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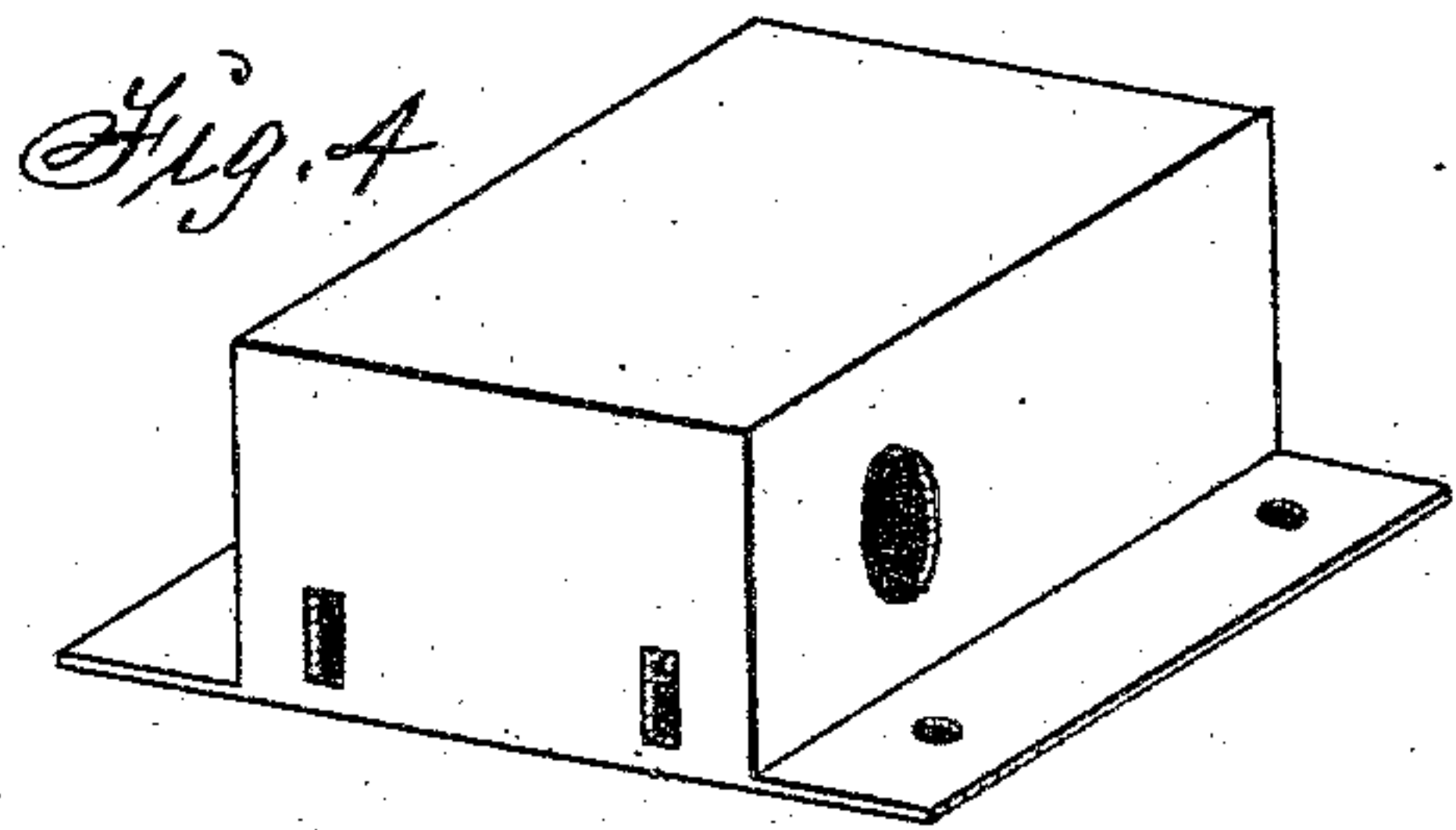
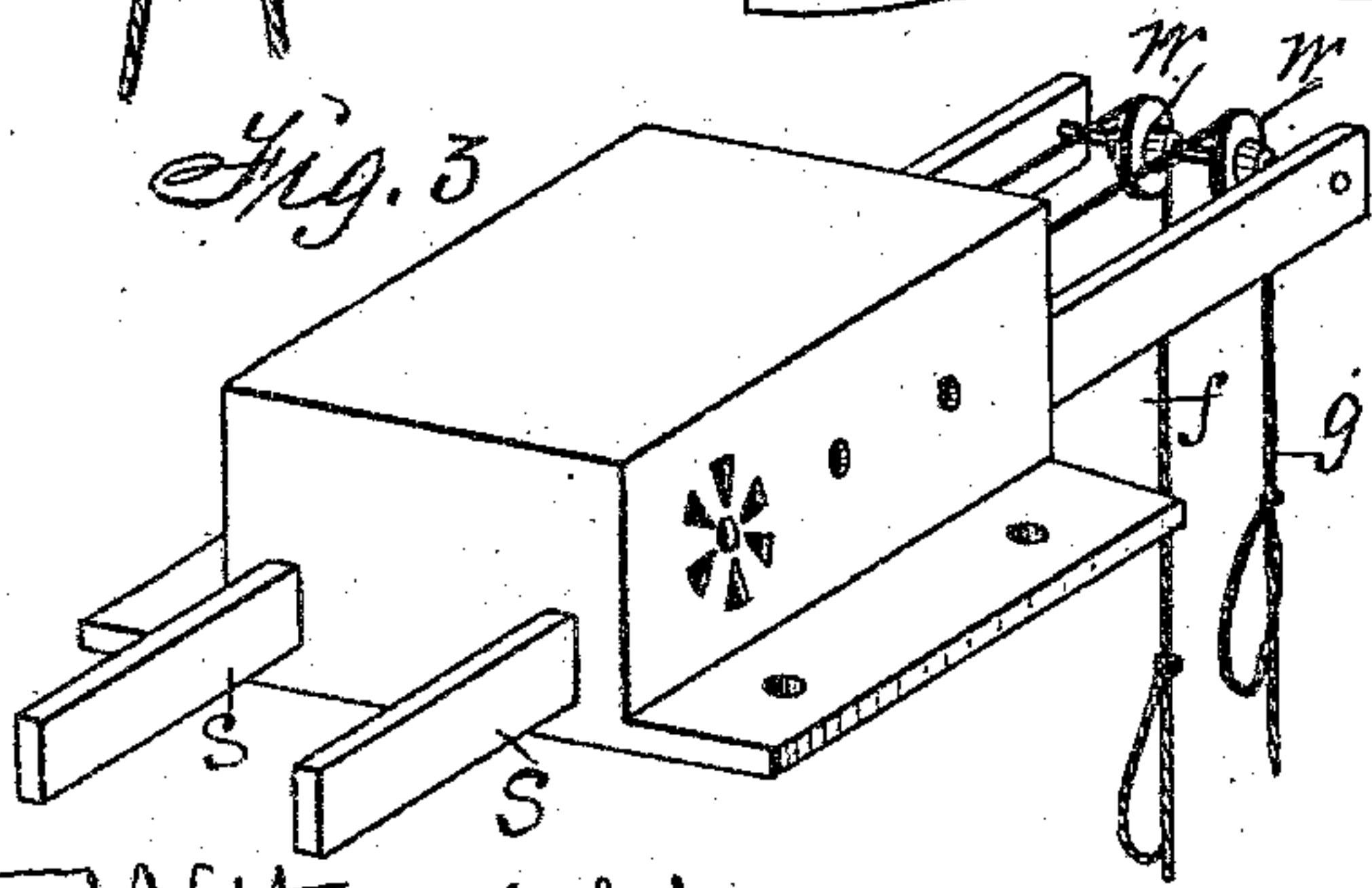
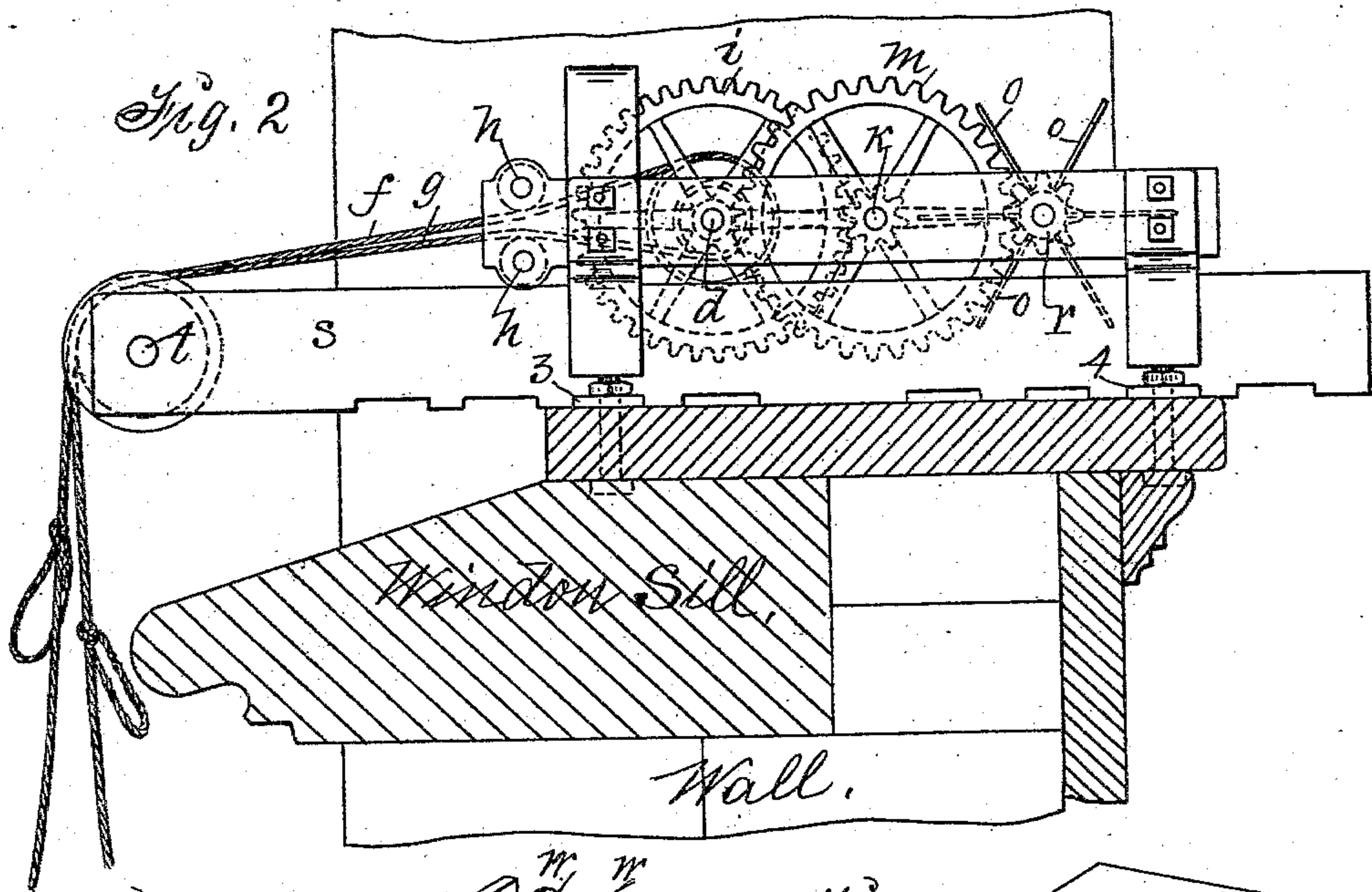
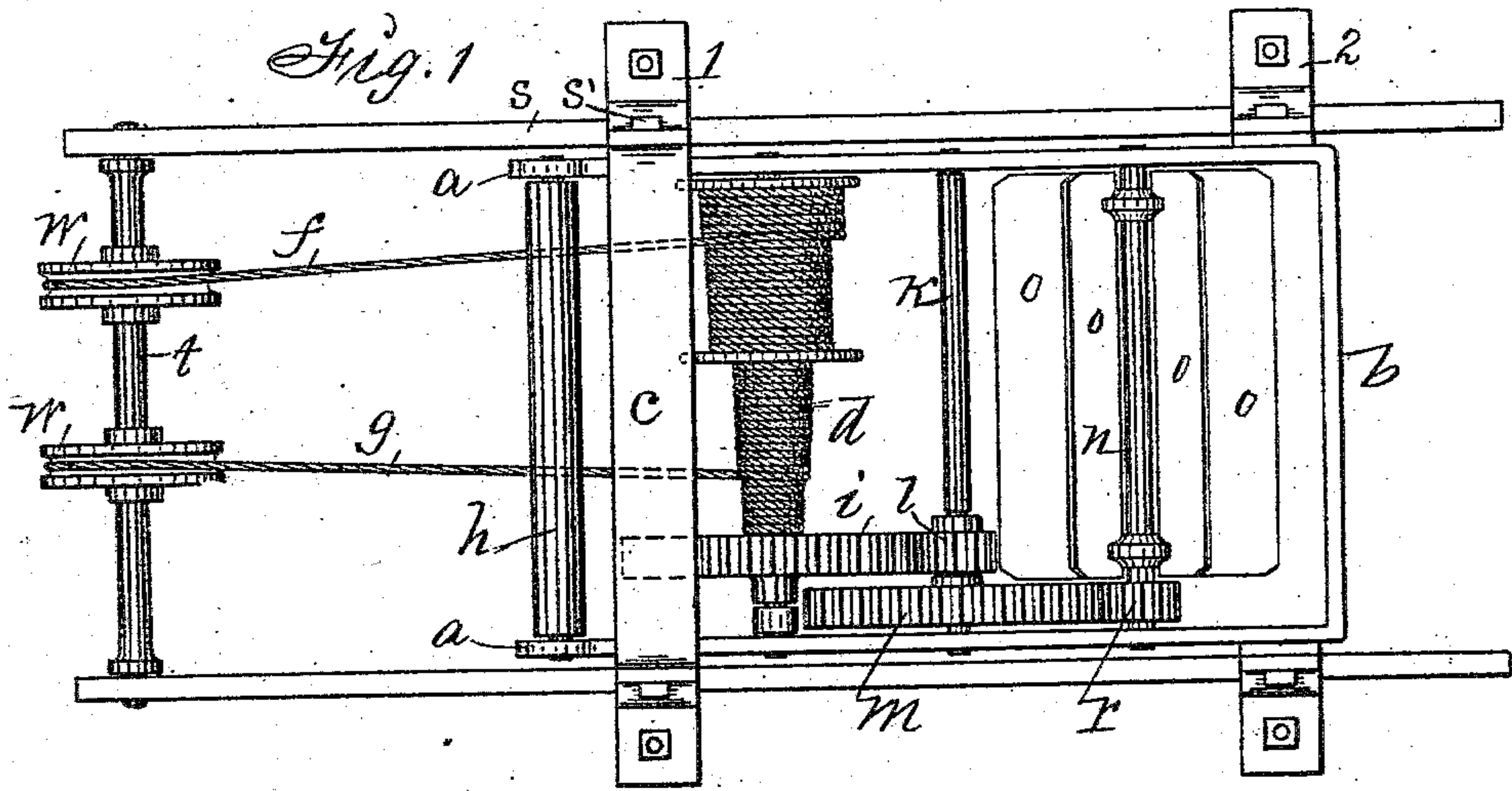
2 Sheets—Sheet 1.

R. B. PARROTT.

FIRE ESCAPE.

No. 295,047.

Patented Mar. 11, 1884.



Witnesses:  
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Inventor:  
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By Thomas G. Orwig, Atty.

(No Model.)

2 Sheets—Sheet 2.

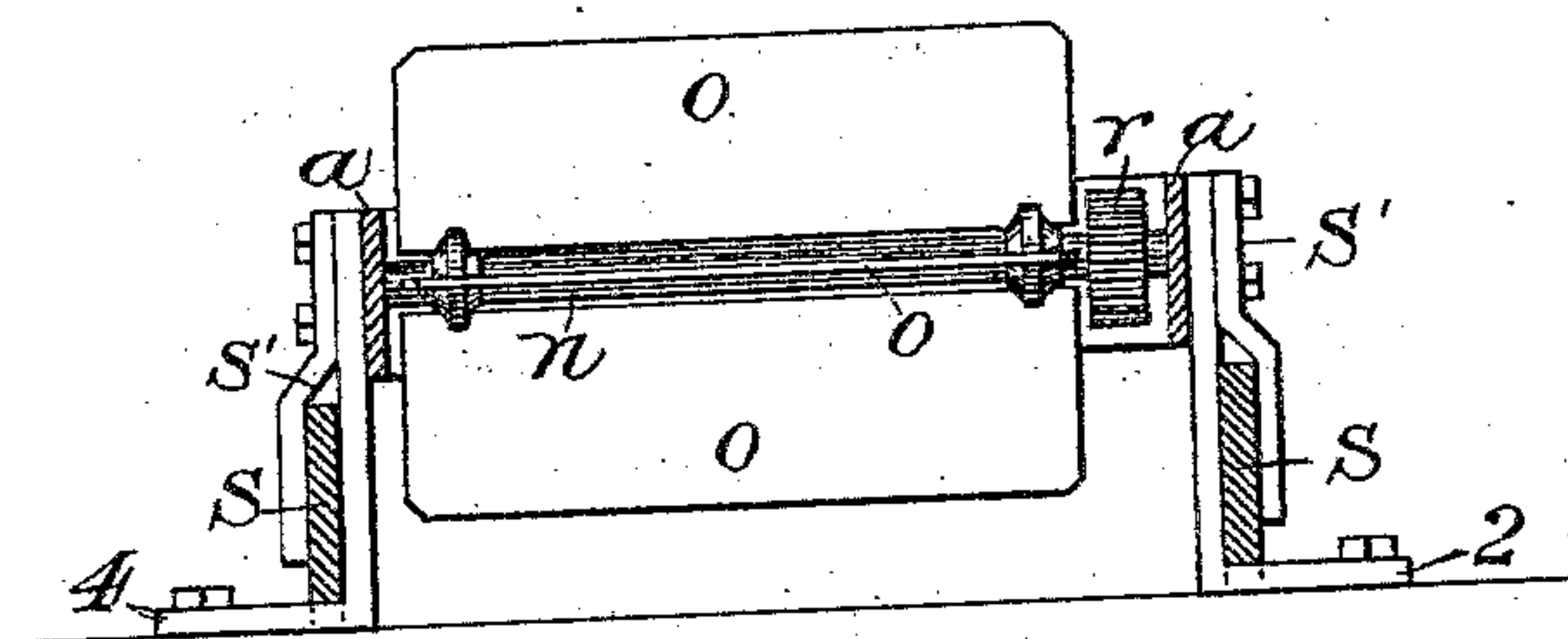
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Fig. 5.



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# UNITED STATES PATENT OFFICE.

ROBERT B. PARROTT, OF INDIANOLA, IOWA.

## FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 295,047, dated March 11, 1884.

Application filed October 15, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, ROBERT B. PARROTT, of Indianola, in the county of Warren and State of Iowa, have invented an improved fire-escape and governing device for lowering persons and heavy objects from elevated positions, of which the following is a specification.

My object is to prevent much of the alarm, danger, and loss of life incident to the burning of buildings, and resulting from the want of permanently fixed and reliable fire-escapes in the buildings. Heretofore a drum, two ropes, a fly-brake, and a train of spur-gears have been mounted in a frame, and the frame hinged to the wall of a building in such a manner that the complete device could be swung from the inside of a window to project outward from the wall to let the ropes descend for the purpose of lowering persons therewith; but to suspend the complete device outside of the building by a hinge-connection with the wall is apparently unsafe, and in reality causes distrust, and is therefore objectionable. To assure confidence and safety, I combine a duplex drum, two ropes or wire cables, gear-wheels, shafts and pinions, a fan-governor, and an adjustable frame carrying sheaves, with a skeleton frame or case that is adapted to be permanently fixed in a window or upon a floor or roof, as hereinafter fully set forth, in such a manner that the frame carrying sheaves can be readily projected beyond the outside of the wall, window, or cornice of a building, to lower persons on the ropes, while the main frame and operative mechanism remain securely fixed within the wall of the building.

Figure 1 of my accompanying drawings is a top view of my machinery combined with a skeleton frame. Fig. 2 is a side view, showing it fixed in a window, and in position as required for practical use. Fig. 3 is a perspective view, showing a metal box substituted for the skeleton frame. Fig. 4 is a perspective view of a sheet-metal case adapted for covering and concealing the skeleton frame and machinery therein. Fig. 5 is a transverse section of Fig. 2.

Jointly considered, these figures clearly illustrate the construction, application, and operation of my complete invention.

*a a* are the side pieces of a skeleton frame, that may vary in size as desired.

*b* is a cross-piece that connects the side pieces at their rear ends.

1 2 3 4 are feet fixed to the side pieces, *a*, to retain them elevated.

*c* is a cross-piece fixed to the front portions of the side pieces, *a*. It is bowed upward to form an arch, under which ropes can pass forward from the drum mounted in the frame. This cross-piece *c* is preferably formed integral with the front feet by simply bending a bar of iron into proper shape.

*d* is a duplex drum that has its bearings formed in or fixed to the parallel side pieces, *a*. *f* and *g* are ropes or wire cables fixed to the drum *d* in such a manner that when one is unwound the other will be wound upon the drum.

*h h* are parallel rollers mounted in bearings formed in or attached to the front ends of the side pieces, *a*, in such a manner that the ropes *f* and *g* will pass through between the rollers, to be protected and directed thereby relative to openings in a case or cover placed over the skeleton frame and machinery.

*i* is a gear-wheel fixed on the shaft of the drum *d*.

*k* is a shaft mounted in bearings in the side pieces, *a*, and in parallel position with the drum-shaft.

*l* is a pinion fixed to the shaft *k*, to engage the gear-wheel *i*.

*m* is a gear-wheel, corresponding in size with the wheel *i*, fixed to the shaft *k*.

*n* is a shaft that has a series of radial wings, *o*, fixed thereto, to produce a fan-governor. It is journaled to the side pieces, *a*, and in parallel position with the shaft *k*.

*r* is a pinion fixed to the fan-shaft *n*, to engage the gear-wheel *m* on the shaft *k*.

*s s* are rack-bars adjustably connected with the skeleton frame by means of loops or bearings *s'*, fixed against the outside and bottom portions of the feet 1 2 3 4. The notches in the under edges of the straight bars *s* engage the horizontal portions of the feet and prevent the bars from sliding until lifted sufficiently in their bearings to disengage the racks from the feet.

*t* is a shaft journaled to the front ends of the bars *s*.

*w w* are sheaves placed upon the shaft *t* in such a manner that they can revolve independ-



ently to direct the ropes *f* and *g* as they move in opposite directions.

In the practical use of my invention thus constructed, it can be securely fixed in a window or on the roof of a building in a level or inclined position by driving spikes through perforations in the feet of the skeleton frame, or the perforated flanges when a metal case is substituted for the skeleton frame. The adjustable frame, composed of the parallel racks *s* and a shaft, *t*, can then be moved out sufficiently to carry the ropes clear from a cornice or other projections on the outside of a wall, so that the ropes can hang suspended and move up and down without being obstructed.

By providing the ropes with a series of loops, as indicated in Fig. 2, adapted for hand or foot holds, a person can readily step into one of the loops with one foot and seize another loop with his hand, and thus become securely attached to the rope, as required, to descend therewith. The rope cannot move faster than it is permitted to unwind from the drum, and it cannot unwind faster than the drum is allowed to revolve by the friction of the gearing and the friction of the fan-governor with the air that is admitted through openings in the sides of the case and at the ends of the governor-shaft, and openings at its rear, through which to pass the racks *s* and to exhaust the air in rear of the fan.

Cages or baskets may be fixed to the ends of the ropes for carrying persons and articles down safely.

Two ropes can be advantageously operated jointly by means of the duplex drum; but one rope may be removed and the other used singly whenever desired.

From the detailed description of the form and function of each element in the complete device, the unitary actions of all the parts in

governing the descent of persons and objects from the upper portions of burning buildings, or from any elevated position to which the device may be fixed, will be readily understood by mechanics, and its adaptation as a safety attachment for elevators in buildings will also be apparent.

By connecting a brake device of common form with the shaft of the drum, and having a rope depending from the brake, the descent of a person or weight of any kind may be readily arrested at any point of elevation by simply pulling on the brake-rope.

I claim as my invention—

1. A fire-escape and governing device for lowering persons and objects from elevated positions, composed of the following elements, to wit: a frame or box, a duplex drum, two ropes or wire cables, a fan-governor connected with the drum by gearing, and an adjustable frame carrying sheaves for directing the ropes relative to objects projecting from a wall, substantially as set forth.

2. The frame *a b c*, having feet 1 2 3 4, the drum *d*, the ropes *f* and *g*, the rollers *h h*, the gearing *i k l m r*, the fan-governor *n o*, and the adjustable frame *s s t*, carrying independent sheaves *w w*, arranged and combined substantially as shown and described, to operate in the manner set forth, for the purposes specified.

3. The combination of a box or case having openings at its side to admit air, and openings for the passage of the racks and the exhaustion of air at its rear end, with the drum *d*, gearing *i k l m r*, the fan-governor *n o*, and the frame *s s t*, carrying sheaves *w*, substantially as and for the purposes set forth.

ROBERT B. PARROTT.

Witnesses:

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