W. HULL.

Spring-Hinge for Gates, &c.

No. 200,657. Patented Feb. 26, 1878.

Fig. 1.

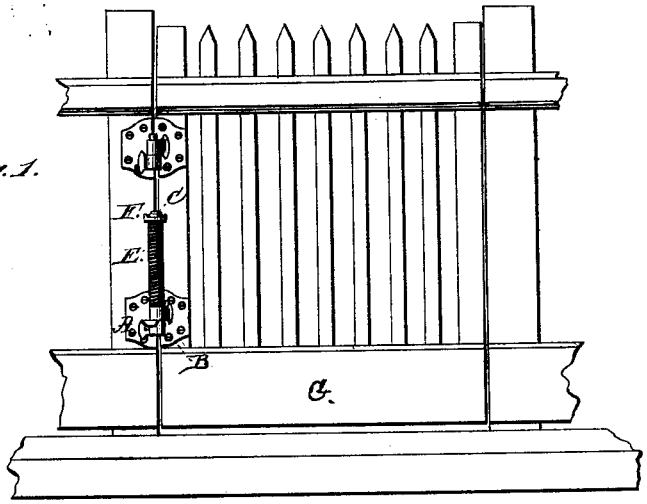


Fig. 2.

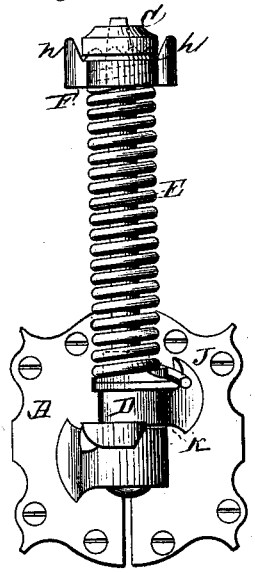


Fig. 3.

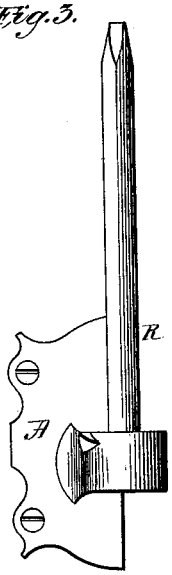


Fig. 4.

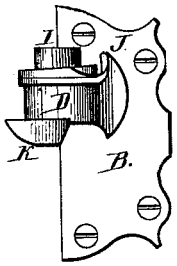


Fig. 5.

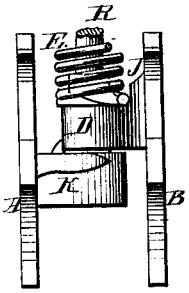


Fig. 6.

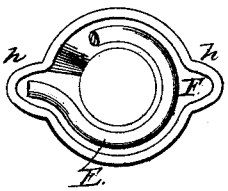
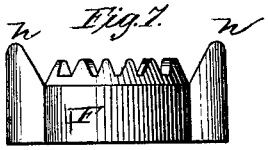


Fig. 7.



Attest:

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Inventor:

Wesley Hull

UNITED STATES PATENT OFFICE.

WESLEY HULL, OF FORT WAYNE, INDIANA.

IMPROVEMENT IN SPRING-HINGES FOR GATES, &c.

Specification forming part of Letters Patent No. **200,657**, dated February 26, 1878; application filed August 31, 1876.

To all whom it may concern:

Be it known that I, WESLEY HULL, of Fort Wayne, in the county of Allen and State of Indiana, have invented a new and useful Improvement in Spring-Hinges, which improvement is fully set forth in the following specification and accompanying drawing, in which—

Figure 1 is a front view of a gate with hinge attached. Fig. 2 is a front view of hinge. Figs. 3, 4, and 5 are views of the hinge and detached parts, and Figs. 6 and 7 are detached views of the regulating-drum.

My invention consists of a spring-hinge in which a spiral spring encircles a long rod, said spring being secured at one end to the socket of one leaf of the hinge, and at the other end within a regulating-drum having ratchet-teeth on the upper end, which teeth engage corresponding teeth in the lower end of a cap, secured to the rod of the other leaf of the hinge. The spring, being compressed in attaching the cap, acts upon the drum in such a manner as to cause the automatic locking of the ratchet-teeth with those of the cap, thus holding the spring at any point to which it may be required to close the gate or door. The hinge is also provided with inclines formed in such a manner as to lock the gate open when desired, for convenience of passing through, all as hereinafter more fully described.

Like letters of reference indicate like parts.

In the accompanying drawings, G represents the gate. A and B represent different leaves of the hinge. On leaf B is formed catch J, extending up near the socket D. Upon the upper end of said socket is formed a thin shell, I, as seen in Fig. 4, extending sufficiently above it to enter the lower end of spring E, and keep it from coming in contact with rod R, thus avoiding friction. At the base of shell I, on the top of socket D, is formed an incline, terminating near catch J, designed to fit the lower end of spring E, to equalize the pressure upon it, with a view to keep the spring as straight as possible when compressed. For a similar purpose an incline is formed in the regulating-drum F to fit the upper end of said spring.

To leaf A is secured a long rod, R, as seen in Fig. 3, (detached view,) which passes up through socket D of leaf B, and extends above it sufficiently to receive the spring and regulating devices. This spring encircles rod R and shell I. The extreme end of said spring, being bent out, engages catch J, by which it is held securely. The upper end of said spiral spring E enters the lower end of the regulating-drum F. This extreme end of said spring, being also bent out, enters one of the recesses formed in the side of the drum, by which it is held secure from turning, the upper end pressing against the upper end of the interior of said drum, which is spirally inclined, to fit the upper end of the spring, to equalize the pressure upon it, that it may not be forced against rod R when compressed in securing cap C and in operating the gate. The spring, by being compressed, acts upon the regulating-drum F, to keep the ratchet-teeth on its upper end engaged with the ratchet-teeth on the lower end of cap C, automatically holding said drum where it may be moved in regulating the tension of the spring to the required power to close the gate or door.

Projections H H on the regulating-drum F form a hold for the hand, by which to turn it in regulating the tension of the spring, to increase which it must be turned in the direction the spring is turned, when it will move over the inclines of the ratchet-teeth; but when desiring to lessen the tension of the spring it will be necessary to force down the drum F until the ratchet-teeth upon their vertical sides become disengaged, thus allowing it to be moved where desired.

It is often necessary or desirable for certain purposes to have the gate remain open for the time being. For this purpose, projection or check K is formed on the outside of socket D of leaf B, having a gentle incline on the rear end and a steep incline on the front, while the incline on the outside of the knuckle on the projection and stem of leaf A has a gentle incline in front and steep incline on the rear of it. Thus both gentle inclines are opposite each other when the gate is closed, offering but little resistance to projection K passing over the stem, and incline in opening the gate. But when the gate is opened almost or entirely against the fence, the steep inclines of projection or check K drops down that in the rear of the stem, thus locking the gate open at a

point to which it is seldom, if ever, opened in general use, and thus giving ample protection to inclosures, and also affording the conveniences named.

The upper hinge is so constructed as to allow the free operation of the lower hinge; or, if necessary, both may be spring-hinges.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The regulating-drum F, cap C, and rod R, in combination with spring E, secured to the exterior end of socket D, substantially as and for the purpose set forth and described.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

WESLEY HULL.

Witnesses:
ABRAHAM B. KOHR,
H. F. FRANCE.