L. BOMMER.

Spring-Hinge.

No. 228,304. Patented June 1, 1880.

Fig: 1.

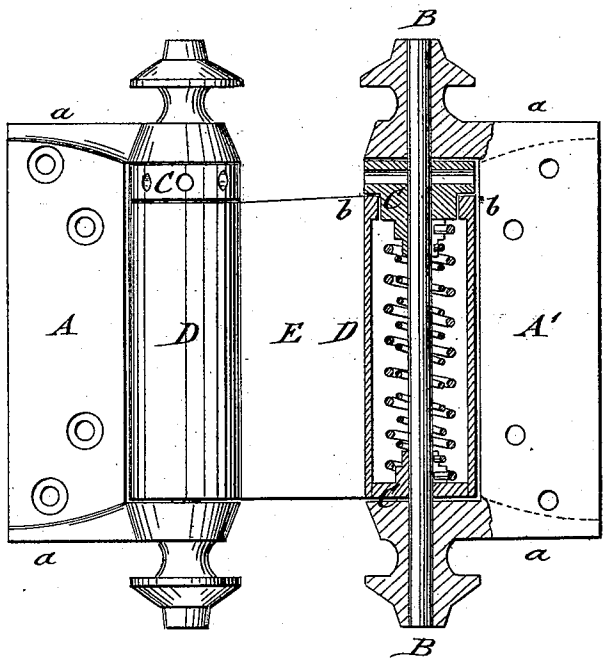


Fig: 2.

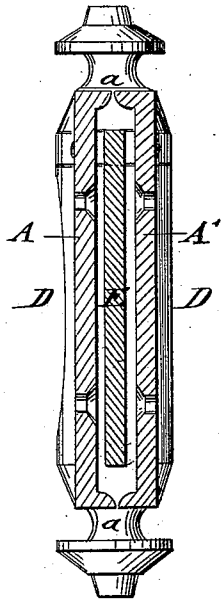


Fig: 4.

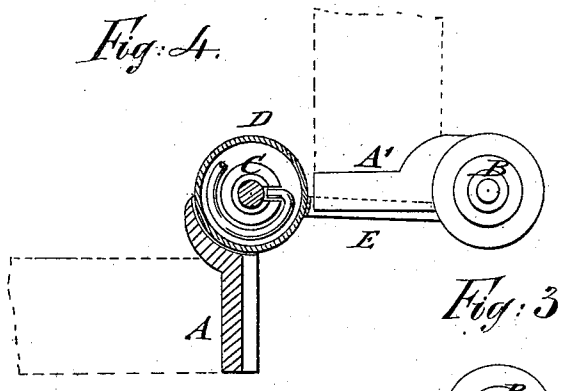


Fig: 3

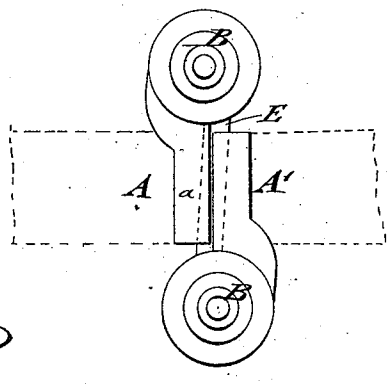
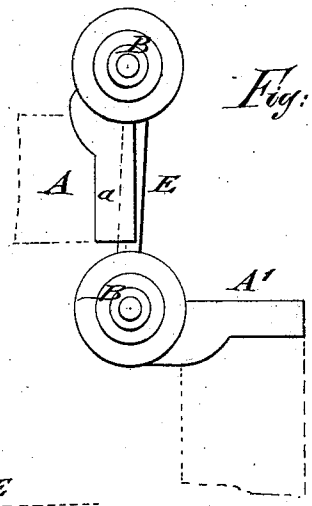


Fig: 5.



WITNESSES:

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LORENZ BOMMER, OF BROOKLYN, NEW YORK.

SPRING-HINGE.

SPECIFICATION forming part of Letters Patent No. 228,304, dated June 1, 1880.

Application filed February 28, 1880.

To all whom it may concern:

Be it known that I, LORENZ BOMMER, of the city of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Spring-Hinges, of which the following is a specification.

In the accompanying drawings, Figure 1 represents a side elevation of my improved spring-hinge, shown as opened and partly in section. Fig. 2 is a vertical transverse section of the hinge as folded up; and Figs. 3, 4, and 5 are top views of the same, showing it respectively in closed and open positions.

Similar letters of reference indicate corresponding parts.

The invention relates to improvements in double-acting spring-hinges, by which the attaching of the hinges to the doors and jambs is facilitated and the same made stronger and more durable.

Hitherto carpenters and others have experienced considerable difficulty in hanging doors by double-acted spring-hinges, owing to the uncertainty as to what depth the door-jamb and door had to be recessed for the leaves of the hinge. This I have aimed to overcome by providing each leaf with a gage at the upper and lower ends, by which the depth of the recess is clearly indicated.

The invention consists, further, in providing the inclosing-barrel of each hinge-section at the upper part with an interior shoulder, on which the upper adjustable pintle-socket rests by means of an annular seat, so as to furnish a good support and exert less wear on the same.

Referring to the drawings, A A′ represent the leaves or wings of my improved double-acting spring-hinge, of which one leaf, A, is screwed fast to the jamb of the door, while the other, A′, is screwed to the door itself.

The leaves are connected in the usual manner by pintles B, which pass through the pintle-sockets C to the inclosing-barrels D of the swinging connecting-plate E. The lower pintle-sockets are riveted or otherwise fastened to the barrels, while the upper pintle-sockets turn loosely in the same and serve to adjust the tension of the actuating-springs, which are arranged at the interior of the barrels and secured to center recesses of the pintle-sockets in the usual manner.

By axially turning the upper sockets with a lever-pin inserted into one of its radial holes the tension of the springs may be increased or relaxed, as required.

For the purpose of guiding the carpenter or other person in hanging the door properly to the spring-hinges the leaves are provided at their upper and lower edges with raised flanges or gages *a a*, which indicate the depth of the recesses to be cut into the jamb and door for properly hanging the door. These gages are cast or otherwise applied to the leaves, and form a simple but very important improvement in spring-hinges. They may also be used with advantage for the common double-acting hinges.

The swinging plate E is either cast in one piece with the barrels of the hinge-sections, or it is made of one or more layers of sheet metal, which are riveted or otherwise fastened to the barrels.

The inclosing-barrels D are made of one continuous piece throughout their entire length without being recessed, so as to interlock with sleeves of the leaves, as has been the case heretofore in double-acting spring-hinges.

An interior shoulder or collar, *b*, is arranged at the upper edge of each sleeve to give a broader support for the upper pintle-socket, which is provided with an annular recess of corresponding size. This supporting-shoulder prevents the too rapid wear at this point and imparts greater strength to the sleeve.

When the door is thrown into closed position by the action of the interior springs of the hinge the gages come in contact with each other above and below the connecting-plate E, as shown in Figs. 2 and 3, and hold thus the door reliably to the jamb, admitting thus the close fitting of the door thereto.

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

1. In a double-acting spring-hinge, the leaves or wings of the hinge, provided with raised flanges or gages at that side at which they are connected to the door and jamb to gage depth of recess for the leaves, substantially as set forth.

2. In a double-acting spring-hinge, the barrels covering entirely both springs of the hinge and connected by a center plate made in one piece therewith, substantially as described.

3. In a spring-hinge, the combination of the leaf and connecting-pintle with an inclosing-barrel for the springs, said barrel having an interior shoulder, and with an adjustable pintle-socket having an annular recessed seat, substantially as specified.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 24th day of February, 1880.

LORENZ BOMMER.

Witnesses:
PAUL GOEPEL,
CARL KARP.