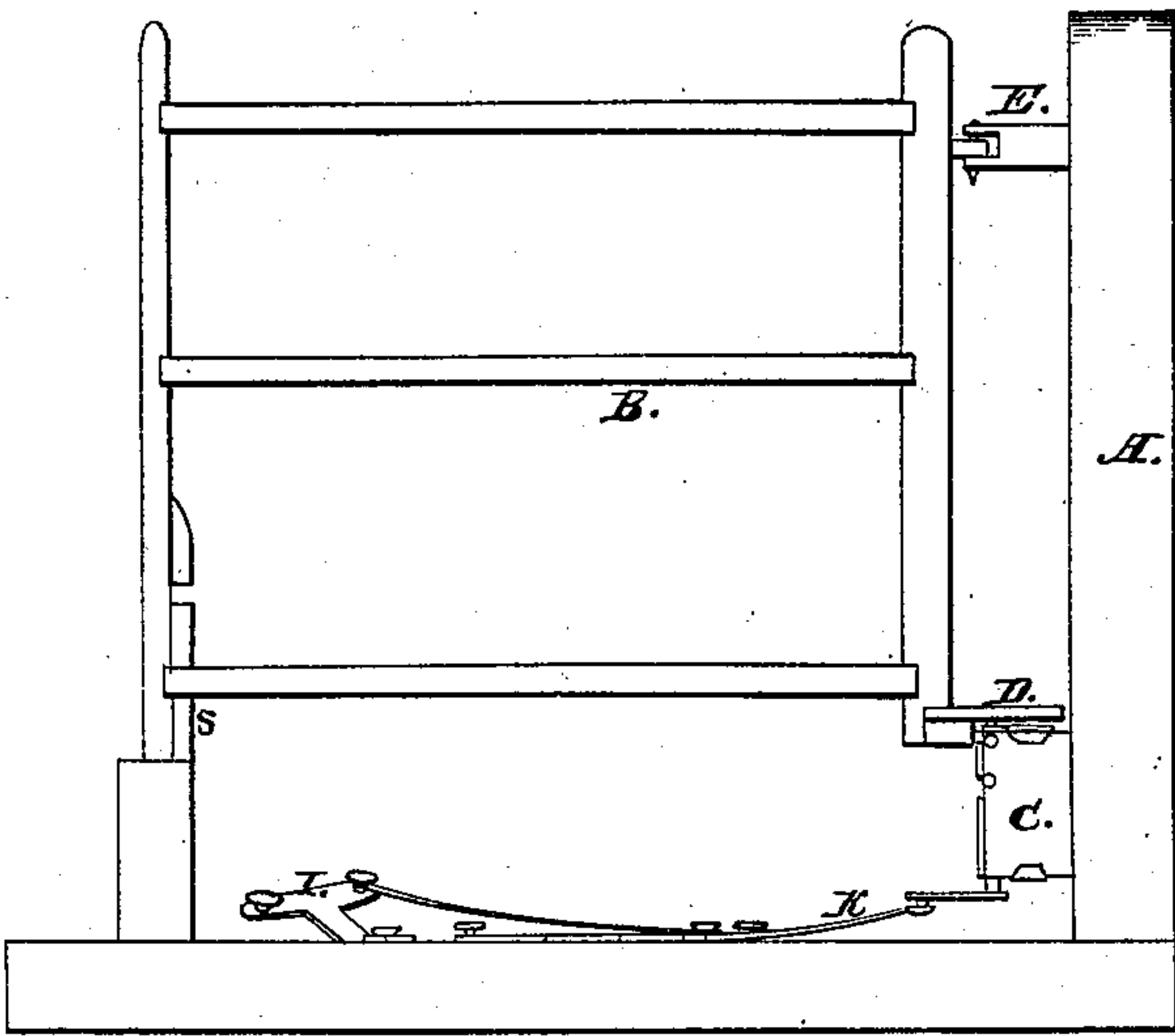


*Automatic Gate,*

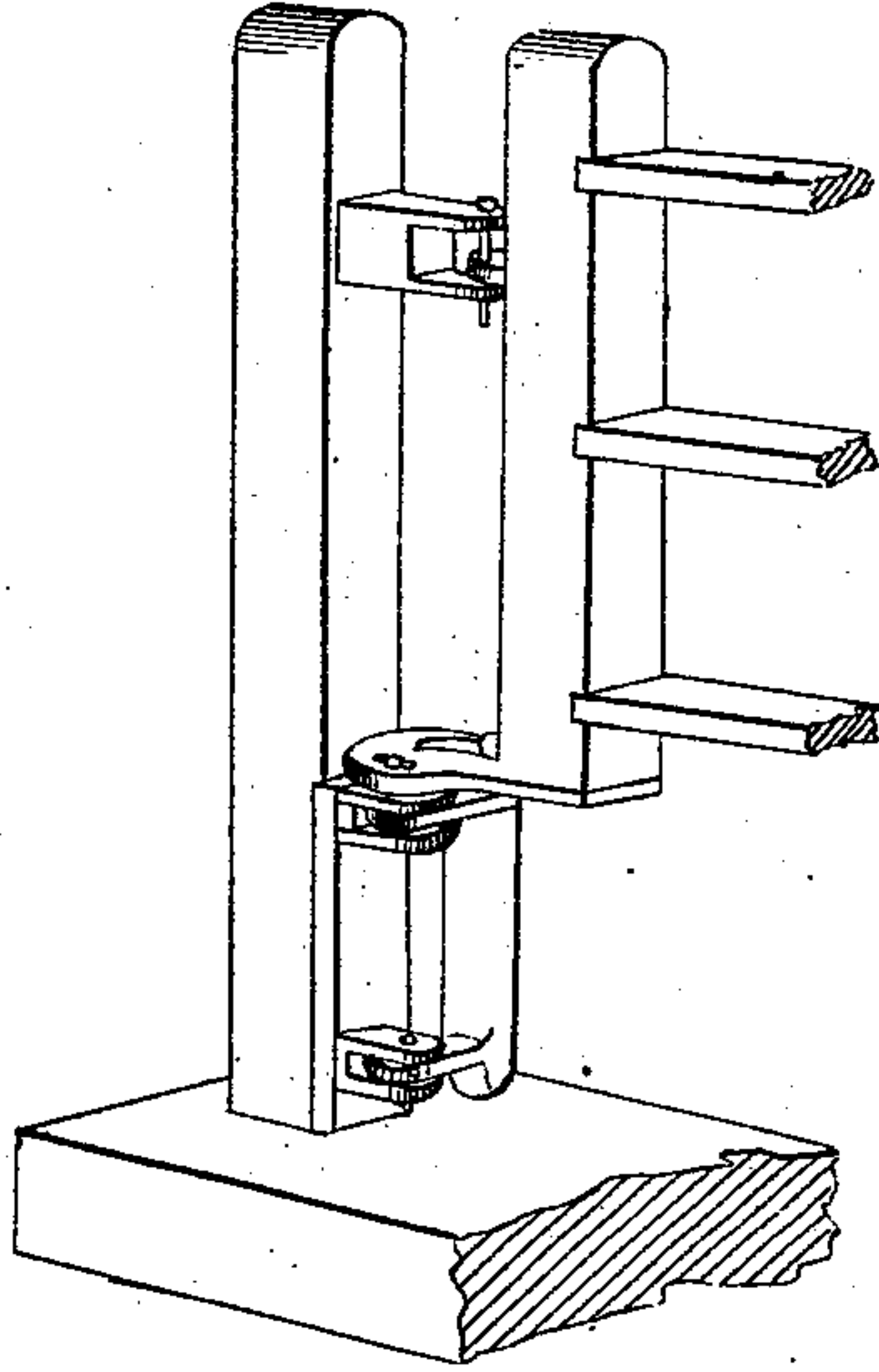
N<sup>o</sup> 85,072.

*Patented Dec. 22, 1868.*

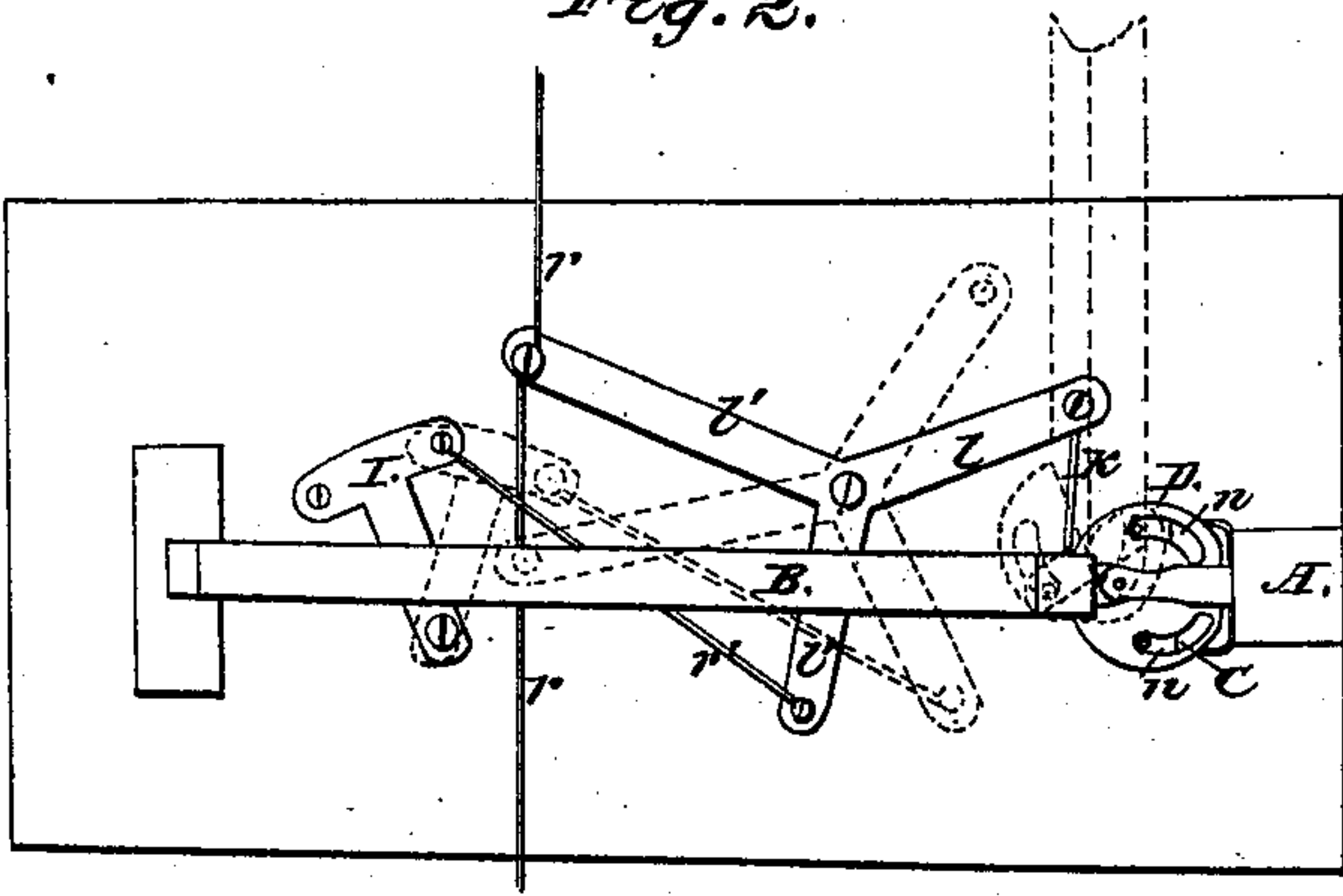
*Fig. 1.*



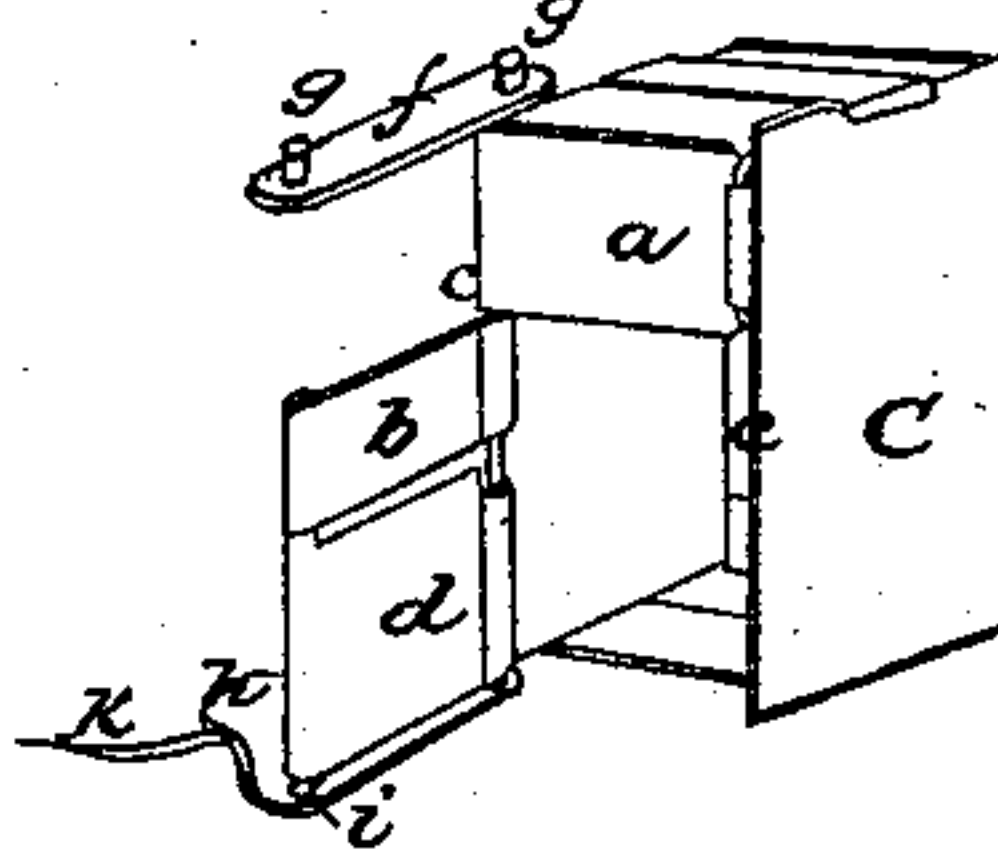
*Fig. 5.*



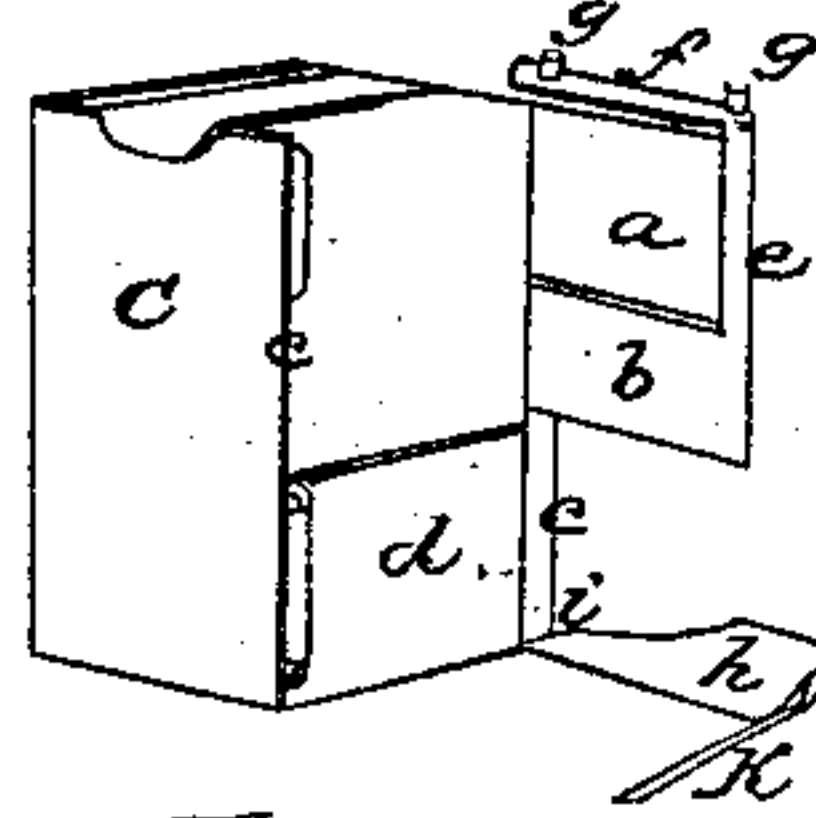
*Fig. 2.*



*Fig. 3.*



*Fig. 4.*



Witnesses:

Geo. W. Tibbitts  
Geo. Hester

*Inventor,*

Wm H. Cowley

# United States Patent Office.

WILLIAM H. COWLEY, OF CLEVELAND, OHIO.

Letters Patent No. 85,072, dated December 22, 1868.

## IMPROVEMENT IN GATES.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern :

Be it known that I, WILLIAM H. COWLEY, of Cleveland, county of Cuyahoga, in the State of Ohio, have invented a new and improved Self-Opening Gate; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

Figure 1 is a side view.

Figure 2 is a plan view.

Figure 3 is a detached view of a double-acting hinge.

Figure 4 is a view of the same, reverse side.

Figure 5 is a view of a single-action gate and hinge.

Like letters of reference refer to like parts in the views.

The nature of this improvement relates, first, to certain attachments to a double-action hinge, and, secondly, to the means for operating said hinge and its attachments, consisting of a system of levers, connected, with rods, to wheel-irons, by which the gates are opened either way, through the agency of said wheel-irons and rods, drawing upon the said levers in such a manner that the gate is raised at the outer or swinging end, and opened thereby, instead of the gate being opened by its own gravity, as in other gates, by changing the perpendicular of the turning-post.

The outer end of the gate, opened by this means, is very much elevated, enabling it to readily pass over obstructions, which is essentially different from others.

The gate closes by its own gravity, in this arrangement.

The same method may be applied singly to open a gate one way.

The construction and operation of this improvement, are as follows:

In the accompanying drawings—

A represents an ordinary post, set in the ground, and

B, a gate.

Attached to the side-post A is a double-acting hinge, C, which I construct in the following manner:

A box or frame, C, is cast in metal, to the edges *c* of which are hung or pivoted the leaves of the hinge *a b d*, the leaf *a* turning to the right, and the leaf *d* to the left. The leaf *b* is secured to the opposite ends of the leaves *a d*, and turns with them in either direction.

Upon the top of the hinge, and firmly attached to the turning-pin *e*, is a plate, *f*, having two pins *g g* on the upper side, the purpose of which will be hereafter shown.

To the bottom of the hinge there is also a similar plate, *h*, secured to the opposite turning-pin *i*.

To this plate is attached a rod, *k*, connecting with the lever *l*, by and through which motion is transmitted to the hinge.

Attached to the bottom of the gate is a circular plate, D, having two circular grooves *n n*. This plate sets upon the pins *g g*, playing in the said grooves.

This hinge is placed partly below the surface of the ground, and connects with the levers placed in a suitable box or recess below the surface of the ground.

The levers consist of three arms, *l l l'*, pivoted, at their junction, to the ground, which pivot forms their fulcrum. As before mentioned, the hinge connects with the lever *l*.

To the lever *l'* are attached the rods *r r*, connected with the wheel-irons, not shown.

The lever *l'* is connected, by a rod, *r'*, to a lever, I, which is intended to operate a hinge upon another post when two gates are used.

The upper side of the gate is hung by a hinge, E, which sustains the weight of the gate, thus relieving the lower hinge.

The operation of this arrangement is as follows:

When the rod *r* is drawn upon by the action of the wheel-irons, the leaves *l l l'* are moved in the direction indicated by the dotted lines, fig. 2, by which the hinge is operated or opened toward the left hand.

The forward end of the gate being raised, releases the catch *s*, and the gate, when swung around, is considerably elevated, which enables the gate very readily to pass over any obstructions.

The grooves *n n* in the plate D permit the gate to be opened by hand sufficiently for a person to pass through, if desired, and also relieves the gate from any jarring.

By reverse action, the gate can be operated to open in the opposite direction indicated by the dotted line.

As will be seen by fig. 5, a hinge may be constructed, on the same principle, to operate singly, when it is desired to have a gate open but one way.

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

The combination of the plate D, attached to the inner end of the gate, and provided with curved slots *n*, with the plates *f h*, the former having pins *g*, the double-acting hinge *a b d*, levers *l l l'* I, and connections *r r k*, all constructed and arranged to operate substantially as herein set forth.

WM. H. COWLEY.

Witnesses:

GEO. W. TIBBITTS,  
GEO. HESTER.