

No. 660,851.

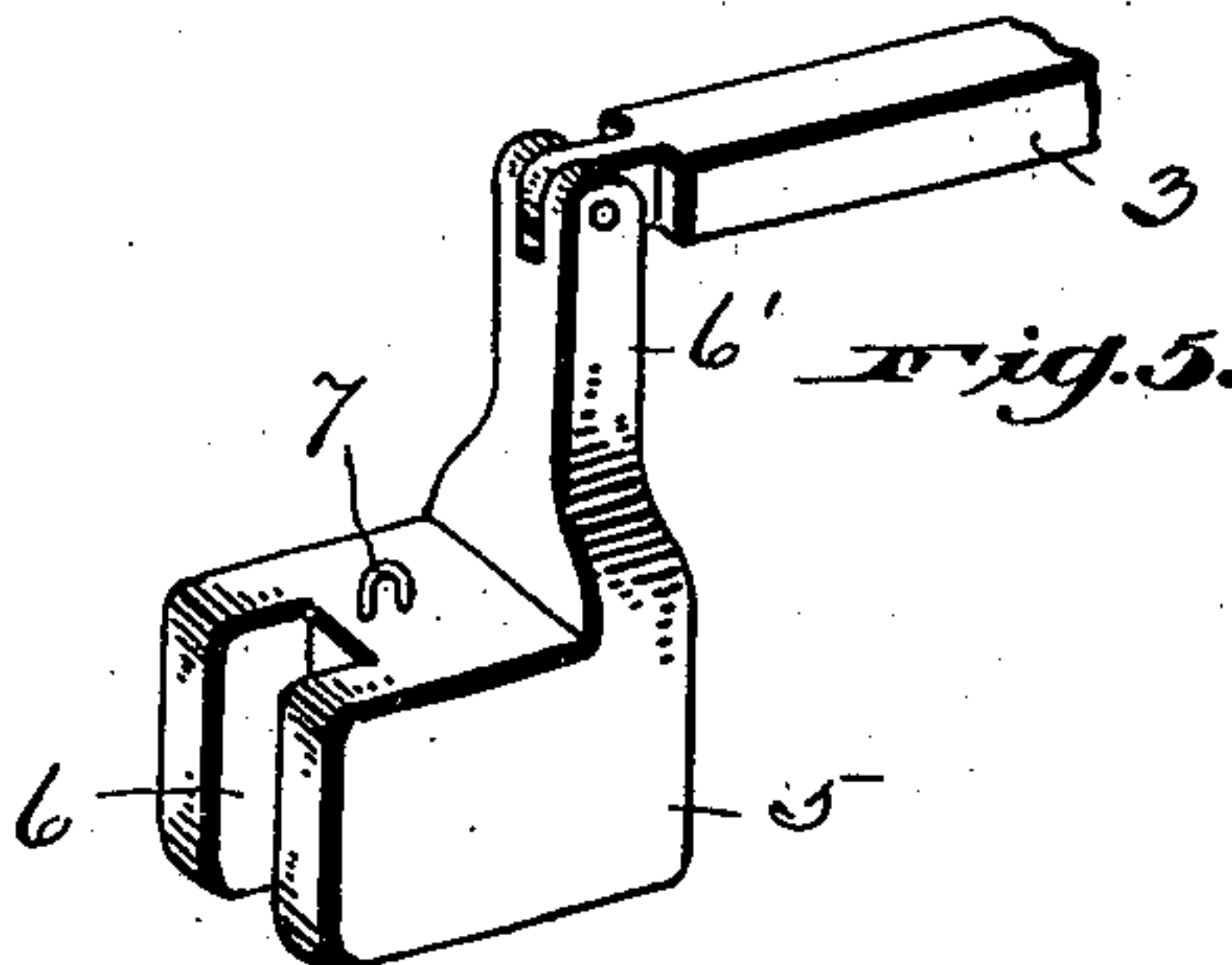
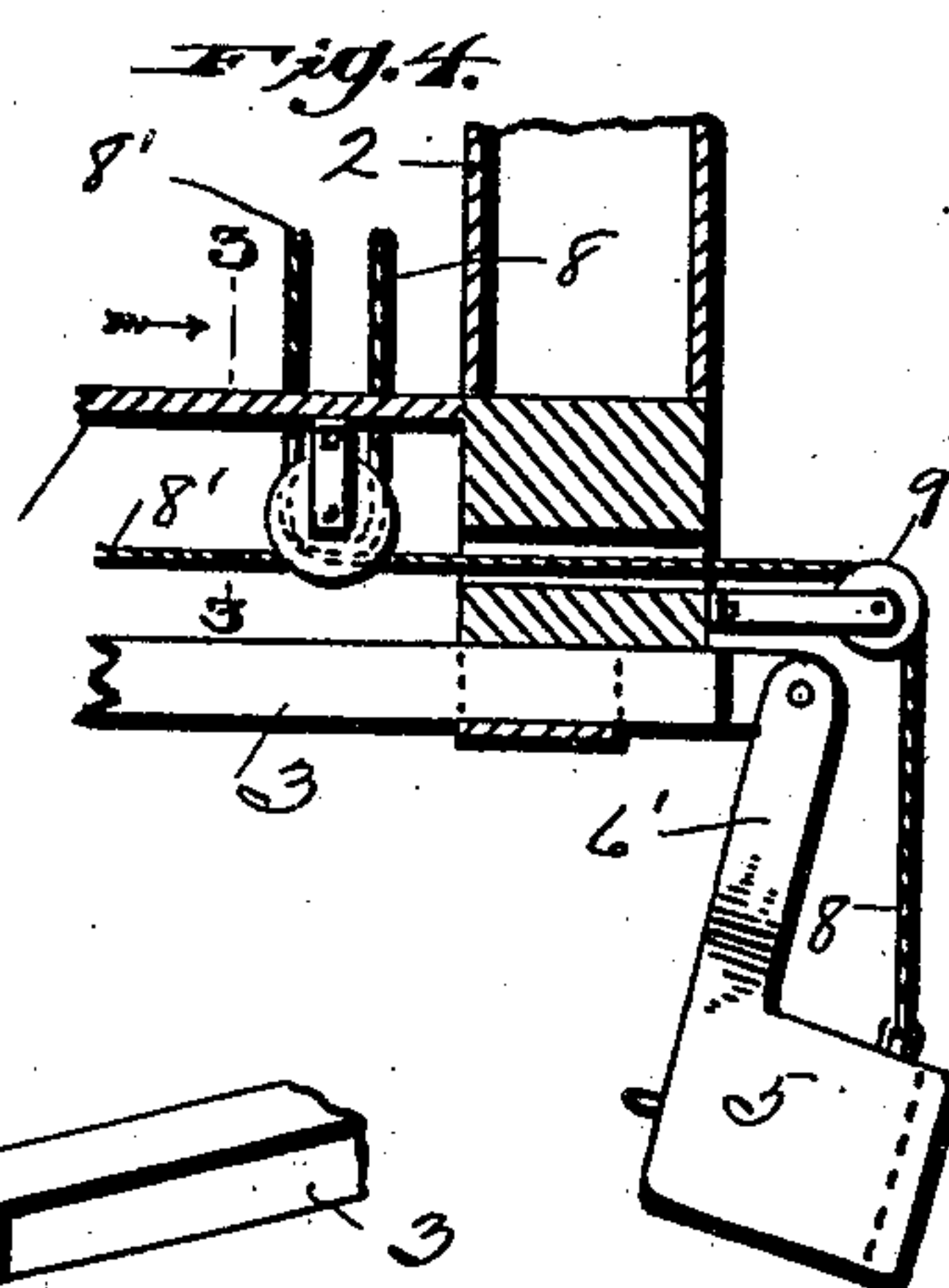
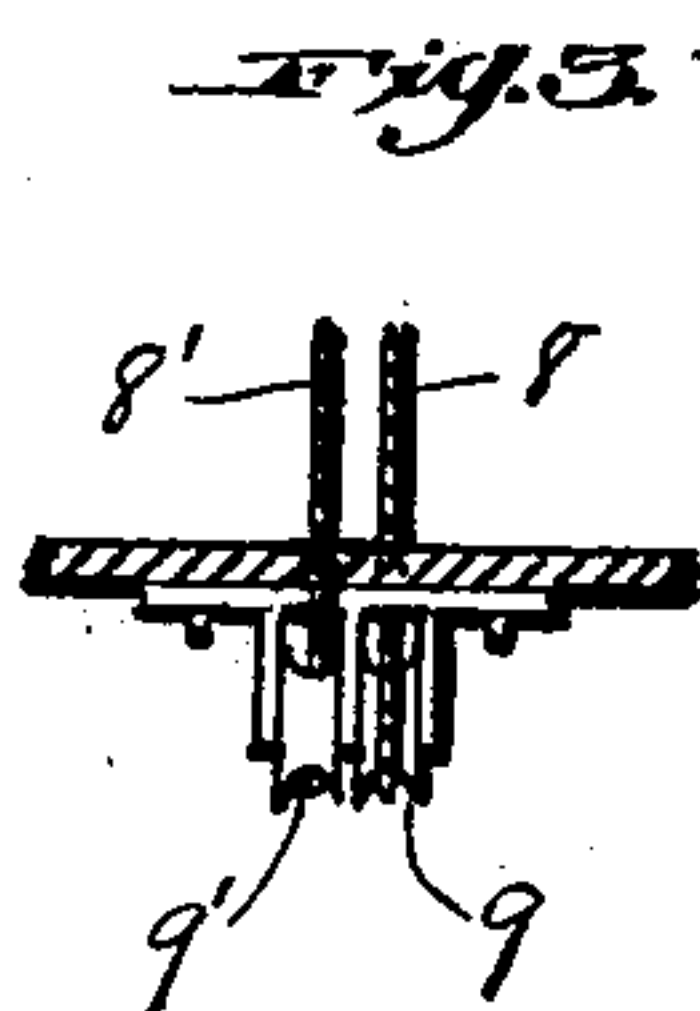
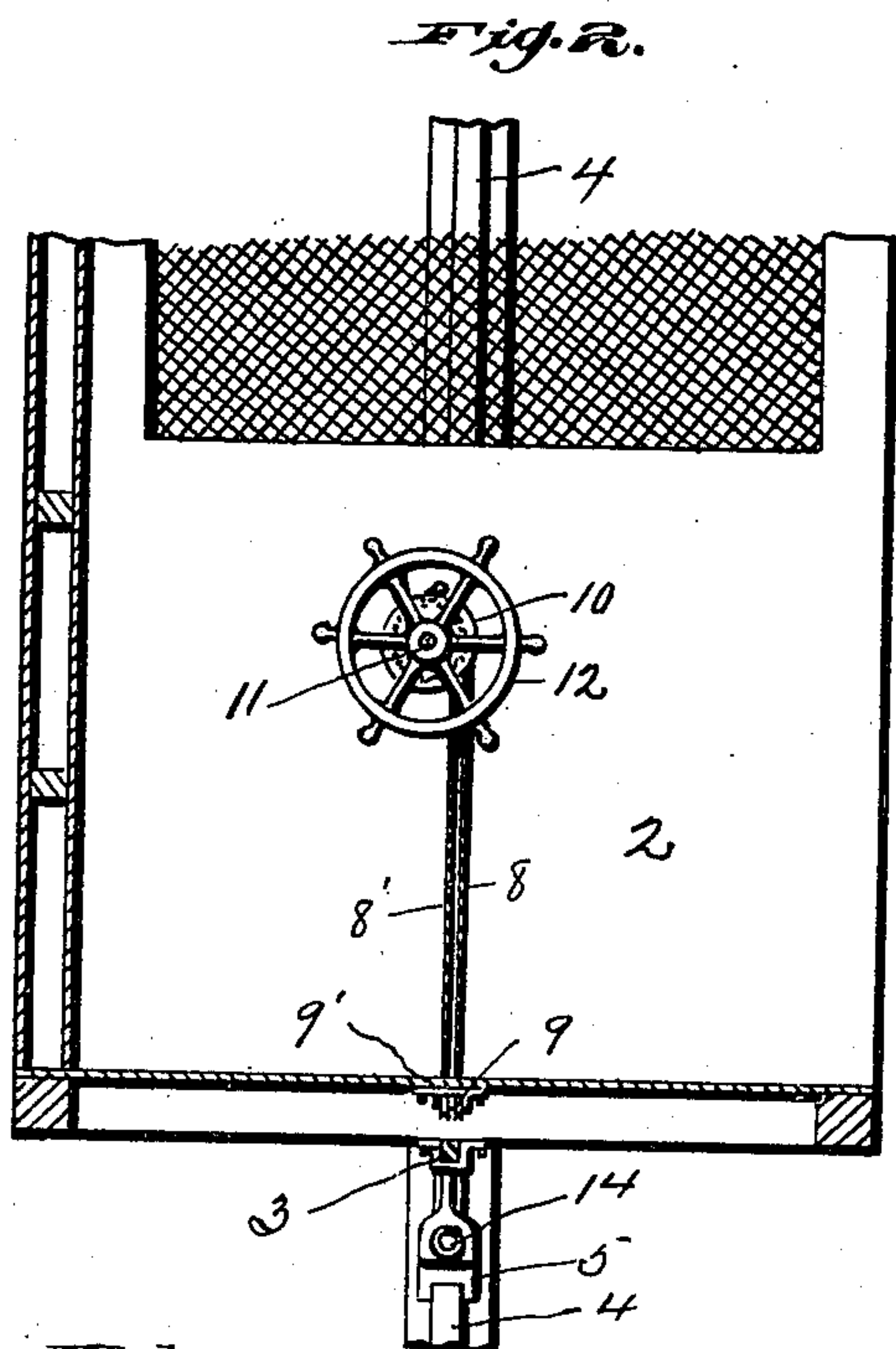
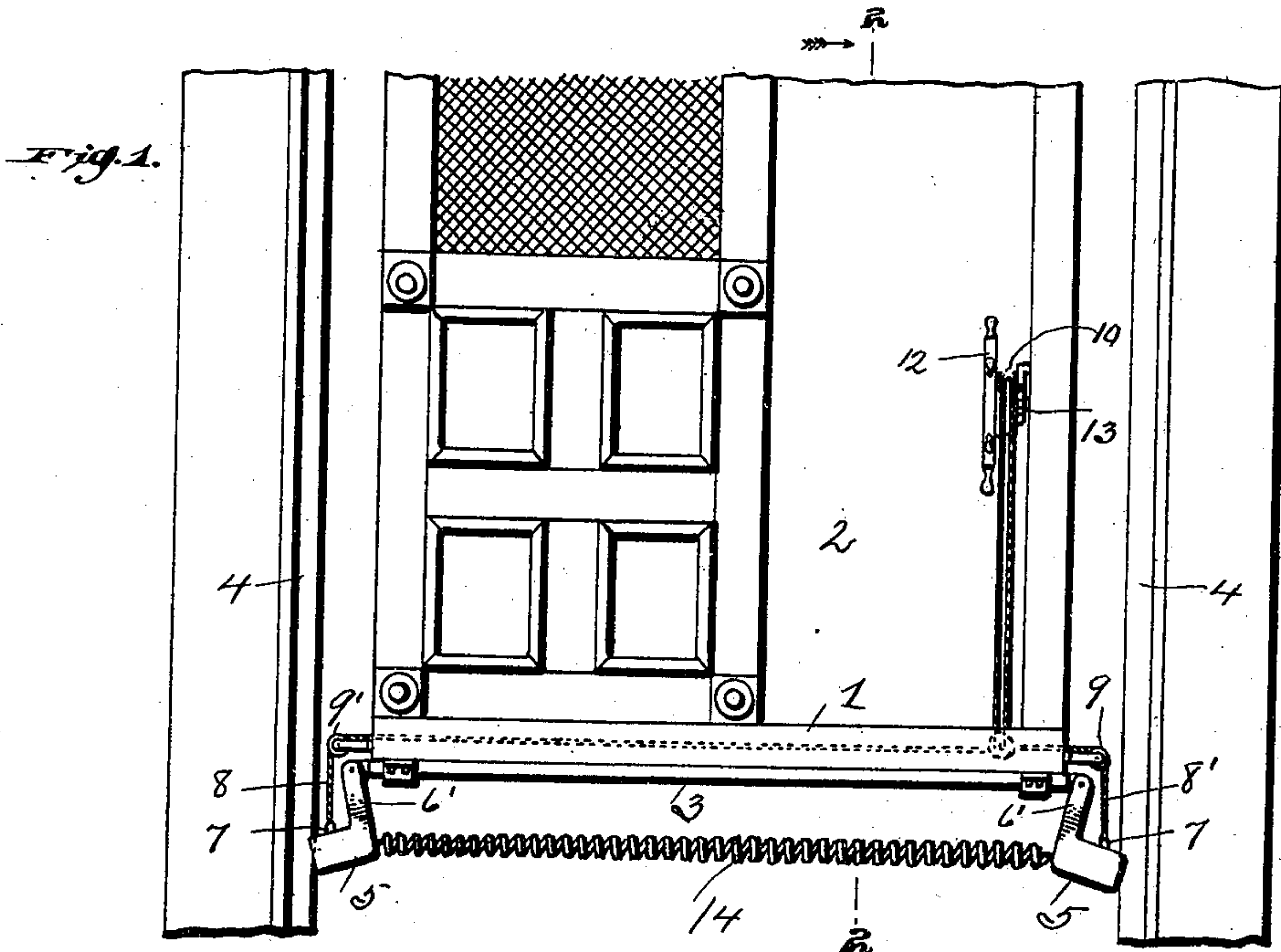
Patented Oct. 30, 1900.

I. FRANKEL.

EMERGENCY STOP OR BRAKE FOR ELEVATORS.

(Application filed Aug. 1, 1900.)

(No Model.)



Witnesses:
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UNITED STATES PATENT OFFICE.

ISAAC FRANKEL, OF PITTSBURG, PENNSYLVANIA.

EMERGENCY STOP OR BRAKE FOR ELEVATORS.

SPECIFICATION forming part of Letters Patent No. 660,851, dated October 30, 1900.

Application filed August 1, 1900. Serial No. 25,527. (No model.)

To all whom it may concern:

Be it known that I, ISAAC FRANKEL, a citizen of the United States of America, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Emergency Stops or Brakes for Elevators; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to an improved emergency stop or brake for elevator-cars; and it consists in certain details of construction and combination of parts, as will be fully described and claimed hereinafter.

In the accompanying drawings, Figure 1 is a rear elevation of a portion of an elevator shaft and car, showing my improved safety stop or brake arranged in connection therewith, the same being constructed and arranged in accordance with my invention. Fig. 2 is an end sectional elevation of the same, taken on the line 2 2 of Fig. 1. Fig. 3 is a sectional view on the line 3 3 of Fig. 4, showing the arrangement of the guide-pulleys used in connection with the device. Fig. 4 is an enlarged detailed front view of one of the safety-checks of shoes, together with a portion of its connected mechanism. Fig. 5 is an enlarged perspective view of one of the checks of shoes, showing a portion of the bar upon which the same is hinged.

To put my invention into practice, and thereby provide a safety device for elevators, I attach beneath the floor 1 of the elevator-car 2 a bar 3, the ends of which terminate opposite and a short distance away from the slides or guides 4, on which the said car travels up and down the shaft. Hinged to each end of this bar 3 are stout metal blocks or shoes 5, each formed with a slot or groove 6 to engage with the guides 4 and each having an upwardly-projecting arm 6', by means of which the said shoes are hinged to the bar 3. Each of these shoes 5 is provided with a staple 7, to which cords or ropes 8 and 8' are connected, and the said cords or ropes are arranged over pulleys 9 and 9' and attached to a drum 10, located inside of the elevator-car 2. This drum 10 is mounted upon a shaft 11, arranged in suitable bearings and within easy reach of the operator, and the said drum

is fitted with a hand-wheel 12 and a ratchet-wheel and pawl 13 to keep the shoes 5 in a certain position and prevent the spring 14 from drawing the shoes any farther away from the slides 4. These two shoes 5 are connected the one with the other by a spring 14, which tends to draw the said shoes away from the slides 4.

In operation should rope or machinery operating the car 2 break or become inoperative and fail to suspend the car or elevate or lower the car properly the operator by simply giving the hand-wheel 12 a quick turn or partial revolution on its axis a tension is placed upon the ropes or cords 8 and 8' to slightly wind them about the drum 10. This movement of the drum 10 will elevate the shoes 5 into contact with the slides 4 and by reason of their eccentric movement will bind or jam themselves against the said slides and, aided by the weight of the car and its occupants, will create a frictional contact that will bring the car to a dead-stop.

Various slight modifications and changes may be made in the details of construction without departing from the spirit of the invention. Therefore I do not confine myself to the exact construction shown and described.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

In combination with an elevator-car, the shoes 5 hinged beneath the floor of the said car, a spring 14 connecting the said shoes together, the tension of which will keep the same from contact with the slides 4, ropes or cords attached to the shoes, a drum arranged within the elevator-car to which said cords or ropes are connected, means for operating the said drum whereby the said shoes may be elevated into contact with the slides, or held stationary away from the same, all arranged and combined for service, substantially as and for the purpose described.

In testimony whereof I have hereunto affixed my signature in the presence of two subscribing witnesses.

ISAAC FRANKEL.

Witnesses:

M. E. HARRISON,
JOHN GROETZINGER.