

J. C. GOULD.
Gate and Door Spring.

No. 71,478.

Patented Nov. 26, 1867.

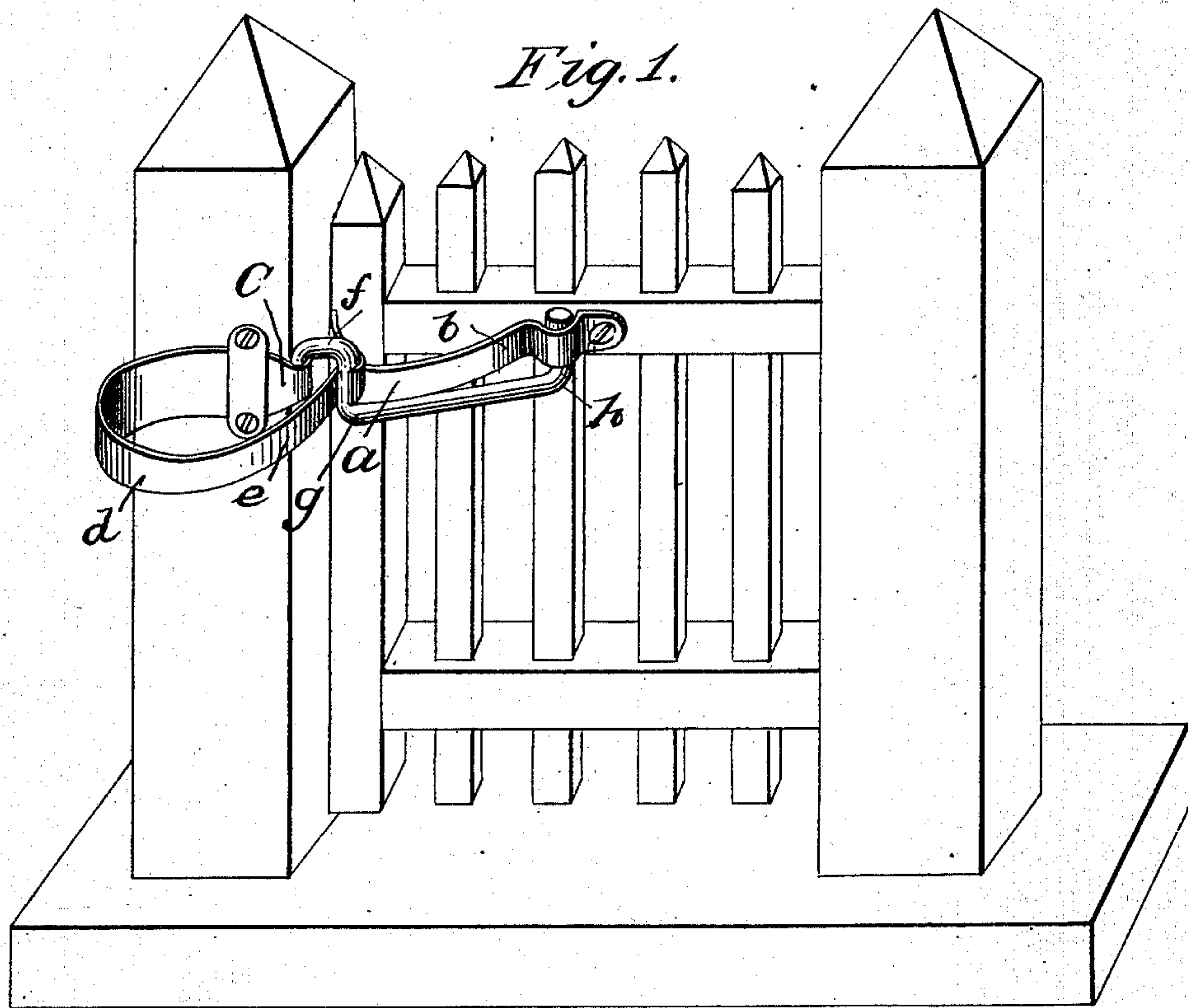


Fig. 2.

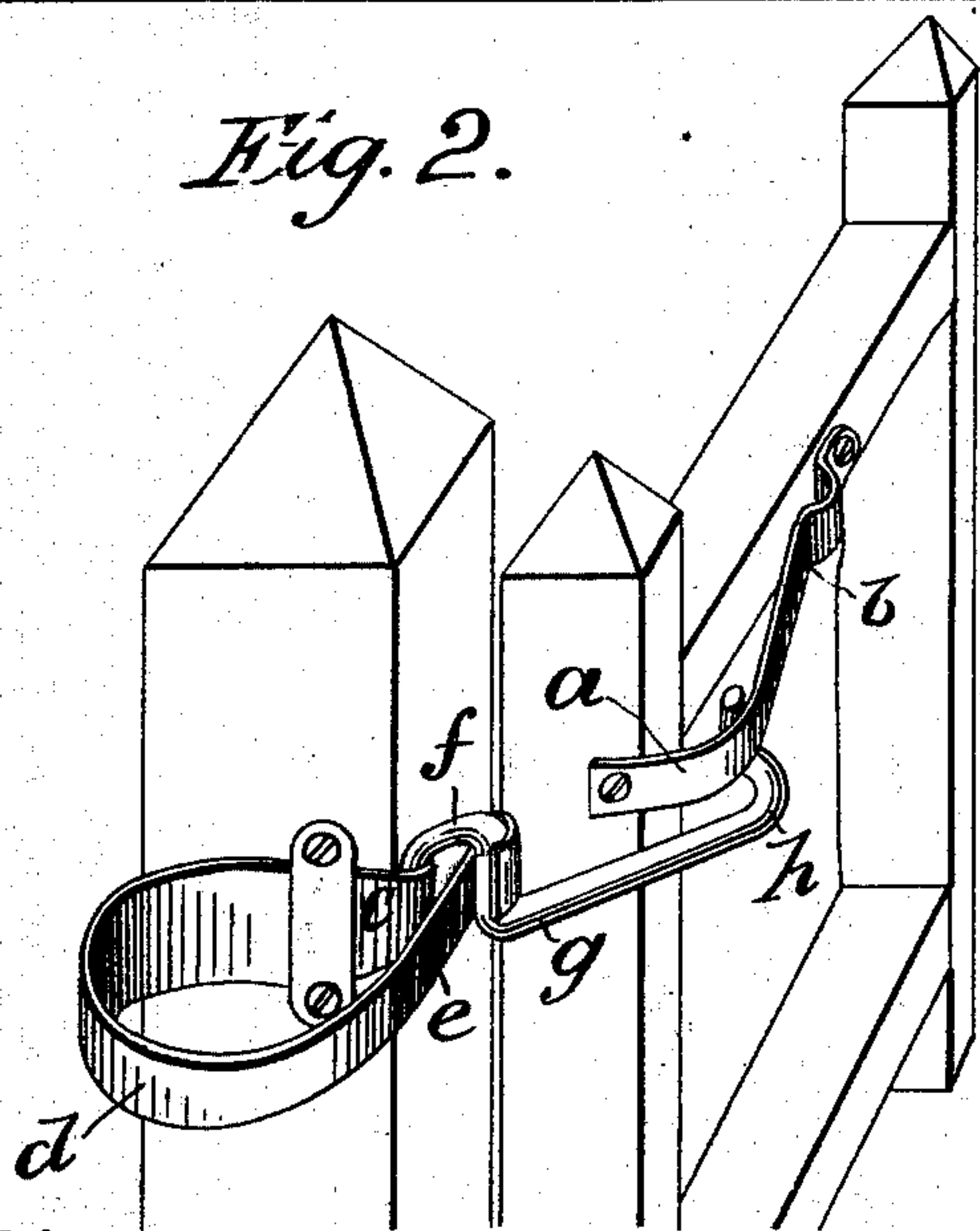
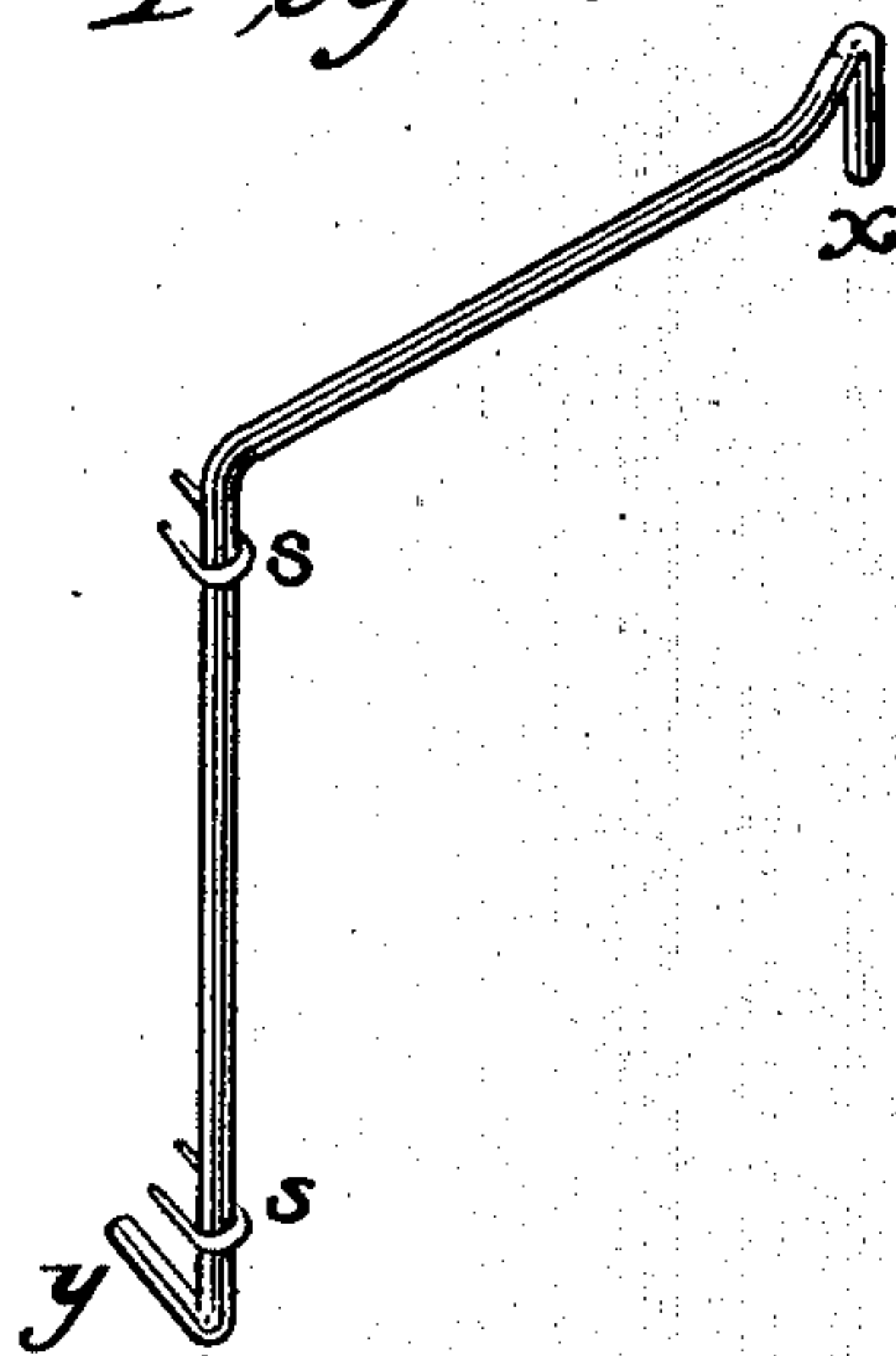


Fig. 3.



Witnesses.

Wm. Marks

Wm. H. Thorne

Inventor.

John C. Gould - by his atty.

Wm. H. Hall.

UNITED STATES PATENT OFFICE.

JOHN C. GOULD, OF OXFORD, NEW JERSEY.

IMPROVED GATE AND DOOR SPRING.

Specification forming part of Letters Patent No. 71,478, dated November 26, 1867.

To all whom it may concern:

Be it known that I, JOHN C. GOULD, of Oxford, in the county of Warren and State of New Jersey, have invented a new and useful Improvement in Gate and Door Springs; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, and to the letters of reference marked thereon.

The springs hitherto in use for the purpose of closing doors and gates have been applied in such a manner that their tension is increased by the opening of the door or gate and the least amount of retaining force is exercised when it is in a closed position.

The object of my invention is to apply the spring in such a way that the gate or door may be retained most forcibly when closed, and that the power of the spring at any other point will be only sufficient to close it.

To accomplish this object my invention consists in securing to the gate a curved yoke, into which works a link acted upon by a spring fastened to the post. On the first movement to open a closed gate the curvature of the yoke, acting through the link, causes a comparatively extended motion and resistance of the spring; but as the gate is opened wider and the head of the link reaches the central portion of the yoke, where the curvature is more sweeping, the strain upon the spring is correspondingly lessened and there is only sufficient force applied to cause the closing of the gate. When it is desired in the case of a light door or otherwise to apply a torsion-spring, the link may be made in a single piece with the spring, so that the head of the link part slides within the curved yoke on the door and the spring part twists against the door post, to which it is secured.

To enable others skilled in the arts to which it appertains to make and use my invention, I will proceed to describe its construction and operation with reference to the drawings.

Figure 1 is a perspective view of a gate

with my invention applied and holding it in a closed position. Fig. 2 is the same with the gate open, and Fig. 3 shows separately the spring and link when made in a single piece.

The curved yoke *a b* is secured to the gate. The spring *c d e* is fastened to the post. The link *f g h* is held at *f* and *g* by the two ends *c* and *e* of the spring and the loose end *h* slides on the inner side of the yoke. As the gate stands half-open in Fig. 2, it may be further opened through a quarter of a circle until it lies against the fence without materially extending the spring; but when the gate is closed, as in Fig. 1, the first opening of the gate must move the link out of the recess in the yoke and occasion a greater strain upon the spring than is obtained at any other point.

In Fig. 3 the end *x* of the wire slides in the yoke on the door like the end of the link that has been described, and the end *y* is inserted in the post, to which it is loosely held by the staples *S S*. When the door is opened, the end *x* is carried with it along the yoke and the part against the post is twisted in the staples and acts as a torsion-spring.

Having thus described and illustrated in the drawings the manner in which I prefer to carry my invention into effect, I would also state that the details may be varied by altering the shape of the spring, for instance, and the manner of its application through the link, and by fitting the latter with a roller to work within the yoke, if desired, without departure from the principle of applying the force of the spring by means of a curved yoke to regulate its action.

What I claim as my invention is—

The combination of a spring and link or its equivalent with a yoke *a b*, curved substantially as described, and for the purpose specified.

JOHN C. GOULD.

Witnesses:

THEODORE STOUT,
WM. FIRMMA.