

(No Model.)

2 Sheets—Sheet 1.

H. V. PHILPOTT.

GATE.

No. 363,964.

Patented May 31, 1887.

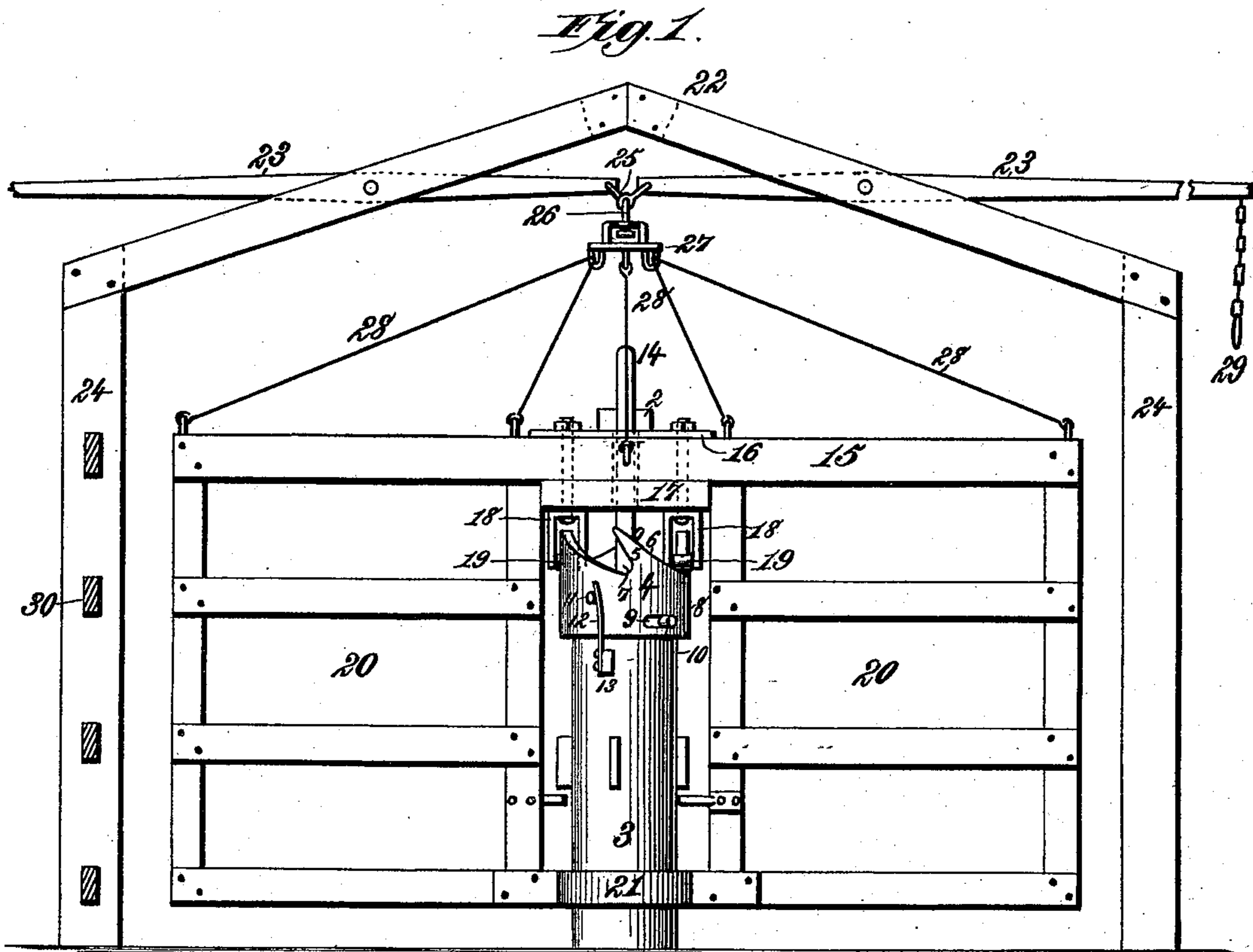


Fig. 2.

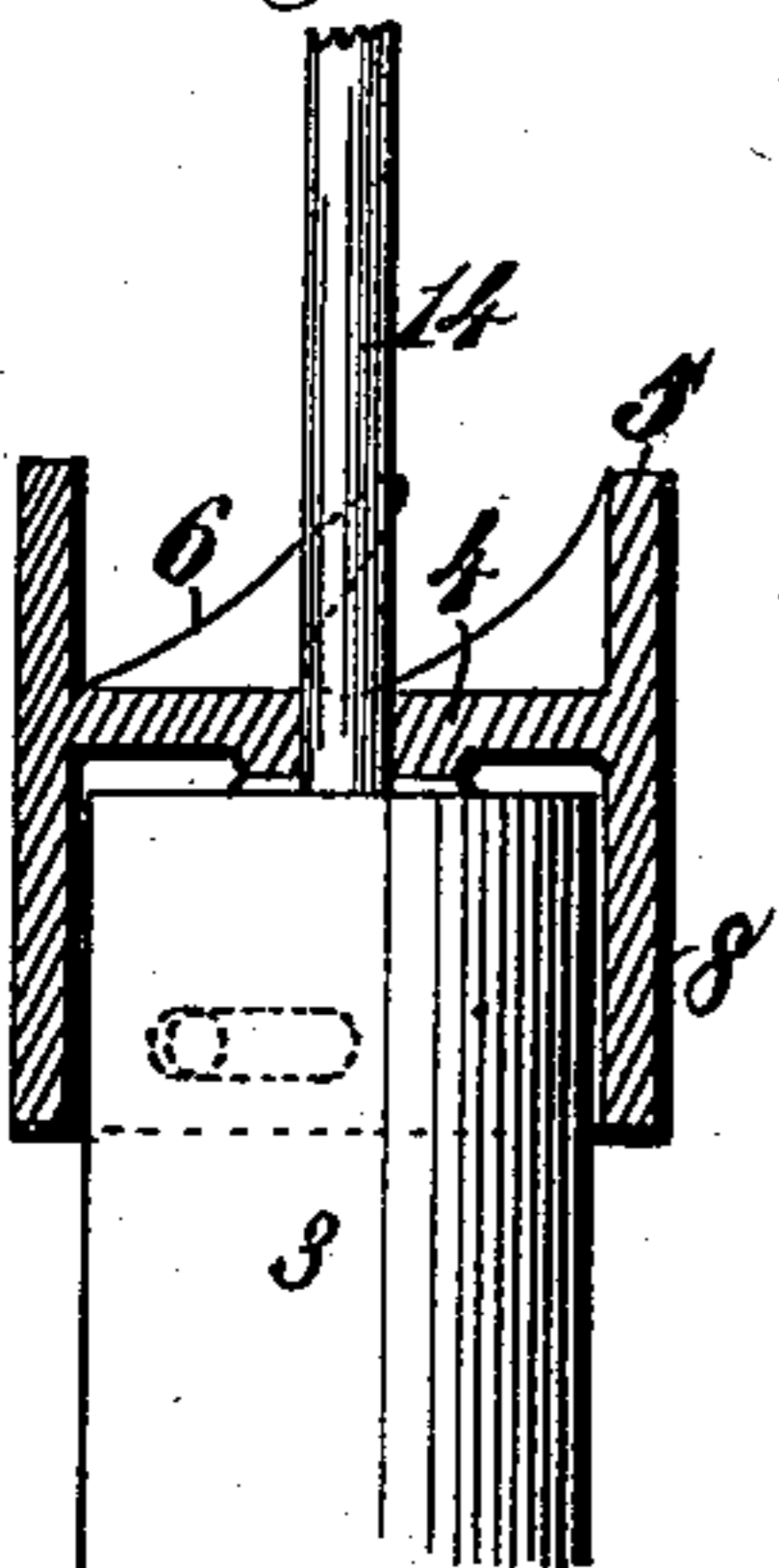


Fig. 3.

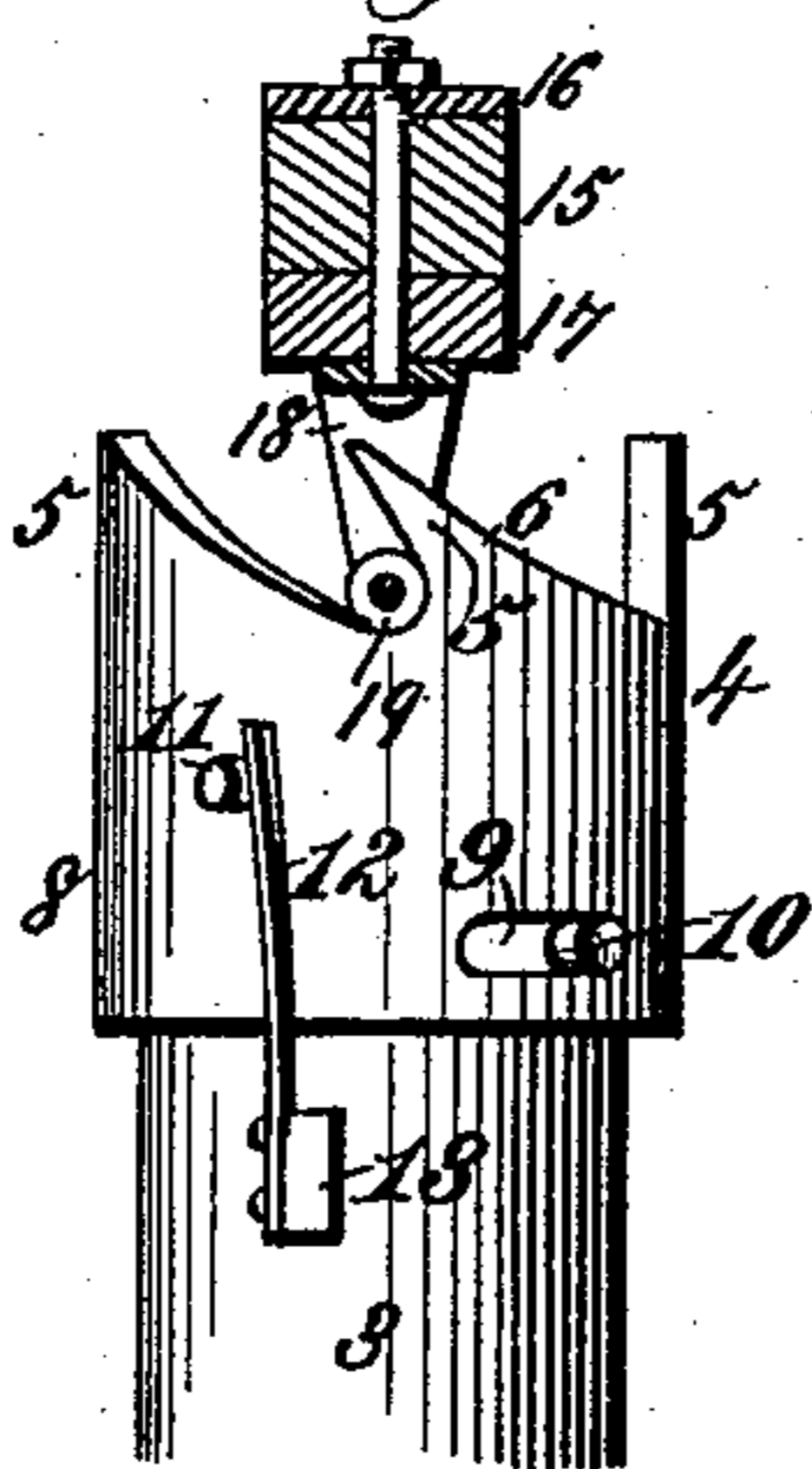


Fig. 4.

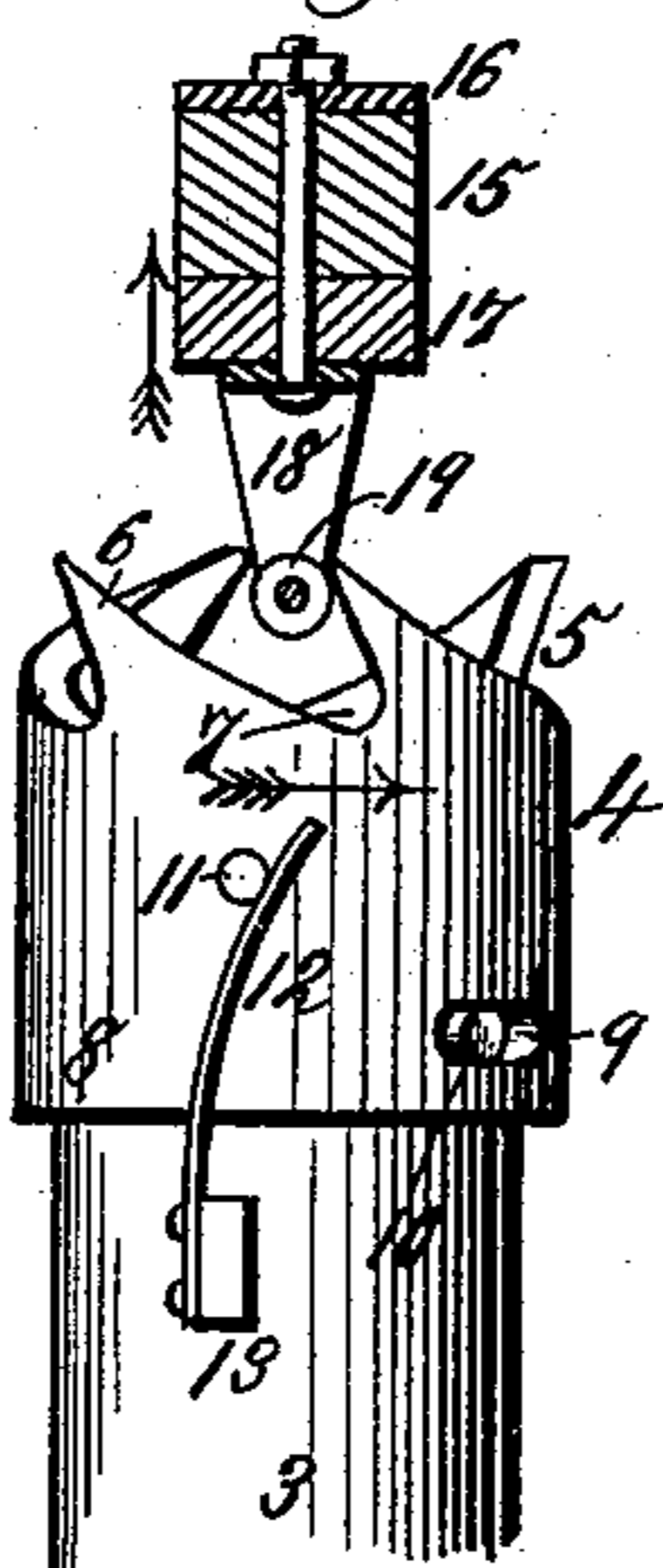
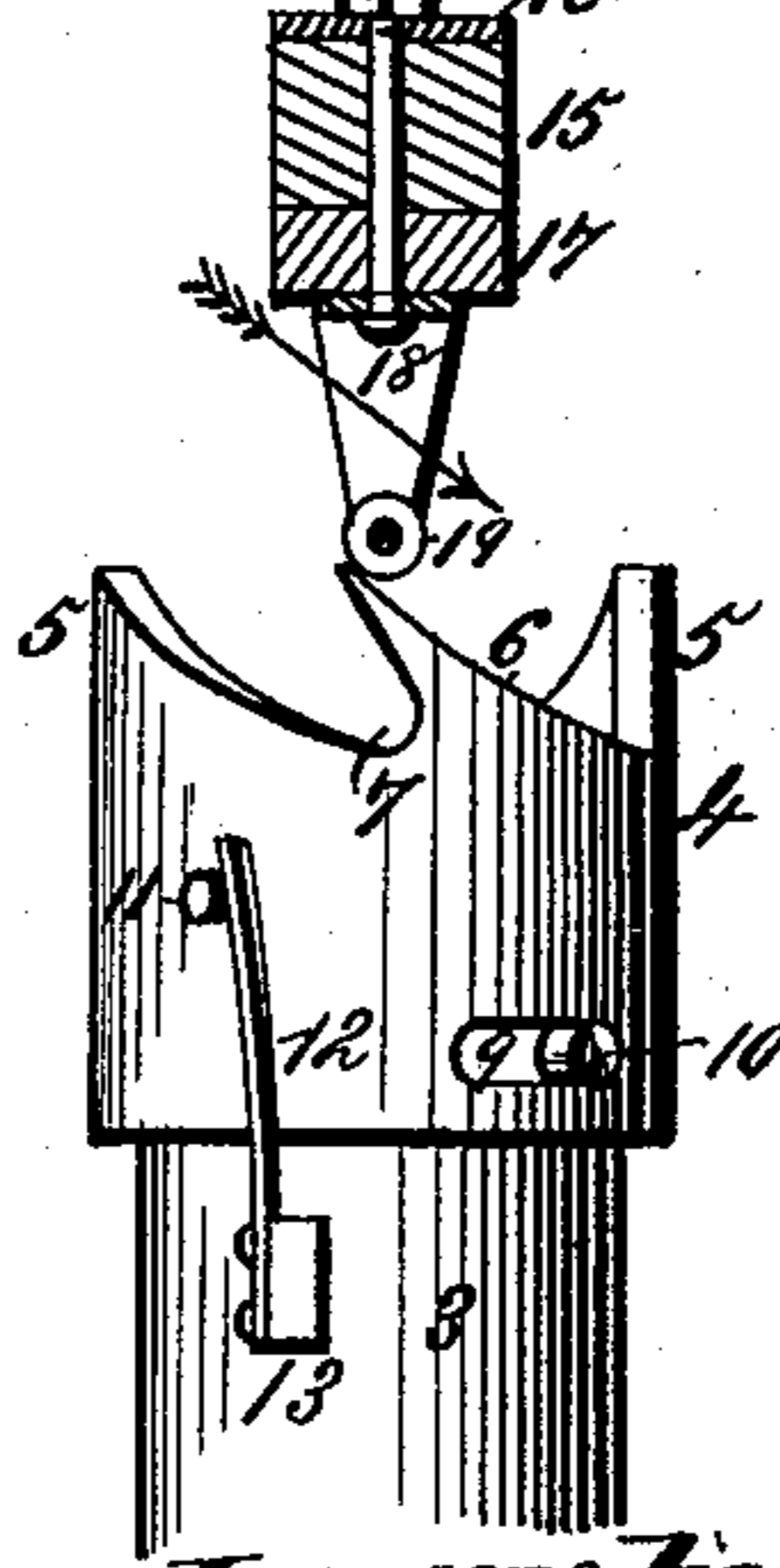


Fig. 5.



Witnesses,

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Inventor

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By *James L. Norris,*
Atty.

(No Model.)

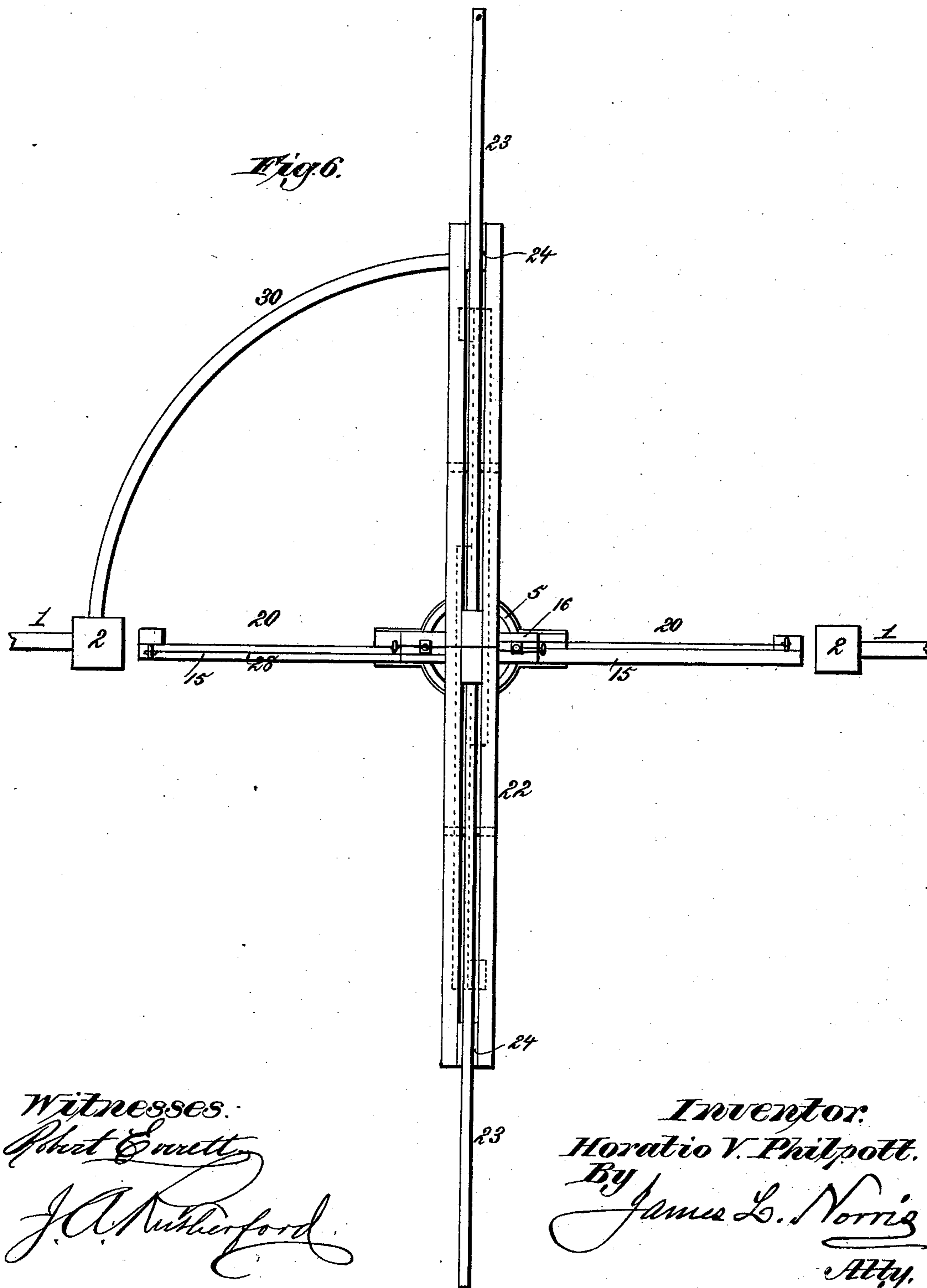
2 Sheets—Sheet 2.

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GATE.

No. 363,964.

Patented May 31, 1887.



UNITED STATES PATENT OFFICE.

HORATIO V. PHILPOTT, OF BRYAN, TEXAS.

GATE.

SPECIFICATION forming part of Letters Patent No. 363,964, dated May 31, 1887.

Application filed April 1, 1887. Serial No. 233,206. (No model.)

To all whom it may concern:

Be it known that I, HORATIO V. PHILPOTT, a citizen of the United States, residing at Bryan, in the county of Brazos and State of Texas, have invented new and useful Improvements in Gates, of which the following is a specification.

It is the purpose of my invention to provide an automatically opening and closing gate for use upon farms and in other places where a traveler is usually compelled to dismount in order to unfasten and swing the heavy gate open and shut.

It is my purpose to construct the gate so that it may be raised by suitable mechanism, and that by releasing the raising devices it will be swung upon its support by means of its own gravity.

To this end, therefore, my invention consists in the several novel features of construction and combinations of parts, hereinafter fully set forth, and definitely pointed out in the claims.

In the accompanying drawings, Figure 1 is an elevation of the lifting arm and levers, the gate and its support. Fig. 2 is a detail section, somewhat enlarged, showing the central support for the gate. Fig. 3 is a detail elevation showing the same with the top beam of the gate in section. Fig. 4 is a similar view showing the same parts in a different position. Fig. 5 is a similar detail illustrating further action of the parts; and Fig. 6 is a plan view showing the gate, fence, and arch.

In the said drawings the reference-numeral 1 designates the line of fence in which is located the gate, a post, 2, being placed at each end of said fencing in the usual manner. Centrally between these posts is planted a post, 3, of suitable height, having upon its top a cylindrical cap, 4, the edge of which is extended to form teeth or projections 5, having each an inclined surface, 6, and a pocket, 7, at the foot of said incline and cut under the tooth. The cap is held on the post by a short skirt, 8, coming down over the end of the post and provided with slots 9, through which studs 10 are passed into the post. Projecting from the periphery of the cap, on opposite sides, are pins 11, which receive the pressure of leaf-springs 12, the latter being mounted on the post below the cap by any suitable bearing or support, 13.

The tension of these springs tends to hold the cap in the same position relatively to the springs, and if rotated said springs will return it, when released, to the old position.

Projecting upward from the top of the post is a central pivot or staff, 14, which receives the top beam, 15, of the gate, in which a suitable opening is formed to receive said staff. A bearing-plate, 16, is mounted on said beam above, and on the lower face of the latter is attached a plate, 17, from which depend forked bearings 18, in which are journaled rolls 19, so arranged that they rest upon the inclined edges 6 of the teeth 5.

From each end of the top beam, 15, is hung a gate-frame, 20, the lower ends thereof being connected by curved strips 21, which pass around the post.

Straddling the fence, and at right angles therewith, is an arch, 22, the apex or highest point of which is directly above the pivot 14. Fulcrumed on opposite sides of the central point of said arch are levers 23, the ends of which are prolonged sufficiently to project beyond the standards 24, upon which the arch is supported.

The adjacent ends of the levers 23 are connected together by a toggle, 25, from which depends a rod, 26, having upon its lower end a swiveled plate, 27. To this plate are connected in any suitable manner chains, wires, or cords 28, attached to the top beam and to staples upon each side of the bearing-plate 16.

The operation of the device is as follows: The passenger, walking or riding beneath the end of one of the levers 23, seizes the chain 29, hanging therefrom, and draws down thereon. This raises the gate on its central pivot, 14, and as it rises the rolls 19 impinge upon the overhanging points of the teeth 5, thereby causing the cap 4 to rotate a short distance against the tension of the springs 12. As the rolls pass the points of said teeth these springs throw the cap to its former position, bringing the inclined surfaces or edges 6 beneath the rolls. If, now, the lever is released, the gate will descend and by its own gravity the rolls 19 will travel down the inclines 6 and swing the gate through one-fourth of a complete revolution, at which point it will be arrested by the rolls 19 reaching the pockets 7. After passing

through the gate is closed by a repetition of the operation described, save that the lever is operated from the opposite side of the fence.

I intend that in cases where it is desired the fence shall be projected outward in the arc of a circle having the radius of the top beam measured from the pivot. This construction is shown in Fig. 6, the curved section 30 being ninety degrees of arc. Thus when the gate is swung open into the position shown by dotted lines the opening will be closed upon one side of the central post, 3.

Having thus described my invention, what I claim is—

1. In an automatic gate, the combination, with a central supporting-post having a circular cap provided with a series of inclined surfaces, of a gate having rolls moving on said surfaces, levers for raising the gate, and springs whereby the circular cap is partly rotated to bring the inclined surfaces under the rolls, substantially as described.

2. The combination, with the arch straddling the line of fencing, of the levers mounted thereon, the central post beneath the arch, the circular cap mounted on said post and having inclined surfaces and teeth projecting over the lower ends of said inclines, a gate mounted on a central pivot and having rolls resting on the

inclines, a swiveled connection between the gate and the ends of the levers, and springs whereby the circular cap is rotated to bring the inclines under the rolls after the gate is raised, substantially as described.

3. The combination, with the post planted centrally in the gateway, of the circular cap having slots in its periphery and pins standing in the slots and set in the post, a gate having supporting-rolls and mounted on a central pivot rising above the cap, and springs mounted on the post and bearing on projections on the periphery of the cap, the latter being provided with teeth having inclined surfaces 6 and overhanging the pockets 7 at the foot of said inclines, substantially as described.

4. The combination, with the post 3, having pivot 14, of the cap 4, constructed as set forth, the top beam, 15, having rolls 19 and gate-frames 20, the arch 22, carried over the gate and at a right angle thereto, the levers 23, and swiveled plate 27, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

HORATIO V. PHILPOTT.

Witnesses:

ELI FERGUSON,
R. J. FORD.