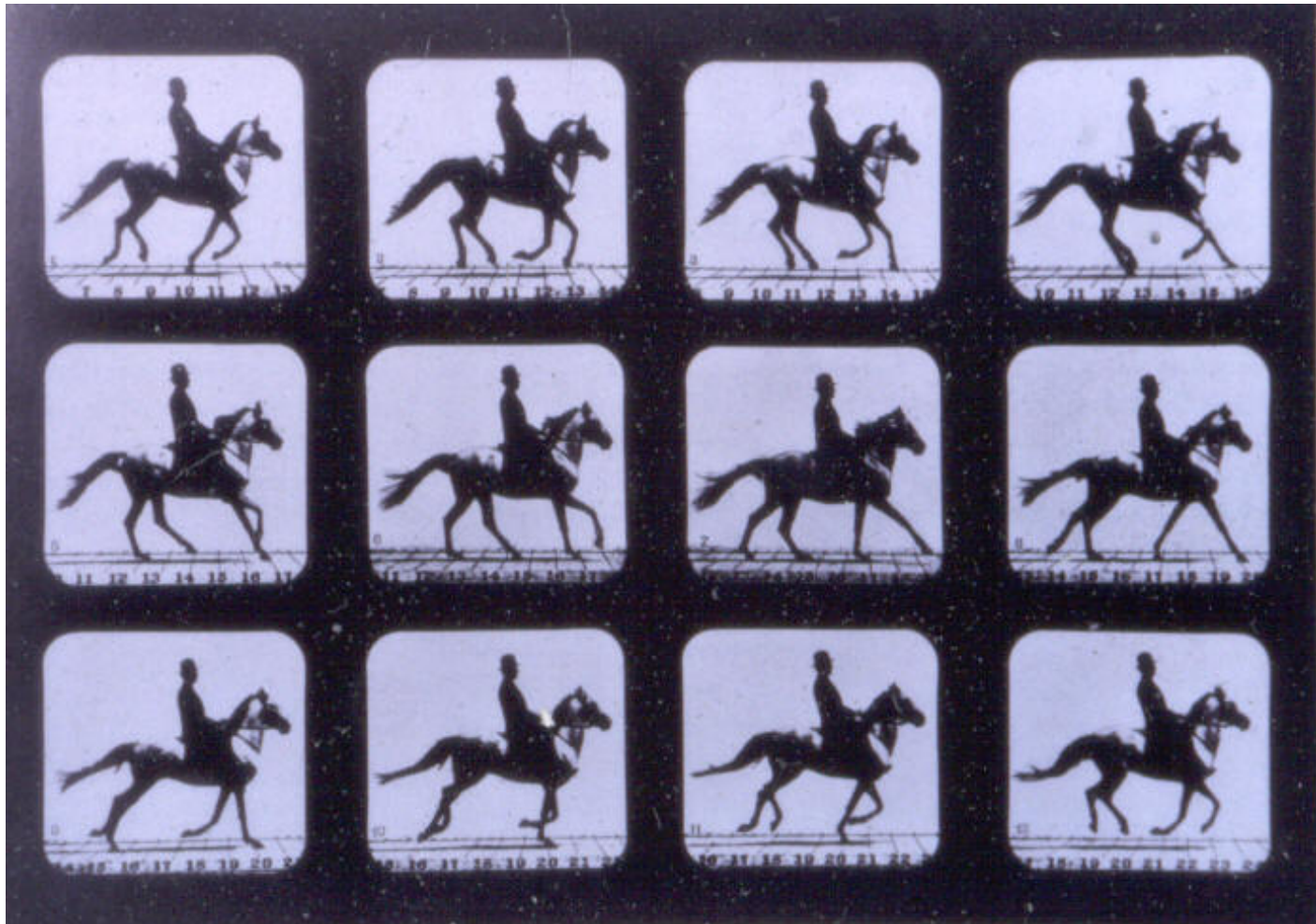


# *History of Photography:*

## *Chapter 6 –*

### *New Technology, New Vision, New Users of Photography*

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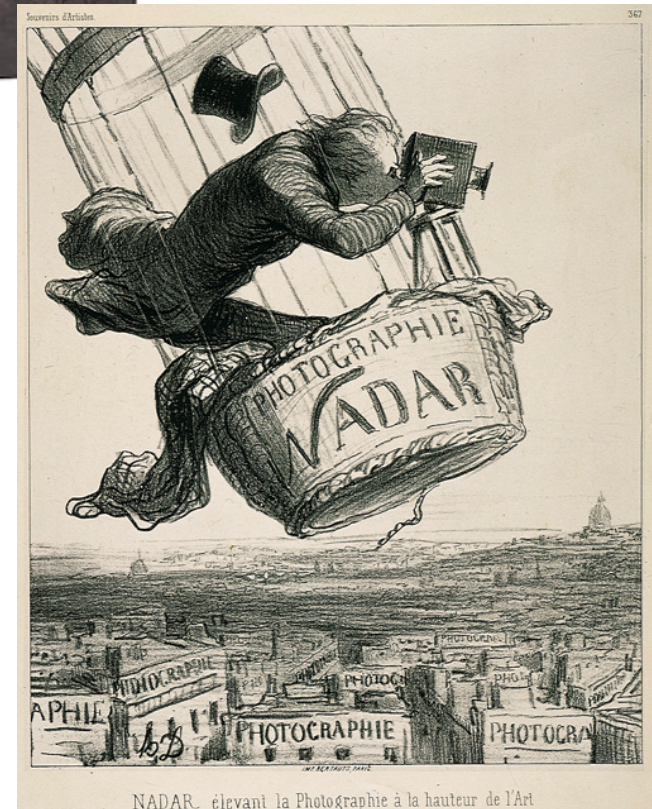


# New Technology, New Vision, New Users of Photography

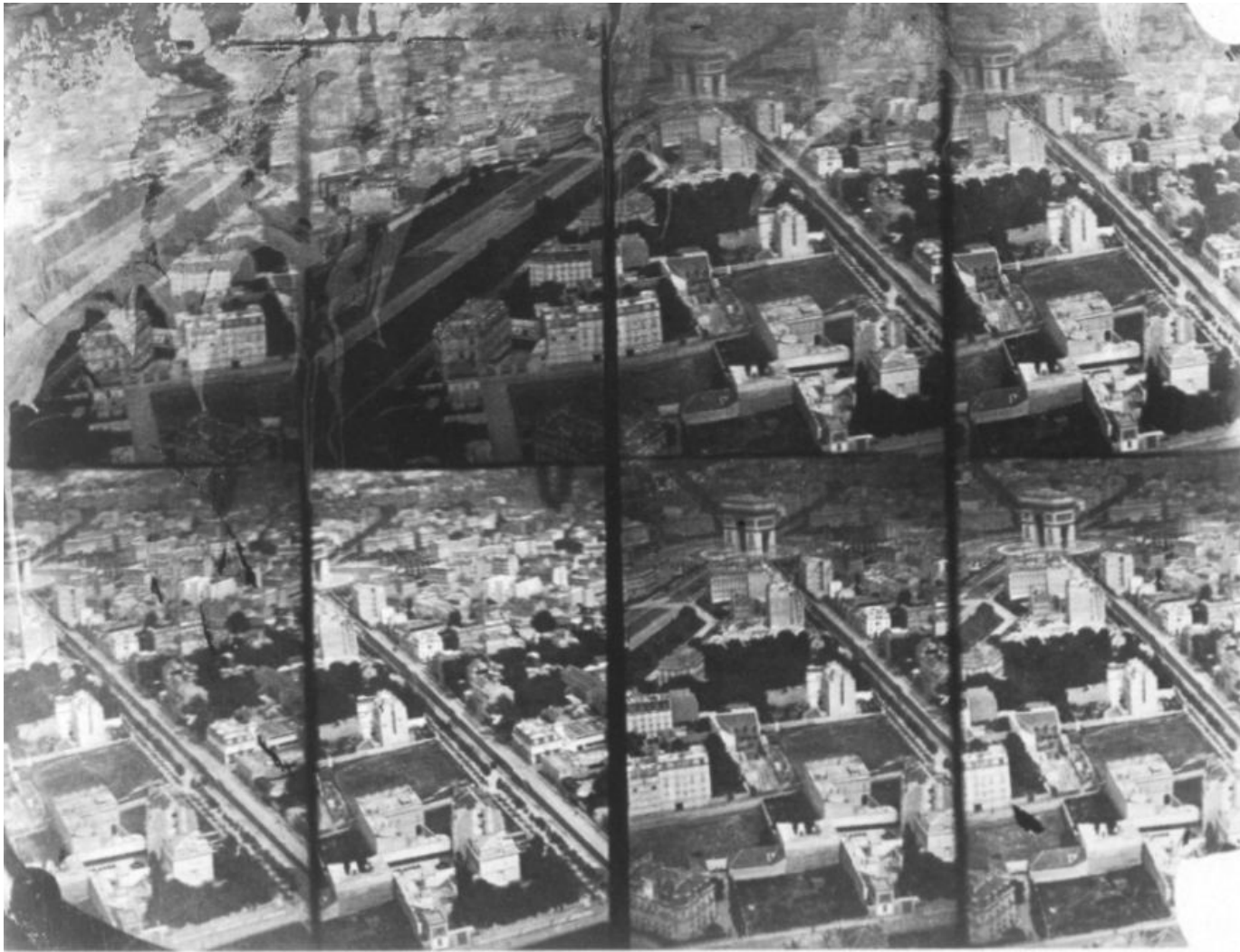
- Aerial photography
- Flash photography
- Motion studies
- Fast camera shutters
- Motion pictures
- Simpler, smaller cameras  
lead to "snapshot photography"

# Nadar –

- first to use electric light in the photography studio
- first to use a hot-air balloon to photograph Paris (1858)
- first to photograph catacombs under Paris using battery-operated lights



Nadar - *Paris From a Balloon* (1868)



NADAR (GASPARD FÉLIX TOURNACHON). *The Arc de Triomphe and the Grand Boulevards, Paris, from a Balloon, 1868.*



**James Wallace Black**  
*Boston From the Air*  
1860  
Albumen Print



**Nadar**  
*Workmen in Paris Catacombs*  
1861  
Albumen Print

First to use battery-powered light





Nadar  
*Subterranean Paris*





Magnesium Flash Tray



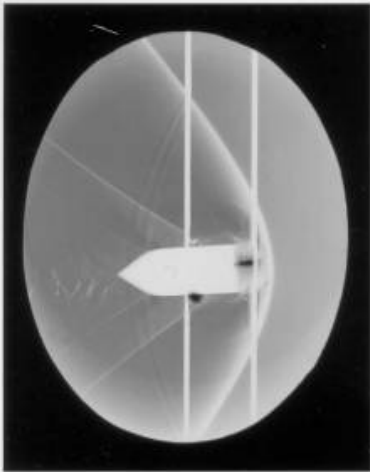
## Magnesium Flash Bulb

(invented in Germany, 1925)

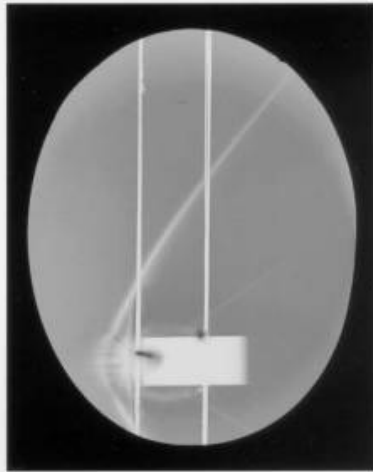
## Motion Studies:

Artists and Scientists  
equally interested in how  
photography can freeze motion

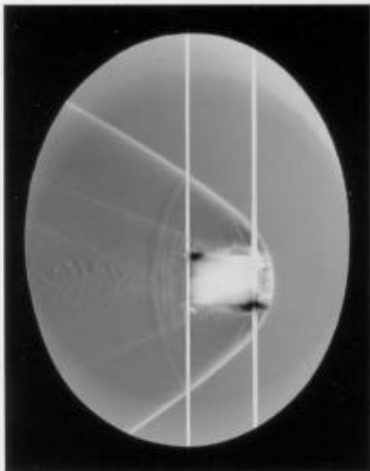
Ernst Mach  
*Shockwaves Created by Bullet*  
(1887)



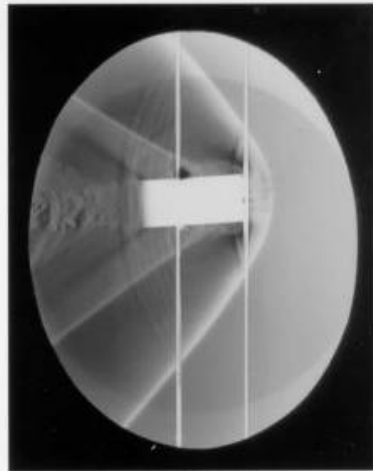
CD\_52374.tif



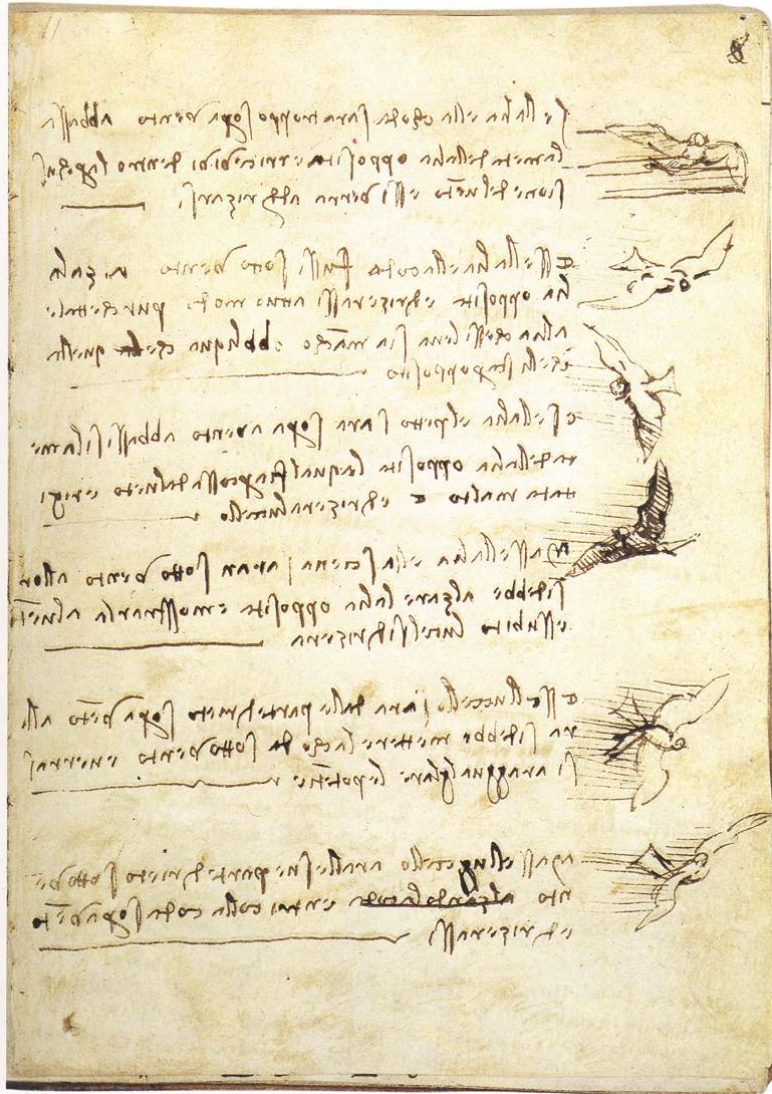
CD\_52375.tif



CD\_52376.tif



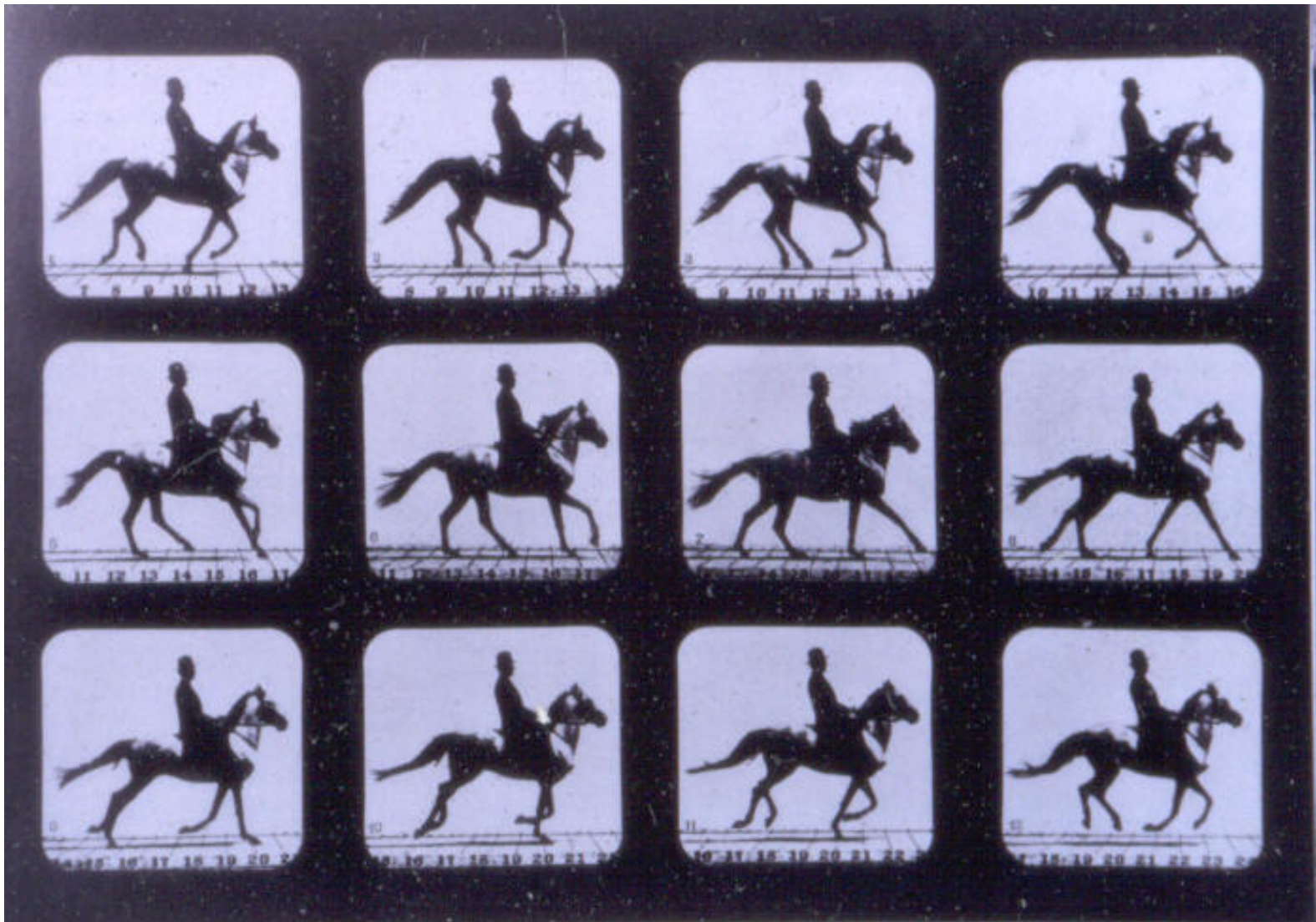
CD\_52377.tif



Leonardo Da Vinci's  
Studies of motion:  
birds & water currents

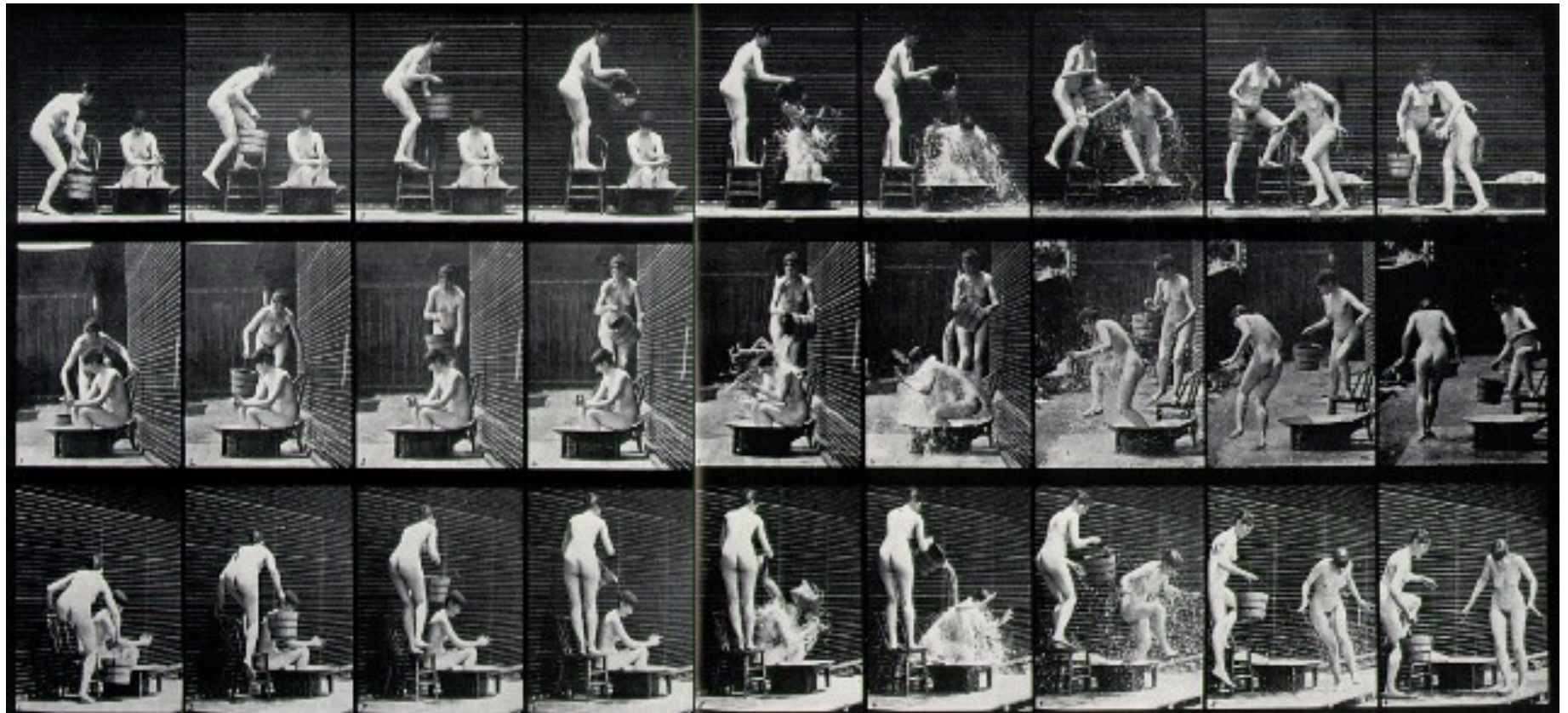


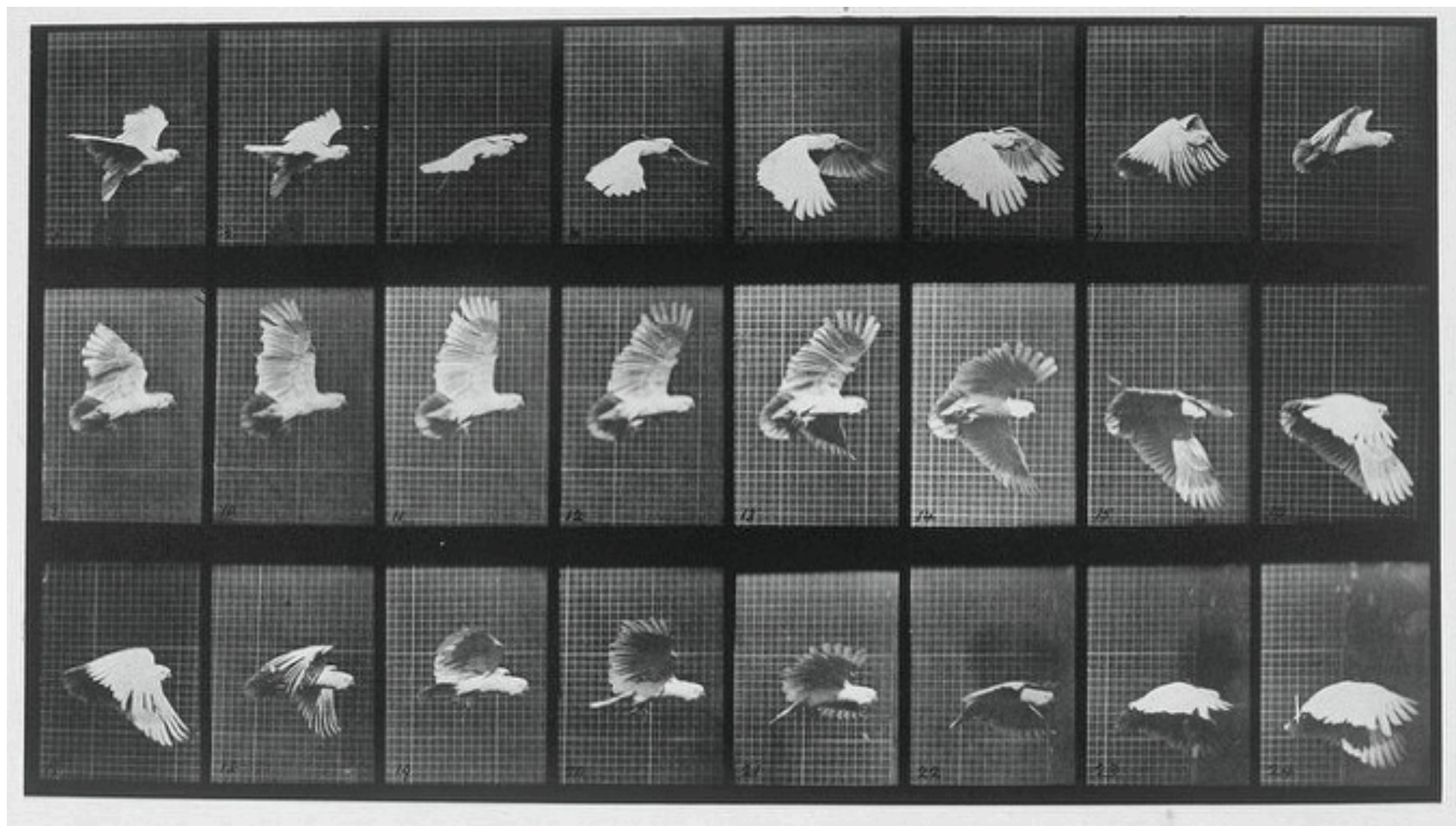
Edward Muybridge - *Horse in Motion* (1878)



Edweard Muybridge - *Human Locomotion Studies* (1870s – 1880s)

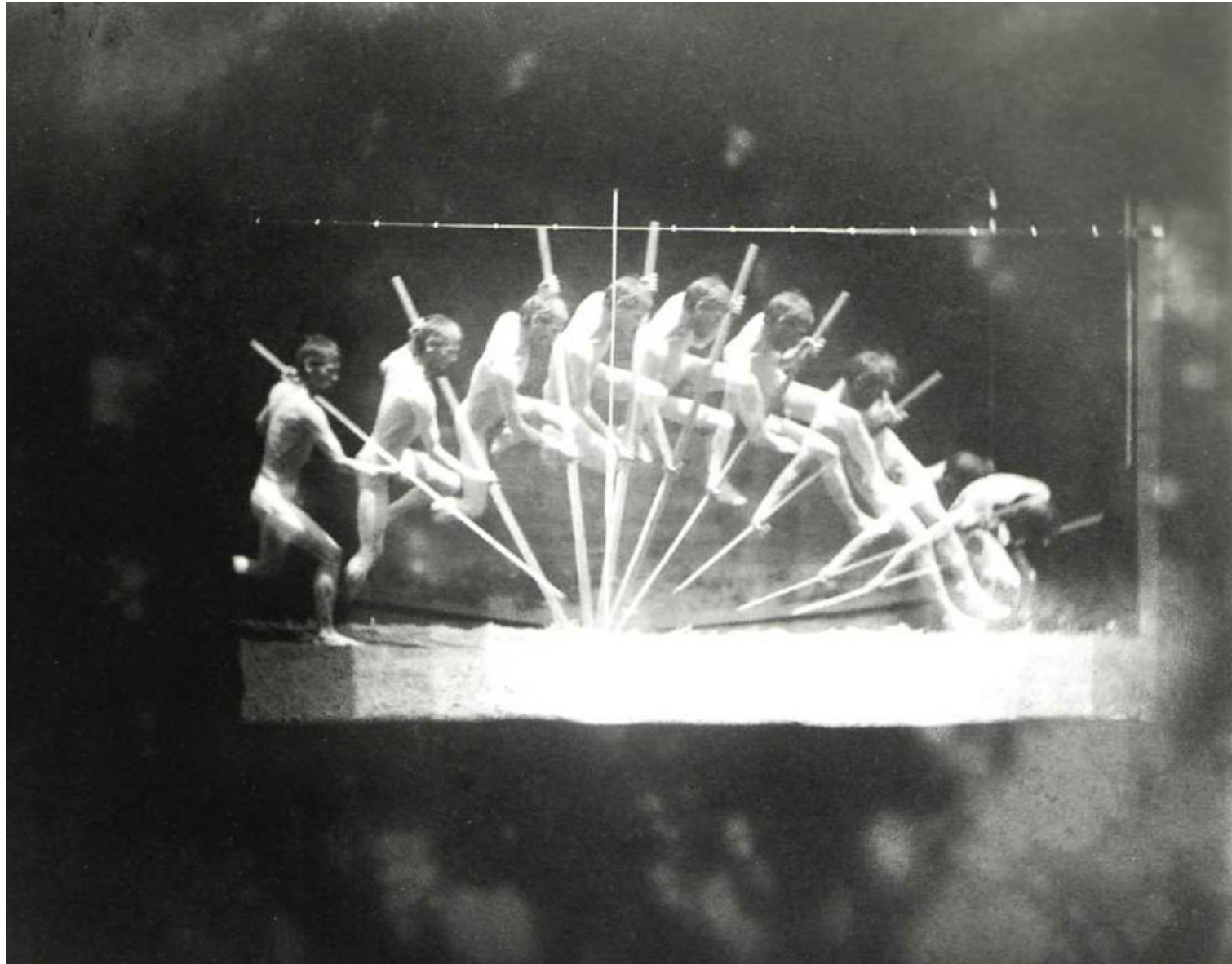


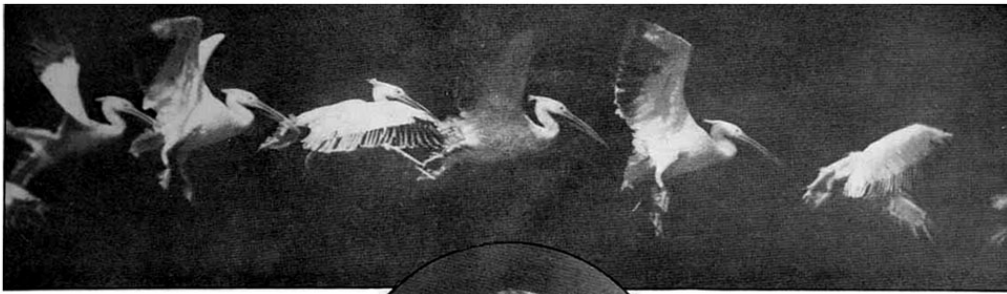






Thomas Eakins - *History of a Jump* (1884) gelatin silver print





Le vol d'un pélican vu de profil.

## MAREY ET LE VOL DES OISEAUX

Les premières études scientifiques des mouvements des êtres vivants sont l'œuvre d'Etienne-Jules Marey. Le rôle de Marey dans les recherches concernant le vol des oiseaux a été considérable.

Entre 1860 et 1880, il a essayé nombre d'appareils de mesure, la plupart basés sur son « tambour » pneumatique transmettant les mouvements à un style inscripteur. Les expériences de Marey ont porté également à cette époque sur la synthèse des mouve-



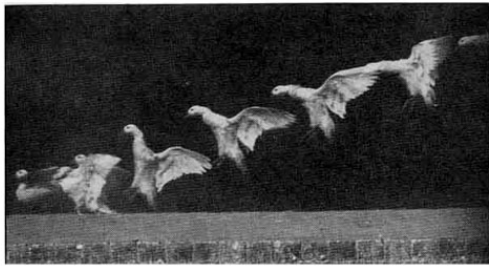
Etienne-Jules Marey, membre de l'Institut (1830-1904).

Chronophotographie avec images dissociées par l'emploi d'un miroir tournant (vers 1889).

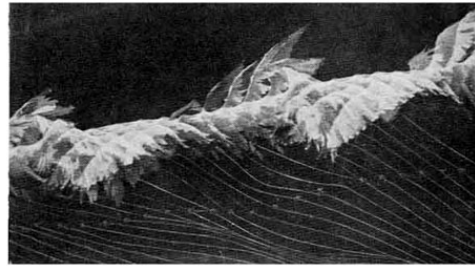
appareils, en 1887, Marey obtint simultanément sur fond noir trois vues : de profil, de dessus et de trois quarts.

Marey créait en 1882 le fusil photographique à plaque circulaire mobile, puis, en 1888, il remplaçait la plaque fixe du chronophotographe par une bande de papier sensible située au foyer et se déplaçant de façon intermittente régulière avec arrêts aux passages des trous du disque obturateur. En 1889 et 1890, Marey perfectionnait cet appareil par l'introduction de bandes sensibles en celluloïd, puis transparentes, et,

## Etienne Jules Marey Various motion studies (1880s)



Posé d'un canard (1882).



Phases du coup d'aile d'un goéland.

ments des ailes. En 1882, reprenant une idée de Pénaud, Marey fut le premier à réussir, grâce à l'appareil chronophotographique à plaque fixe avec disque obturateur, des images successives d'oiseaux en vol, rapprochées jusqu'à cinquante par seconde ou espacées et dissociées grâce à un miroir tournant. Combinant trois

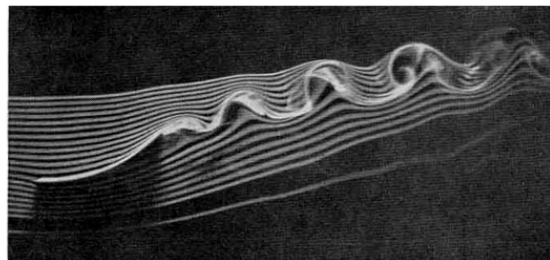
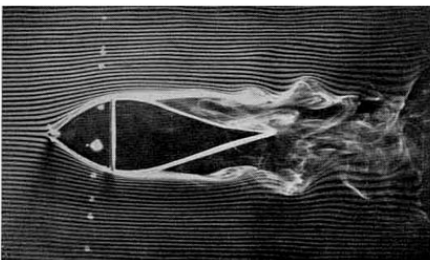


Envol d'un goéland.

en 1892, il projetait sur un écran les séries d'images obtenues.

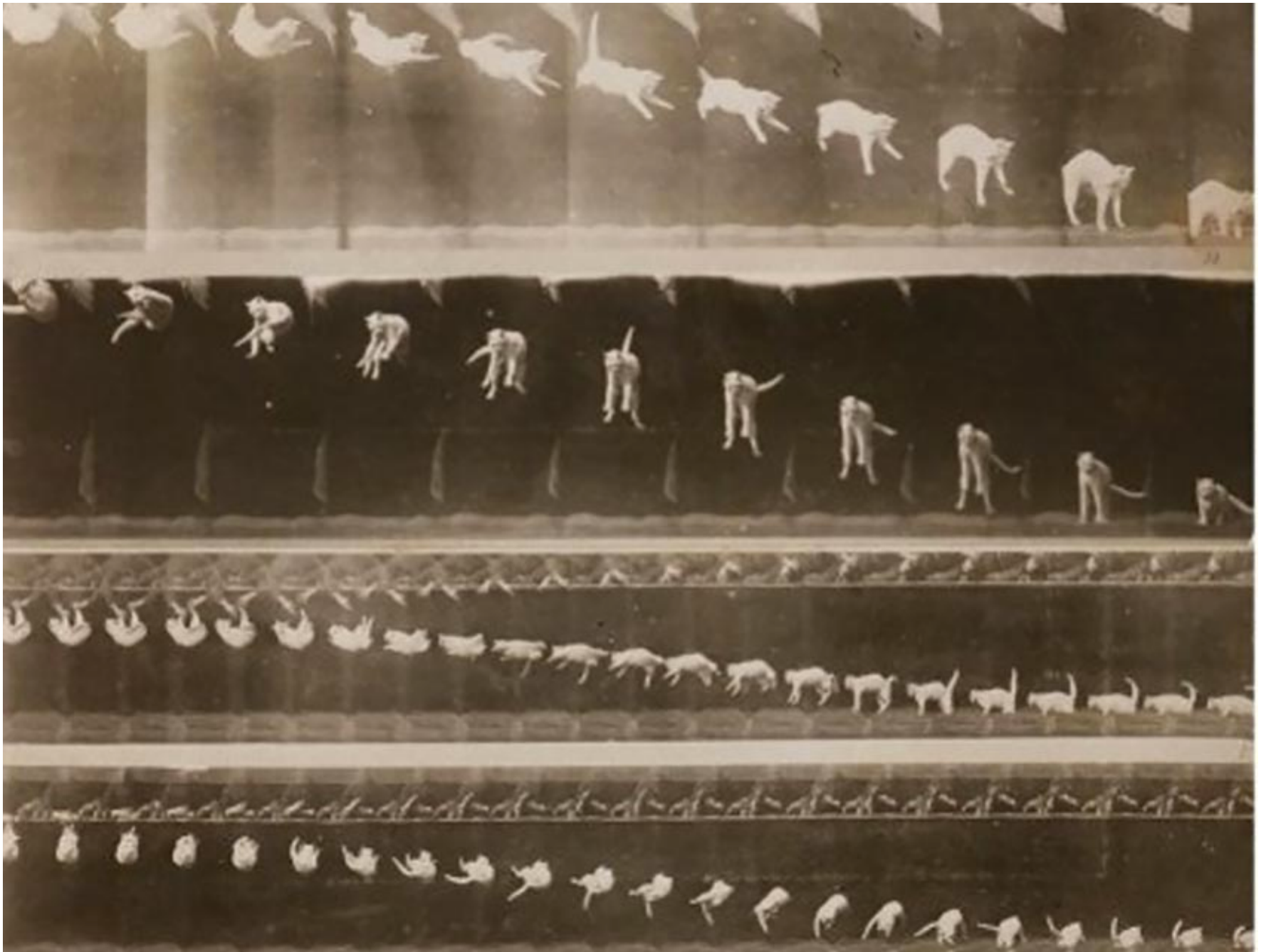
Les travaux chronophotographiques de Marey forment la base de l'invention fixe de la cinématographie.

A la fin de sa carrière, Marey étudia au moyen de fumées les remous produits par différents corps ou placés dans un courant d'air.

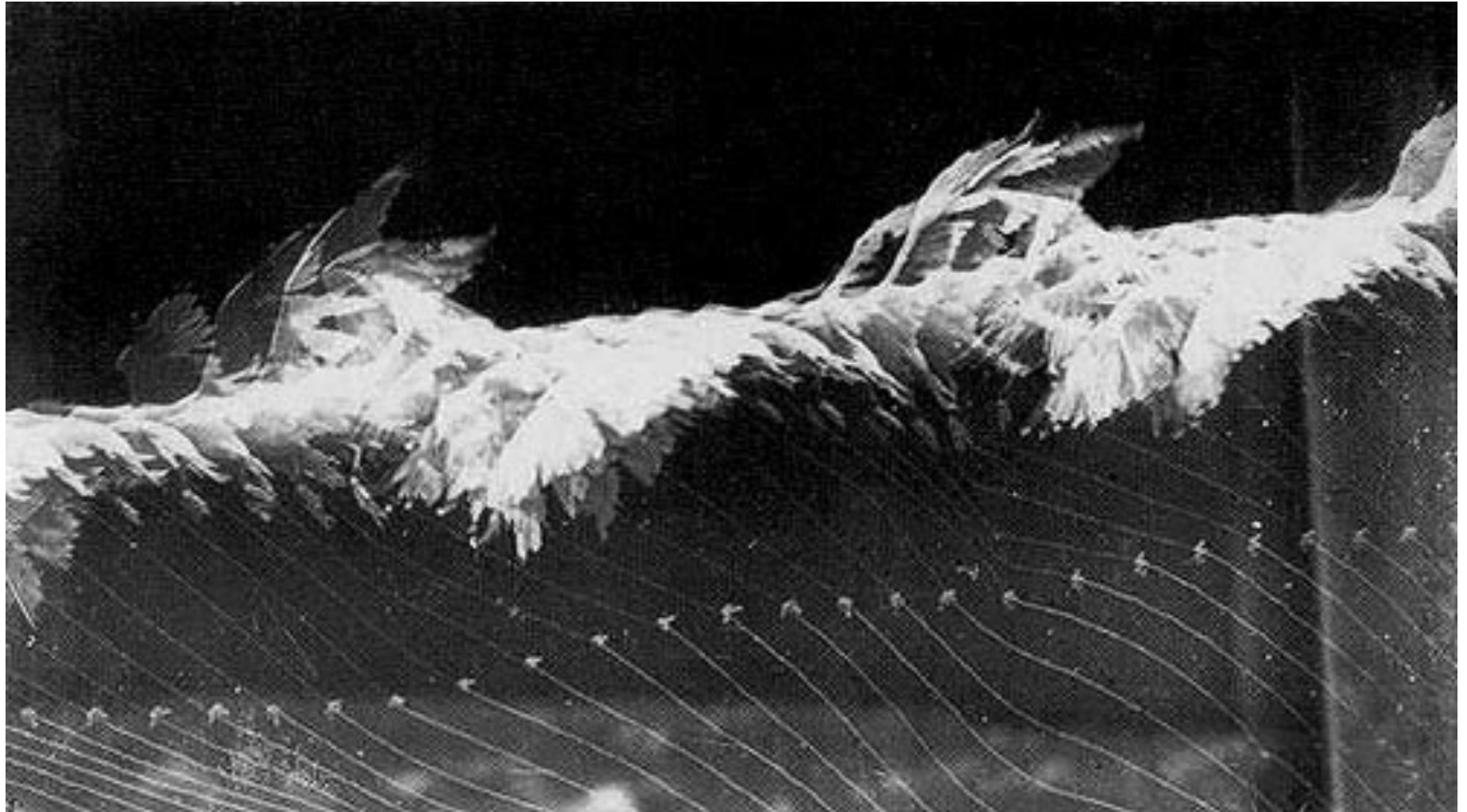


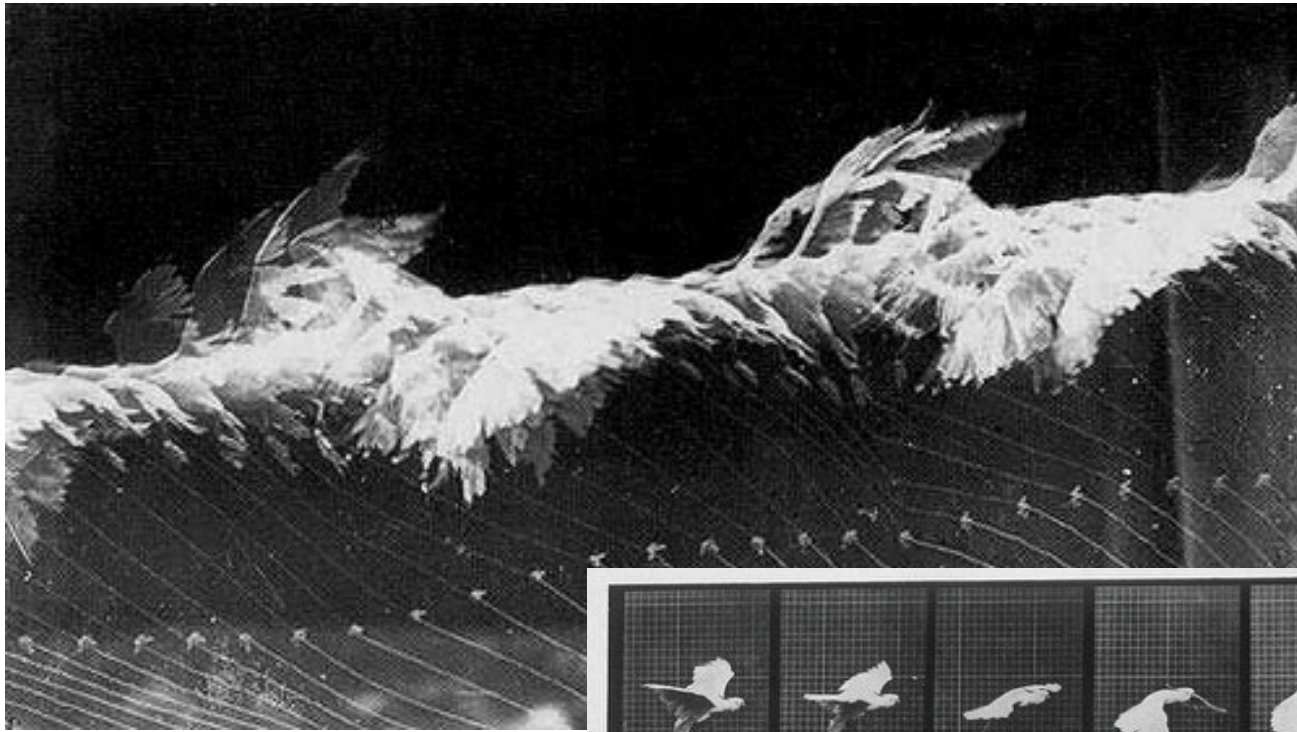
Déformations des filets d'un courant d'air, marqués par de la fumée d'amadou, au contact d'un corps fuselé et d'une surface courbe (1900-1901).

E.J. Marey - *Falling Cat* (1885) Gelatin Silver Print

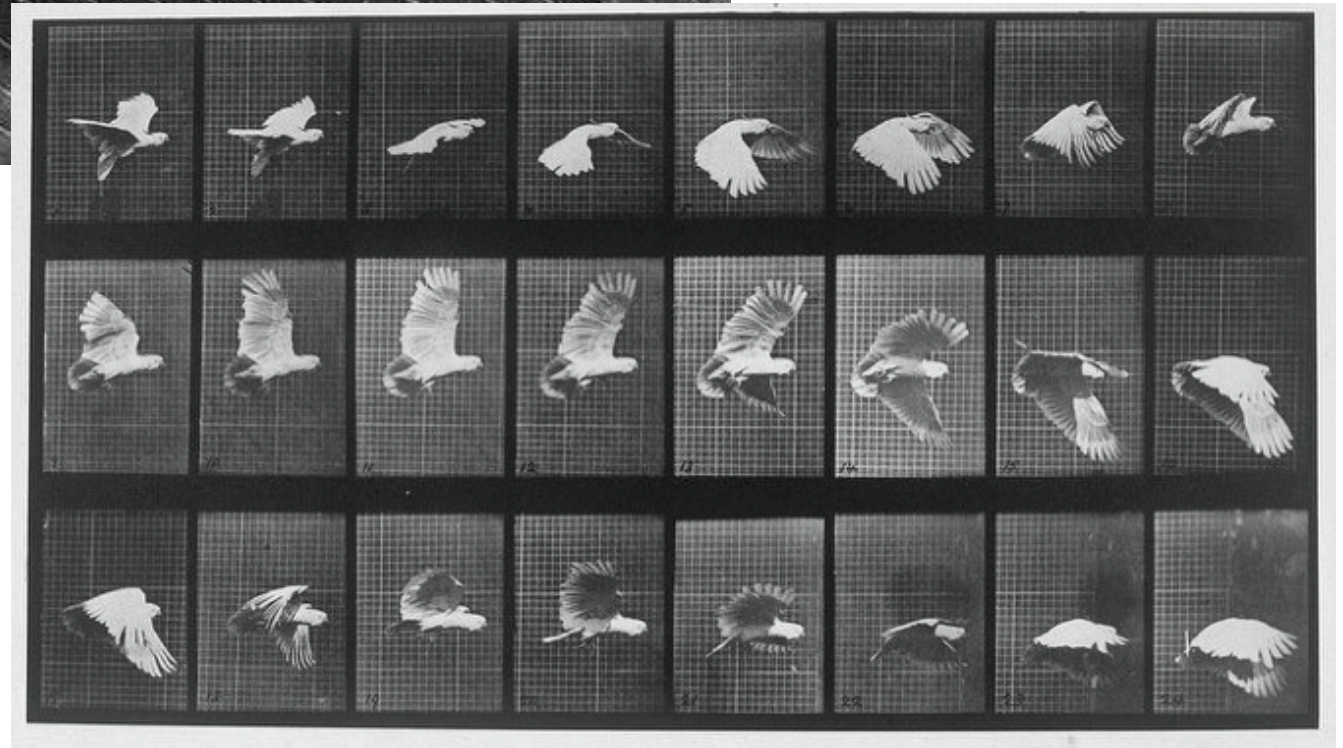


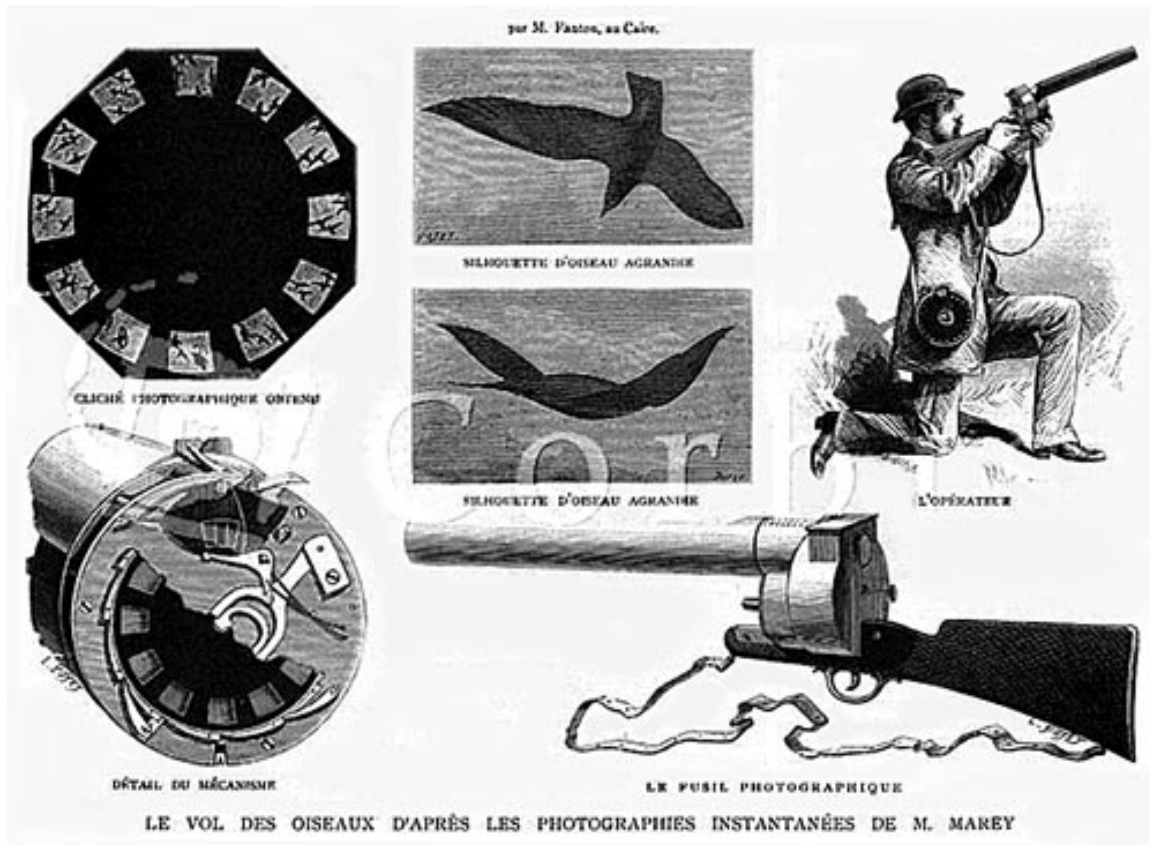
E.J. Marey - *Bird Sequence*





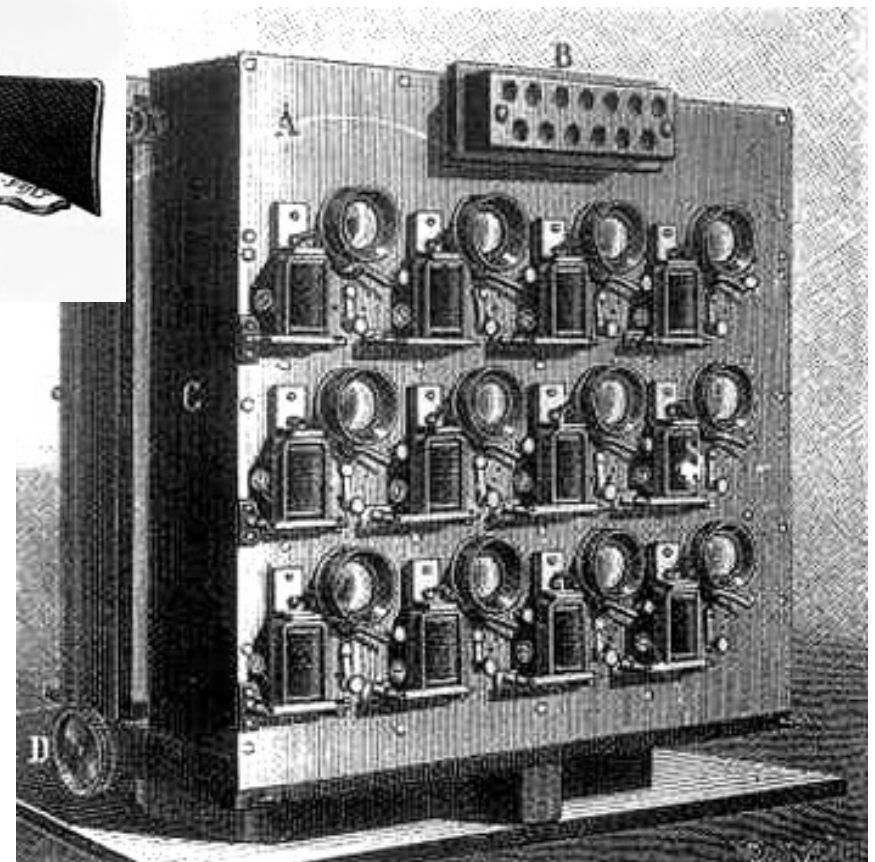
Marey versus  
Muybridge's  
motion-photos of  
birds in flight





Cameras created by  
E.J. Marey:

- Gun-Camera
- 12-lens Camera





## Zoetrope

produced a  
"moving" image



Thomas Edison's

**Kinetoscope**

1890s - ran 35mm film  
with an electric  
motor and light

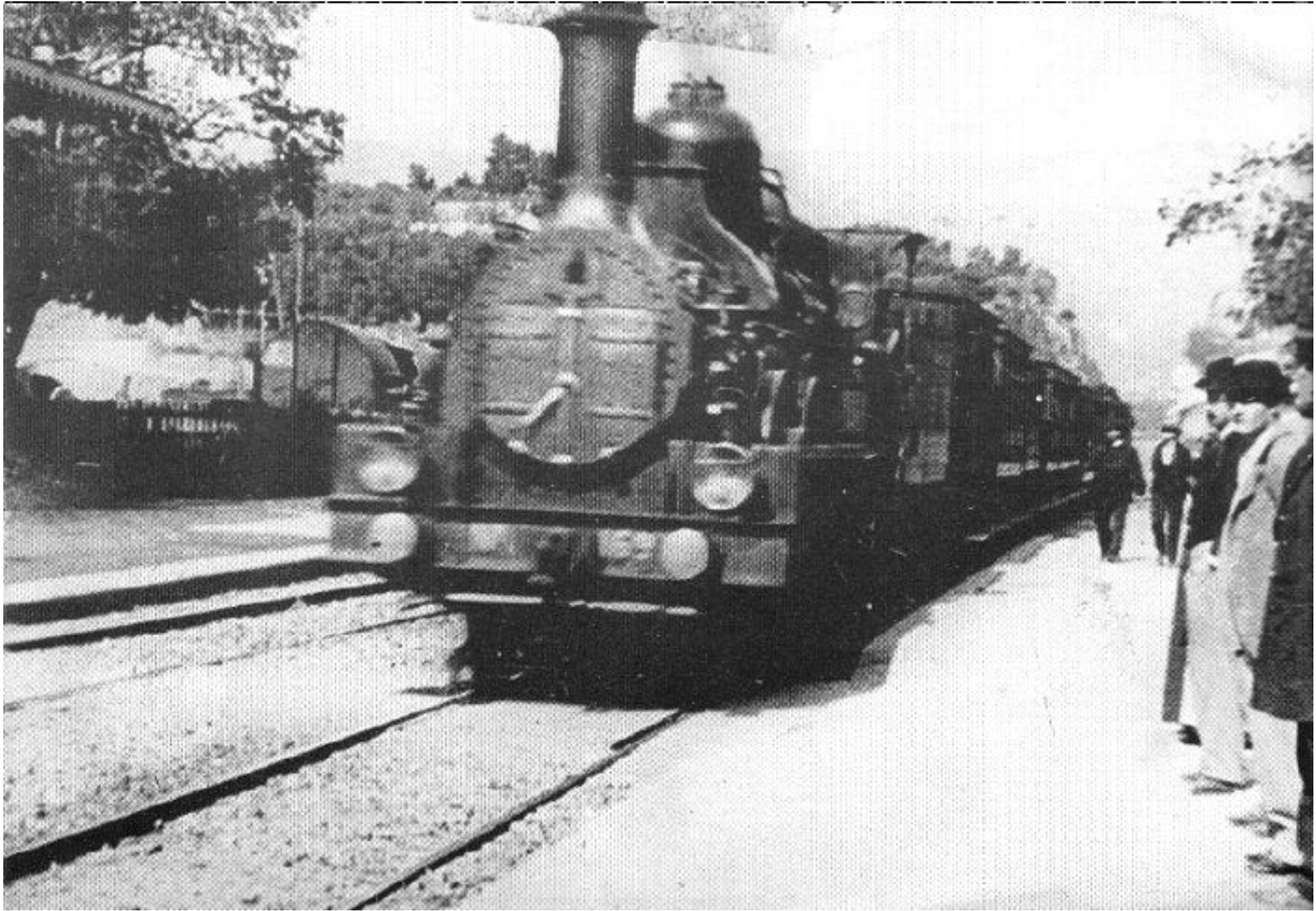
-48 frames/ sec.



Lumière Brothers - Produced Short Films - 1895







Lumiere Brothers



Edison's Films



## *Artists Inspired by New Developments in Photography--*



*Italian Futurism  
(1910s - 1930s)*

Wanted to show the modern world with its motion and speed

...in a new abstract, modern way.



Marcel Duchamp  
*Nude Descending a Staircase*  
1912  
Oil on canvas

Giacomo Balla





Other influences of  
photography on painting:

- unusual compositions
- cut-off figures & shapes
- tilted horizon lines

Edgar Degas  
*Jockeys Before the Race*









## Impressionist Painters

Liked the blurriness of photos,  
The optical distortions of space

Claude Monet

*Boulevard des Capucines, Paris*  
(1873)

## *New Developments in Camera Technology:*



George Eastman Kodak  
Box Camera (*Brownie*)  
1888

2-1/2 inch diameter film

- hand held
- single lens
- rolled celluloid film
- push-button shutter

Beginning of "snapshot"  
photography



## CAMERAS IN DISGUISE

Climaxing the mystery yarn of 50 years ago was the instant the intrepid spy or detective clicked his concealed camera, capturing the evidence. Cameras were bulkier then, but designers disguised them ingeniously. These cameras are displayed at the George Eastman House in Rochester, N. Y. Opera glasses and pistols are sure-fire giveaways for spies, yet that didn't deter the designers. Those in Photo 1 are cameras in disguise. That harmless-looking man surveying land near the Army base was really a spy and his theodolite, like the one in Photo 2, was a camera! The dapper detective was never without his cane because it had a camera in its handle, Photo 3. Back in 1890, the ascot tie, Photo 4, was the mark of a gentleman, but this one had a built-in camera, its lens forming the stickpin. Cruder but just as efficient is the circular camera that shoots through a buttonhole, Photo 5



Various "detective cameras"

Alfred Stieglitz - *The Terminal* (1892) Gravure Print













Eugène Atget  
By Bernice Abbott

1927



**Eugène Atget**  
*Avenue des Gobelins*  
(1925)  
Gold-toned  
"printing-out paper"

*Storefront Windows series*













Review for exam #1.....

# Image Identifications (8 - 10 images)

Photographer's Name -

Title / Subject Matter -

Photographic Process / Medium -

Date / Time period - (to nearest decade)

Additional Facts - (about the artist, the photo, the title of the photo, the surrounding circumstances, etc.)



Photographer's Name

Julia Margaret Cameron

Date - 1860s

Title / Subject -

Julia Jackson

Portraits - women, children

Photographic Process/Medium -

blurry images, albumen print  
used natural lighting

Additional Facts - Photo shows  
J.M Cameron's niece, her studio was  
a converted greenhouse, etc.

---

## 2 Mystery Images:



ARTIST: \_\_\_\_\_

TIME PERIOD: \_\_\_\_\_

What photograph seen in class does this remind you of?

Explain your reasoning.

# Short Answer Questions

for example,

- What is an "Ambrotype?"
- Who was the first photographer to photograph with electrical light?
- Name one important accomplishment of Eadweard Muybridge

# Compare / Contrast

Identify 2 images with the following information:

- Artist
- Time Period

Then, describe **THREE similarities** between the 2 photos and **THREE differences** between the 2 photos.



# Strategies for MEMORIZATION....

Andrew Russell - *Construction of Railroad at Citadel Rock, Wyoming*  
Albumen print (1867)



Andrew Russell - *Meeting of the Rails, Utah*  
Albumen Print (1869)



RUSSELL - RAILROAD - 186060606060660s





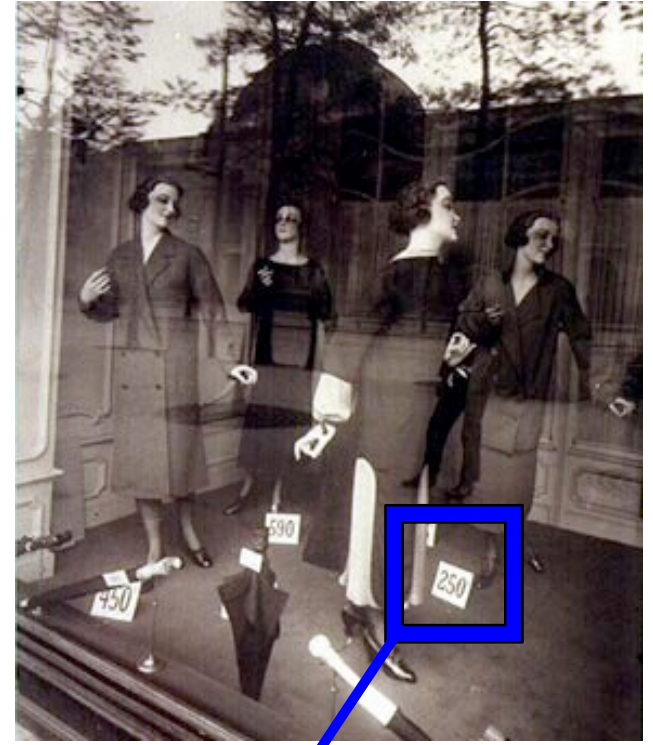
## Julia Margaret CAMERON

- modified her CAMERA (sounds like Cameron) (by using the wrong lens to create her unique blurry images)

## Julia Margaret CAMERON

- was from England, just like British Prime Minister David CAMERON

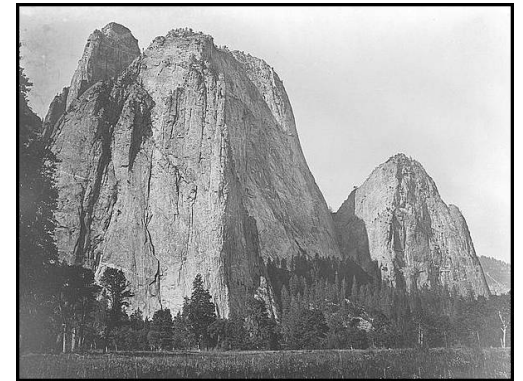
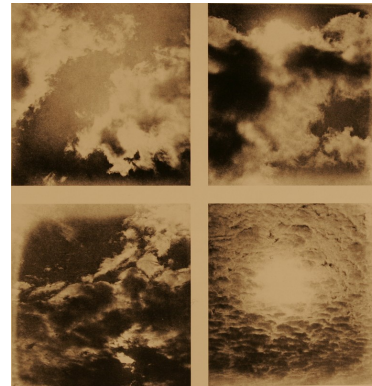
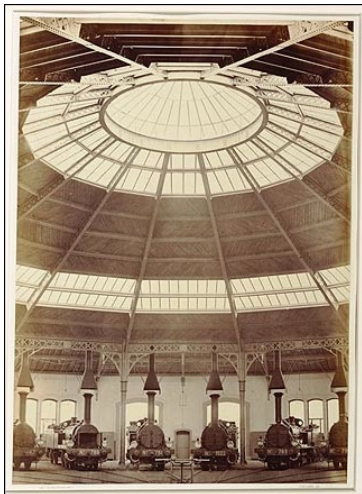
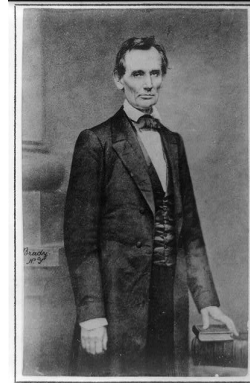
Eugene ATGET - What is he trying to GET AT through those windows?



1925



1860s  
Group  
by date--  
What do  
they have  
in common?



# Group by MEDIUM – Albumen Print / Collodion Negative

