothing came of this invention and, it seems, was soon forgotten, eventually even by Hepworth himself, who failed to mention it in his autobiography published in 1951.

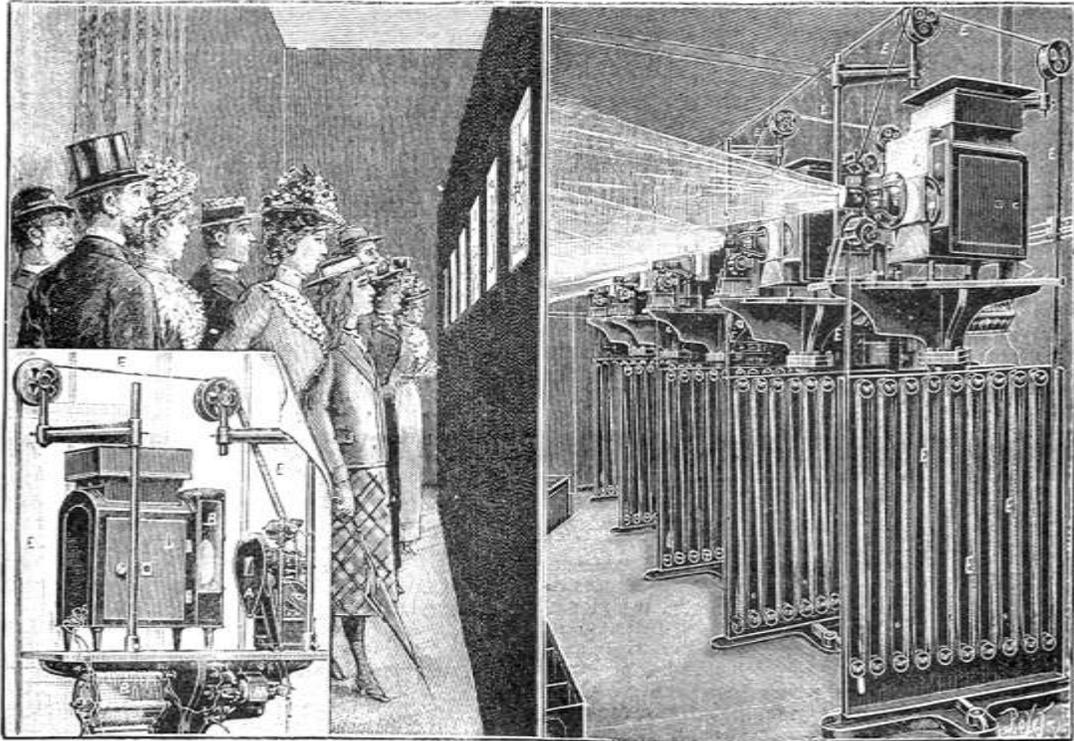


# **DEMENY-GAUMONT**

## **SPOOLBANK**

No Spoolbank of this type is known to exist and I cannot precisely identify the projector used in this set up.

## DEMENY-GAUMONT SPOOLBANK



THE CINEMATOGRAPH AT THE SECTION OF INSTRUCTION  
OF THE CITY OF PARIS

As a general thing, the crowd at the exposition neglects the sections of instruction, since they do not interest it. And yet there would be an excellent opportunity here for it to get an idea of the effort that we have been making during the last twenty years for the development of public instruction, to compare the methods employed in different countries, and to see that, although our neighbors learned the importance of the schoolmaster before we did, we are now on a par with them as regards the results obtained. But the halls in which all this may be read at a glance remain deserted, their aspect is not very attractive, and the public pays no attention to the pictures hanging on the walls. All, however do not deal with statistics, for some of them represent interesting phases of school life that are worthy of attracting a little more attention. People pass by these pictures in indifference, as accurate as they are, because they give but an instant of school life, which nevertheless is all excitement. The pictures are not living ones, and coldly represent a phase of acts that are interesting only in so far as they are completely unfolded in a perfect continuity-such, for example, as the entrance and exit of classes with order and method, elementary gymnastic motions, manual labor, etc. In the pavilion of the city of Paris, M. Bedorez,

## DEMENY-GAUMONT SPOOLBANK

Superintendent of primary instruction at the Prefecture of the Seine, has desired to render the section of interest, so as to attract the public thereto, and has perfectly succeeded by having apparatus installed for the production of animate pictures through projection. For a study of the subject he consulted M. G. Demeny, whose labors in chronophotography are familiar to everyone, and who is a recognized authority in everything that concerns physical culture. The problem was not of the easiest character to solve, because it was necessary to be content with slight space and little light and to operate automatically in a continuous manner; but, M. Demeny, aided by M. Gaumont, the manufacturer of his apparatus, succeeded in overcoming all difficulties.

As we have already described the Demeny chronophotographic apparatus, we shall not revert to it, but shall merely recall the fact that, for a continuous projection, it presents the great advantage that there is not any abrupt intermittent motion in the passage of the band. Since this latter forms an endless belt, it is capable of moving for an indefinite length of time without any deterioration. The arrangement adapted is the same as that found in Edison's first Kinetoscope. The band of film, which has total length of 65.5 feet, runs over a series of pulleys placed alongside of each other at the top and bottom of a vertical frame, reaches the upper part of the apparatus and passes between the objective and the source of light. This latter consists of a 100-candle power incandescent lamp. The arc lamp with naked flame had to be rejected as being capable of offering a certain amount of fire risk, especially in connection with an apparatus that is designed to operate without surveillance. The projection is received upon a plate of ground glass of 12 by 16 inches. It lasts for 45 seconds, and then immediately begins again. The band is actuated as in the ordinary apparatus, but for the winch there is substituted a small electric motor. M. Gaumont, however, devised a type of apparatus with an electric motor for large projections some time ago. This permits of causing a series of from 8 to 10 bands, glued end to end and wound upon a single drum, to pass without interruption.

In the installation under consideration there are six apparatus placed side by side in the gallery of the first story of the pavilion of the city of Paris. They are enclosed in an iron cabinet, and an aisle between the latter and the wall allows the public to pass into the darkness in front of the series of plates of ground glass upon which are unfolded the scenes of life in the Municipal Schools of Paris. – La Nature.

Source: *Scientific American supplement No. 1307*, 1901 p. 20951.



# **BACIGALUPI**

## **Peephole Kinetoscope**

### **Spoolbank Projector**

Magniscope in the collection of the Science and Industry Museum, Chicago, Illinois USA  
Photo courtesy Carey Williams

“Peephole” Kinetoscope used as a projector

Mr. George C. Hall has informed me that Bacigalupi had used a Kinetoscope quite early for the purpose of projecting on a screen. We have no plans or photos of the mechanism Bacigalupi constructed, and obviously the mechanism is not known to exist.

## San Francisco, Cal., Dates Back to the Year 1894

*Peter Bacigalupi was First Dealer--Greatest Development Has Come Since the Earthquake and Fire of 1906*

ONE of the pioneers in the moving picture business on the Pacific Coast is Peter Bacigalupi, of the firm of Peter Bacigalupi & Sons, 908 Market street, San Francisco, now handling phonographs and automatic musical instruments. Mr. Bacigalupi was interested in the moving picture industry from 1894, when the first machines were brought here, until the great fire of 1906, when he turned his attention to other lines. His memory is clear on the early days of the industry and he has some interesting relics to show of the pioneer days. Among these are business cards he had made shortly after the first films were brought to the Coast. Whenever a film became torn or badly worn it would be cut up and a section pasted over a hole cut in a business card, making a souvenir that was in much demand in those days. One of the most interesting relics in his possession, however, is a card establishing the date when moving pictures were first shown here. This reads as follows:

San Francisco, June first, 1894.  
This is to certify that Captain John F. Ryan, United States Government Diver (a Christian), was the first man who paid to see the Edison Kinetoscope west of Chicago.

(Signed) HOLLAND BROS.

This was written in the back of a business card bearing the following wording:

Edison Kinetoscope,  
Holland Bros.,  
Ottawa, Canada,  
Foreign Agents.

Represented by A. Holland.

"When Holland Bros. brought the Edison Kinetoscope to the Pacific Coast," said Mr. Bacigalupi, "I closed a deal at once for the five machines they had, paying \$2,500 for them. These were set up in a store in the Chronicle Building at Market and Kearney streets and people stood in line to see



Peter Bacigalupi, San Francisco, Cal.

the pictures, paying a fee of 10 cents. This was before a screen was used, one person monopolizing a machine during the run of the film, which was, of course, very short. Backed by himself and others E. H. Arnet of Waukegan, Ill., commenced the manufacture of a machine called the Magniscope, but only a few were made.

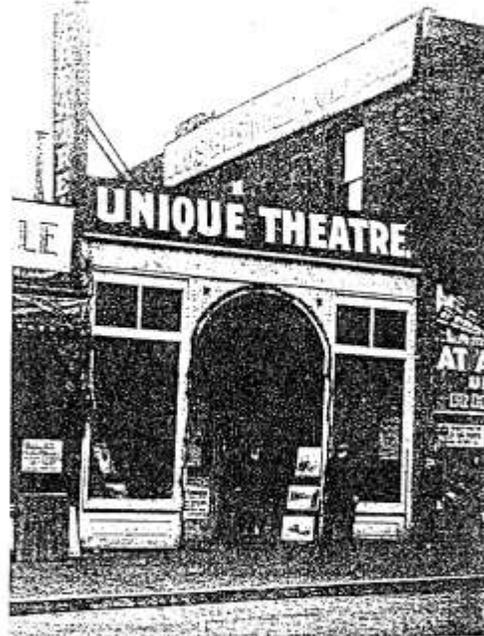
"Walter Furst was the first man to have a five-cent show here, his house being located on Market street about where the Odeon theater now is, this being known as the Cinegraph. At first vaudeville was given upstairs and when the performance here was over the audience would go to a room below where moving pictures were shown, everyone standing to see them, there being no seats. At first ten cents was charged, but later the vaudeville was eliminated and straight pictures were shown at five cents.

"One of the first attempts to use a screen in connection with moving pictures was made by a man named Wright who came here from Portland and worked for the late Charles L. Ackerman, the attorney. He took one of the coin-in-the-slot machines, turned it on its side and with but a few changes threw a picture on a screen. He later opened a theater on Market street, near Fifth, where the Lincoln

Market now stands, and this house, with the one conducted by Walter Furst were among those destroyed by the fire of 1906.

About 1898 D. J. Grauman entered the field, after working for Walter Furst for a time, opening the Unique theater on Market street, near Mason. He made a big success of the business and bought a large part of the films I was importing at that time. In 1900 I made a visit to Paris and bought a large quantity of Pathe, Gaumont and other foreign films and sold most of these to Mr. Grauman upon my return. Most of these films came in lengths of from fifty to one hundred and fifty feet and sold at about \$25 for the shorter lengths. Some of these early subjects would be very interesting now. For instance, among the first films shown here were some featuring Ruth St. Denis, the dancer, Sandow and Anna Belle Moore.

"Among the first Biographs brought here was one showing Pope Leo XIII. I brought this to the Orpheum and at the



Unique Theater, Seattle, Wash., First Picture House of Miles Bros., Herbert Miles in Lobby.

same time brought John Brandlein, an operator, to the city, and he is still to be found here. The pictures of Pope Leo were also shown in Metropolitan Hall on Fifth street, but although they were excellent, about the best that had been shown here up to that time, the attendance was very light. Mrs. McEnerney, wife of the well known attorney, was an enthusiast over this picture, and saw it many times.

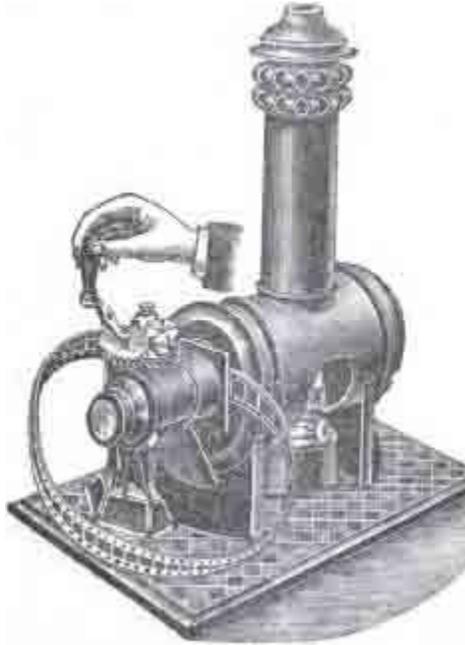
"At the time of the fire of 1906 my headquarters were at 786 Mission street, up to then, and I was doing a big business in moving pictures, Edison machines and penny arcade goods. I operated two of the latter, one being on Market street, at Stockton, and the other in the historic old Bella Union theater on Kearny street. When I lost the Edison agency it was taken over by George Breck, the supply man."

This page from "The Moving Picture World," July 15, 1916, gives a version of the early days of motion picture exhibition in San Francisco.

Peter Bacigalupi, The Moving Picture World. July 15, 1916

**CONTINUOUS FILM  
TOY MOVIE  
PROJECTORS**

## BING CONTINUOUS LOOP TOY MOVIE PROJECTOR

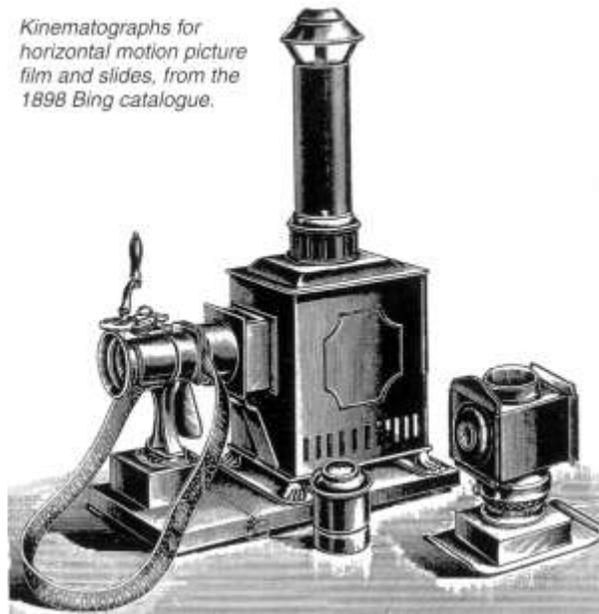


### Messrs. Butcher & Son

... "We noticed an article, for which there should be a good demand-to wit the toy kinematograph; there are toy kinematographs, and toy kinematographs, and this is of the later, and we have no doubt that these toys will prove a source of delight to many juvenile hearts. The price is 13/6, with nine films ! Extra films can be had for 6/. per box of six."

THE PHOTOGRAPHIC DEALER, October 1898, page 92

*Kinematographs for horizontal motion picture film and slides, from the 1898 Bing catalogue.*



The Magic Lantern Society, ENCYCLOPEDIA OF THE MAGIC LANTERN, p. 37

## **BING CONTINUOUS LOOP TOY MOVIE PROJECTOR**



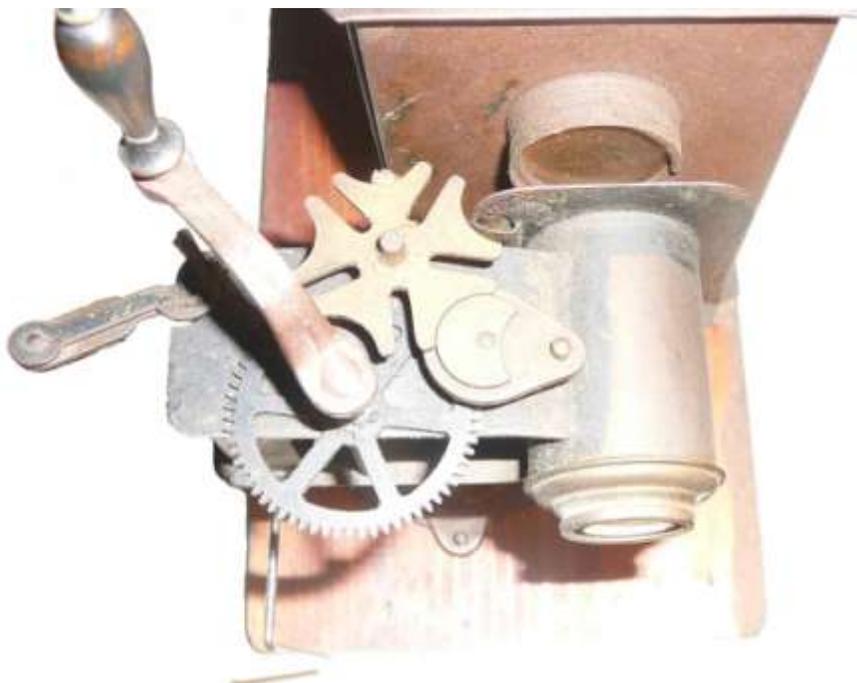
Bing 35 mm continuous loop movie toy projector  
Collection Soterios Gardiakos

### **FIRST FILM ANIMATION**

. ... In 1987 came the discovery that the great 19th century illustrator George Cruikshank had turned his hand to animation at the advanced age of 78, with notable success. The identification of eight surviving Bing horizontal-format animation films from 1897-8 set a new date on the beginnings of animation in the cinema

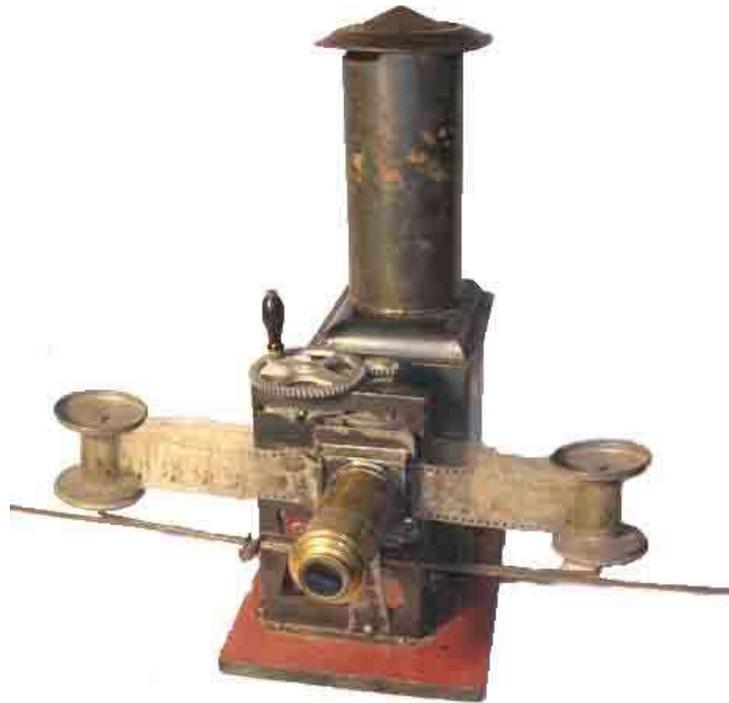
David Robinson Masterpieces of Animation 1833-1908 Catalogue of the exhibition arranged by David Robinson at the 10th Pordenone Silent Film Festival, 1991.

**BING CONTINUOUS LOOP TOY MOVIE PROJECTOR**



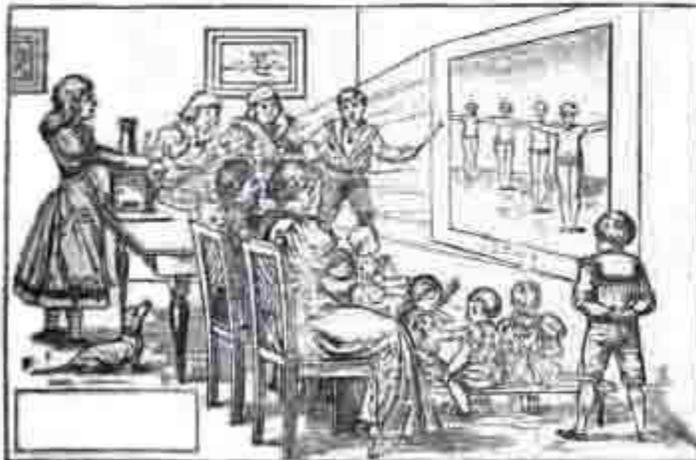
Bing continuous loop toy projector  
Collection Soterios Gardiakos

CARETTE CONTINUOUS LOOP TOY MOVIE PROJECTOR



Carette continuous film loop film projector

**Georges Carette & Co.,** NÜRNBERG, (Germany),  
Manufacturers of  
**OPTICAL, MECHANICAL & ELECTRIC ARTICLES.**



Specialties.

- Magic Lanterns.
- Gas and Caloric Engines.
- Model Steam Engines.
- Locomotives & Railways with Clockwork.
- Reading Glasses, Stereoscope Apparatus.
- Electrical & Mechanical Toys.

**TOY  
CINEMATOGRAPHS.**

ENGLISH CATALOGUE NOW READY.

Agents & Representatives for Great Britain & Ireland **LONSDALE BROS.,** 22 Goswell Rd., London, E.C.  
**ENGLISH PRICE LISTS (fully illustrated) NOW READY.**

Note the barely visible spool film on the projector on the table  
The Photographic Dealer December 1898, page xvii



**DRGM**

# **BOOKS AND MONOGRAPHS WRITTEN BY SOTERIOS GARDIAKOS**

June 30, 2010

## **Relating to Movie Machinery**

**Cinematic Machinery Collection of Soterios Gardiakos**, 2002, ISBN 0-9777537-3-5, May 28, 2008, 201 pages

**A Warwick (Baucus & Maguire Ltd.) spoolbank Projector ca 1897 In the Collection of Soterios Gardiakos**, 2001, ISBN 0-9777537-0-0, June 1, 2008 48 pages

**Pre 1900 American Made Movie Projectors**. 2002. ISBN 0-9777537-4-3, June 11, 2008 144 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, November 23, 2007, 57 pages

**Kinematic Peephole Machines Using a Continuous Strip of Film or Paper**, 2002 ISBN 0-9777537-5-1, June 15, 2008, 73 pages

**LeRoy Projectors, An enigmatic pioneer in the quest to project motion pictures on the big screen**. ISBN 0-9777537-7-8, June 11, 2008, 43 pages

**Optigraph 35 mm projectors**, June 26, 20008, 44 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***, October 26, 2009, 24 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, June 11, 2008, 21 pages

**Peep Show Phantoscope ca 1904-1905 made by C. Francis Jenkins in the Collection of Soterios Gardiakos**, June 11, 2008, 16 pages

**Spoolbank Projectors**, 2001. ISBN 0-9777537-1-9, June 11, 2008, 75 pages

**Selig Polyscope Movie Projectors made by William N. Selig – a compilation**, April 22, 2010, 47 pages.

**Cineograph movie projectors and some cameras Made by Siegmund Lubin 1896-1916 *A checklist***, 2010 54 pages

**From the JENKINS PHANTOSCOPE to the ARMAT VITASCOPE Chronologically arranged**, 2010, 135 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**, By Chrissafenika Gardiakos, Aurora, IL 2006 with updates, ISBN 0-9777537-6-X. featuring 101 sculptures

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

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

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

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