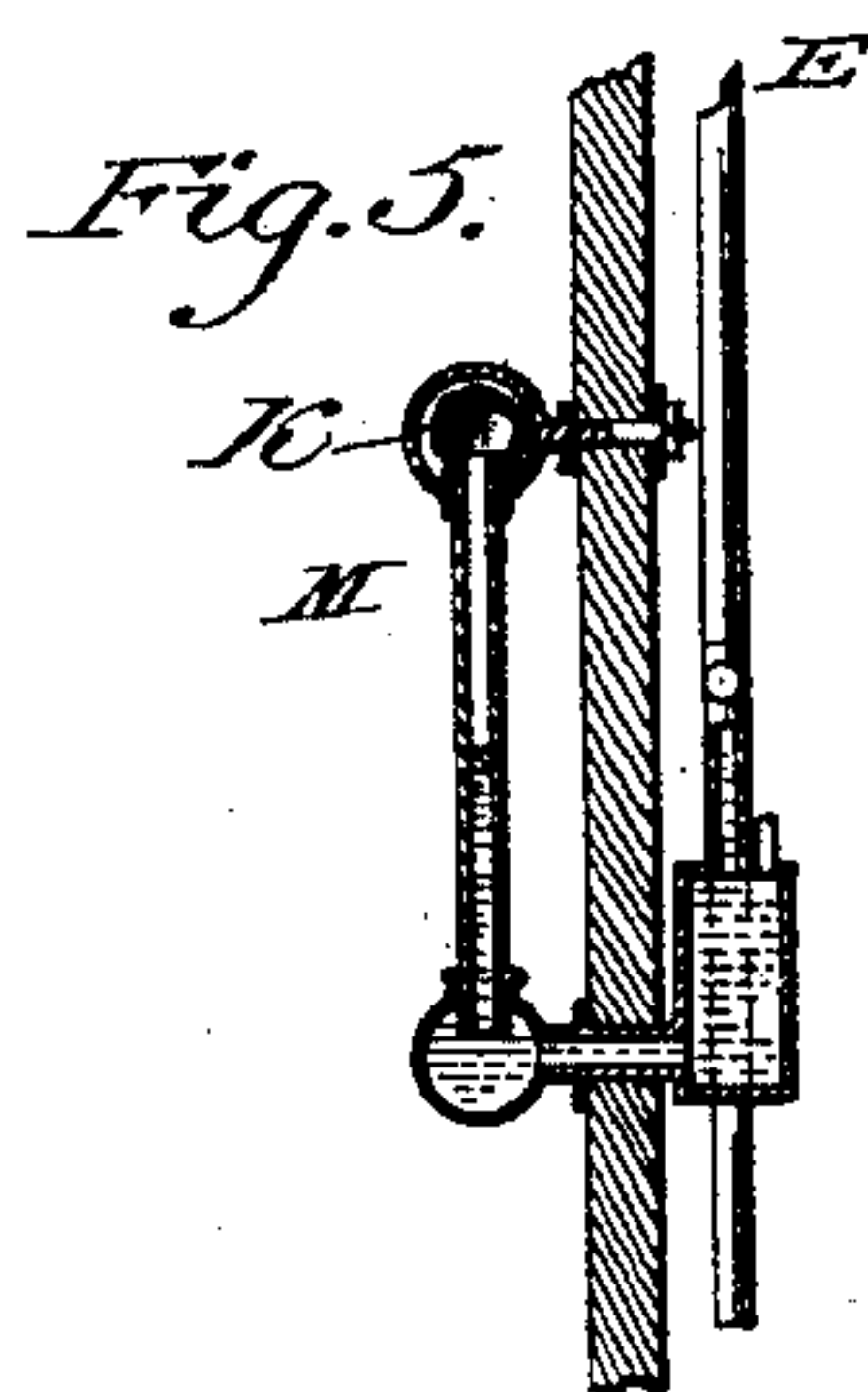
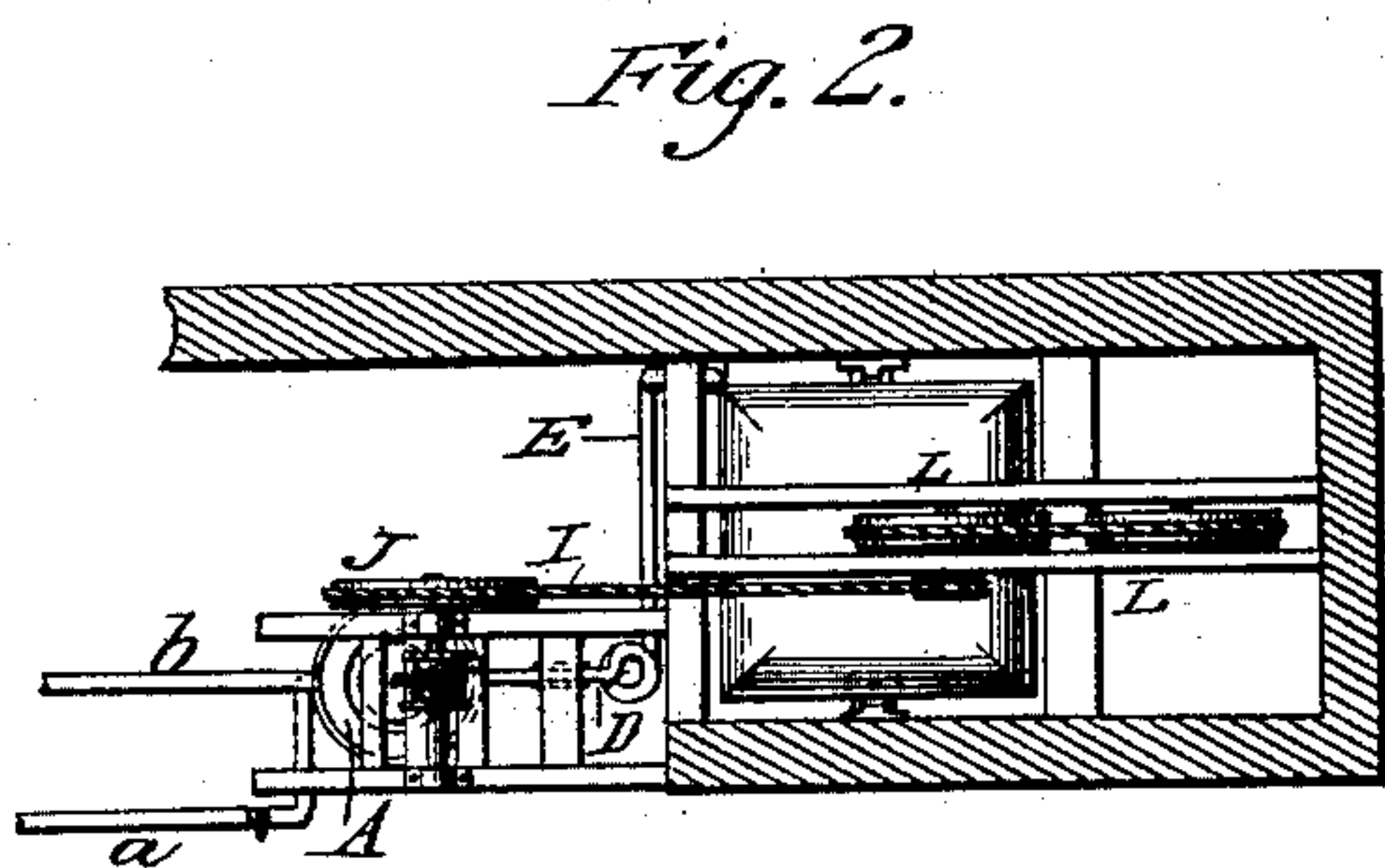
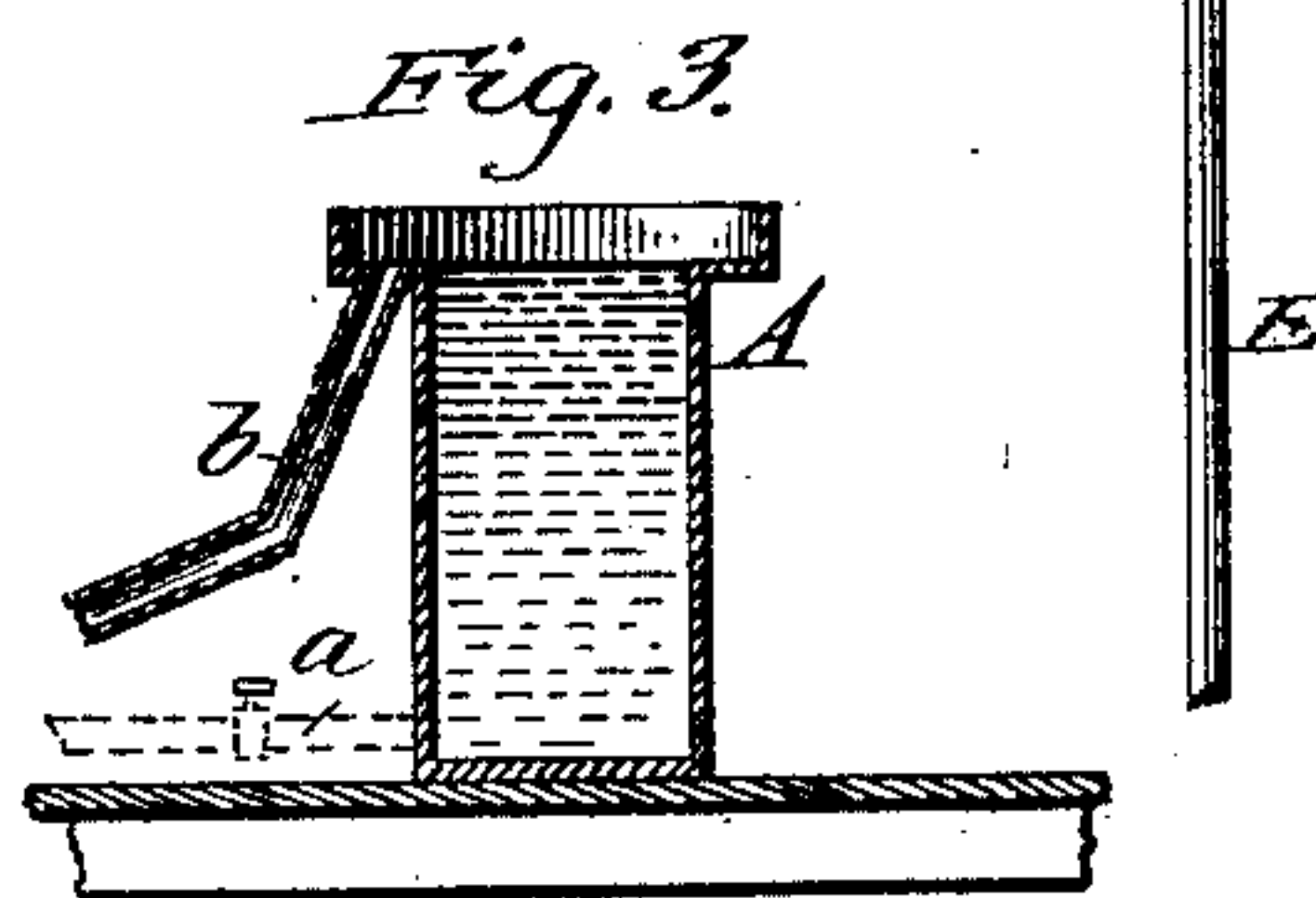
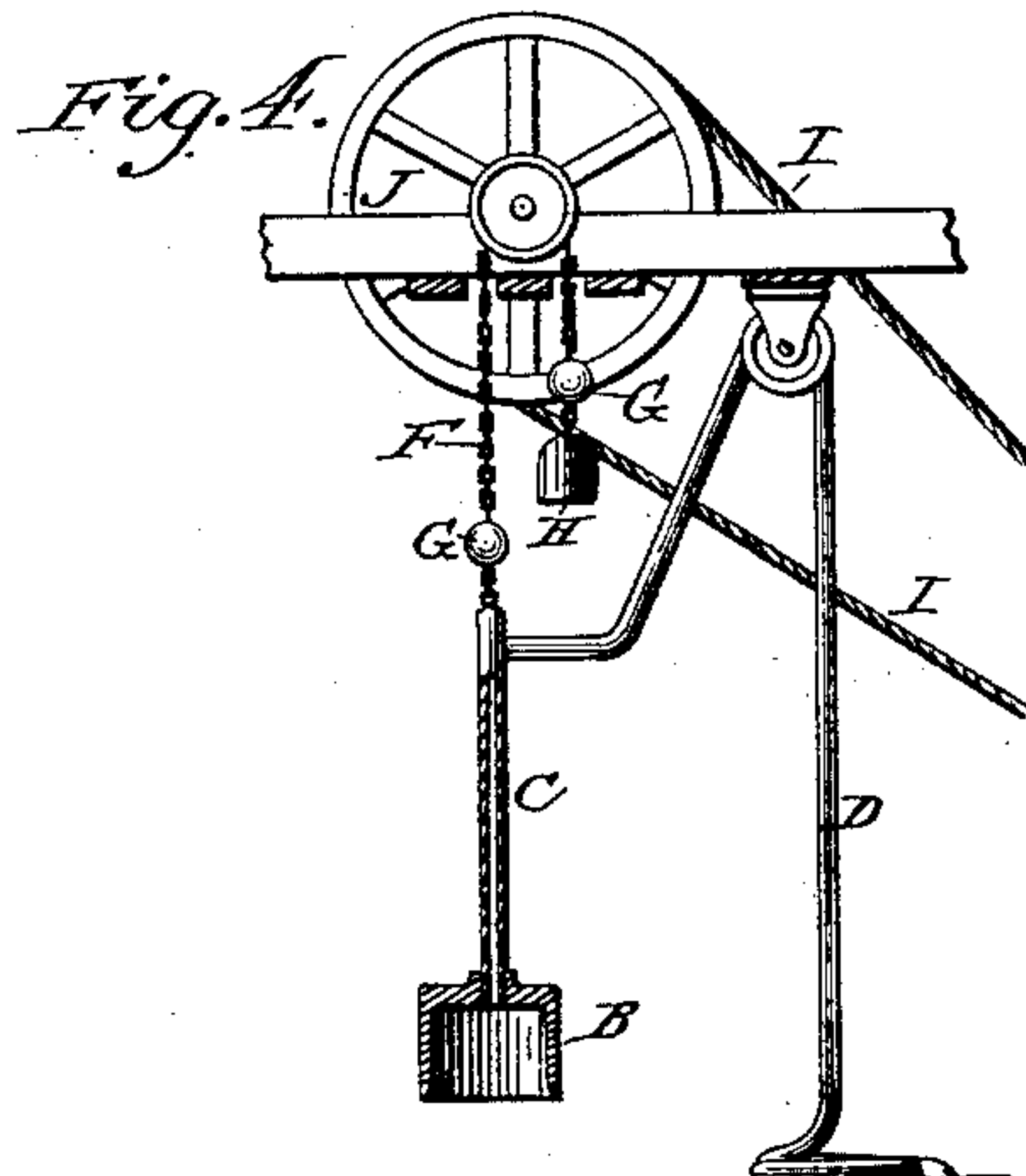
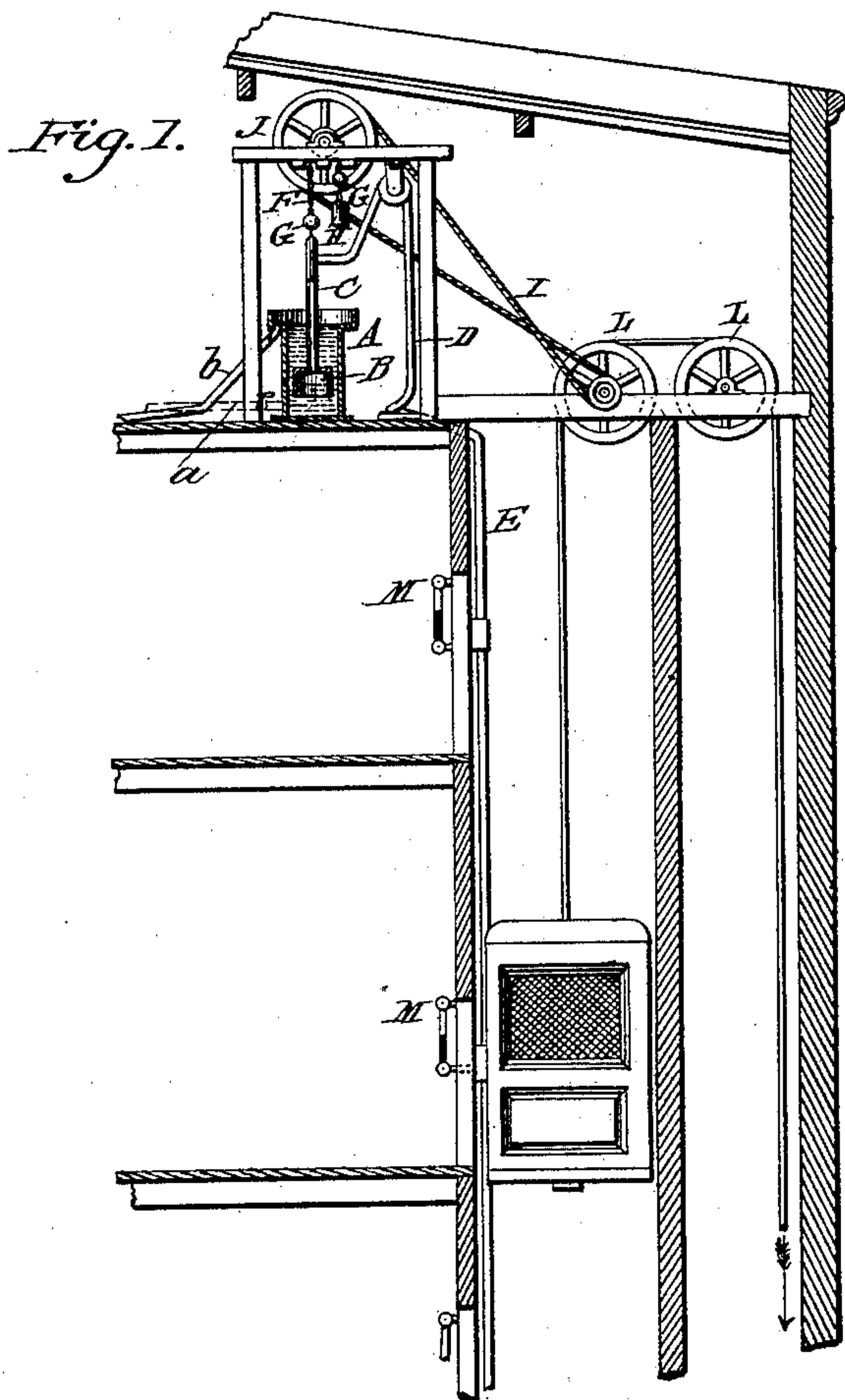


(No Model.)

Q. N. EVANS.
ELEVATOR INDICATOR.

No. 360,518.

Patented Apr. 5, 1887.



Witnesses.

W. C. Adams.
Robert F. Farnis.

Inventor.

Quincy N. Evans

UNITED STATES PATENT OFFICE.

QUIMBY N. EVANS, OF BROOKLYN, NEW YORK.

ELEVATOR-INDICATOR.

SPECIFICATION forming part of Letters Patent No. 360,518, dated April 5, 1887.

Application filed August 13, 1886. Serial No. 210,850. (No model.)

To all whom it may concern:

Be it known that I, QUIMBY N. EVANS, of Brooklyn, county of Kings, State of New York, have invented an Improvement in Indicators for Elevators, of which the following description, in connection with the accompanying drawings, is a specification.

My invention has for its object to provide a building having an elevator with indicators deriving their movement from a column of air acted upon through the agency of a diving-bell connected by means of pipes, and a flexible tube with the separate indicators located on each floor of the building, the movement of the diving-bell being regulated directly from the overhead gear, operating the elevator-car, and allowing the diving-bell to be immersed in a stationary tank to such a depth as to produce the necessary air-pressure to operate the above-mentioned indicators. The said indicators, which are to be operated by the air-pressure caused by before-mentioned diving-bell, have been fully described in specification forming part of Letters Patent granted to me, and numbered 327,075, dated September 29, 1885.

My invention, therefore, consists, primarily, in the combination, with an indicating device, of a diving-bell submerged in a stationary tank, and connected by a flexible tube with the air-pressure pipes of the indicators, the movement of said diving-bell, as specified, to cause the air-pressure in the connecting air-pressure pipes to act upon the indicators with more or less force, thus varying their positions in a manner to correspond with the position of the elevator-car.

Figure 1 is a diagram showing the vertical section of stationary tank with diving-bell submerged, the connection of the diving-bell with the air-pressure pipes leading to the indicators, and the manner in which the movement of the diving-bell is effected from the overhead gear of the elevator-car. Fig. 2 is a plan of Fig. 1. Fig. 3 is an enlarged vertical section of the stationary tank with the necessary supply and overflow pipes. Fig. 4 is an enlarged vertical section of the diving-bell with flexible-tube attachment, showing its connection with its moving gear regulated by stop-balls and counter-weight. Fig. 5 is a vertical section of the indicator having a rubber bag

attached to its upper end to prevent the evaporation of the fluid contained in the indicator.

Similar letters refer to similar parts throughout the several views.

A is a stationary tank placed conveniently close to the overhead gear of the elevator-car, having supply-pipe *a* to keep it constantly filled, and an overflow-pipe, *b*.

B is the diving-bell, with air-pipe C and flexible tube D connecting with air-pressure pipe E.

F is a chain by which the diving-bell B is raised or lowered.

G G are stop-balls limiting the movement of the chain F.

H is a balance-weight.

I is a rope or belt transmitting the motion of the overhead gear L of the elevator-car to the diving-bell gear J.

When the elevator-car is rising, its motion is transmitted through the belt I, causing the lowering of the diving-bell B into the tank A, thus producing an air-pressure which is proportional to the depth of the immersion of the diving-bell, and which is transmitted through the pipe C and the flexible tube D and the pipe E to the indicator M, (which is described in my Letters Patent, as before said,) thus causing said indicator to register the position of said elevator-car.

K is a rubber bag to prevent evaporation of the fluid contained in the indicator M.

I am aware that prior to my invention different mechanisms for working elevator-indicators have been in use. I therefore do not claim such a combination, broadly; but

What I do claim as my invention, and desire to secure by Letters Patent, is—

In an elevator-indicator, the combination of an indicating-tube, an attached air-pipe, the stationary tank A, provided with water, the diving-bell B, a chain, F, having stop-balls G G, and a balance-weight, H, a pulley, J, the elevator-car, and connecting mechanism, whereby the movement of the car raises and lowers the diving-bell, which creates an air-pressure that acts upon and operates the indicator, all substantially as described.

QUIMBY N. EVANS.

Witnesses:

ED. A. TRAPP,
ROBERT JACKSON.