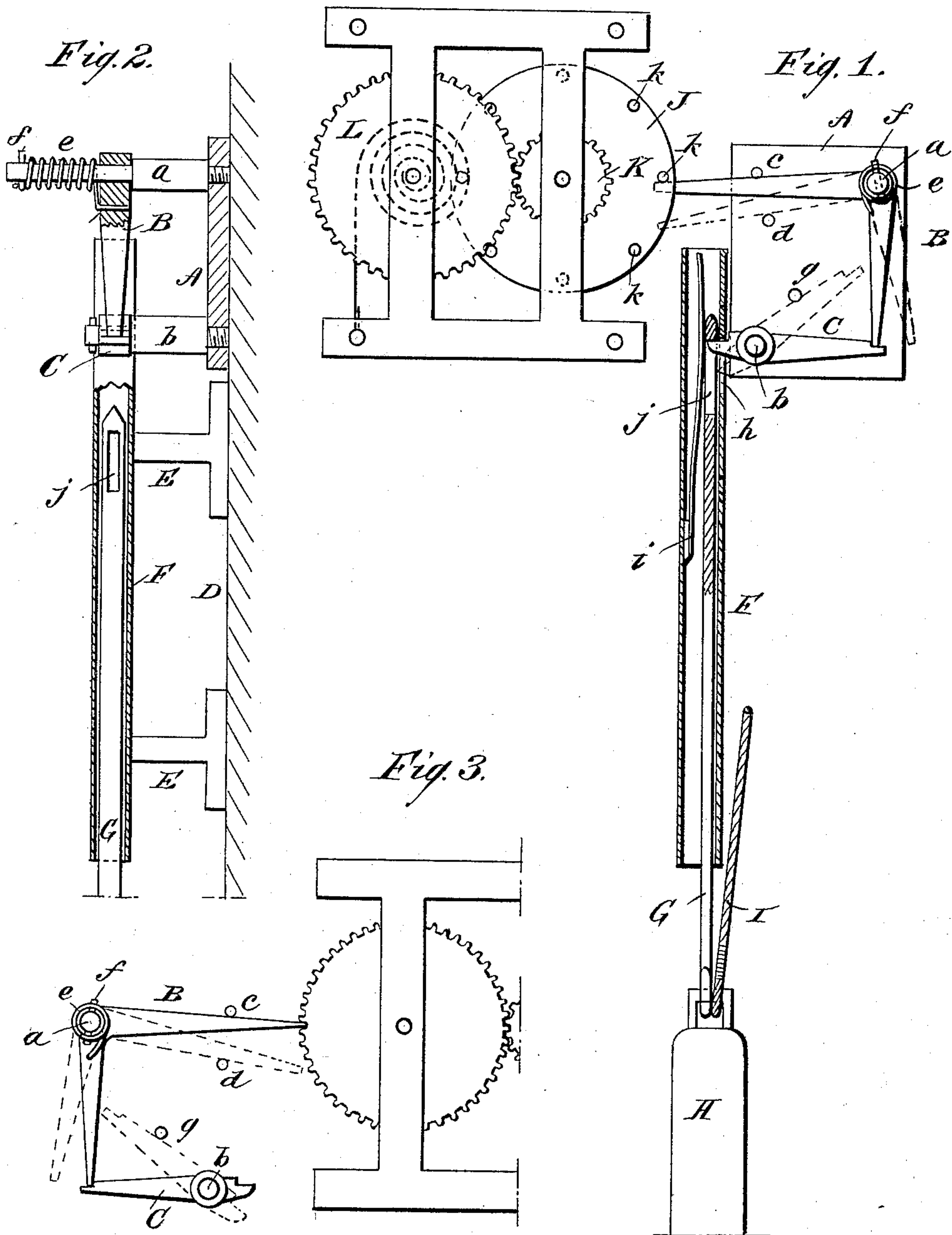


(No Model.)

E. B. BIRGE.
WEIGHT-RELEASING DEVICE.

No. 463.026.

Patented Nov. 10, 1891.



WITNESSES:

Donn Twitchell
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INVENTOR:

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UNITED STATES PATENT OFFICE.

ELIAS B. BIRGE, OF ST. PAUL, MINNESOTA.

WEIGHT-RELEASING DEVICE.

SPECIFICATION forming part of Letters Patent No. 463,026, dated November 10, 1891.

Application filed February 16, 1891. Serial No. 381,573. (No model.)

To all whom it may concern:

Be it known that I, ELIAS B. BIRGE, of St. Paul, in the county of Ramsey and State of Minnesota, have invented a new and Improved Weight-Releasing Device, of which the following is a specification, reference being had to the annexed drawings, forming a part thereof, in which—

Figure 1 is a side elevation, partly in section, of my improved weight-releasing device. Fig. 2 is an elevation, partly in section, taken at right angles to the plane of Fig. 1; and Fig. 3 is a side elevation of a modified form.

Similar letters of reference indicate corresponding parts in all the views.

The invention is an improvement in weight-releasing mechanism for opening or closing doors of fire-engine houses, &c.

In the plate A are inserted the studs *a b*. On the stud *a* is placed the right-angled lever B, the longer arm of which projects between the stop-pins *c d*, projecting from the plate A. Upon the stud *a* is placed a spiral spring *e*, one end of which is bent at a right angle and inserted in the lever B, the other end being hooked around a pin *f*, passing through the outer end of the stud *a*. The said spring *e* tends to throw the longer arm of the lever B against the stop-pin *c*. On the stud *b* is placed the catch-lever C, the longer arm of which is adapted to be engaged by the shorter arm of the right-angled lever B. The upward movement of the longer arm of the lever C is limited by the stop-pin *g*.

The base-plate A is attached to a fixed support D, and to the same support are secured arms E, to which is attached a pipe F. In one side of the pipe F is an aperture *h*, into which projects the shorter arm of the catch-lever C. In the pipe F, opposite the aperture *h*, is secured a spring *i*, which tends to press the bar G against the apertured side of the pipe F. The lower end of the bar G is secured to a weight H and the upper end of the said bar is furnished with a mortise *j*, adapted to receive the shorter arm of the catch-lever C,

and to the weight H, is attached a rope I, which is in practice suitably connected with a sliding bolt or other fastening for the door of an engine-house. It is understood that such door will be provided with a spring or other means for throwing it open automatically when released from the fastening.

The weight, being in the position shown in Fig. 1, is supported by the catch-lever C, and when the catch-lever C is released by tilting the lever B, as indicated by dotted lines, the weight tilts the lever C, the bar G is released, and the weight allowed to fall. To replace the weight it is only necessary to force the bar G upwardly in the pipe F, thereby engaging the shorter arm of the lever C, returning it to its normal position, at the same time causing the said lever to press the shorter arm of the lever B backward so as to bring it again into engagement with the longer arm of the lever C, as shown. The spring *i* allows the mortised end of the bar G to pass the shorter arm of the catch-lever and engage it, thereby holding the weight H in an elevated position.

In Fig. 3 the angled lever B is shown in engagement with a spur-wheel instead of a pin-wheel. In other respects the device is the same as that already described.

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

The combination, with the weight H and pull-cord I, of the slotted bar G, attached to said pull-cord, the open-ended and laterally-apertured pipe F, the spring *i*, secured in the latter, the pivoted horizontal catch-lever C, projecting into the pipe and engaging said bar, the elbow-lever B, the stop *c* for the latter, and a trip-wheel adapted to actuate such lever mechanism for releasing the weight, as shown and described.

ELIAS B. BIRGE.

Witnesses:

PETER SIMONS,
CHAS. H. MAUSHIP.