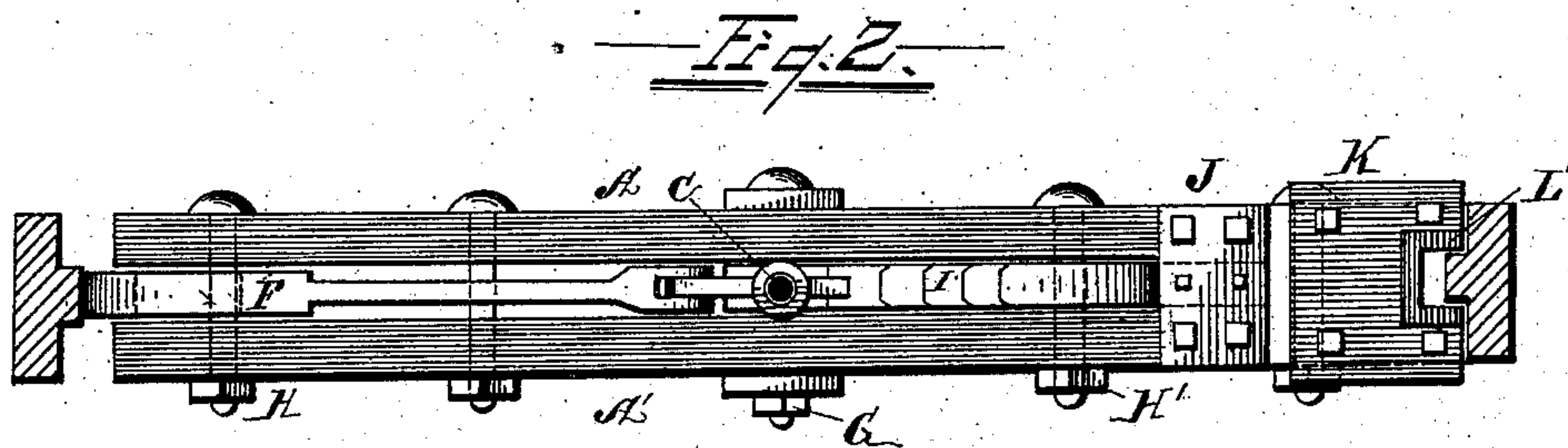
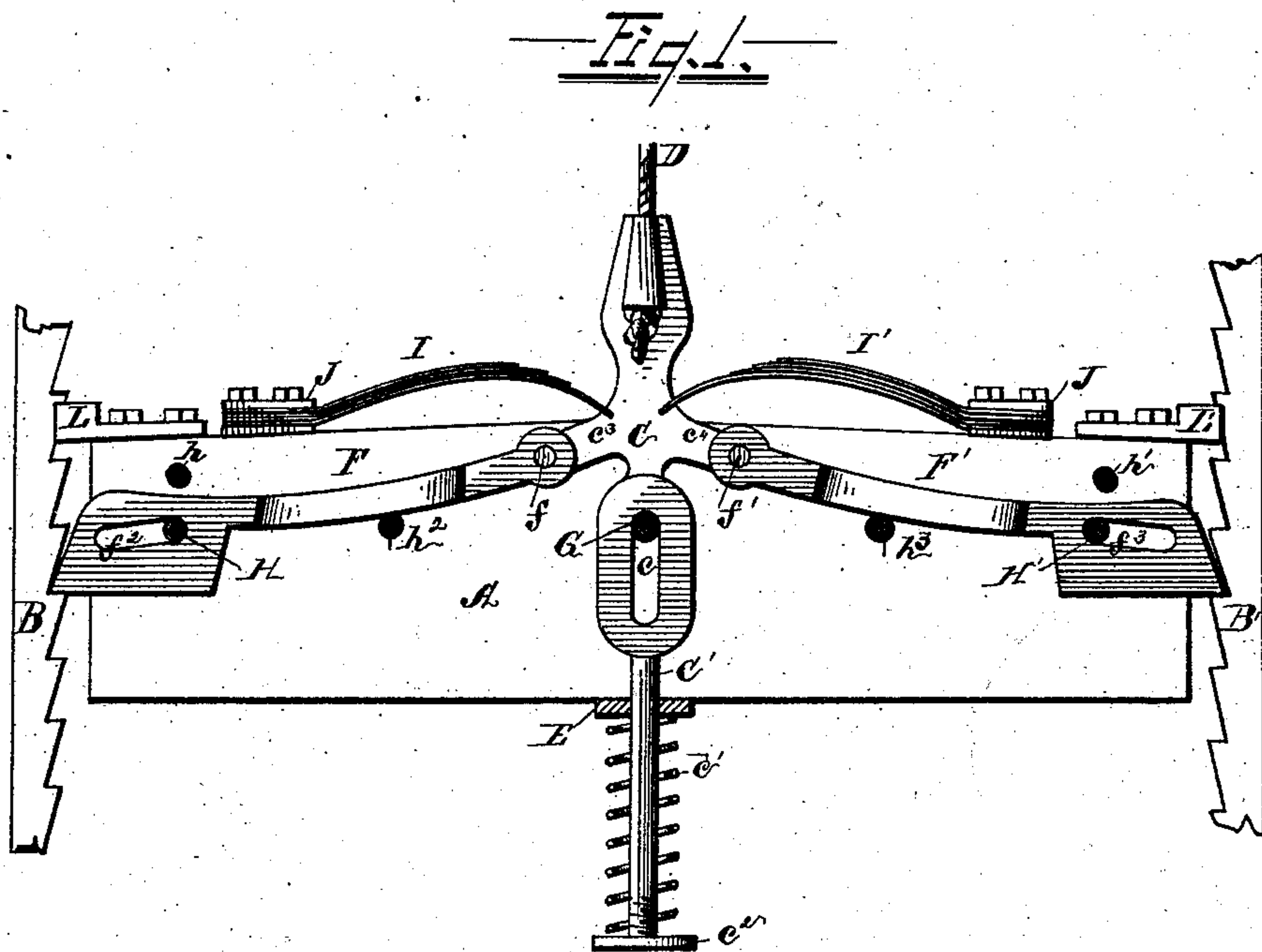


(No Model.)

F. SCOONEAS.
ELEVATOR STOP MECHANISM.

No. 292,686.

Patented Jan. 29, 1884.



WITNESSES

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UNITED STATES PATENT OFFICE.

FRANK SCOONEAS, OF DETROIT, MICHIGAN.

ELEVATOR STOP MECHANISM.

SPECIFICATION forming part of Letters Patent No. 292,686, dated January 29, 1884.

Application filed December 5, 1883. (No model.)

To all whom it may concern:

Be it known that I, FRANK SCOONEAS, of Detroit, county of Wayne, State of Michigan, have invented a new and useful Improvement in Elevator Stop Mechanism; and I declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form a part of this specification.

My invention consists of the combination of devices and appliances hereinafter specified, and more particularly pointed out in the claims.

In the drawings, Figure 1 is a side elevation of a device embodying my invention, with parts removed. Fig. 2 is a plan view of a portion of a device embodying my invention.

My invention relates to safety appliances for elevators, and has particularly for its object the construction of an improved stop mechanism, whereby, should the hoisting-cable be suddenly broken, the elevator would be quickly and automatically prevented from falling.

As shown in the accompanying drawings, A and A' are cross-beams or timbers forming a part of the elevator-frame.

B and B' represent suitable rack-bars located upon the sides of the elevator-well.

C is a slide, with which the hoisting-cable D is connected in any proper manner. This slide is constructed with an elongated slot, *c*, and preferably with a stem, C', extending downward through a suitable bearing, E, secured upon the cross-beams, said stem being provided with a spring, *c'*, held in place by an adjusting-nut, *c''*. I prefer, also, to construct said slide with lateral arms *c''* and *c'''*, to which are hinged or pivoted levers F and F', as shown at *f* and *f'*. The outer ends of these levers are also constructed with elongated slots *f''* and *f'''*, said outer ends being suitably shaped to engage with the rack-bars.

G is a suitable bolt inserted within the slot *c* of the slide, and upon which said slide may be operated vertically. This bolt may be extended through the timbers to aid in uniting the cross-beams.

H and H' are bolts inserted in the orifices of the levers F and F'. They may also be ex-

tended and aid in uniting the timbers. These bolts serve to guide the operation of the levers. In order to relieve the levers of undue strain, which might otherwise tend to bend them, I prefer to locate suitable stop-bolts above and below the levers—as, for instance, the stop-bolts *h* and *h'*, located above said levers at their outer ends, and also the stop-bolts *h''* and *h'''*, located below said levers intermediate of their ends. It will be seen that these stop-bolts will effectually prevent an undue bending of said levers.

I and I' represent springs of suitable construction, secured at one end in any proper manner. I prefer to provide a cross-plate, J, upon which the ends of these springs may be secured, though I do not limit myself to securing them in this manner. The free ends of said springs are located so as to have their bearings upon the slide C. The cross-braces may be provided with suitable tie-plates, K, if desired.

L and L' are the usual guides, located about the rack-bars.

The operation of the device is as follows: The weight of the elevator being suspended by the cable D, connected with the slide C, it is evident that when the elevator is thus supported on the cable the slide C will be forced upward, and the levers will be disengaged from the rack-bars. Now, should the cable break, it will be seen that the springs I and I', together with the spring *c'*, will force the slide downward into the position shown in Fig. 1, upon which the levers will be forced outward along the bolts at their outer ends and into engagement with the rack-bars. This will occur so promptly upon any breakage of the cable that the elevator would ordinarily be stopped almost instantly, or at least it would descend not more than the length of a single notch of the rack-bars.

What I claim is—

1. The combination, with an elevator, of a slide, C, provided with a longitudinal orifice, and a stem, C', extending through a suitable bearing, and in connection therewith lever-arms having a hinged connection with said slide, said levers provided toward their free extremities with orifices *f''* and *f'''*, substantially as described.

2. In an elevator, a slide, C, provided with

a longitudinal orifice and a depending stem, and in combination therewith levers having a hinged connection with said slide, and provided with suitable guiding mechanism at the 5 opposite ends, and in addition thereto suitable springs bearing on said guide, substantially as described.

3. In an elevator, the slide C, provided with a longitudinal orifice and a depending stem, 10 levers having a hinged connection with said slide, said levers provided with suitable guiding mechanism, springs bearing upon said slide, suitable stops adapted to prevent the bending of the levers, and in combination 15 therewith rack-bars adjacent to the outer ends of said levers, the construction being such that the levers may be engaged with the rack-bars and disengaged therefrom by opposite movements of the slide, substantially as de- 20 scribed.

4. The combination, with suitable cross- 25 beams of an elevator-frame, of a slide, C, adapted to be engaged with a hoisting-cable, and provided with a longitudinal orifice, through which said slide is mounted upon a suitable bearing, levers having a hinged con- 30 nection with said slide and extending in opposite directions therefrom, mechanism for guiding the motion of said levers, springs bearing upon said slide, the construction being such that the outer ends of said levers may be forced in and out by opposite movements of the slide, substantially as described.

In testimony whereof I sign this specification in the presence of two witnesses.

FRANK SCOONEAS.

Witnesses:

M. B. O'DOHERTY,
N. S. WRIGHT.