(No Model.)

J. C. KOCH.

CLASP FOR ALBUMS, BOOKS, BOXES, &c.

No. 421,174. Patented Feb. 11, 1890.

Fig. 1.

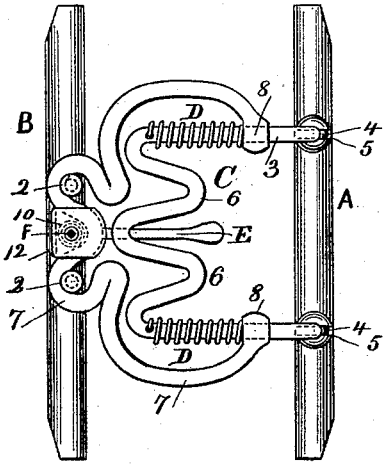
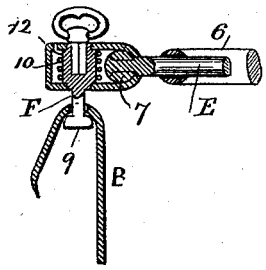


Fig. 3.



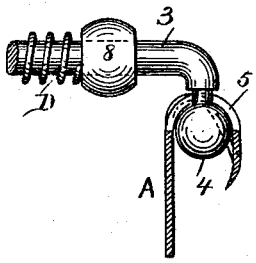
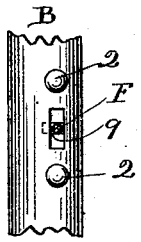


Fig. 2.

Fig. 4



Witnesses
Chas. H. Smith
J. Hall

Inventor
John Caspar Koch.
per Lemuel W. Serrell
atty

UNITED STATES PATENT OFFICE.

JOHN C. KOCH, OF BERLIN, GERMANY.

CLASP FOR ALBUMS, BOOKS, BOXES, &c.

SPECIFICATION forming part of Letters Patent No. 421,174, dated February 11, 1890.

Application filed October 19, 1889. Serial No. 327,546. (No model.)

To all whom it may concern:

Be it known that I, JOHN CASPAR KOCH, a citizen of the United States, residing in Berlin, Prussia, have invented an Improvement in Clasps for Albums, Books, Boxes, &c., of which the following is a specification.

In album-clasps heretofore constructed clip-plates have been employed, one upon each cover of the album, and to one of the clip-plates a swinging clasp is hinged, and the swinging end of the clasp connects with a stud on the other clip-plate. The hinges by which the swinging clasp is connected to one of the clip-plates have been made in a variety of forms; but they are often objectionable in appearance or expensive to manufacture. In my improvement the hinge uniting the clasp to the clip-plate is formed by a globular or cylindrical segment within the edge of the clip-plate, connected to the swinging clasp through transverse segmental slots in the edge of the clip-plate, and the clasp itself is extensible, one part sliding on the other and guided by a central rod that occupies a position triangular to the expansible springs, so that the extensible portion of the clasp is reliably guided and cannot become bound or wedged by a lateral movement, and I provide a locking-button which serves to prevent the clasp being accidentally opened in handling, or opened by a child or inexperienced person.

In the drawings, Figure 1 is a plan view representing my improved clasp. Fig. 2 is a section, in larger size, of the hinge. Fig. 3 is a section, also in larger size, of the locking device. Fig. 4 is a plan of a portion of one of the clips with the stem of the locking device in section.

The clip-plates A B are adapted to be fastened upon the edge of the album-cover in any usual manner, and upon the clip-plate B are the studs 2 for the moving end of the clasp to be hooked over.

The swinging clasp C is made with the parallel side bars 3, having globular or cylindrical ends 4, which are within the folded portion of the clip-plate A, there being transverse slots 5 in the clip-plate for the neck or reduced portion of the side bars 3 at their junction with the ends 4, so that such globular or cylindrical ends 4 are free to turn within the fold of the clip-plate as the clasp is swung, the neck portions of the parallel bars moving within the transverse slots. The sheet metal of the clip-plate A is pressed upwardly to form projections that contain the globular ends 4, either partially or entirely, and in order to prevent the globular ends 4 coming into contact with the edge of the album-cover such cover may be notched before the clip-plate is fastened to the same.

The parallel side bars 3 are preferably of wire, and united by the zigzag portion 6 of such wire, and around the parallel side bars 3 are expansive helical springs D, and the extensible portion of the swinging clasp C is formed of a wire bow 7, having at its ends collars 8, that slide freely around the parallel side bars 3, and they are acted upon by the expansive helical springs D to draw the wire bow 7 toward the other portion of the expansible clasp and draw the covers of the album toward each other when such wire bow is hooked over the studs 2 on the clip-plate B.

It is important to insure the parallel movement of the wire bow in the same plane as the side bars 3 of the swinging clasp. To effect this object, I perforate the wire at the center of the zigzag portion 6 and pass through the same a guide-bar E, the end of which is permanently fastened to the center portion of the wire bow 7, and it will be apparent that the hole through which the guide-bar E passes occupies a triangular position to the collars 8; hence the wire bow 7 is retained in the same plane as the parallel side bars, and there is no opportunity for the wire bow to move laterally in such plane, because the guide-bar E prevents such lateral motion; hence the movement of the wire bow will be parallel to the side bars 3, and it is not liable to become twisted or obstructed in its movement. I make use of a turn-button F, having a T-head 9, adapted to pass into the mortise in the clip-plate B, and there is around the shank of the turn-button a helical spring 10, one end of which is fastened to the turn-button and the other end to the wire bow 7 or at a hole in the small metal plate 12, fastened to the bow 7, and the tendency of the spring 10 to hold the T-head 9 at right angles to the mortise in the clip-plate B; hence to disconnect the parts the turn-button has to be partially revolved by hand against the action of the spring, and

this motion is given to the turn-button before the parts are brought together for the T-head to pass into the mortise in the clip-plate B, and the spring then turns the button so that the T-head is at right angles to the mortise in the plate, thus holding the parts in position, and until the turn-button is moved to bring the T-head into line with the slot in the clip-plate. The turn-button may have a movable key entering a square hole in the stem of the turn-button, as shown, or the head and stem of the turn-button may be in one piece.

I claim as my invention—

1. The swinging clasp having side bars with contracted necks and enlarged and laterally-projecting ends, in combination with a sheet-metal clip-plate recessed for the reception of the projecting ends and slotted transversely for the necks that join the side bars with the projecting ends, substantially as specified.

2. A swinging clasp having parallel side bars 3 3, in combination with the helical springs around the parallel side bars, the wire bow 7, having collars around such side bars, and the guide-bar E, connected with the wire bow and passing through the zigzag portion 6, that connects the parallel side bars, substantially as set forth.

3. The combination, with the swinging clasp, of the expansive helical springs, the wire bow having collars around the parallel side bars of the swinging clasp, and a turn-button having a T-head adapted to hold the wire bow to the clip-plate, substantially as set forth.

Signed by me this 16th day of October, 1889.

JOHN C. KOCH.

Witnesses:

GEO. T. PINCKNEY,

WILLIAM G. MOTT.