F. E. S. CRANE.

Bolt.

No. 167,828. Patented Sept. 21, 1875.

Fig. 1.

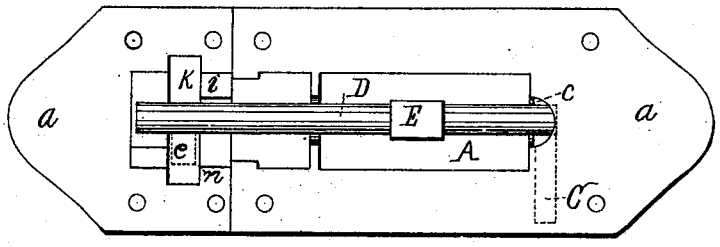
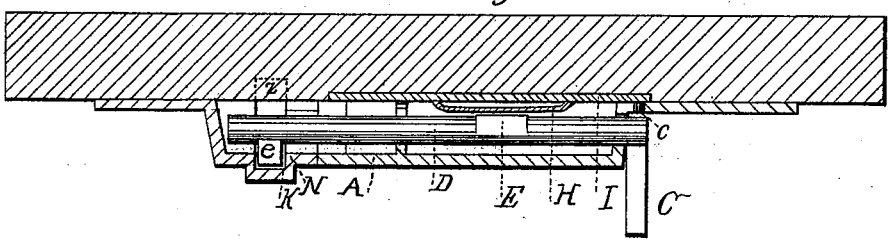


Fig. 2.



Witnesses.
Chas. A. Gill
W. Hendley

Inventor.
Francis E. S. Crane
by his Attys.
Cox & Cox

UNITED STATES PATENT OFFICE.

FRANCIS E. S. CRANE, OF NEWARK, NEW JERSEY, ASSIGNOR OF ONE-HALF HIS RIGHT TO EDWIN D. PARKHURST, OF SAME PLACE.

IMPROVEMENT IN BOLTS.

Specification forming part of Letters Patent No. **167,828**, dated September 21, 1875; application filed May 13, 1875.

To all whom it may concern:

Be it known that I, FRANCIS E. S. CRANE, of Newark, New Jersey, have invented a new and useful Improvement in Sliding Catches or Bolts, of which the following is a specification:

The invention has relation to that class of devices which have for their object the connecting together of two parts or bodies in such manner that the connection may be readily applied or freed at will. It is adapted to divers uses, and may be employed in a variety of ways, as will more fully appear hereinafter.

A case is provided, having a base-plate, by means of which it is attached to any object. In the rear portion of the case an aperture is cut, through which projects the thumb-piece of a bolt, which, operating within the case, extends beyond the mouth thereof a sufficient distance to engage a projection in a corresponding case or box of smaller proportions, as hereinafter more fully set forth. The projecting end of the bolt is provided with a ward that occupies substantially the same plane as the thumb-piece at its other extremity, and adjacent to its central part is a block or section having three flat sides, which are upon the surfaces of the bolt not between the ward and thumb-piece. Directly below and in contact with the block or section fitting within the case is an elastic metallic piece, which fulfils the offices of a spring, and below the whole a plate which serves to retain the bolt and spring in place. The corresponding case or keeper hereinbefore alluded to is arranged with relation to the ward of the bolt so that when the latter is in one position the case or keeper may be removed at will, and when in another is held by the ward and bolt, and the parts or objects to which the two are attached thus securely connected with each other.

The details of construction and operation are described in the specific explanation of the same hereinafter and definitely claimed.

In the accompanying drawings, Figure 1 is plan view of the bottom of the device with the spring removed. Fig. 2 is a longitudinal central section of a device embodying the elements of the invention.

A denotes the principal case, which is provided with the base-plate *a*, by which it is attached to the object upon which it is employed. At the rear of the case is cut the aperture *c*, which is of such diameter and size that the thumb-piece C of the bolt D may be passed through it when the parts are disconnected. The rotating bolt D is provided, at any point within the case A, with the section or block E, which has three flat surfaces that are at about right angles to each other, and in planes that are removed from the planes that pass through the ward *e* and thumb-piece C, being formed by flattening the sides of the bolt, or otherwise, in any convenient manner. One end of the bolt D projects beyond the mouth of the case, and is provided with a ward, *e*, near its termination. Fitted within the case, in a compartment formed by the partition *b*, is the elastic metallic piece or spring H, below which, provided with apertures that are coincident with the apertures in the base-plate of the case, is the plate I, which is designed to hold the parts in place, and to enhance their operation.

The elements above described are attached, as set forth, to the principal part or object, while that about to be described is attached to the subordinate part or object. Thus, the former would be secured to the body of a trunk, and the latter to the top or lid; but the two may be employed at will, according to circumstances, and as may be deemed expedient. K is a case or keeper, which corresponds, in its general exterior appearance, with the rear part of the case A. Its mouth is of the same size and shape as that of the case, except that it is reduced by the projection *i*, which occupies one side. The construction of the interior of the case or keeper K, and the relations of the bolt and ward thereto, are clearly shown in Fig. 2 of the drawings. The raised part *k* is of sufficient depth to afford a sweep for the ward *e*, while the projections *i* and *n* render the locking of the parts effectual and snug. If desired, an open space or slot, *z*, may be cut in the box to afford a sweep for the ward *e*, as shown at Fig. 2. The allocation and proportions of the

other elements, and the details of construction, are also illustrated and explained by said Fig. 2 and the other views.

The device is operated as follows: The thumb-piece being thrown to the right the bolt D may be inserted or withdrawn from the case or keeper K at pleasure; but upon the bolt being inserted and thumb-piece carried over to the left the ward *e* is thrown beyond the projection *i*, and the two parts thus securely held together. The spring H serves, in combination with the block or section E, to hold the bolt firmly in place, operating in a manner that will be readily understood.

The details of construction may be varied without materially departing from the construction and arrangement above described.

What I claim as new, and desire to secure by Letters Patent, is—

1. The combination of the rotating bolt D, provided with thumb-piece C and flattened section E, the spring H, and the case A, as and for the purpose specified.

2. In combination, the bolt D, having thumb-piece C, ward *e*, and section E, the spring H, the case A, and the case or keeper K, having projection *i* and raised part *k*, all substantially as and for the purpose set forth.

In testimony that I claim the foregoing improvement in sliding catches, as above described, I have hereunto set my hand and seal this 26th day of April, 1875.

FRANCIS E. S. CRANE. [L. S.]

Witnesses:
JOHN R. ELLIOTT,
F. M. TICHENOR.