

# History of High Speed Motion Picture Photography

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## 1874

- **Jenssen** (French), astronomer
- Use of motion picture photography as a visual aid to the study of a scientific problem
- Taking 48 pictures in 70 seconds during the transit of the planet Venus across the sun's disc.

## 1878

- **Eadweard Muybridge** (1830-1904)
- He was able to demonstrate high speed motion pictures of animals in movement.
- He conducted human and animal motion studies by shooting multiple photographs of moving subjects over a short period of time.
- His work had a large impact on many disciplines such as biology, medicine, photography, and animation.
- He was thus the first person to photograph sequences of movement.



- The Flying Horse
- Zoopraxiscope
- Animal Locomotion

At the time, it was not known if a horse ever had all four feet off the ground while trotting.

Muybridge was able to prove this true in his initial studies.

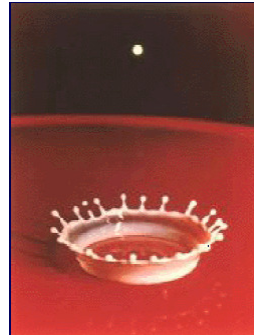
- Muybridge took more than 20,000 photographs from 1884-85 of men, women, children, animals and birds in almost every conceivable type of movement resulting in the most comprehensive analysis of movement.
- His work was published under the title “Animal Locomotion” in 1887 and is still used widely today as a source of illustration and reference.

## 1931

- **Harold Edgerton**, an MIT scientist
- He was known for developing the stroboscope and electronic flash for photographic illumination.
- He developed the stroboscope in 1931 for ultra-high-speed and stop motion photography.
- He began taking high-speed photographs of familiar activities that move at speeds beyond the ability of the human eye to perceive.



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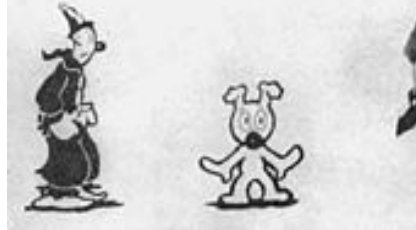


- His most well known photograph being the coronet on a drop of milk.
- His images were revolutionary because they were taken with exposures between thousandths and up to one millionth of a second, and revealed more than the eye could see.

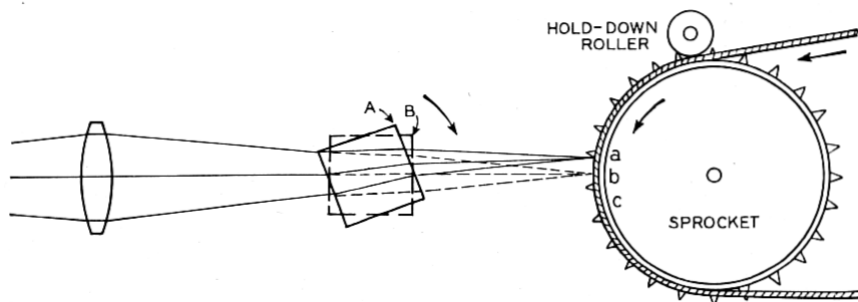
## 1915

- **Max Fleischer**, cartoonist
- He invented the Rotoscope
- Allowed animators to trace cartoon characters over photographed frames of live performances.
- The first cartoon character to be rotoscoped was “Koko the Clown”.
- It was later used by Walt Disney, in 1937, to get realistic human motion for “Snow White and the Prince”. Rotoscoping is a two-dimensional approach to capture motion.

[http://en.wikipedia.org/wiki/Koko\\_the\\_Clown](http://en.wikipedia.org/wiki/Koko_the_Clown)

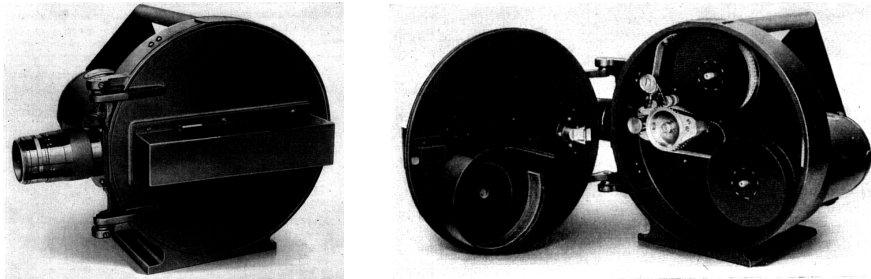


Amateur and profesional motion pictures are taken and projected at the rate of 16 or 24 frames of pictures per second.



Schematic arrangement of high speed camera

- Bell Telephone Laboratories developed a high speed camera which normally operates at a taking speed of 4.000 pictures per second.



- The camera has been adapted to use standard amateur 16 millimeter motion picture film.

## References

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