

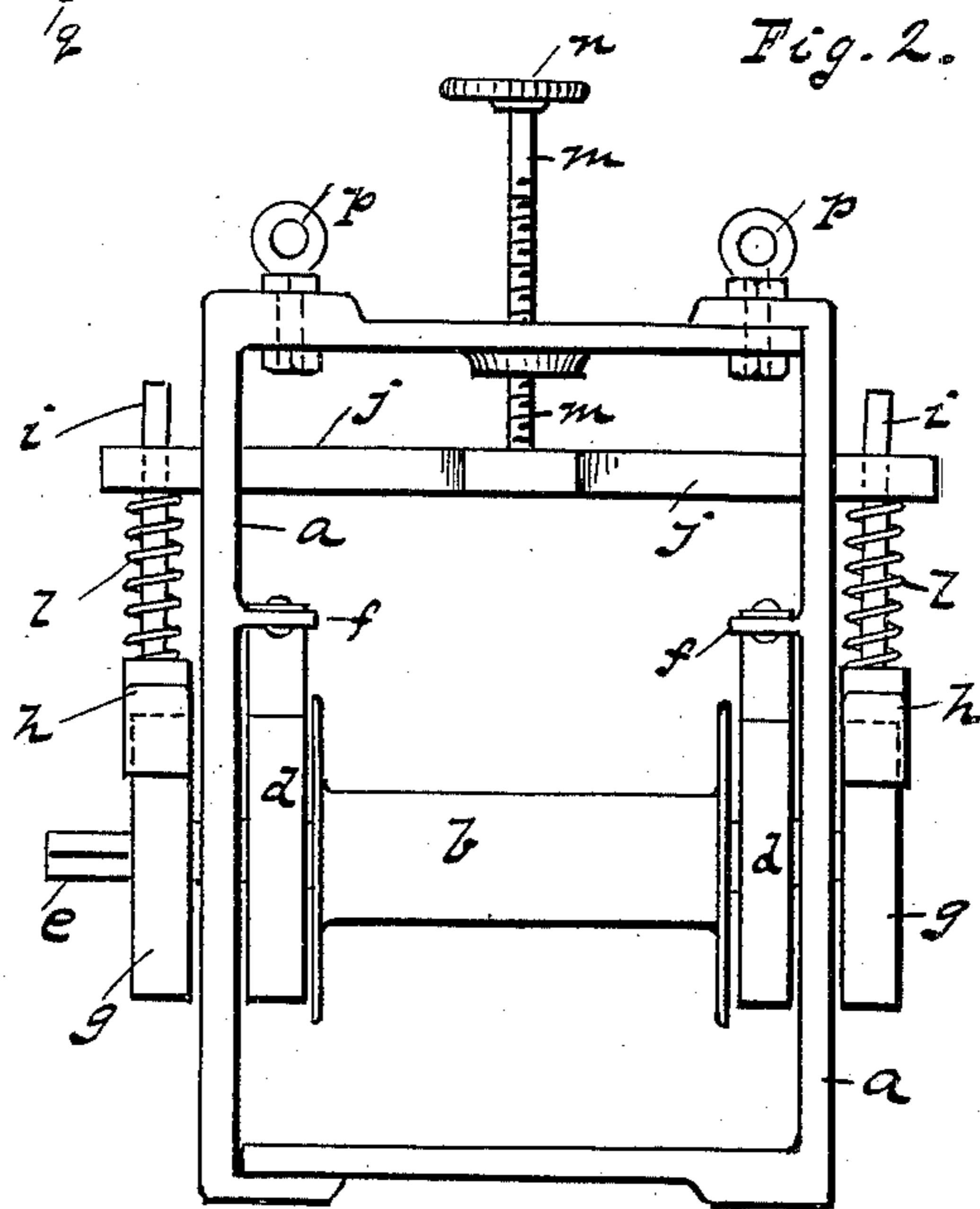
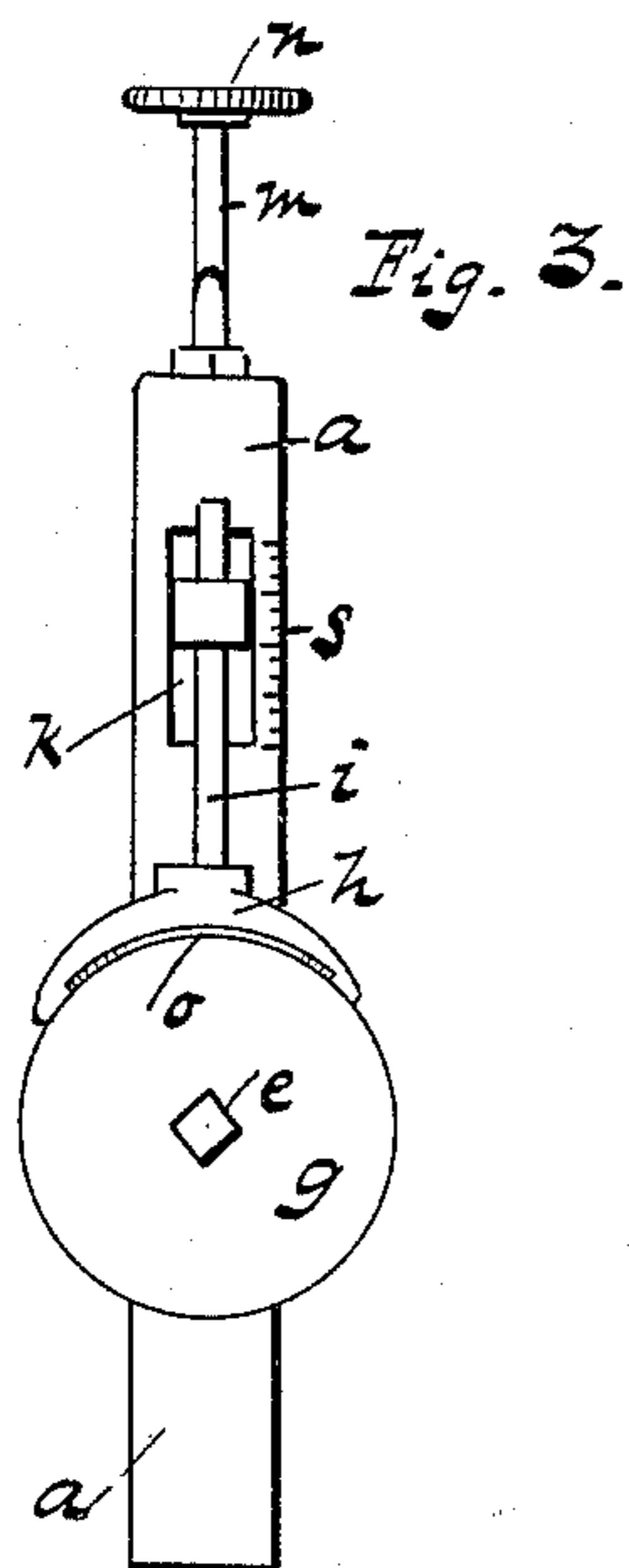
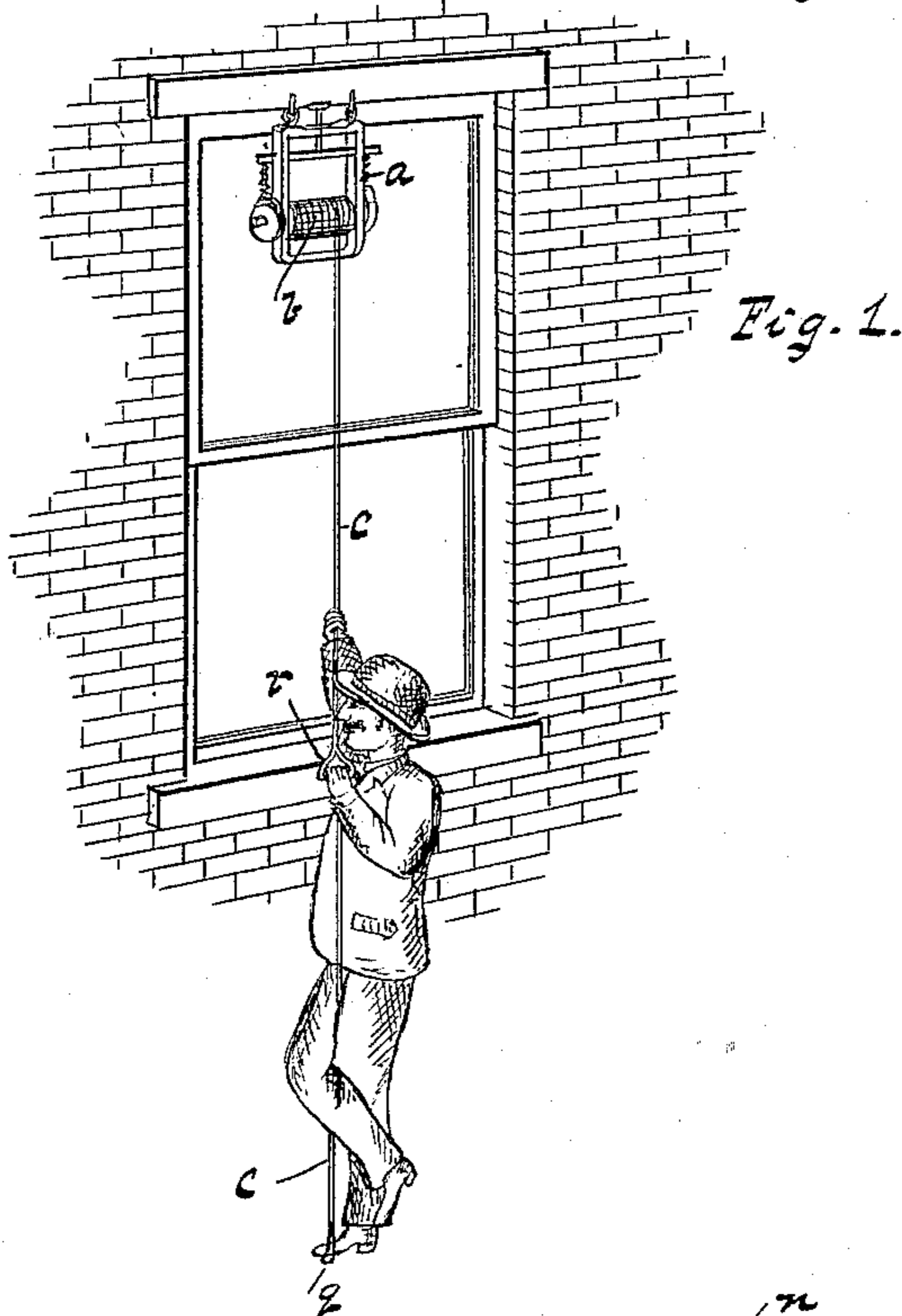
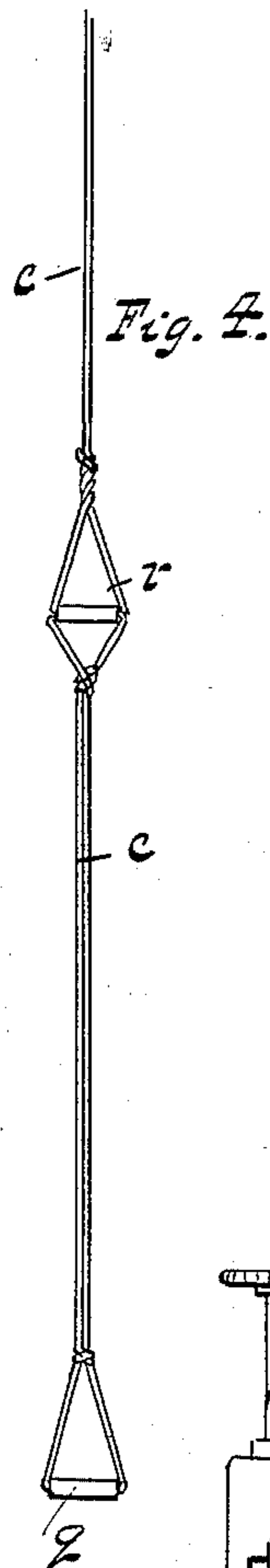
(No Model.)

A. BERNSTEIN & A. GOLDSTEIN.

FIRE ESCAPE.

No. 383,432.

Patented May 29, 1888.



Witnesses:
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UNITED STATES PATENT OFFICE.

ADOLPH BERNSTEIN AND ABRAHAM GOLDSTEIN, OF PITTSBURG, PENNSYLVANIA, ASSIGNORS OF ONE-HALF TO JOSIAH COHEN, OF SAME PLACE.

FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 383,432, dated May 29, 1888.

Application filed September 27, 1887. Serial No. 250,872. (No model.)

To all whom it may concern:

Be it known that we, ADOLPH BERNSTEIN, a citizen of the United States, and ABRAHAM GOLDSTEIN, a subject of the Emperor of Russia, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Fire-Escapes; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

Our invention relates to an improvement in fire-escapes; and it consists in a frame having mounted thereon a drum about which is coiled a pliable wire cord, a brake for regulating and controlling the speed of the drum, an indicator for regulating the pressure of the brakes, and suitable springs for recoiling the wire about the drum when the same has been relieved of its burden, together with certain details of construction and combination of parts, as will be fully set forth hereinafter.

In the accompanying drawings, Figure 1 is a perspective view showing the manner in which our improved apparatus is used. Fig. 2 is a front elevation of an improved fire escape constructed in accordance with our invention. Fig. 3 is a side elevation of the same. Fig. 4 is a side view of one end of the wire cord, showing the manner in which stirrups are formed, which enables the person descending to secure foot and hand hold.

To put our invention into practice we provide a frame, *a*, of suitable size and form of construction. Across this frame *a* is mounted a drum, *b*, capable of containing a suitable length of a light flexible wire cord, *c*. At either end of this drum *b* we place a strong flat coil-spring, *d*, one end of which is secured to the shaft *e*, on which the drum *b* is secured, and the other attached to small brackets *f*, formed on the inner sides of the frame *a*. Securely attached to the projecting ends of the drum-shaft *e* are two brake-wheels, *g*, which operate in conjunction with a brake-shoe, *h*,

placed on the top of each. Secured to these brake-shoes *h* are two vertical posts, *i*, which project through a horizontal bar, *j*, operating vertically in a slot, *k*, formed in the sides of the frame *a*. Between the bar *j* and the brake-shoes *h* are two strong spiral springs, *l*, on the top of which the horizontal bar *j* finds a bearing. A suitable screw, *m*, provided with a hand-wheel, *n*, and operating through the top of the frame *a*, and bearing against the horizontal bar *j*, serves as a means for setting or locking the drum *b* by means of the brake-shoes *h*, acting on the wheels *g*. On the under or contact side of the shoes *h*, I secure a strip of rubber or leather, *o*, which increases the friction on the parts. Secured to the top of the frame *a* are two eyebolts, *p*, which serve as a means for attaching the device to hooks secured above the window or to any other convenient part of the building. One end of the wire cord *c* is secured to the drum *b* and the remaining portion wound about the same. On the other end of the cord *c* is secured a foot-stirrup, *q*, and a short distance from this a similar stirrup, *r*, for the hands.

In operation the apparatus is secured to hooks above the window of the room from which the descent is to be made, and the operator, knowing his weight, ascertains from a scale or indicator, *s*, formed on the side of the frame *a*, when the required pressure is placed on the brakes. One foot is now placed in the lower stirrup, *q*, and a secure hold with the hand on the upper one. The cord *c* slowly unwinds from the drum *b*, thereby lowering the operator to the ground, at which time, when relieved of its weight, the drum will, by the action of the springs *d*, rewind the cord *c* and be ready for use again.

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

In a fire-escape such as described, the combination consisting of the frame *a*, the drum *b*, mounted thereon, the brake-wheels *g*, secured to the same shaft, *e*, as the drum *b*, the horizontal bar *j*, operating the brake-shoes *h*, the spiral springs *l*, and vertical guides *i*, the

screw *m*, for operating the brakes, the wire cord *c*, one end of which is attached to the drum *b* and the other provided with suitable stirrups, *q r*, the eyebolts *p*, for securing the
5 device in position, the springs *d*, for rewinding the cord *c*, and an indicator or scale, *s*, for ascertaining the required pressure to place on

the brakes, substantially as and for the purpose set forth.

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