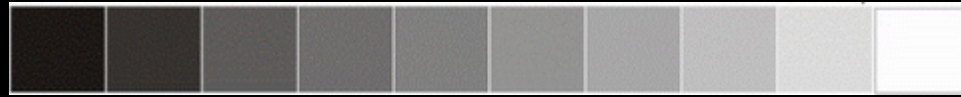
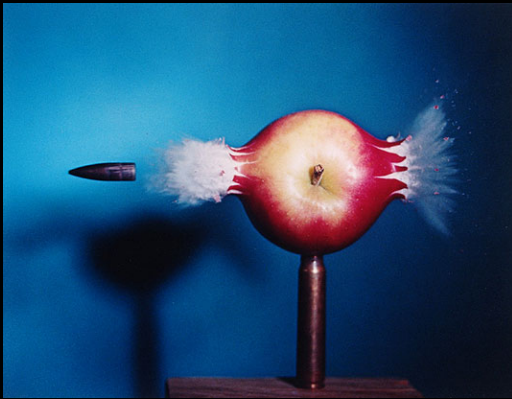
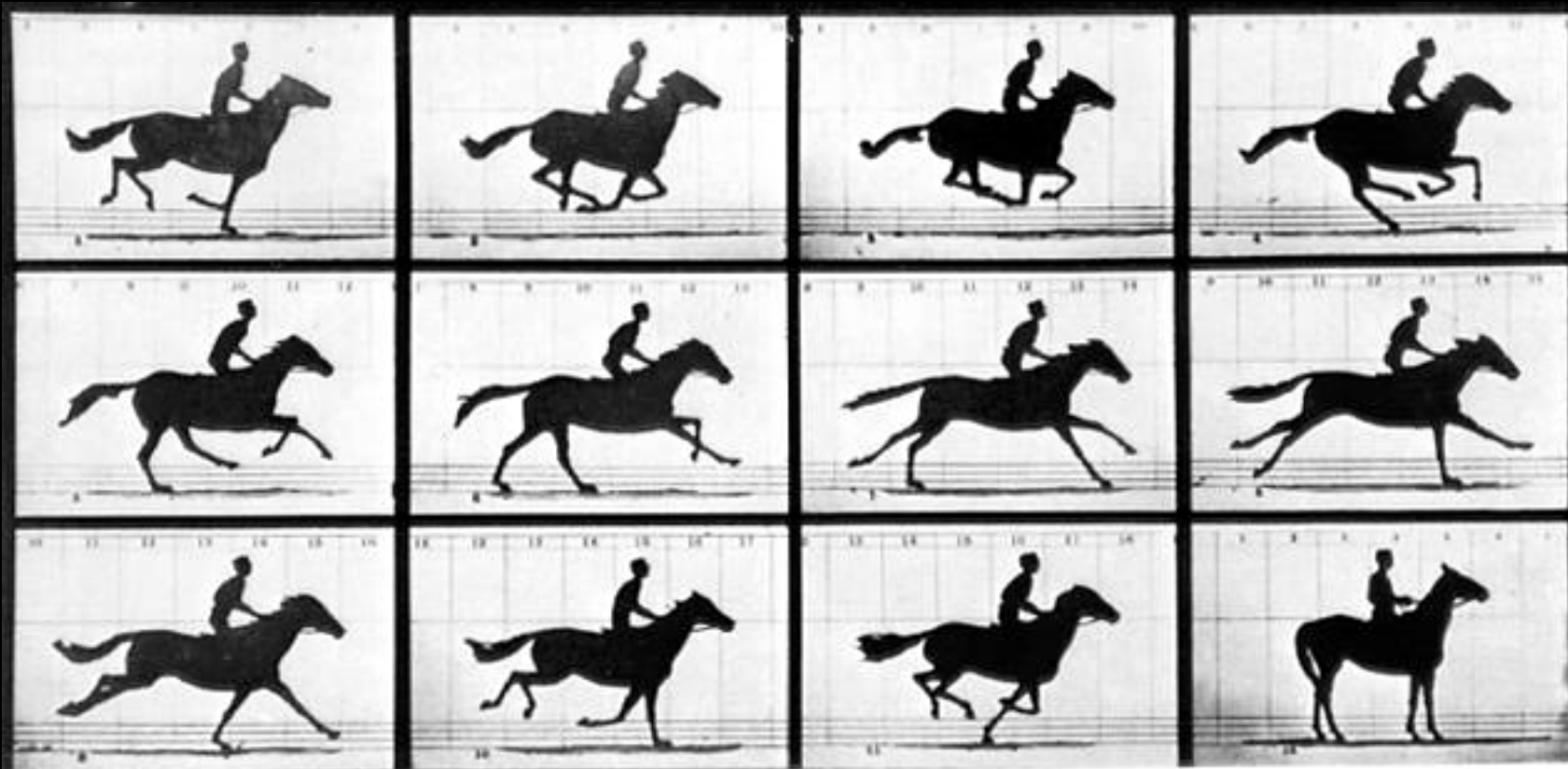


Motion Control



Controlling Motion with shutter Speed





Copyright, 1878, by MUYBRIDGE.

MORSE'S Gallery, 437 Montgomery St., San Francisco.

THE HORSE IN MOTION.

Illustrated by
MUYBRIDGE.

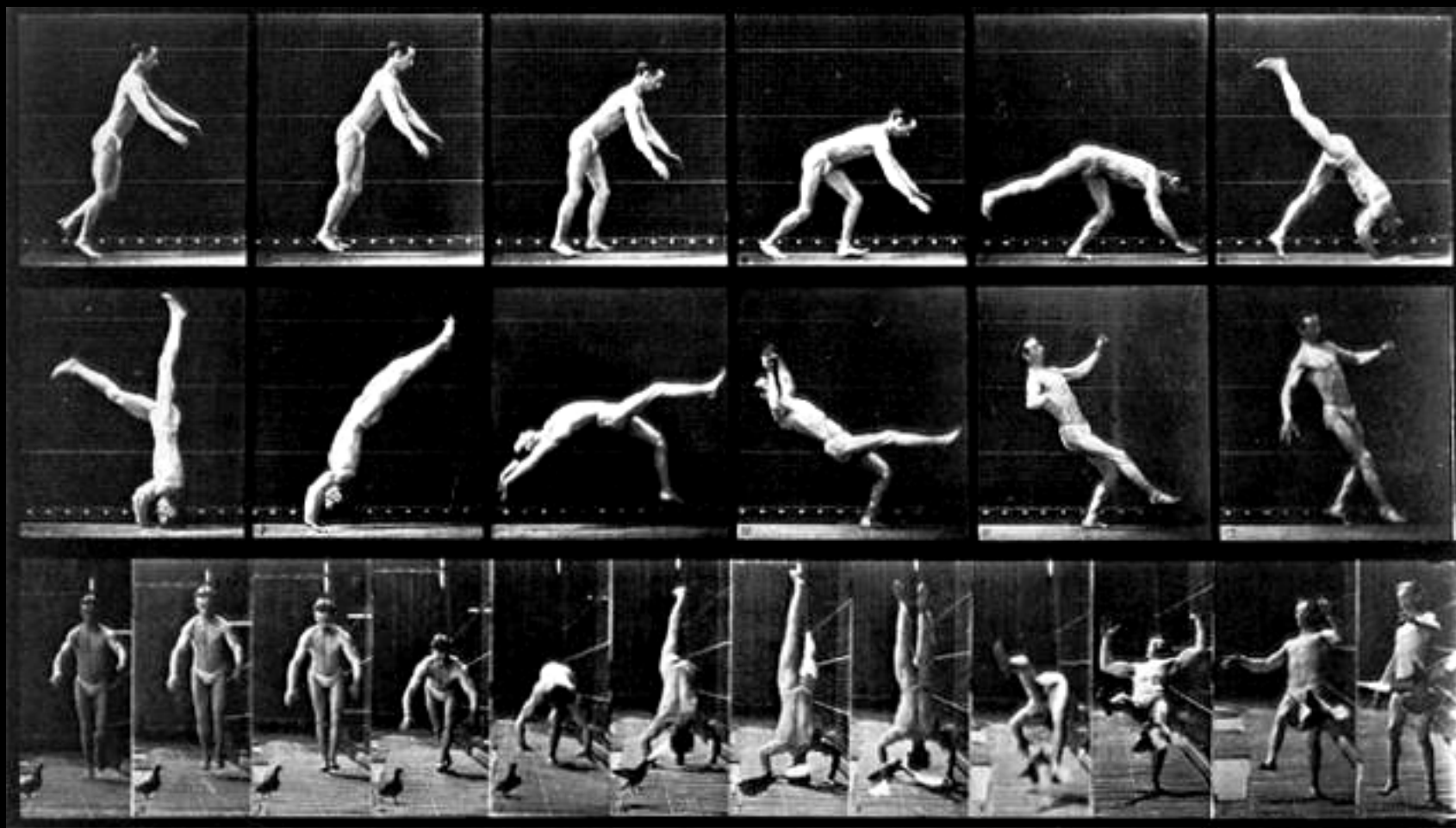
"SALLIE GARDNER," owned by LELAND STANFORD; running at a 140 gait over the Palo Alto track, 10th June, 1878.

The negatives of these photographs were made at intervals of two-sevenths of an inch, and about the twenty-fifth part of a second of time; they illustrate consecutive positions assumed in each twenty-seven inches of progress during a single stride of the horse. The vertical lines were twenty-seven inches apart; the horizontal lines represent elevations of four inches track. The exposure of each negative was less than the two-thousandth part of a second.

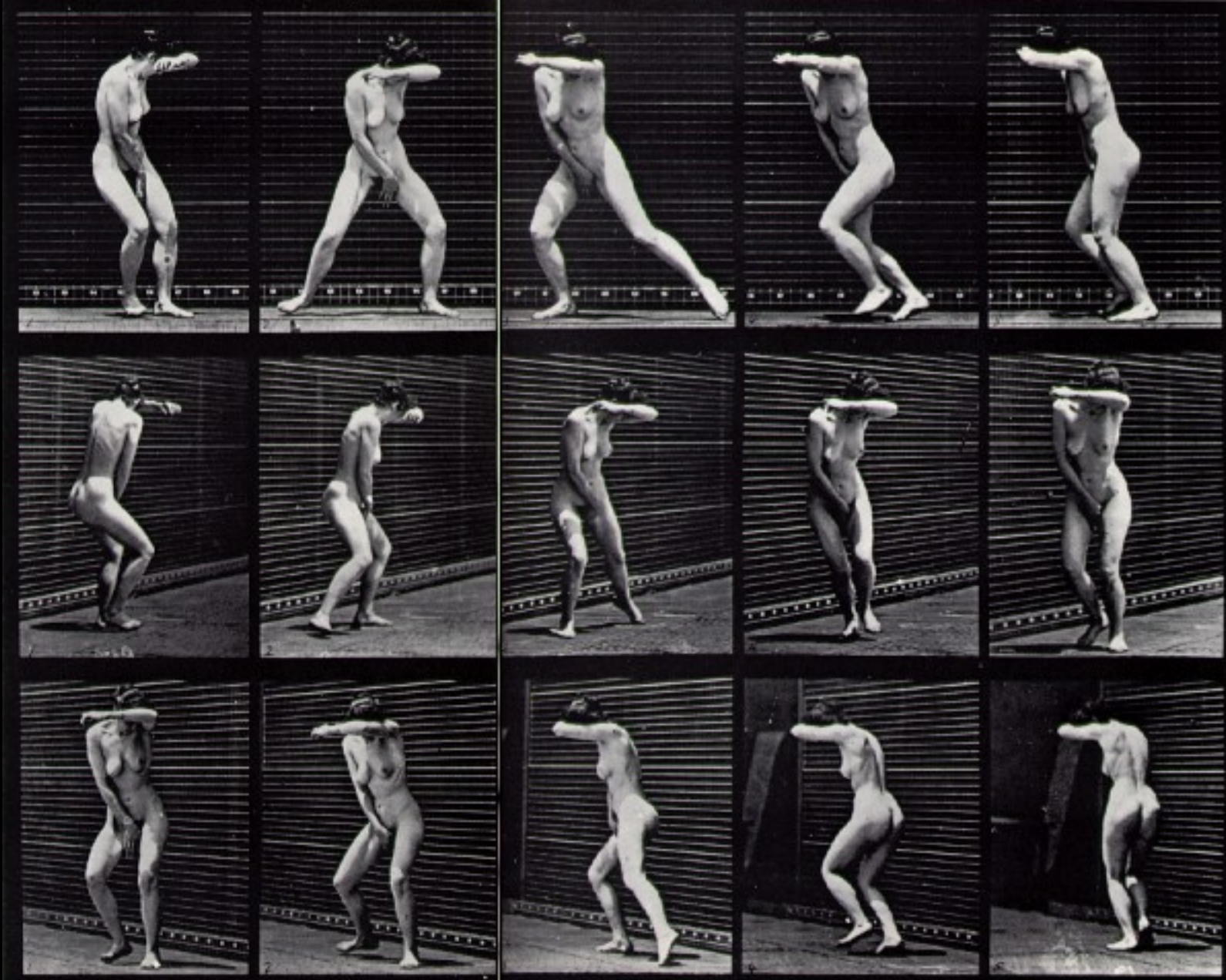
AUTOMATIC ELECTRO-PHOTOGRAPH

Muybridge- Horse in Motion 1878





Muybridge- Headspring with Pigeon 1885



Muybridge- Turning away and running 1884

Shutter Speeds

FAST

1/2000

1/1000

1/500

1/250

MEDIUM

1/125

1/60

1/30

1/15

SLOW

1/8

1/4

1/2

1 sec

VERY SLOW

2 sec

4 sec

8 sec

16 sec

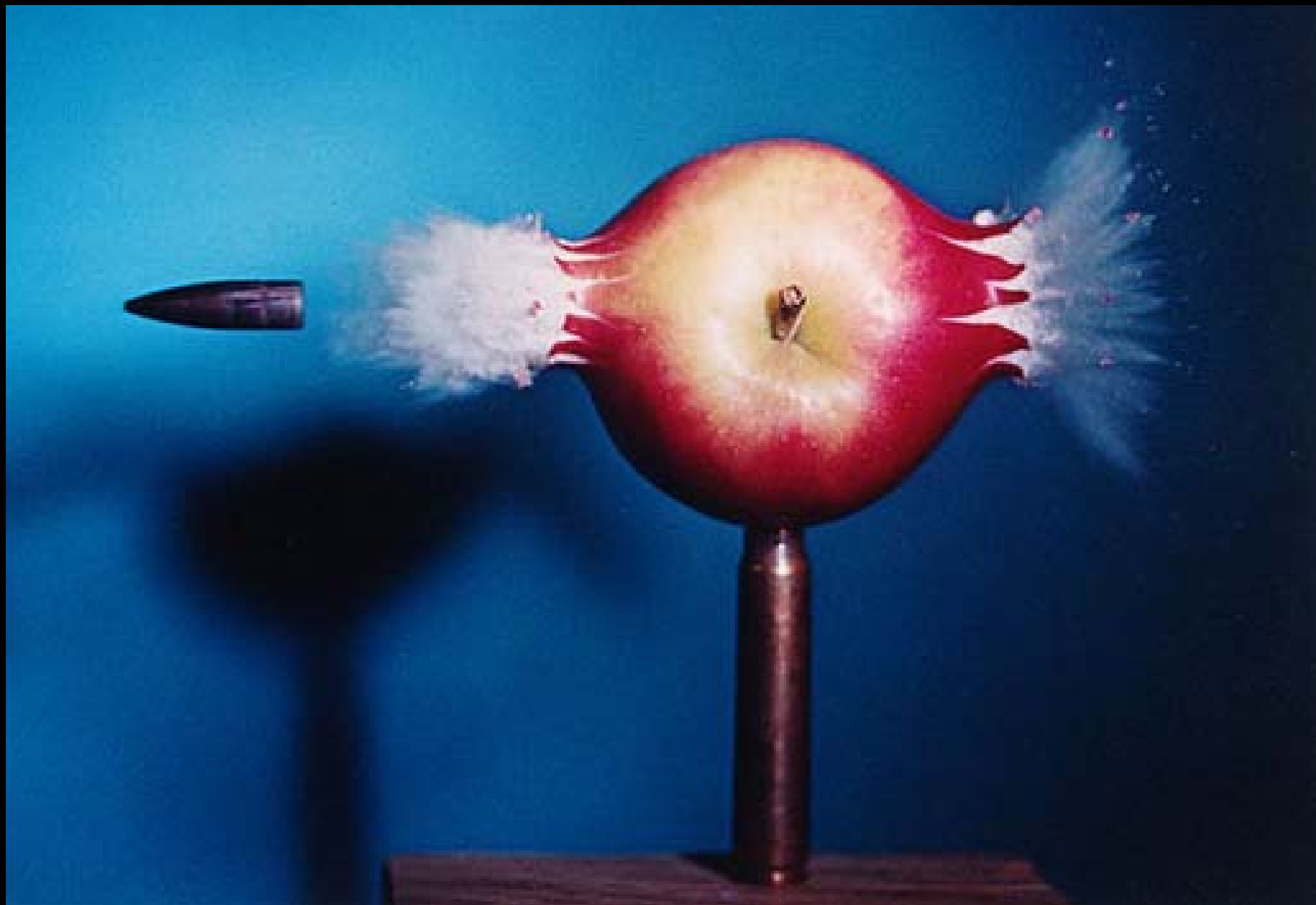
32 sec



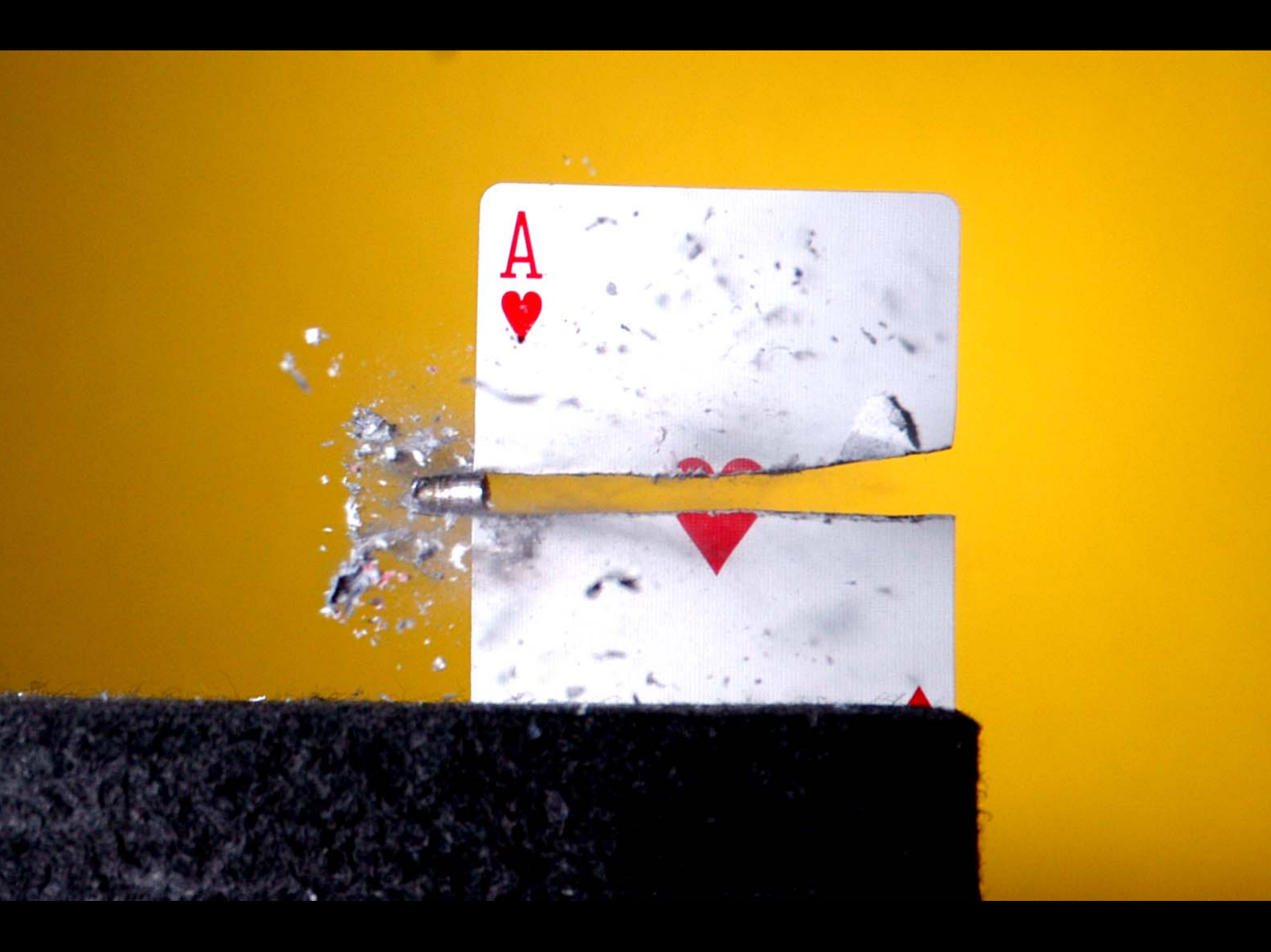
Henri Cartier Bresson
"The decisive moment"



Gary Winogrand



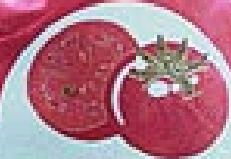






FOR FOOD SERVICE USE

Campbell's



**Tomato
Juice**
from concentrate

NET 5.5 FL. OZ. (163 ml)



Camera is steady- subject held still- background moved



Camera is steady- subject moved across frame



Camera panned with subject



Camera is steady- subject moved



Camera is steady- long exposure



Camera is steady- extended long exposure

Everything moved





High shutter speed freezes motion



Camera is steady- subject moved



Camera is steady- subject moved



Camera is steady- subject moved



Camera panned with subject



Camera is steady- subject moved

Time vs Aperture Priority



With a camera that has an automatic feature- you set one and the camera sets the other. On a manual camera, you first set the aperture or shutter speed and then set the other- centering a meter needle or getting the green light.

There are more shutter speed choices than aperture choices.

It is best to set the aperture first and then set the shutter speed or let the camera automatically set it for you.

For a fast shutter speed- pick a large aperture (smallest number) (f 1.4)

For a slow shutter speed- pick a small aperture (large number) f/16



f/2.3 1/100



f/8 1/15

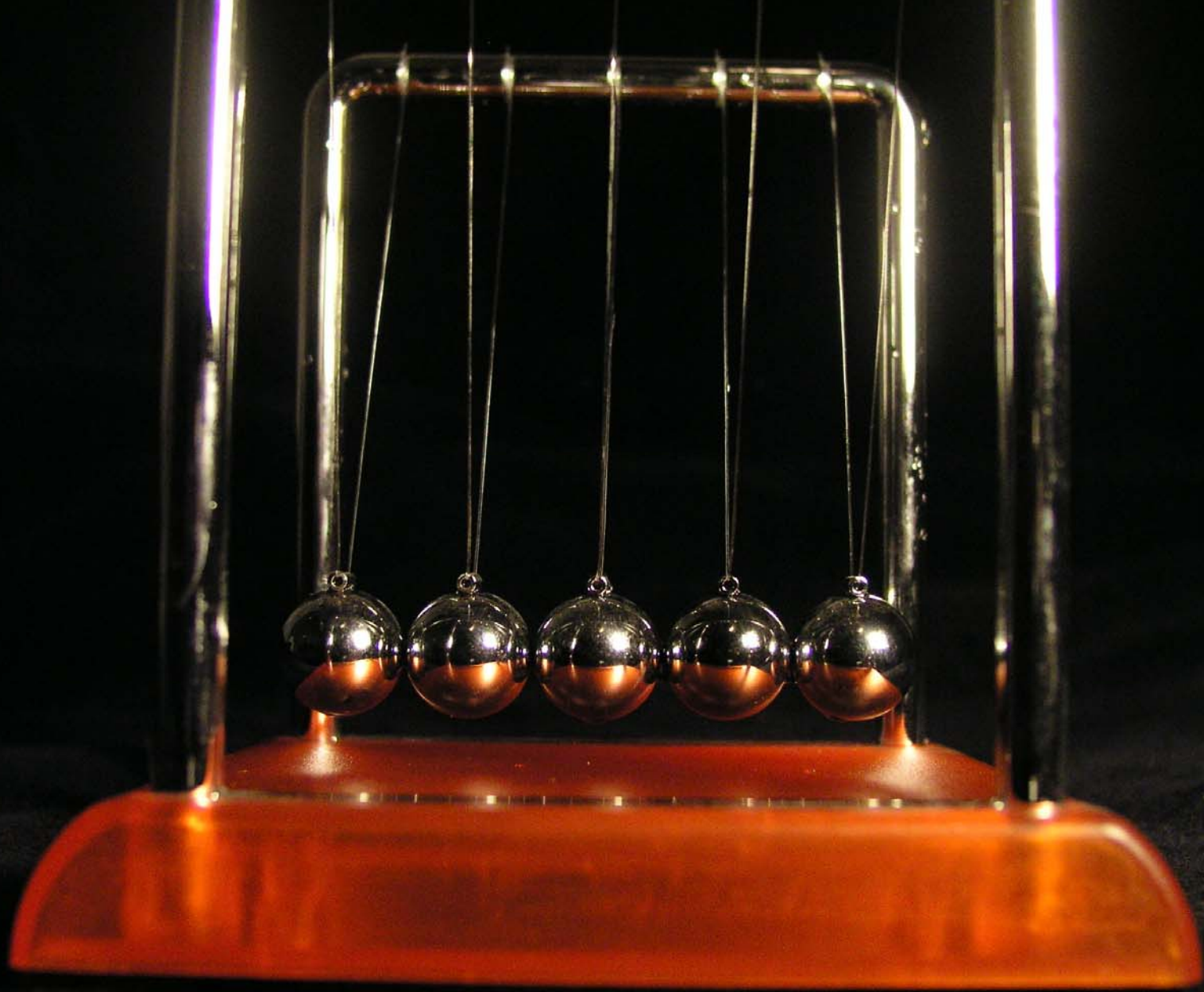




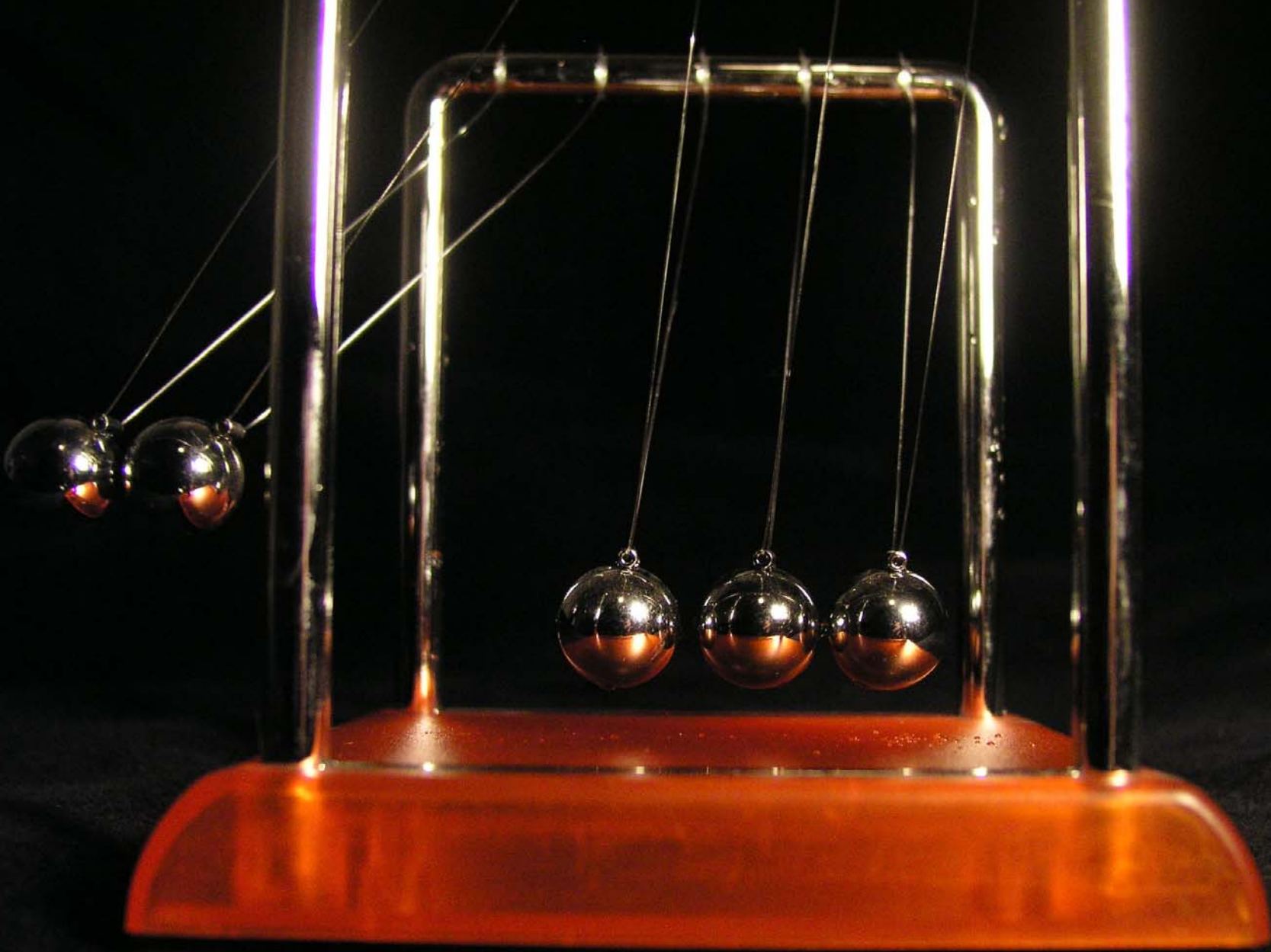
f/2 1/160



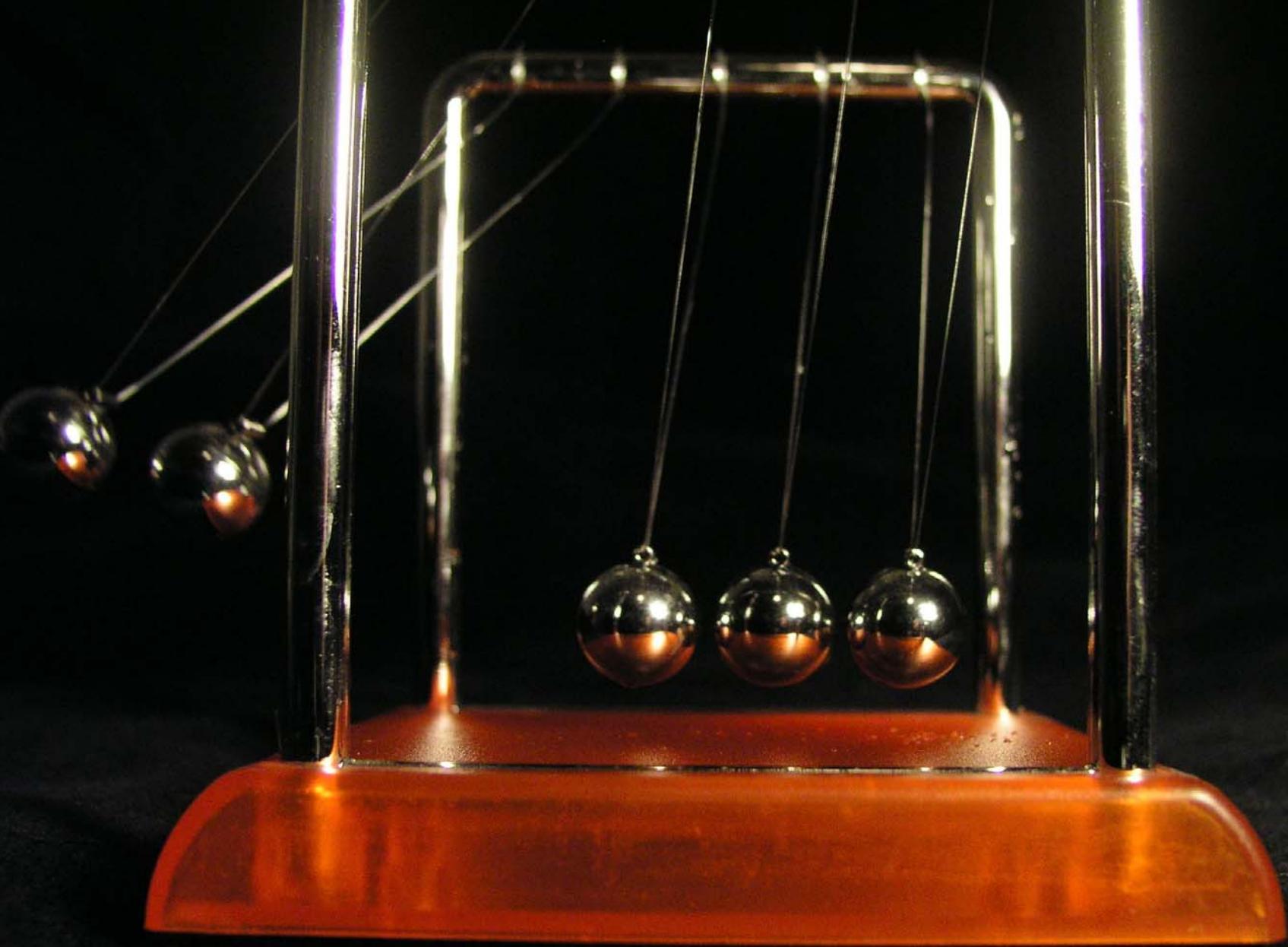
f/8 1/15



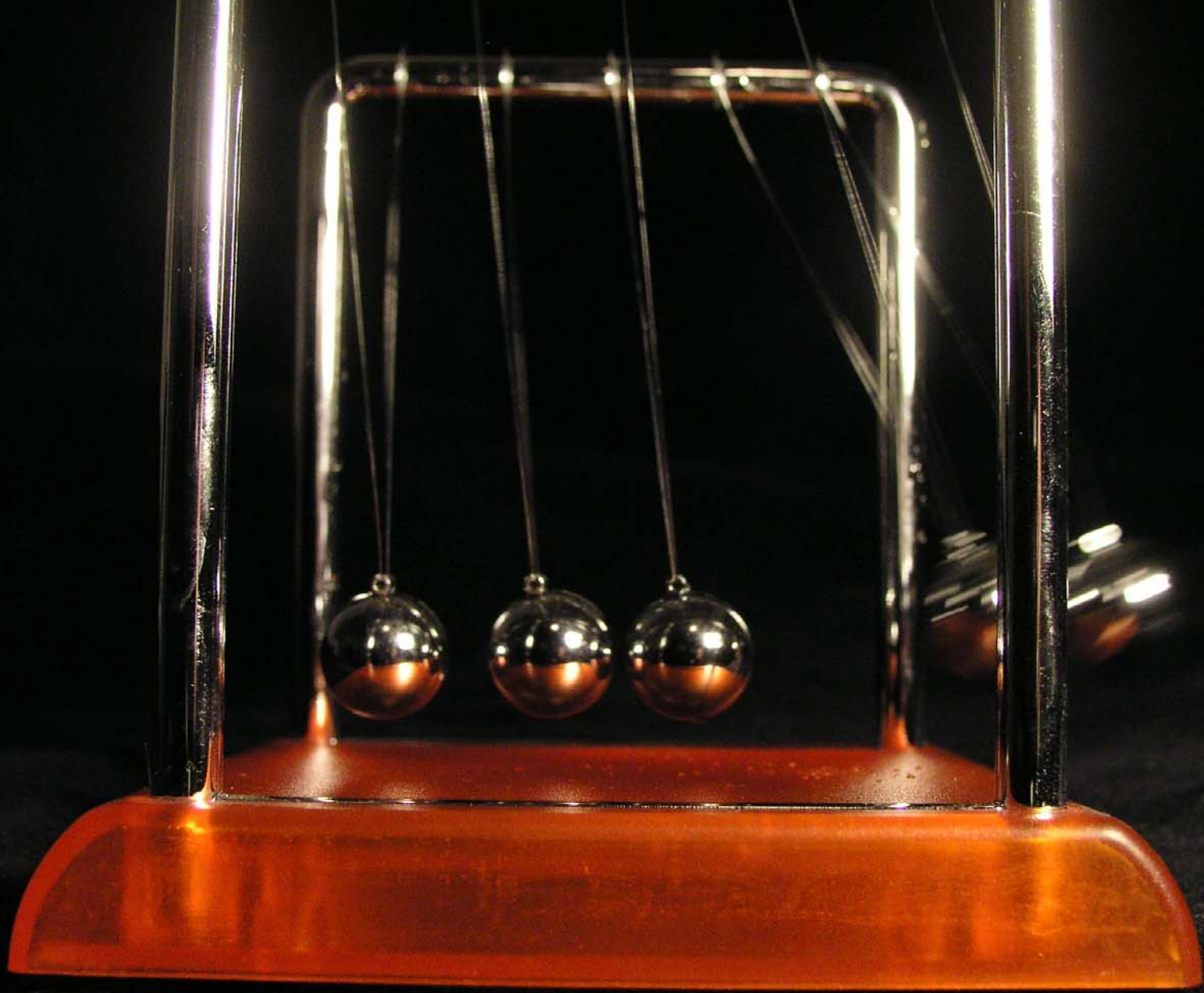
Still



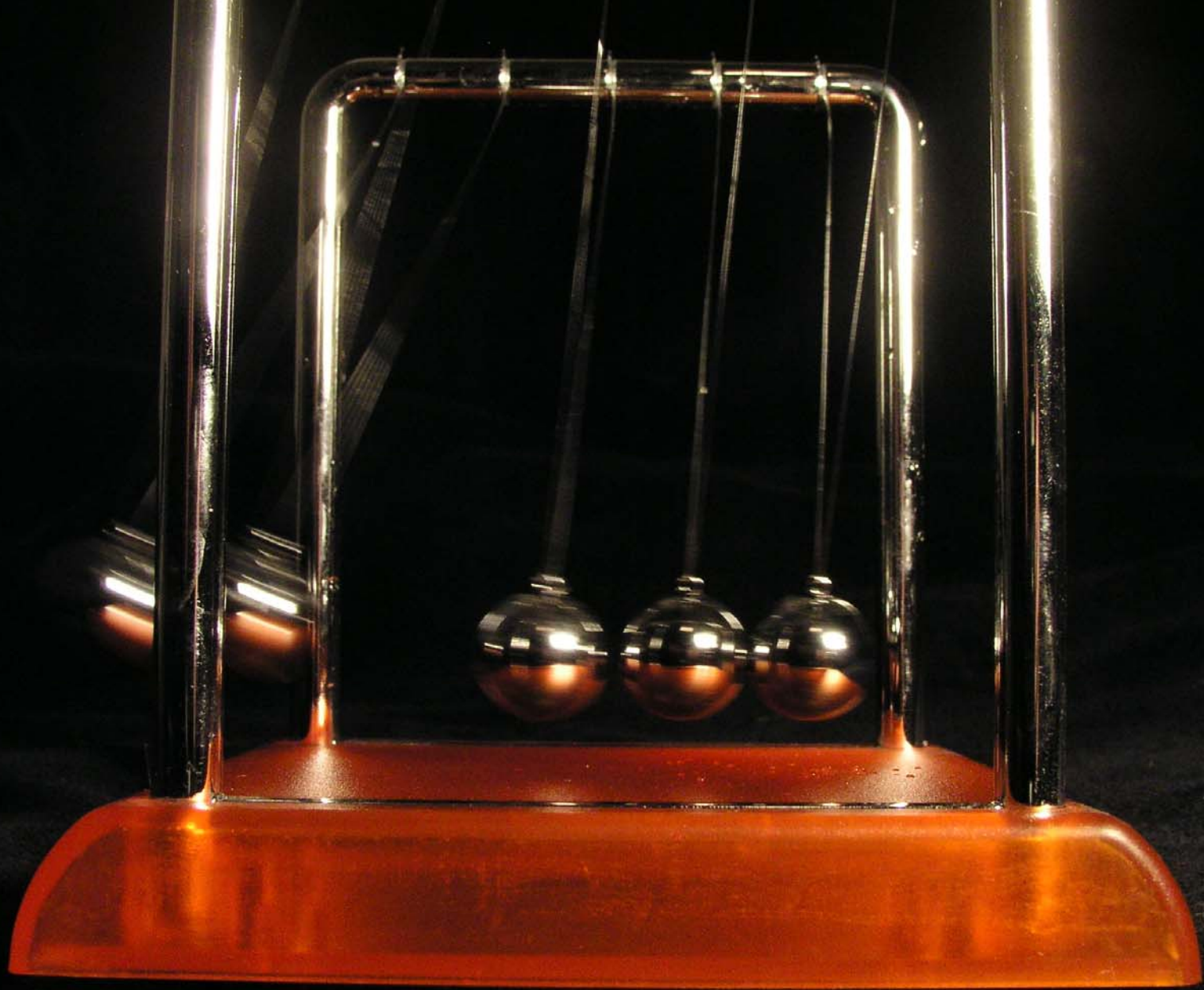
1/320 sec



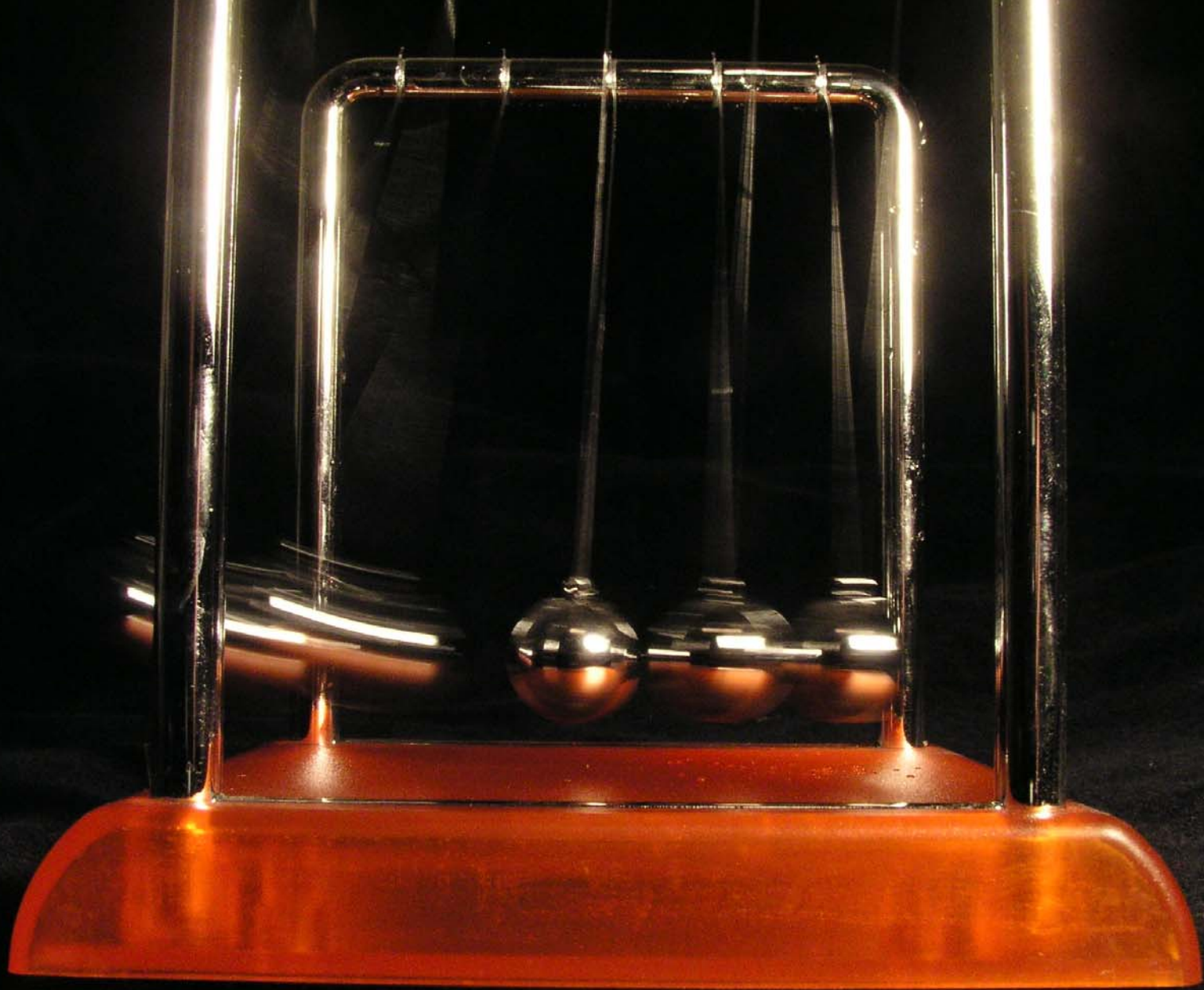
1/200 sec



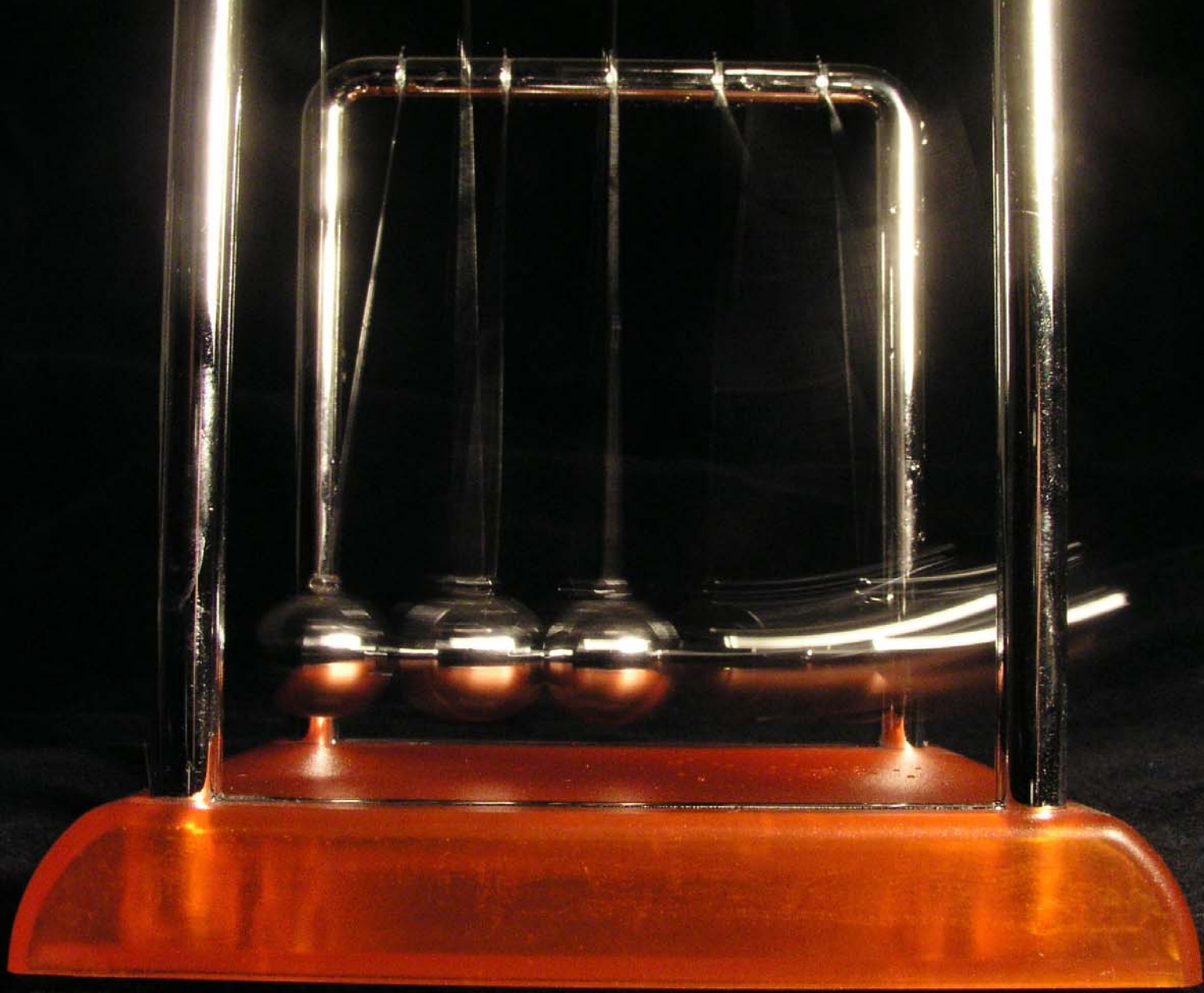
1/125 sec



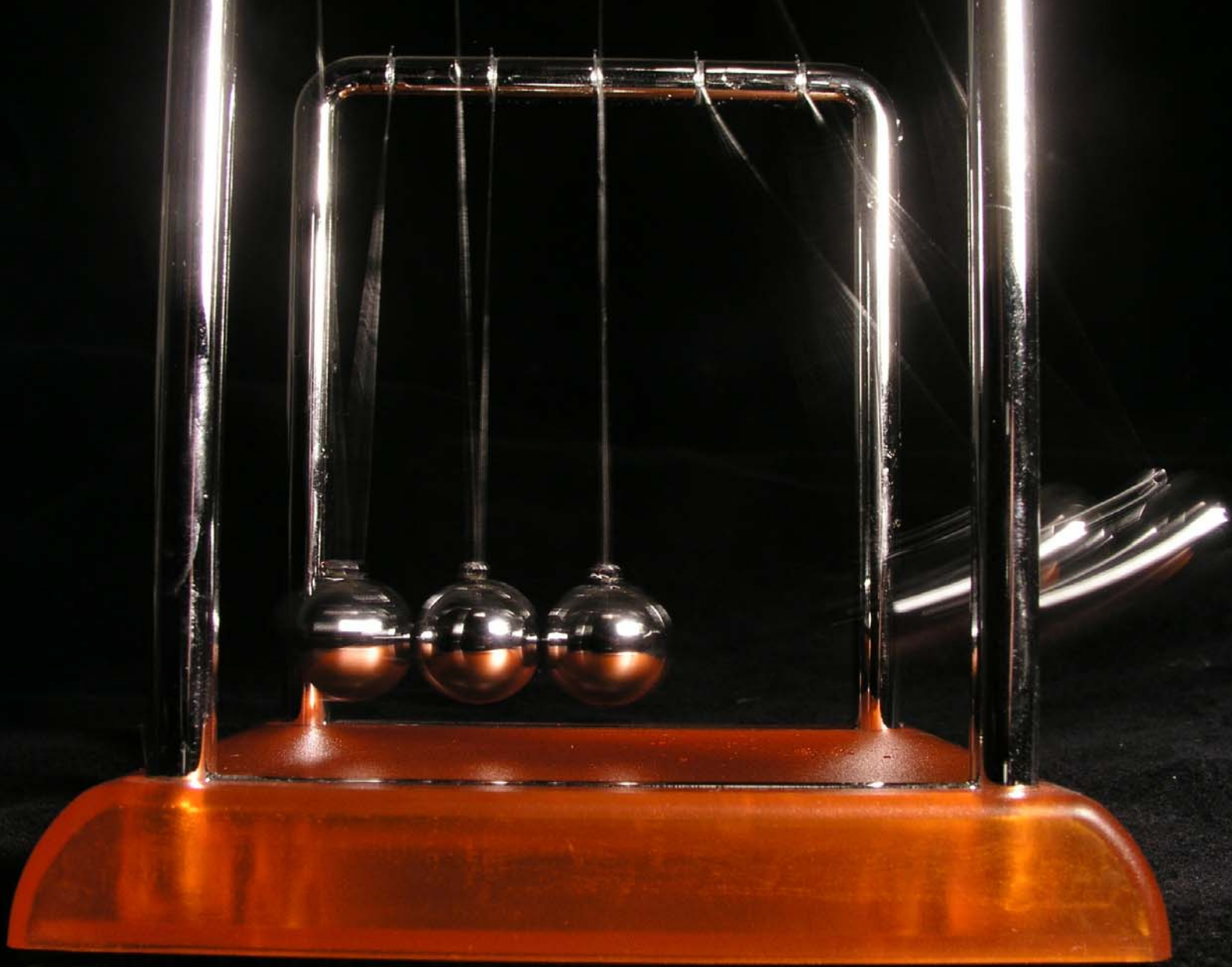
1/40 sec



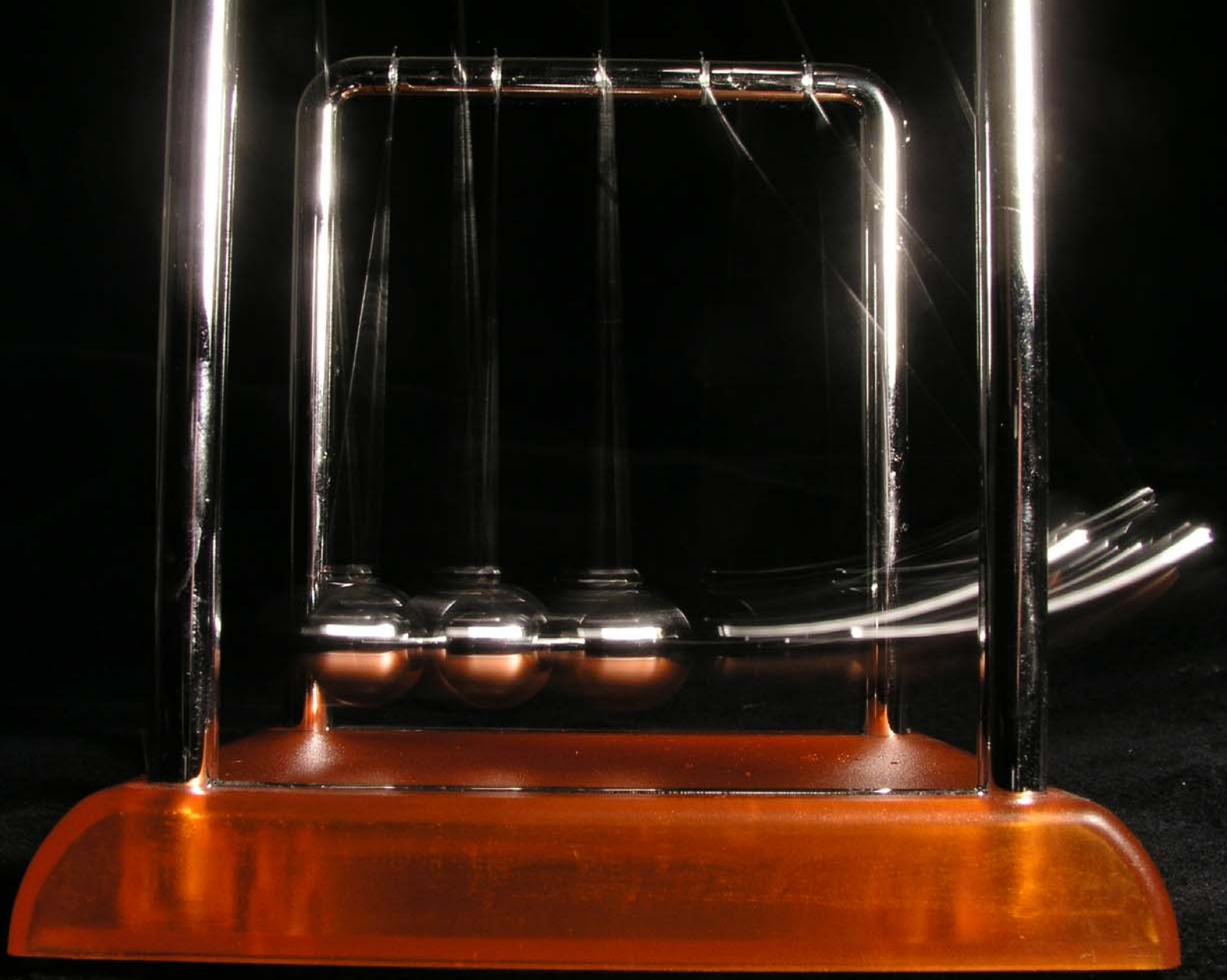
1/20 sec



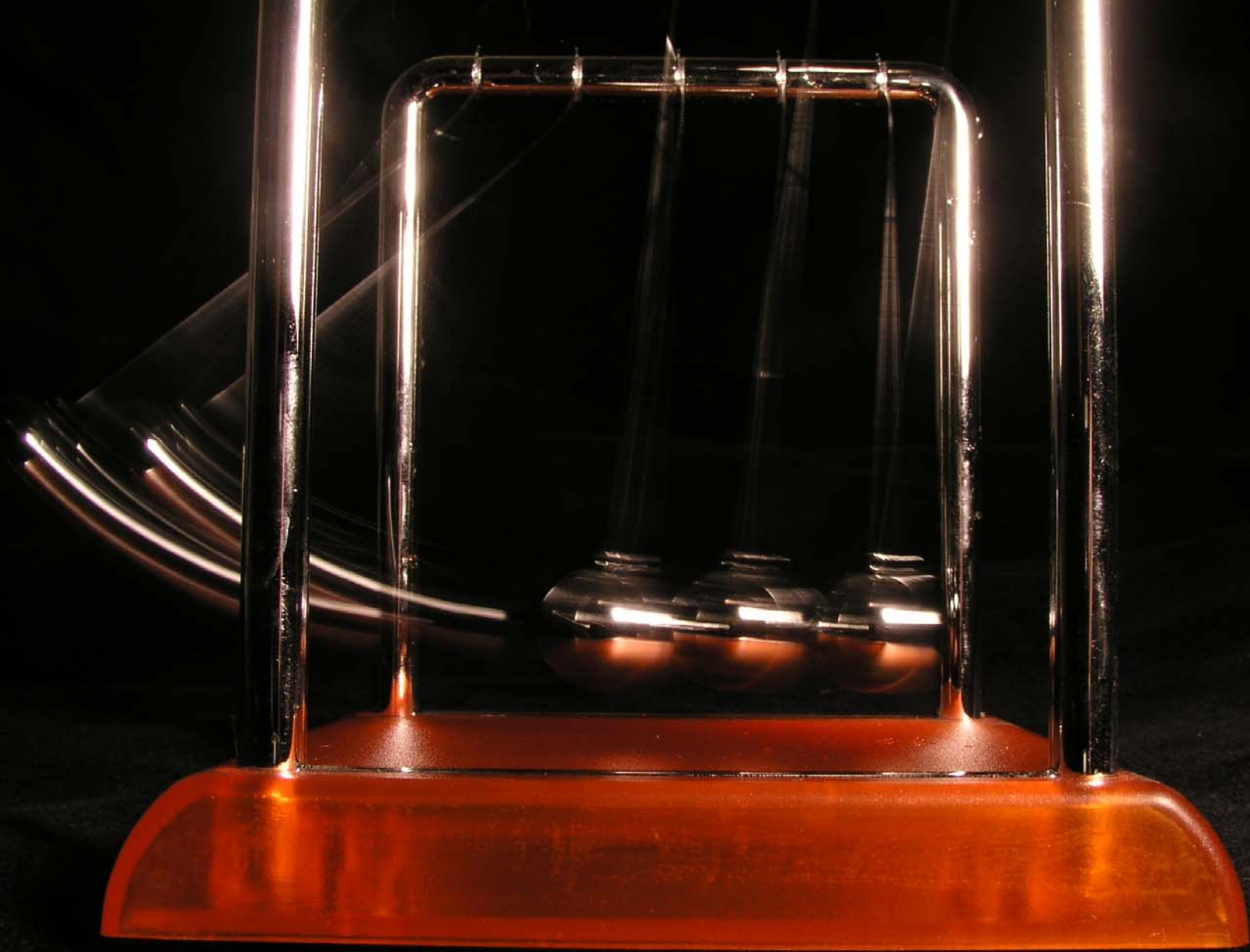
1/15 sec



1/8 sec



1/5 sec



1/4 sec



1/2 sec



1 sec



1.3 sec