# Film History The Beginnings

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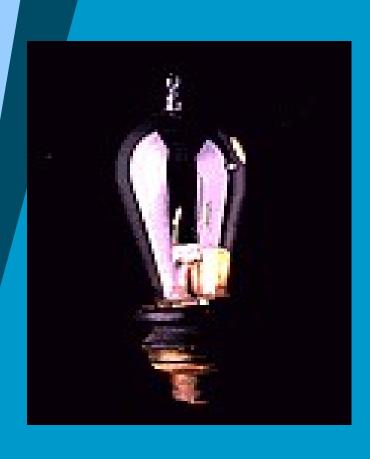
## Three Ways to Look at Film History

**Art** 

Business

**Technology** 

#### Inventors



 Early film is a result of inventors, not artists.

#### **Persistence of Vision**

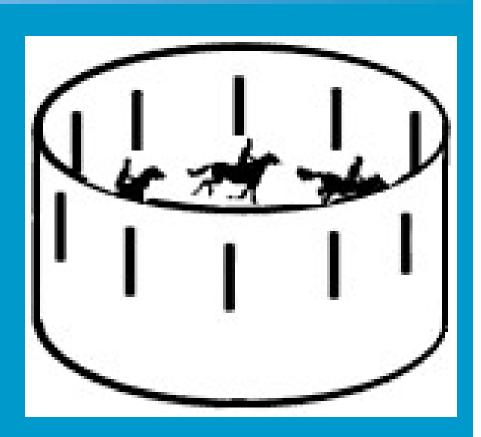
- The ability of the brain to retain an image a split second longer than the eye actually sees it.
- If we see 16 individual images in rapid succession the brain connects them to make a fluid sequence of movement.

#### **Toy Makers**

 Toy makers used this theory to create hand held machines that were the basis of film development.

#### Zoetrope

- Circular drum with slits.
- allows moments of darkness.
- creates illusion of movement.
- 1834 by William Horner.



#### **Experimentation**

- Was going on in many countries at the same time.
- France, Germany, England, and the U.S. all claim to have invented the movies.

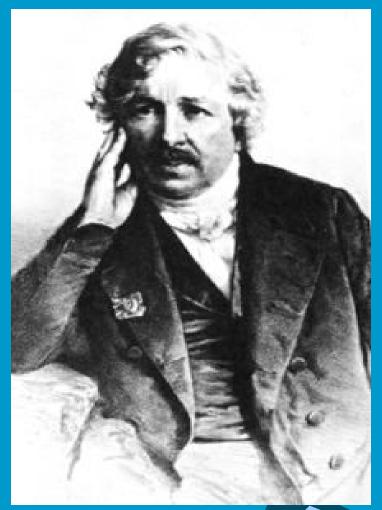


### Photography

Had to have photography before motion pictures

#### **Important Dates**

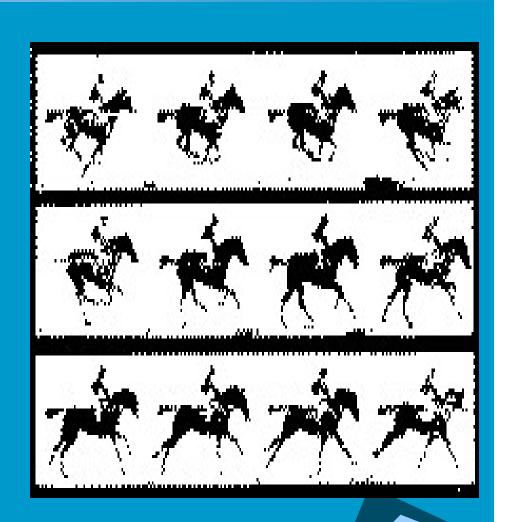
- 1816 Nicephore Niepce made first photographic images.
- 1839 Louis Daguerre created clear, sharp images on silver copperplate.
  - Required 15 minutes exposure time.
- <u>1841</u> Only 3 minutes needed for exposure.



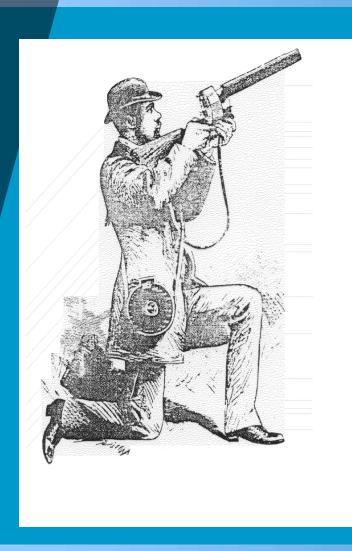
Daguerre Self-portrait

#### **Eadweard Muybridge**

- 1872 Set up 12 cameras along a track, tied strings to the shutters which were tripped as the horse ran down the track.
- Created movement with photography.



#### **Etienne-Jules Marey**



- **1882**
- Invents "photographic gun."
- Lens in the muzzle, paper in the chamber.
- Pull trigger and have12 rapid exposures.
- Eventually 100 exposures.

#### George Eastman

- **1884**
- Developed celluloid film.
- Originally created for the still camera, it made motion pictures possible.
- Flexible and allows light to pass through.



Eastman and Edison make movies

Fred Ott's Sneeze

- **1889**
- William
   Dickson
   (working for
   Thomas
   Edison)
   begins using
   celluloid film.
- First film in America.



# Motion Picture Photography Solved!

Filmmakers now had to find a way to show their images.

#### Kinetoscope

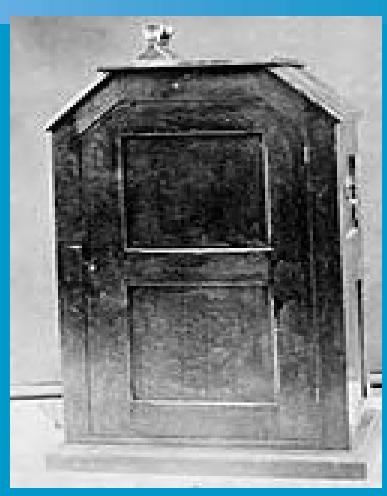


Kinetoscope Open

- October <u>1889</u>
   Dickson shows
   Edison projection
   with sound.
- Quality is poor.
- Edison opts for silent, individual showings of films.
- Invents Kinetoscope.

#### Kinetoscope

- Kinetoscopes were set up in parlors.
- You would see dancing, juggling, clowning, wonders of the world, a few re-enactments.
- No stories yet.



Kinetoscope Closed

#### **Thomas Edison**

- Despite Edison's shortsightedness in mass projection he did leave his mark on motion pictures.
- He contributed sprocket holes on film.
- Black Maria.
  - **First movie studio.**

#### **Black Maria**

- Camera could only move forward and backward.
- Roof opened to allow sunlight in.
- Building rotated to catch sun's rays.
- Camera used electricity.

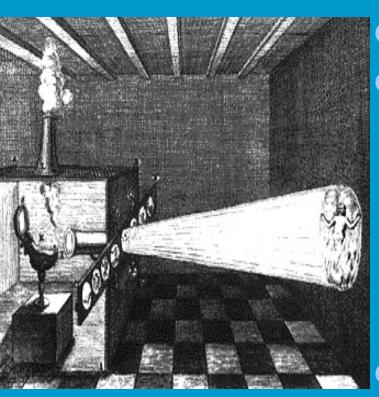


These are a few of the contributions from America. The history now goes back to Europe.

### Projection

Projection was a difficult problem to solve. Its roots go back as far as 1646.

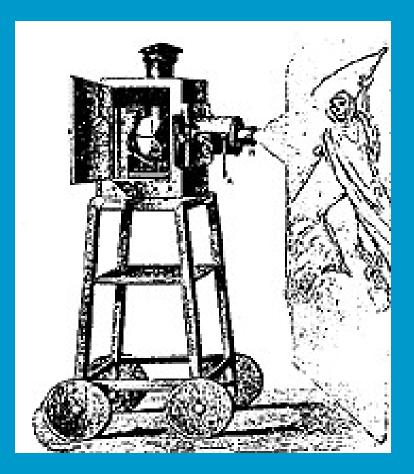
#### **Magic Lantern**



- **1646**
- Father Athanasius Kircher made drawings of a box that could reproduce an image through a lens.
- Ancestor of present day slide projector.

#### **18th Century**

- Showmen travel across Europe showing magic lantern shows.
- Used drawn images in the beginning.
- Eventually used photographs.



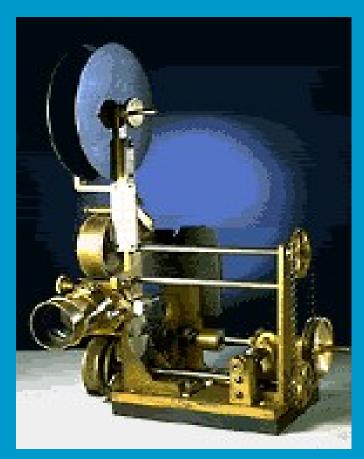
Phantasmagoria

#### 19th Century

- Photo plays drew viewers to a story just as film does today.
- Combination of magic lantern shows, live actors, and photography.
- Some lasted up to 2 hours and told melodramatic stories.
- Proved the potential of projected film.

#### **Projection Problems**

- Projector needs a powerful light source to make images clear.
- Film has to run smoothly past this light source without tearing.



Vitascope Projector

#### **Late 19th Century**

- Discovered intermittent movement was needed (similar to Zoetrope slits).
- Each frame stops briefly in front of the light source.
- Ended problem of the light source and tearing.
- Created problem of burning film.
  - Invented cooling system (similar to today's).

#### **Lumiere Brothers**

- **1894**
- Tinker with Edison's Kinetoscope.
- Designed their own machine within a year.



Auguste and Louis

#### Cinematographe



- Machine shot the pictures, printed them, and projected them.
- The camera was portable.
  - A hand crank provided the power.

#### **December 28, 1895**

- First theater opens to the paying public.
- Basement of a Paris café.
- Lumieres' show:
  - Workers leaving the Lumiere Factory.
  - Arrival at Lyon.
  - A Baby's Meal.

