(Model.)

A. A. TREAT.

Gate Latch.

No. 234,092. Patented Nov. 2, 1880.

Fig. 1.

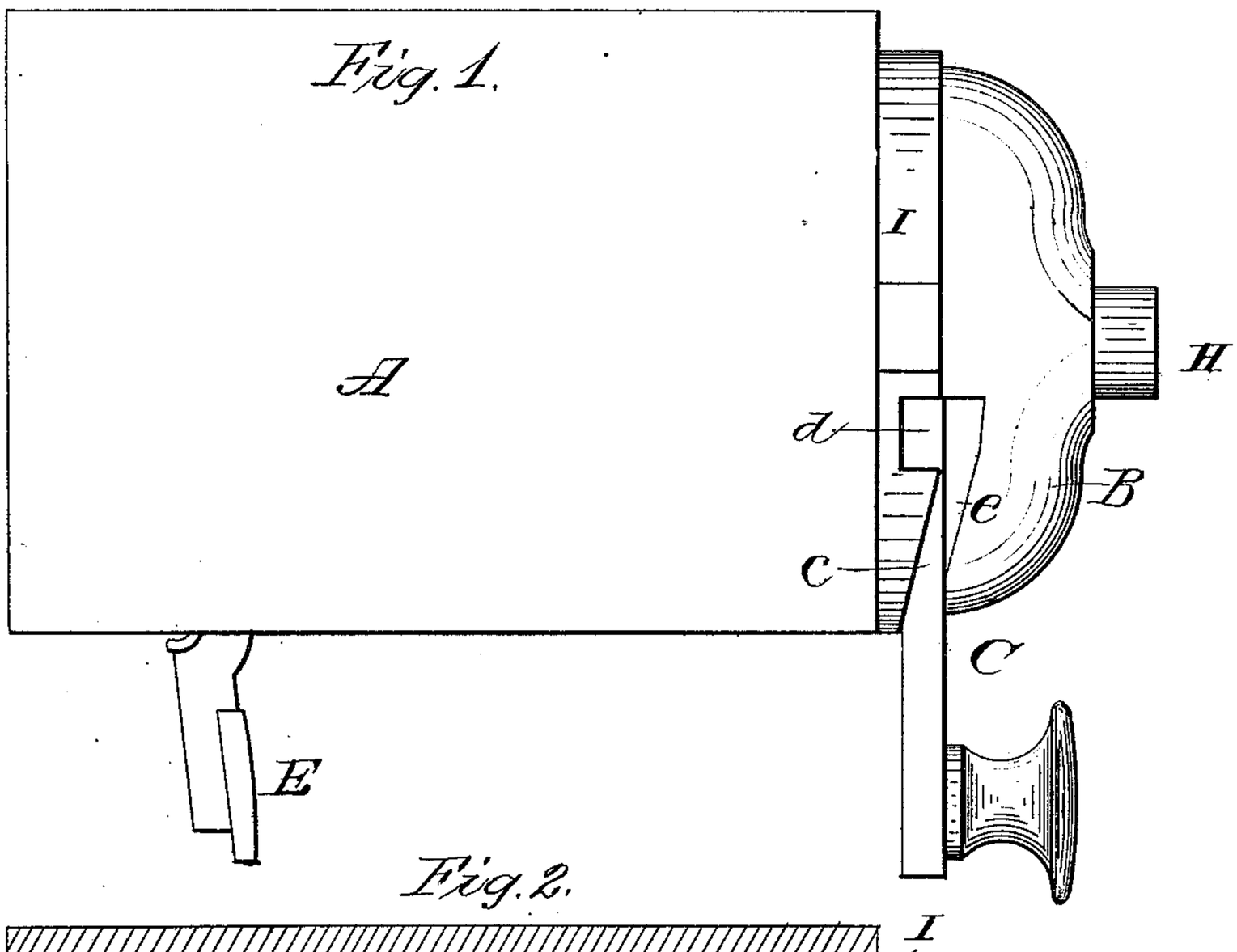

Fig. 2.

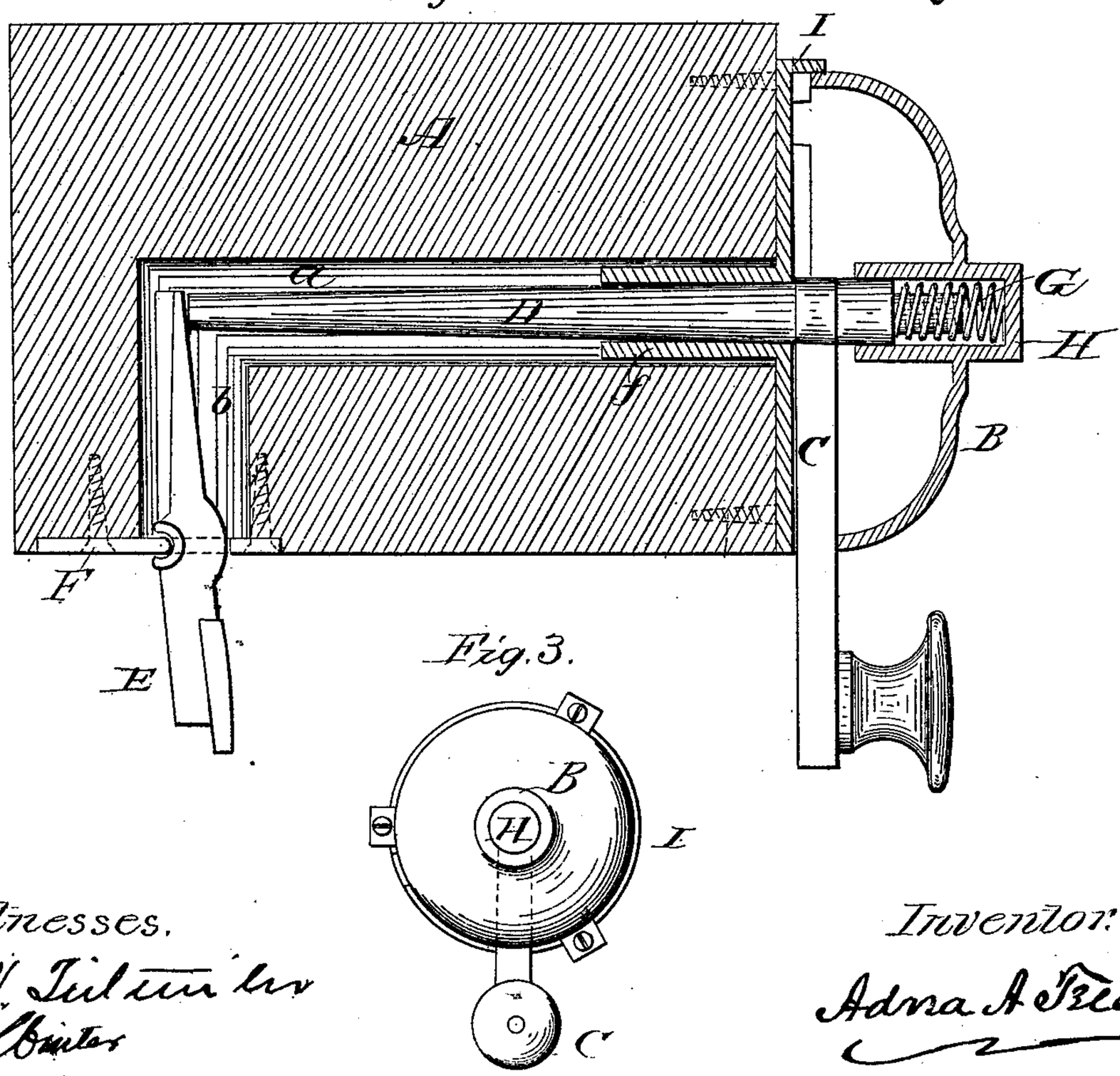

Fig. 3.

Witnesses.
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UNITED STATES PATENT OFFICE.

ADNA A. TREAT, OF INDIANAPOLIS, INDIANA.

GATE-LATCH.

SPECIFICATION forming part of Letters Patent No. 234,092, dated November 2, 1880.

Application filed September 14, 1880. (Model.)

To all whom it may concern:

Be it known that I, ADNA A. TREAT, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented a new and useful Gate or Door Latch, of which the following is a specification.

My invention relates to improvements in gate or door latches in which the latch is operated by the closing of the gate or door. A lever which is tripped by the gate or door in closing releases the latch, which, falling by its own gravity, receives the gate or door.

It also relates to a detent for supporting the latch in an elevated position until released by the lever, and in certain novel details of construction and operation hereinafter set forth.

Figure 1 is a top view of a post or frame with the latch attached. Fig. 2 is a horizontal sectional view. Fig. 3 is an end view.

Similar letters refer to similar parts throughout the several views.

A indicates the post or frame, in which are formed two communicating holes, *a* and *b*, in adjacent faces of the post or frame, at right angles to each other. On one side of the post, over the hole *a*, is secured the flanged plate I. The flange of the plate is cut away at *c* to form an incline and at *d* to form a notch or detent. The plate I has also formed on it at its center a tube, *f*, which fits into the hole *a* in the post or frame. To the plate I, inside of the flange, is secured a dome-shape cap, B. A part of the edge of the cap is also cut away at *e*, to form an incline. The inclines *c* and *e* pass about a quarter-way around the plate and cap, forming an inclined passage or slot for the latch to move in. The cap B is provided with an opening on the inside of the cap.

C is the latch, which, passing through the inclined passage or slot formed by the plate and cap, is attached to its bearing-spindle D.

The outer end of the bearing or spindle D fits into the hollow boss of the cap, and the other end passes through the tube *f* into the hole *a* of the post or frame. In the hollow boss of the cap is placed a spiral spring, which presses against the end of the bearing-spindle D.

The lever E is pivoted, as shown, in the plate F, which covers the hole *b* in the post. The long arm of the lever is inserted and presses against the inner end or knob of the spindle. The short arm of the lever projects a short distance beyond the face of the post.

The operation of the device is as follows: In raising the latch from a horizontal to a vertical position the latch and spindle are forced outward by the inclined slot, slightly compressing the spring. When the latch arrives opposite the notch or dent it is forced into said notch or dent by the spring. The gate, in closing, strikes against the short arm of the lever E, thus forcing the spindle outward against the spring, which removes the latch from the notch or detent into the inclined slot. The latch, falling by its own gravity, passes in front of the gate. The gate is thus securely held between the lever E and latch C, unaffected by the usual sag and inclination.

It is obvious that a spring might be used to force the latch down in front of the gate or door.

What I claim, and desire to secure by Letters Patent, is—

1. In gate and door latches, the combination of a swinging and horizontally-moving latch, a retaining device, and a pivoted lever for releasing said latch and permitting it to fall by gravity to fasten the gate or door when said lever is tripped by the gate or door in closing, with means for connecting the latch and lever, substantially as described and shown.

2. In gate and door latches, the combination of a swinging and horizontally-moving latch, a detent for holding the same in its retracted position, and a pivoted lever for releasing said latch and permitting it to fall by gravity when said lever is tripped, with means for connecting the latch and lever, substantially as described and shown.

3. The combination, in gate and door latches, of a swinging and horizontally-moving gravity-latch, a detent for holding the same in its

unlatched position, a spring for forcing said latch into its detent and retaining it there, and a pivoted trip-lever to release said latch, with means for connecting the latch and lever, substantially as described and shown.

4. In a gate and door latch, the combination of the latch, the cap-plate having the detent and the bearing, and provided with the slot and the hollow boss, the spring, the trip-lever, and its pivot-plate, provided with the bearing or fulcrum for the lever, substantially as described, and for the purpose set forth.

ADNA A. TREAT.

Witnesses:
H. W. TUTWILER,
F. WINTER.