L. BOMMER.

SPRING-HINGE.

No. 184,058. Patented Nov. 7, 1876.

Fig: 1.

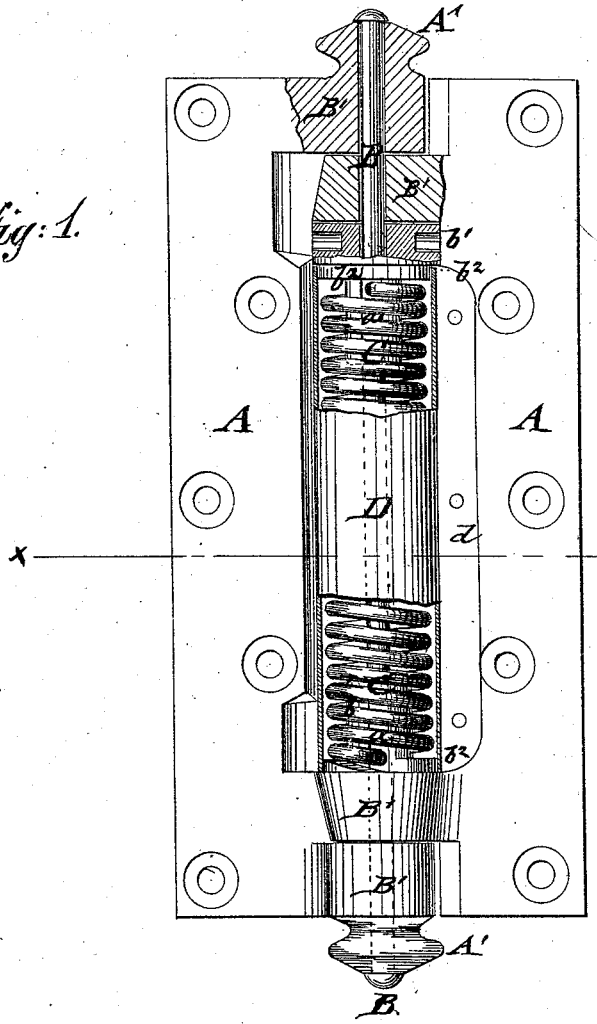


Fig: 3.

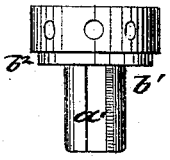
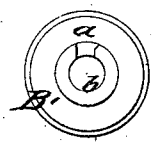


Fig: 4.



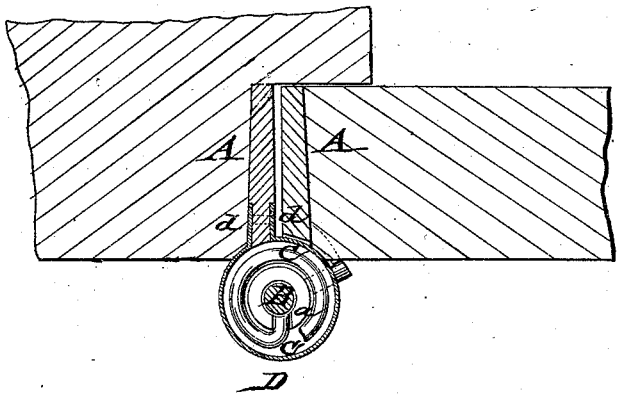


Fig: 2.

WITNESSES:

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UNITED STATES PATENT OFFICE.

LORENZ BOMMER, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN SPRING-HINGES.

Specification forming part of Letters Patent No. **184,058**, dated November 7, 1876; application filed October 14, 1876.

To all whom it may concern:

Be it known that I, LORENZ BOMMER, of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Spring Butt-Hinge, of which the following is a specification:

In the accompanying drawing, Figure 1 represents a front elevation of my improved spring butt-hinge, partly in section; Fig. 2, a horizontal section of the same on line *x x*, Fig. 1; and Figs. 3 and 4 are, respectively, side and top views of the upper and lower pintle-sockets.

Similar letters of reference indicate corresponding parts.

The object of my invention is to furnish an improved spring butt-hinge which closes the door in an easy and noiseless manner, producing reduced friction on the faces of the seats, and being cheap, strong, and effective.

The invention consists in the construction and arrangement of parts which will be hereinafter more fully described, and then pointed out in the claims.

In the drawing, A are the flanges or wings of a butt-hinge, which are connected by a center pintle, B, passing through perforations of the seats B′ of the flanges, and being riveted to the end buttons A′ at the top and bottom of the hinge. The buttons A′ are not made detachable, to be separately applied to the hinge-seats, but cast in one piece with the seats of the swinging flange A applied to the door. This dispenses with the separate casting, finishing, and attaching of the buttons, and imparts, by the greater bearing-surface on the pintle, a more rigid connection with less friction on the faces or bearings of the seats. The hinge is provided with an interior spiral spring, C, that is secured at one end into a slot or recess, *a*, of a socket, *b*, cast with the lower seat B′ of the flange A, attached stationary to the door-casing. The upper end of spiral spring C is secured to a similar recess, *a′*, of a detachable pintle-socket, *b′*, which turns on the pintle during the opening and closing of the door. The tension of the spring C is adjusted in the customary manner by introducing a small rod into one of the radial holes of the movable socket *b′*, and turning the same, inserting a small pin into the hole nearest to a raised part of the swinging door-flange. The flange of the door bears then, in opening, against the pin, twisting thereby the spring, and closes the door by the reaction of the same. The spiral spring C is inclosed by a cylindrical sleeve, D, that is accurately fitted to annular recesses b^2 of the movable pintle-socket b^1 and of the fixed socket *b* of the seat of the stationary flange A. The sleeve D is open at the side and provided with side flanges *d* that extend into recesses at both sides of the stationary flange being riveted flush with the same. The sleeve D serves to strengthen the flanges A, secures the position of the movable socket *b′*, and incloses and keeps out the dust from the interior of the hinge.

The spring butt-hinge of this construction is cheaper, stronger, and less liable to friction and sagging of the door than similar butt-hinges heretofore patented.

The butt-hinge may be applied to any side of the casing and in reversed position.

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

1. In a butt-hinge, a flange or wing-plate, A, being cast in one piece with the ornamental top and bottom buttons of the hinge, substantially as and for the purpose described.

2. The supporting-flange A, having fixed pintle-socket and detachable top socket, both provided with annular recesses, in combination with an incasing-sleeve, C, riveted to flange A, for the purpose specified.

LORENZ BOMMER.

Witnesses:

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C. SEDGWICK.