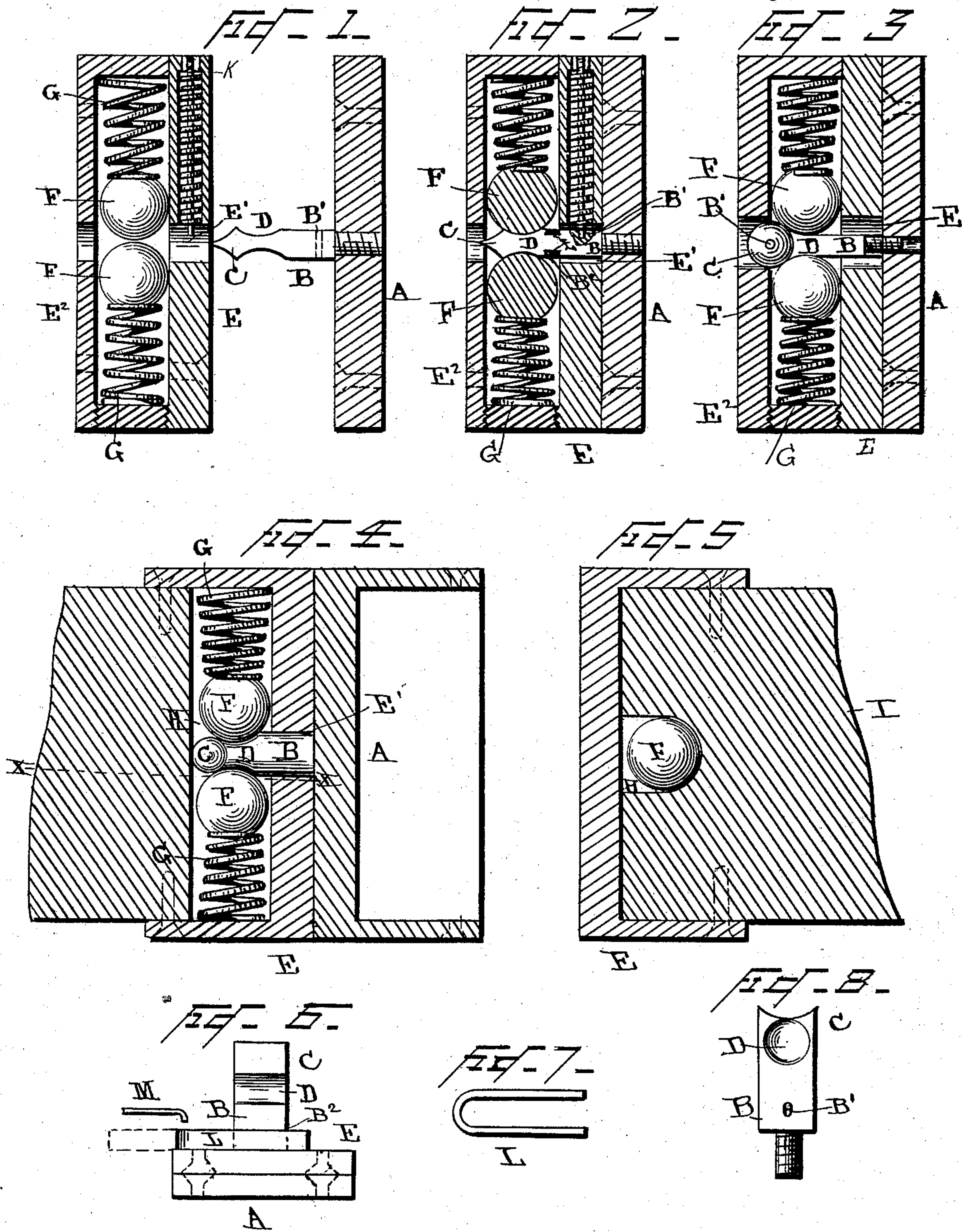


(No Model.)

L. E. HARVIE.
COUPLING FOR FURNITURE.

No. 406,731.

Patented July 9, 1889.



Witnesses
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UNITED STATES PATENT OFFICE.

LEWIS E. HARVIE, OF FRANKFORT, KENTUCKY.

COUPLING FOR FURNITURE.

SPECIFICATION forming part of Letters Patent No. 406,731, dated July 9, 1889.

Application filed December 19, 1888. Serial No. 294,059. (No model.)

To all whom it may concern:

Be it known that I, LEWIS E. HARVIE, residing at Frankfort, in the county of Franklin and State of Kentucky, have invented certain new and useful Improvements in Couplings for Furniture, &c., of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to couplings, catches, or clasps by which the parts of an object—as a piece of furniture—may be united together.

The object of the invention is to construct couplings by means of which the legs and other parts of chairs, tables, bedsteads, &c., may be attached and detached, or any other parts of furniture and analogous articles may be made removable and replaceable and by which the parts may be held together firmly.

The invention consists in a spring clasp and catch of the general character hereinafter described, and a positive locking device connected thereto, to be used when considered desirable.

Figure 1 is a central section of a coupling device made according to this invention, the parts being uncoupled. Fig. 2 is a similar section of a modification, the parts coupled and an additional locking-catch applied. Fig. 3 is a similar section showing spherical head to coupling-catch. Fig. 4 is a similar section showing sockets added to coupling-plates. Fig. 5 is a section on line *x x*, Fig. 4. Fig. 6 is an end view of coupling-plates with a locking-loop engaging the catch. Figs. 7 and 8 are details hereinafter referred to.

A indicates a metallic plate or socket. The plate or socket may be attached to a chair or table leg, a portion of a box, or any other article or thing of like character the parts of which are united together. The outline of the part A will be determined by the article to which it is to be attached. One face of plate A will be flat and will be provided with a projecting catch B, (flat, pointed, or rounded,) which catch may be attached by a screw-thread or in other convenient manner to plate A, or may be integral with plate A, or a plurality of such catches may be applied to plate A. The end of catch B away from plate A has a ball, arrow-head, or other enlargement C, and a narrower or thinner neck D

behind the same. The plate E corresponds generally to plate A in outline, but has a hole E', to receive each projection B on plate A.

Behind plate E and in close proximity thereto are clasp-pieces F F. These pieces F are pressed toward the axial line of the holes in the plate E by springs G G. The pieces F, which may be balls, short cylinders, or equivalents, which present an inclined engaging-surface and not a positive lock, are held in a recess H in the table-leg I or other article to which the clasp is applied, or may be held between plate E and an inclosing casing E².

With the construction so far described it will be apparent that when the catch B is passed through the hole in plate E until the plates A and E are in contact the catch B will be embraced between the balls, cylinders, or other pieces F, and will be held by these pieces F, entering the depressions D with a force proportioned to the strength of the springs G G, but may be drawn out by the exertion of a force sufficient to overcome said springs.

To lock the two parts of the coupling permanently a further locking device is employed. The catch B may be perforated in either direction, as at B', or may have notches B² cut in its sides.

A bolt K, actuated by a spring or otherwise, can be placed in a recess in plate E, or may be placed alongside said plate in position to enter the hole B' in catch B. It will be apparent that this bolt may be in any convenient place, the hole in catch B being in corresponding position.

The bolt K may be actuated by a key, which makes engagement therewith in any manner common in actuating locking-bolts.

Instead of a single bolt, a double bolt or loop L, Figs. 2, 6, and 7, may be made to engage notches B² in the sides of catch B, and this bolt may be drawn out or pressed in by a hook M. Other common forms of locking device may be used.

Fig. 8 shows a form of catch B which may be used, in which the balls F find seats in the recess D.

It will be understood that the pieces F may, if desired, be permanently attached to springs G; that a worn spring, ball, or cylinder may be replaced with a new one; that a friction-

ball may be substituted for a friction-cylinder, and vice versa, and that a small ball at end of catch may be substituted for an arrow-head, and vice versa, at any time so desired.

5 This device may be used for fastening almost any kind of solid bodies together, so as to hold them merely clasped, or absolutely closed with a positive lock, unless a key is applied or some part should break.

10 The hole or mortise E' may be made to fit closely to the shank of catch B, and if the catch is polygonal in cross-section no rocking of the parts will be permitted.

When the catch B is made to screw into plate A, it is apparent that it may be adjusted so that the pieces F will have more or less bearing on the catch. Thus in Fig. 3 the ball C may be set in such position as to lie almost between the centers of balls F F when the coupling is closed, when of course the coupling would be easily pulled apart.

I am aware that door-checks and the like have been made with an arrow-head or similar catch or hasp which passed between spring-pressed clasps to retain the same. In such, however, the supporting-plates did not abut, so that the holding devices were not supported against any movement other than a direct withdrawal of the catch, as in my device.

30 I claim—

1. In a furniture or similar joint, the combination, with a coupling-plate, of a projecting catch having an enlarged head and inclined neck behind the same, a second perforated plate having its face bearing on the first when the coupling is closed, and a pair of spring-pressed clasps behind said second plate in position to bear on the inclined neck of the catch, substantially as described.

2. In a furniture-joint, the combination, 40 with a plate having a projecting catch provided with enlarged head and inclined neck, of a second plate having a hole through which said catch passes, so that the two plates abut when the joint is closed, and spring-pressed 45 balls or cylinders connected to said second plate in position to bear on the inclined neck at both sides of the head of the catch, all substantially as described.

3. In a furniture-joint, the combination of a 50 coupling-plate having a projecting catch with enlarged end and inclined neck, a second perforated plate which receives the catch and bears on the first when the coupling is closed, spring-pressed clasps connected to the second 55 plate in position to bear on the inclined neck of the catch when the coupling is closed, and a positive lock, also in position to engage said catch and hold the coupling-plates in contact, all substantially as stated. 60

4. In a furniture-joint, a coupling-plate having a catch adjustably connected thereto, said catch having enlarged head and inclined neck, and a second perforated plate which 65 bears on the first when the coupling is closed, said second plate having spring-pressed clasps in position to engage the inclined neck of the catch when the coupling is closed, all combined and relatively arranged substantially as described. 70

In testimony whereof I affix my signature in presence of two witnesses.

LEWIS E. HARVIE.

Witnesses:

W. A. BARTLETT,
PHILIP MAURO.