

G. C. MASON.
GATE HINGE.
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929,682.

Patented Aug. 3, 1909.

Fig. 1.

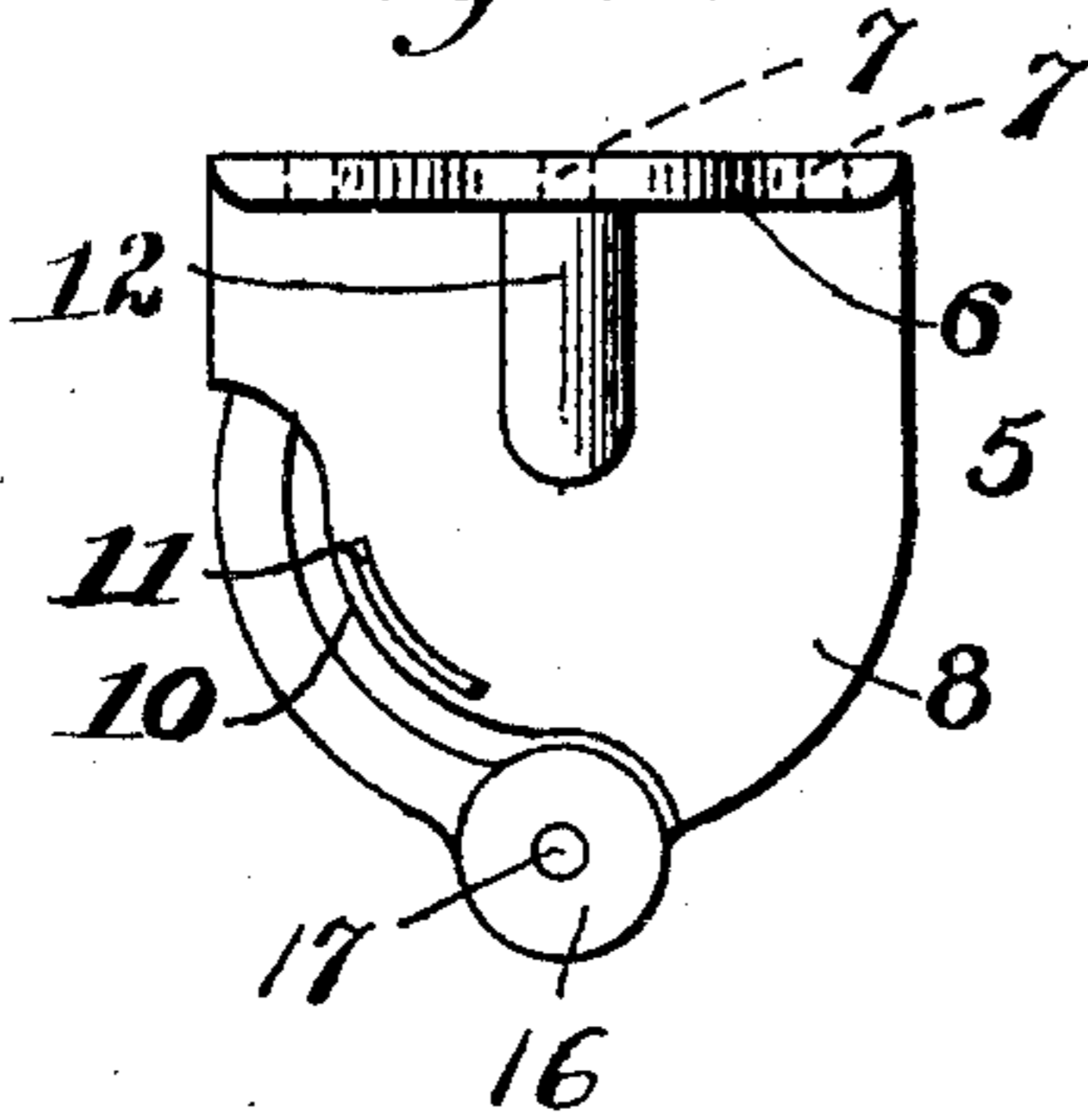


Fig. 3.

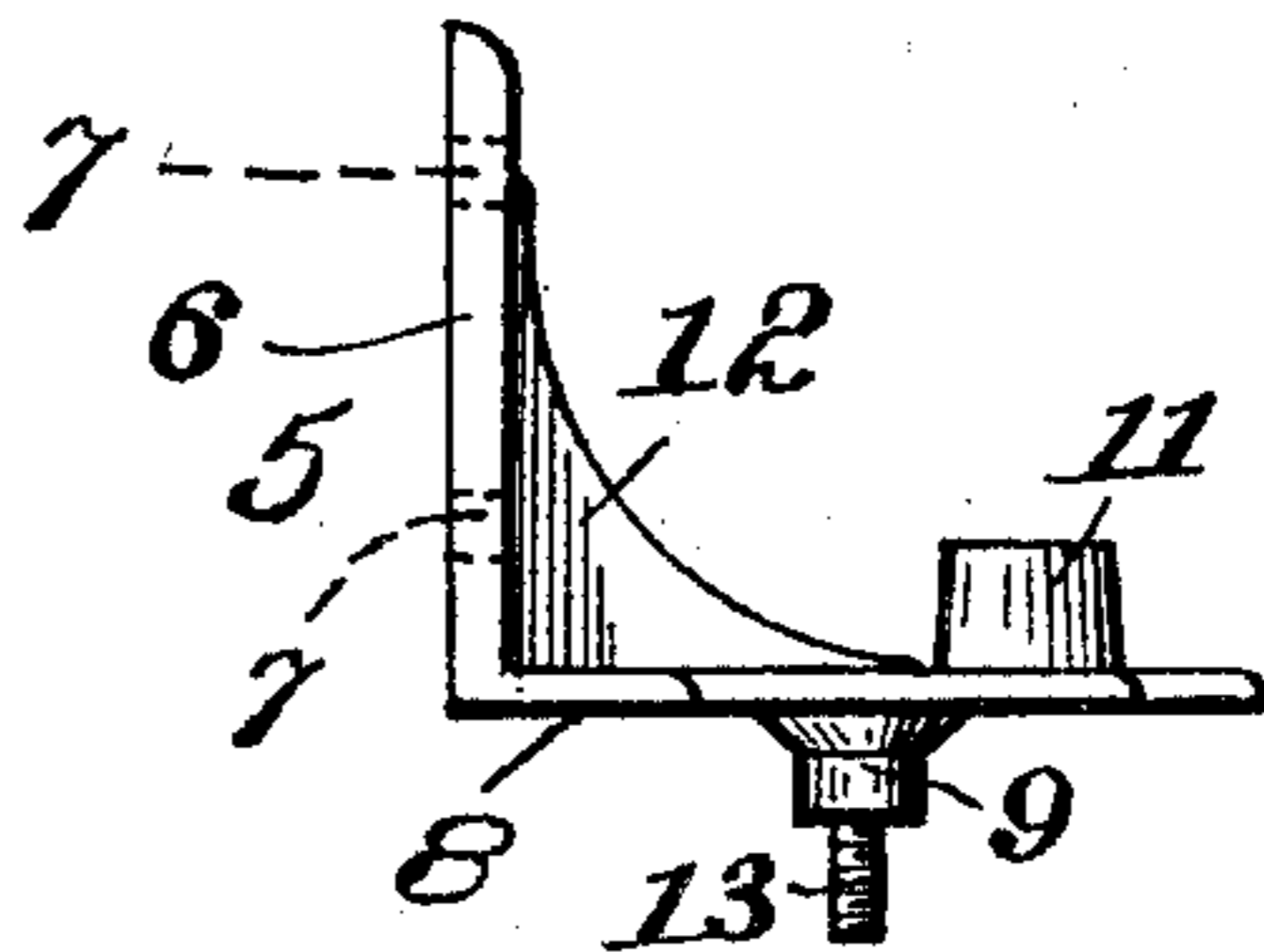


Fig. 2.

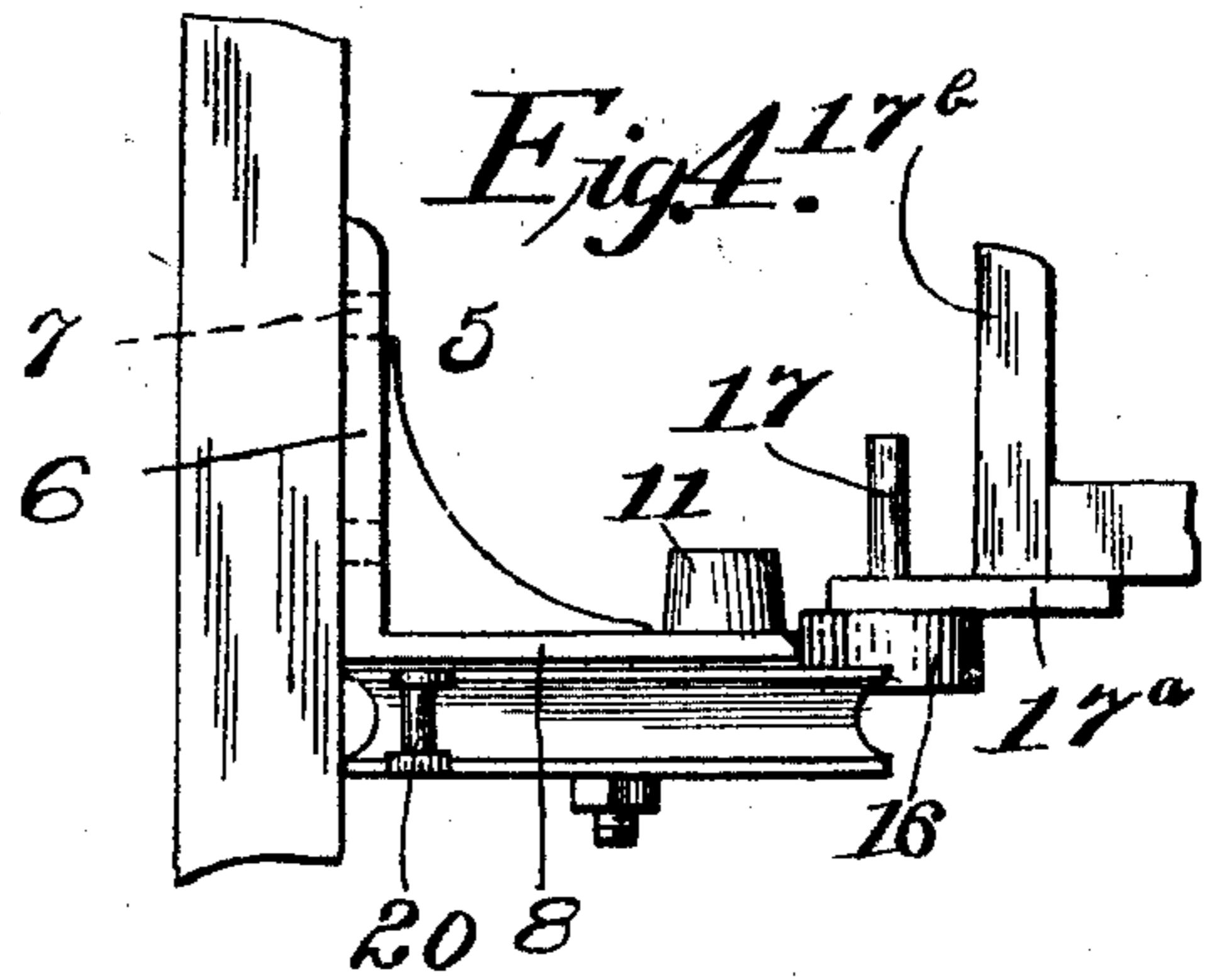
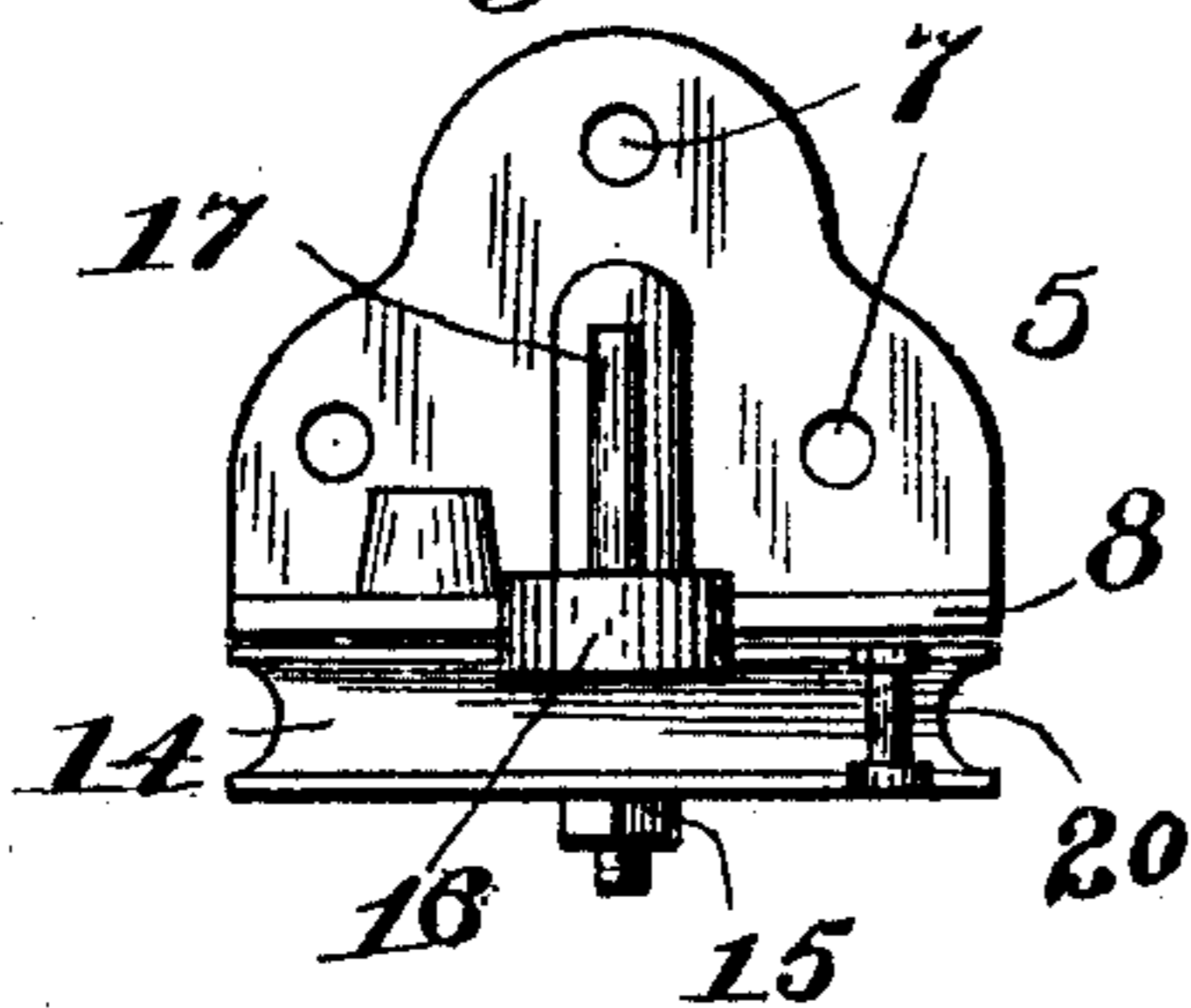


Fig. 5.

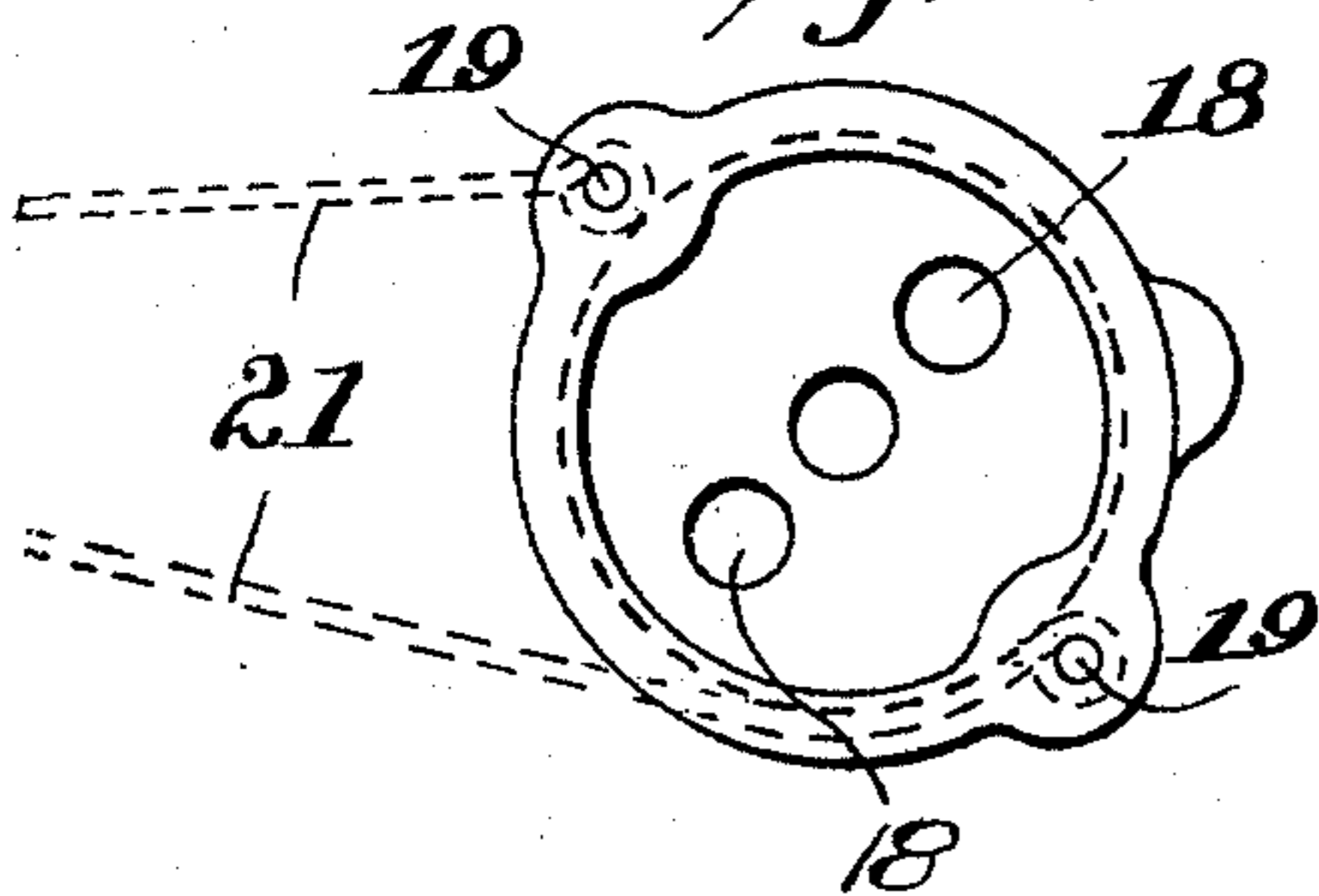
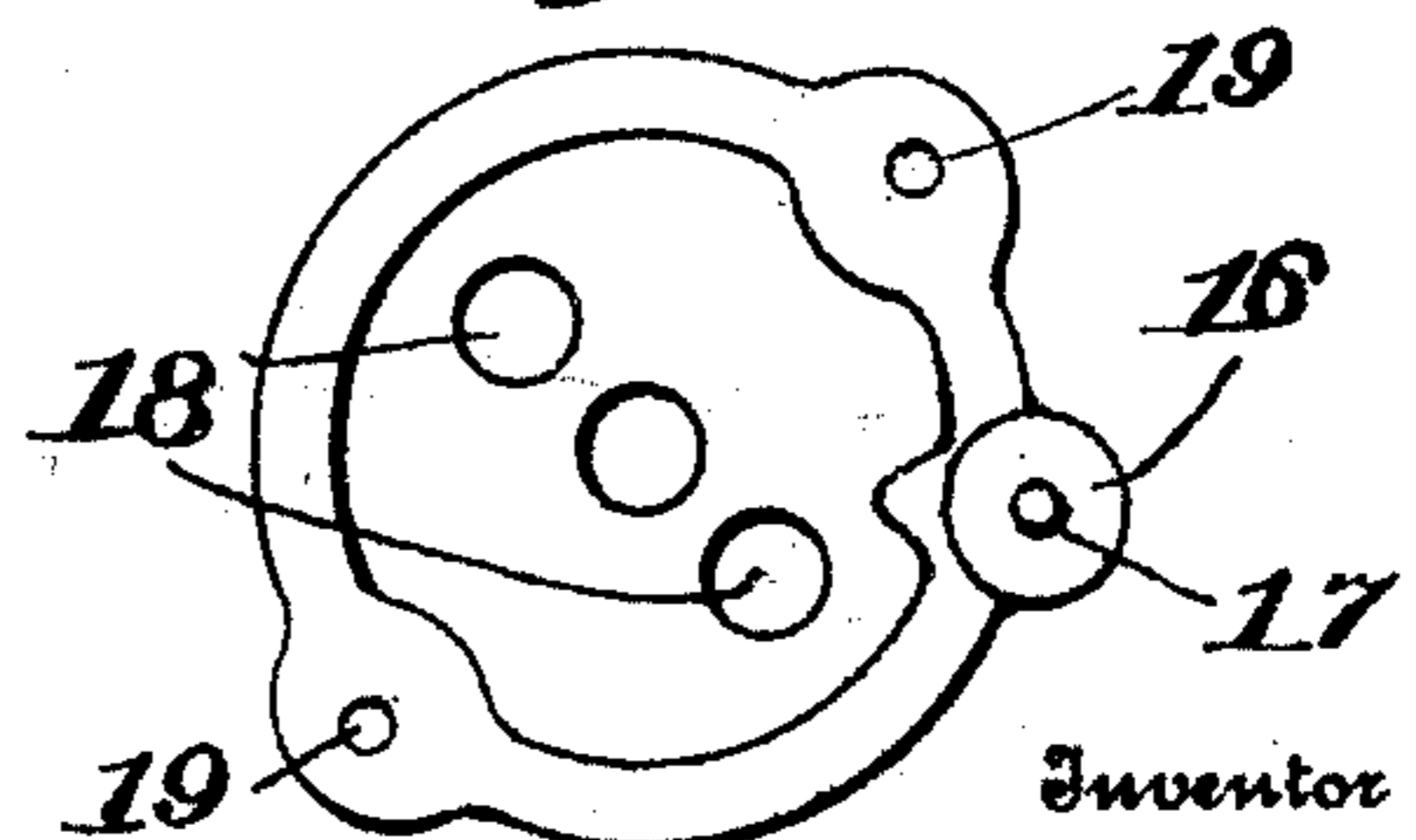


Fig. 6.



Witnesses

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GATE-HINGE.

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To all whom it may concern:

Be it known that I, GARRETT C. MASON, a citizen of the United States, residing at Sebastopol, in the county of Sonoma and State of California, have invented certain new and useful Improvements in Gate-Hinges, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to that class of gates in which a swinging or variable pivot is employed for the inner upright of the gate, through the movement of which, the gate is first tilted to relieve it of its latch, and is then adapted to swing by gravity to an open or closed position.

The objects of the invention are to simplify the lower pivot construction of this class of gates to render the operation of the latter easy and effective through the medium of power transmitted from suitable means in the roadway, adapted to be run down by the wheels of a passing vehicle; to provide a hinge attachable to any gate having a lifting, tilting and gravity swing movement and adapted to be bolted to a main gate post without requiring the use of an extra post; and to equip a hinge of this character with means for assisting the gate to open or close and thus obviate the loose movement or free swinging of the gate when it is desirable to positively hold the same.

With these and other objects and advantages in view, the invention consists in the preferred construction and arrangement of parts which will be more fully hereinafter specified.

In the drawings:—Figure 1 is a plan view of the hinge embodying the improvements. Fig. 2 is a front elevation of the same. Fig. 3 is a side elevation with the pulley detached. Fig. 4 is a view similar to Fig. 3 showing the hinge applied and the pulley attached. Fig. 5 is a bottom plan view of the pulley, and Fig. 6 is a top plan view of the pulley.

The hinge essentially comprises a bracket (5) having an upright or flange (6) provided with a number of holes (7) to fasten the same to a hinge post of a gate, as shown by Fig. 4, and a horizontal support (8) at right angles to the upright or flange (6) and provided with a central depending stud (9), an edge slot or recess (10) extending over a portion of the support and a vertical

flange (11) of outer convex contour located intermediately with relation to said recess (10) and parallel with the wall of the latter. Between the upright (6) and support (8) is a reinforcing web (12) serving to prevent fracture of the parts of the bracket. The terminal of the stud (9) is screw threaded, as at 13 and thereover is rotatably applied a grooved pulley (14) which is held in applied position by a nut (15), the pulley having an integral lug (16) movable with the pulley and provided with a central upstanding post or pintle (17) to receive the hinge member (17^a) of the gate (17^b), see Fig. 4. The pulley is lightened in weight by forming openings (18) therein, and at diametrically opposite points it is provided with bolt seats (19) to receive bolts (20) for attachment of pull devices, preferably ropes or cables (21) as shown by dotted lines in Fig. 5.

The lower corner of the gate will have the usual hinge eye or knuckle which is slipped over the post or pintle (17) and the lower edge of the gate corner will bear on the lug (16). The pull devices (21) will extend away from the pulley (14) any distance desired and connect with suitable operating means. The pull exerted on one rope or cable (21) will turn the pulley (14) in one direction on the support (8), and a pull on the opposite rope or cable will reversely operate the pulley so that the gate to which the hinge is attached may be easily opened and closed. When the gate is closed a pull exerted on the first operated rope or cable (21) will cause the pulley (14) to oscillate and move the post or pintle (17) therewith in a forward direction and has the immediate effect of tilting the latch end of the gate upwardly in a vertical plane, and continued movement of the pulley (14) carries the post or pintle (17) through an arc of a circle which has the effect of throwing the lower hinge eye or connection of the gate out of the perpendicular plane of the upper gate hinge connection and the gate will swing open by gravity and be limited in its opening movement by the flange (11). During the movement of the pulley (14) the lug (16) moves in the recess (10), the opposite terminals of said recess acting as limiting or stopping means for reverse movements of the pulley. The gate is closed by exerting a similar pull on the remaining

rope or cable (21) and thereby reversing the oscillation or movement of the pulley (14) and lug (16) and post or pintle (17) carried thereby. Ropes or cables are preferred as the operating means for the pulley (14) because they will not become tangled, and the same may extend away on opposite sides of the gate any suitable distance.

It will be noted that the improved hinge construction is positive in its operation, and further, that the entire pull of the ropes or cable is directed wholly upon the gate by reason of the parts being free of the fixed hinge post and thus rendering the operation of the gate much easier.

It should be understood that in its broader aspect the invention comprehends the employment not only of the various means described, but of equivalent means for performing the recited functions. While the arrangement shown is thought, at the present time, to be preferable, it is desired to reserve the right to effect such modifications and variations thereof as may come fairly within the scope of the appended claims.

What is claimed as new is:—

1. The combination with a gate and post, of a hinge device comprising a support secured to the post and having an arcuate recess, a pulley held by the support and provided with a lug having an upstanding pintle to which the lower hinge member of the gate is applied, the lug moving in said recess, and pull means attached to opposite portions of the pulley.

2. The combination with a gate and post, of a hinge device comprising a support secured to the post and having an arcuate edge recess and a vertical stop flange intermediate of said edge, a pulley held by the support and having a lug movable in the edge recess and provided with an upstanding pintle to engage the lower hinge member of the gate, and pull means secured to opposite portions of the pulley.

3. A hinge device for a gate comprising a bracket having a horizontal support and a right angular attaching member, the support having an arcuate edge recess and a vertical stop flange at an intermediate point with relation to said recess, and a pulley

held against the under side of said support and having a lug with a vertical pintle, the pulley also provided with means at opposite portions for attaching pull devices thereto.

4. A device of the character described, comprising a bracket provided with a recess formed in one edge, a pulley secured to said bracket and provided with means positioned in the recess of the bracket for limiting the movement of the pulley and pull-means attached to opposite portions of the pulley.

5. A device of the character described, comprising a spur provided with a horizontal portion, said horizontal portion provided with a recess, a rotatable-member in engagement with said horizontal portion, said rotatable-member provided with means positioned in the recess for limiting the movement of said rotatable-member upon the horizontal portion and means for manually imparting a rotary movement to said rotatable-member.

6. A device of the character described, comprising a support, a pulley in engagement with said support, means fastening said pulley to said support, said support provided with a recess, said pulley provided with means extending through said recess for limiting the rotary movement of the pulley, said support provided with means contiguous to said recess for engaging the means of the pulley extending into the recess, whereby the movement of the pulley is retarded, and pull-means, and fastening means carried by the pulley for attaching pull-means thereto.

7. A device of the character described, comprising a support provided with a recess, a pulley secured to said support and provided with projections extending into said recess and means formed upon said support, connected to said recess and adapted to engage said projections for retarding the rotary movement of said pulley.

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

GARRETT C. MASON.

Witnesses:

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