No. 695,706. Patented Mar. 18, 1902.

E. BOMMER.

SPRING HINGE.

(Application filed Feb. 14, 1901.)

(No Model.)

Fig: 1.

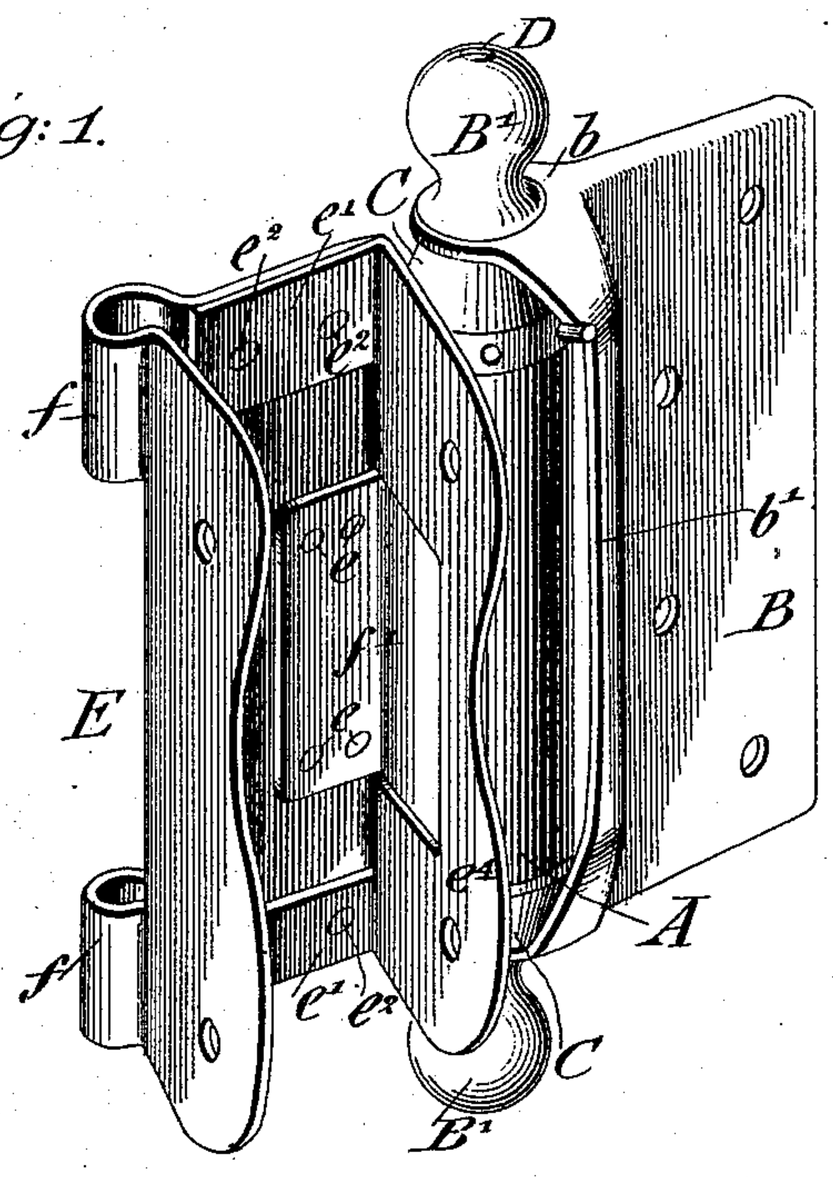


Fig: 3.

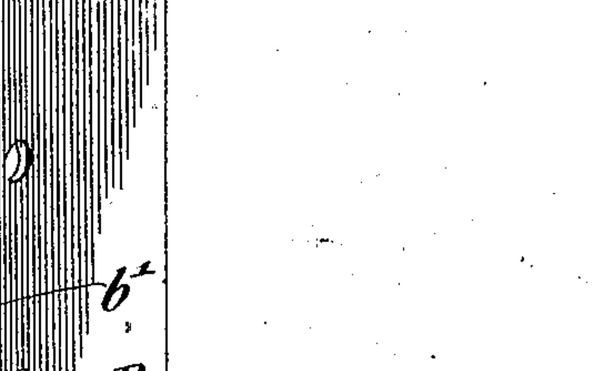


Fig: 2.

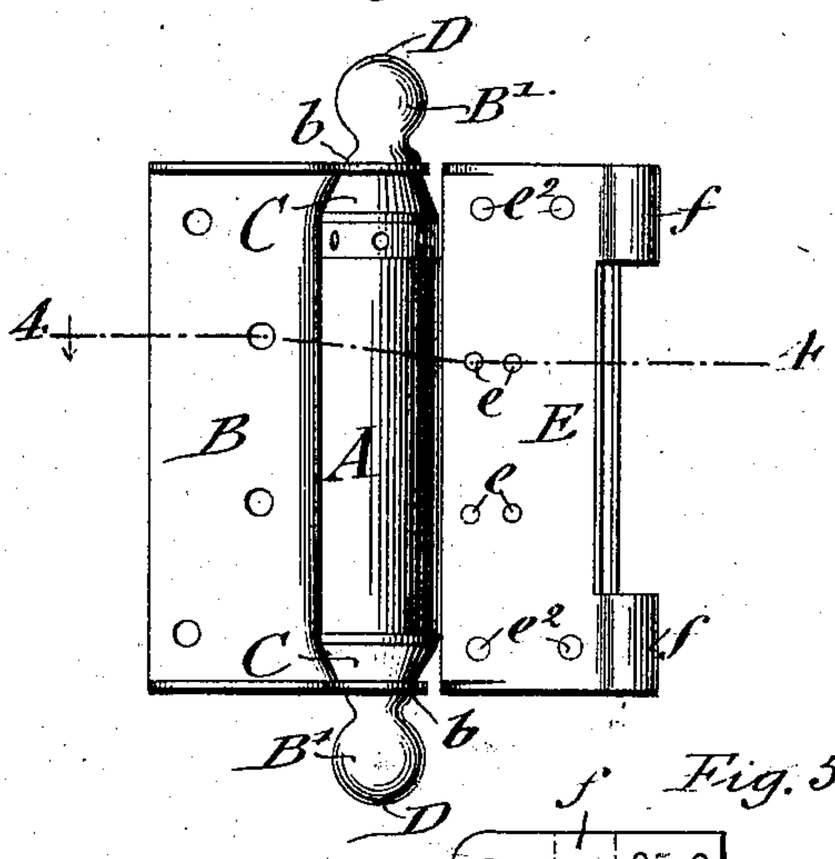


Fig: 4.

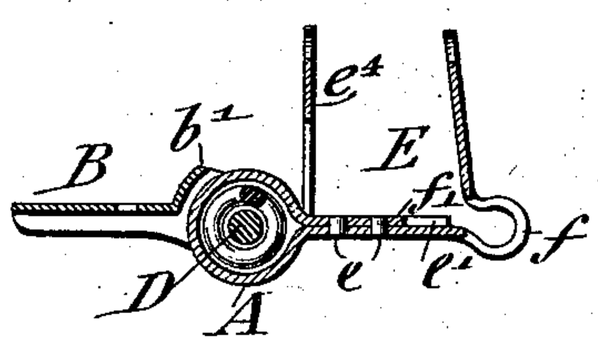
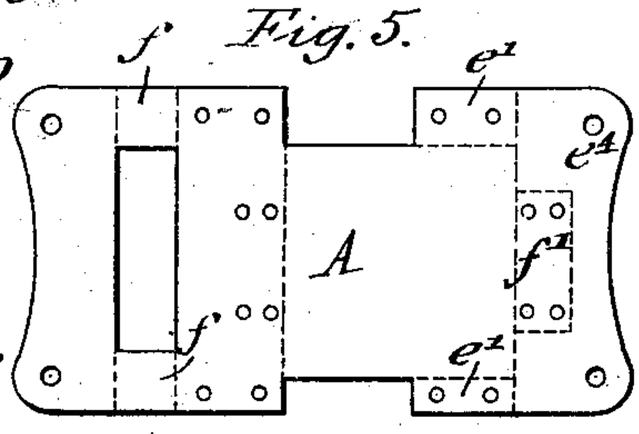


Fig: 5.



Witnesses:
John C. Rennie.
Joseph H. Niles.

Inventor:
Emil Bommer,
By Goepel & Wahle
Attorneys.

UNITED STATES PATENT OFFICE.

EMIL BOMMER, OF BROOKLYN, NEW YORK.

SPRING-HINGE.

SPECIFICATION forming part of Letters Patent No. 695,706, dated March 18, 1902.

Application filed February 14, 1901. Serial No. 47,311. (No model.)

To all whom it may concern:

Be it known that I, EMIL BOMMER, a citizen of the United States, residing in New York, borough of Brooklyn, in the State of New York, have invented certain new and useful Improvements in Spring-Hinges, of which the following is a specification.

This invention relates to improvements in spring-hinges, and more especially to improvements in the spring-hinges known as "box-flanged spring-hinges," which are applied to the marble, slate, or other partitions of water-closets, for the purpose of supporting the door when closed flush with the front edge of the partition; and the invention consists of a spring-hinge in which one flange is applied to the door, while the other flange is made box-shaped in one piece with the barrel of the spring-hinge and provided with means whereby the hinge can be adjusted to a partition of any thickness.

The invention consists, further, of a box-flanged spring-hinge in which the box-flange is made in one integral piece with the barrel of the spring-hinge, the box-flange being formed by the extensions of the edges of the barrel, which are riveted together at the back portion of the box-flange, as will be fully described hereinafter and finally pointed out in the claims.

In the accompanying drawings, Figure 1 represents a perspective view of my improved box-flanged spring-hinge. Fig. 2 is a rear elevation of the same. Fig. 3 is a top view. Fig. 4 is a horizontal section on line 4 4, Fig. 2; and Fig. 5 is a plan of the blank from which the barrel and box-flange are made.

Similar letters of reference indicate corresponding parts.

Referring to the drawings, A indicates the barrel of a spring-hinge, and B one flange of the same, which is provided with perforated ears *b*, that are bent up at right angles to the upper and lower edges of the flange B and with a stop-flange *b'*, that connects the perforated ears, as shown clearly in Fig. 1. The perforated ears are retained on the spring-barrel of the hinge between the ball-shaped terminals B' of the pintle D and the pintle-sockets C. The barrel A is made integral with the second flange E of the hinge, which is made in the form of a box-flange of approximately U shape, the outer portion of the same being connected to the back of the box-flange by partially-circular portions *f* at the upper and lower ends, which permit the outward or inward adjustment of the outer portion by bending the partially-circular portions *f* in order to be adjusted to different thicknesses of marble, slate, or other partitions, as shown by dotted lines in Fig. 3. The spring-barrel A and the box-flange E are stamped up by means of dies from one piece of sheet metal in the form shown in Fig. 5. One edge of the spring-barrel is connected with the back and outer portion of the box-flange, while the opposite end is connected with the inner portion of the box-flange, the middle portion *f'* being cut out and bent over upon the body of the box-flange and connected thereto by rivets *e*, as shown in Figs. 1, 2, and 4. The upper edges of the inner portion of the box-flange adjacent to the spring-barrel have extensions *e'*, which are connected by rivets e^2 to the back of the box-flange, so that thereby a rigid connection of the box-flange with the barrel is obtained. The portion of the box-flange adjacent to the barrel, comprising the extensions *e'* and e^4, may instead of being made integral be made of an independent piece of metal bent in proper shape and riveted to the back of the box-flange.

The advantages of my improved box-flanged spring-hinge are that a more reliable connection of the barrel and box-flange is obtained than when the barrel and flange are made up of separate pieces and connected together; secondly, that the expense of manufacture is much reduced, while at the same time a stronger hinge is produced; thirdly, that the hinge is adapted to be applied to various thicknesses of partitions, the outer portion of the box-flange being adjustable to partitions of various thickness by changing the curvature of the partially-circular portions *f*. The flanges of the spring-hinge, with the spring-barrel, can be struck up in one piece, by means of dies, from sheet metal, so that sheet metal is used in place of cast metal for the manufacture of these hinges, and thereby a box-flanged spring-hinge of approximately the same strength as similar spring-hinges

made of cast metal and one which is better adapted to the various requirements of the trade is produced.

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

1. A spring-hinge for hanging doors to marble and other partitions, provided with a spring-barrel, a flange having perforated ears bent over at the upper and lower edges of the barrel, a box-flange made integral with said spring-barrel, and partially-circular portions connecting the outer leaf and the back of said box-flange, substantially as set forth.

2. A spring-hinge for hanging doors to marble and other partitions, consisting of a spring-barrel, pintle-sockets at the upper and lower ends of said spring-barrel, a flange provided with bent perforated ears, a pintle passing through the ears and pintle-sockets, and a U-shaped box-flange made integral with the spring-barrel, portions of said box-flange at one side of the barrel being connected with the back of the box-flange, and other portions of the same side bent up to form the leaf adjacent to the barrel, substantially as set forth.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

EMIL BOMMER.

Witnesses:
PAUL GOEPEL,
JOSEPH H. NILES.