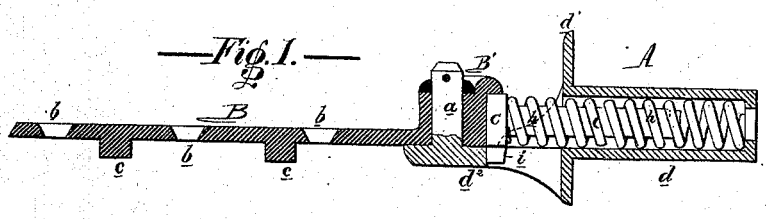
A. F. Schiffling,

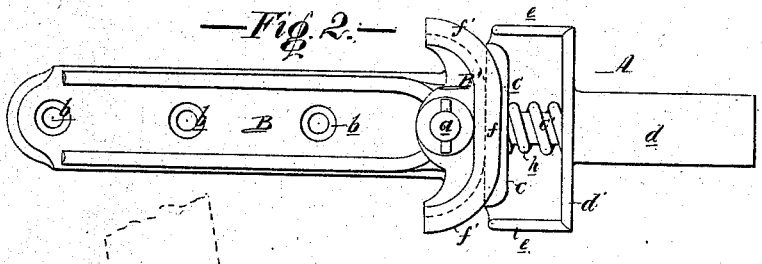
Door Spring.

No. 107,819. Patented Sept. 27, 1870.

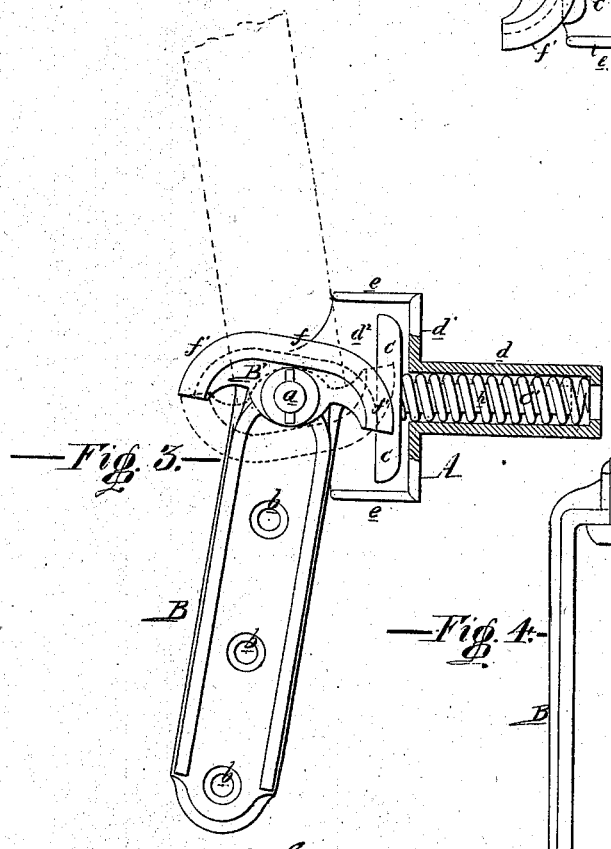
—Fig. 1.—



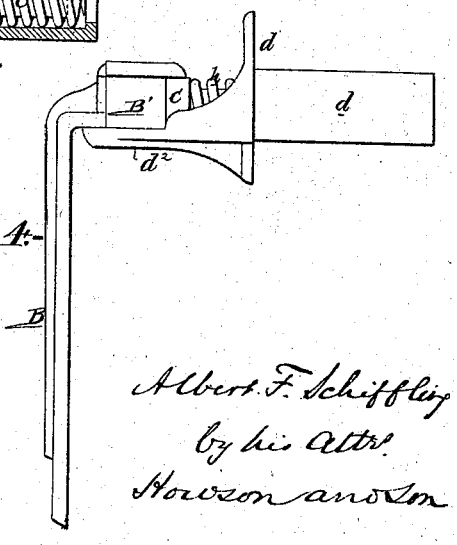
—Fig. 2.—



—Fig. 3.—



—Fig. 4.—



Witnesses { Wm. A. Seal
John Parker

Albert F. Schiffling
by his attys
Howson and Son

United States Patent Office.

ALBERT F. SCHIFFLING, OF EVANSVILLE, INDIANA.

Letters Patent No. 107,819, dated September 27, 1870.

IMPROVEMENT IN SPRING-HINGES FOR DOORS &c.

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

I, ALBERT F. SCHIFFLING, of Evansville, county of Vanderburg, State of Indiana, have invented an Improved Spring-Hinge for Doors, &c., of which the following is a specification.

Nature and Object of the Invention.

My invention relates to a hinge, consisting of two sections, one having a cam and the other a plate, which is pressed against the cam, so as to tend to maintain the latter in a certain position; and

My invention consists in constructing the different parts in the peculiar manner fully described hereafter, so as to produce a hinge which is simple in construction, cheap, durable, and not liable to get out of order.

Description of the Accompanying Drawing.

Figure 1 is a sectional view of my improved spring-hinge;

Figure 2, a plan view of the same;

Figure 3, a plan view, partly in section, showing the hinge turned in one direction in full lines, and in the opposite direction in dotted lines; and

Figure 4 is an edge view of a modified form of hinge.

General Description.

A represents the stationary leaf, or that portion of the hinge which is secured to the post or framework to which the gate, door, or shutter is hung; and

B represents the movable leaf of the hinge, pivoted to the pin or projection *a* of the leaf A, and arranged for attachment to the upper or lower edge of the gate, &c., by means of screws or nails, which are passed through holes *b b b* of the said leaf, the strain upon these screws or nails being relieved by lugs *c c* of the hinge, which enter the wood-work of the door or gate.

The stationary leaf A of the hinge consists of three main portions, namely, a tube, *d*, which is inserted into an opening in the post or frame; a flange, d^1, which bears against and is secured to the said post or frame by screws or other fastenings; and a horizontal ledge, d^2, strengthened by side flanges *e*, and supporting the pivot *a*, to which the leaf B is hung.

The latter has at its inner end a cam-like enlargement, B′, flattened in the center at the point *f*, and having rounded ends *f′*.

Against this enlargement bears a flat plate, C, which is secured to or forms part of a rod, C′, adapted to the interior of the tube D, and having coiled upon it a strong spiral spring, *h*, which bears against the rear edge of the tube and against the plate C, and thus has a constant tendency to force the latter toward and hold it tightly against the enlargement B′ of the movable leaf.

This pressure of the plate C against the flat portion *f* of the cam-like enlargement tends to hold the movable leaf firmly in the position shown in figs. 1 and 2, and to consequently retain the door, shutter, or gate to which the said leaf is secured, in a closed position.

The door or gate can, however, be turned in either direction, as indicated by the full and dotted lines in fig. 3, but such motion will cause a pressure of the cam-like enlargement against the plate C, and a consequent forcing back of the latter, and compressing of the spring *h*, so that, when the door is released, the spring thus compressed will act with increased force against the plate C and cam-like enlargement, and will cause an immediate closing of the door, and the action will be the same in whichever direction the door has been turned.

In order to prevent any unequal strain upon or twisting of the plate C, it is provided underneath with a lug, *i*, arranged to slide in a longitudinal slot of the ledge d^2.

The above hinge is, it will be evident, especially applicable to the doors of hotels and restaurants, and to garden or other gates, which it is desirable should be self-closing and capable of being opened in either direction. It can also be applied to doors and gates generally, or to shutters, or, in fact, in any case where it is desirable to use a spring in connection with a hinge.

It is not absolutely necessary that a spiral spring should be used for forcing up the plate C, as any other suitable spring might be substituted for the same; nor is it essential that the leaf B should be arranged for attachment to the top or bottom only of a gate or door, as described, as it can be bent at right angles, as shown in fig. 4, in order to adapt it to the inner edge of the gate, or it might be arranged vertically, or on edge, instead of horizontally, as shown in the first three figures of the drawing, in order to adapt it to the side of the gate.

Claim.

The section A with its tube *d*, flanges d^1 d^2, and pin *a*, in combination with the section B and its cam B′, and with the sliding plate C, operated by a spring, as set forth.

In testimony whereof, I have signed my name to this specification in the presence of two subscribing witnesses.

ALBERT F. SCHIFFLING.

Witnesses:
A. C. ANCONA,
CHAS. HENRY ROBERTS.