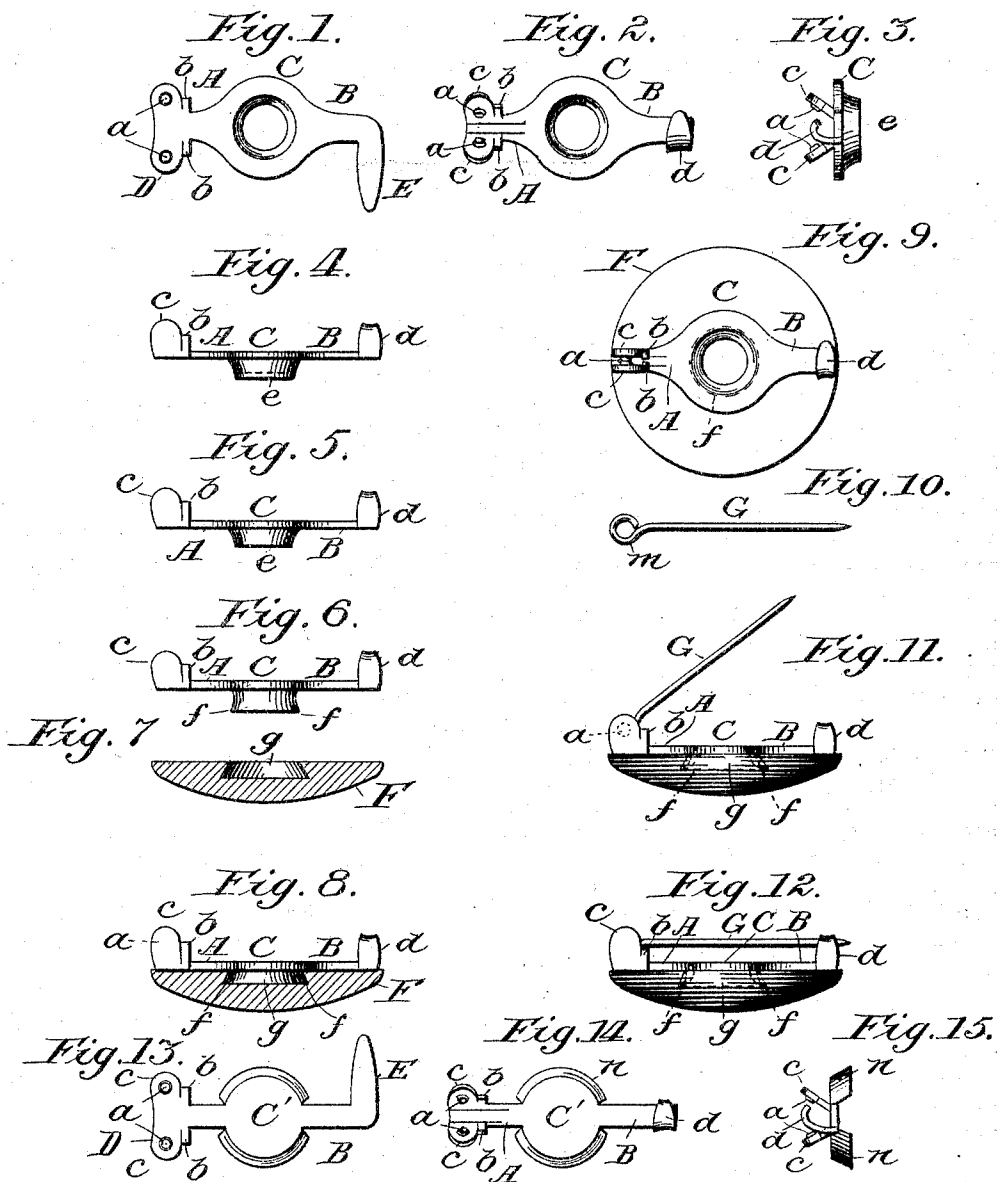


F. E. FARNHAM.

PIN FASTENER.

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UNITED STATES PATENT OFFICE.

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PIN-FASTENER.

SPECIFICATION forming part of Letters Patent No. 783,941, dated February 28, 1905.

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To all whom it may concern:

Be it known that I, FRANK E. FARNHAM, a citizen of the United States, residing at Providence, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Pin-Fasteners, of which the following is a specification, reference being had therein to the accompanying drawings.

10 Like letters indicate like parts.

Figure 1 is a plan of the blank after it has been cut from a strip of sheet metal, but before it is bent into shape. Fig. 2 is a plan of the same after the pin-catch and ear-pieces 15 have been bent into shape and the center has been perforated. Fig. 3 is an end elevation of said bent-up blank. Fig. 4 is a side elevation of my improved pin-fastener before the center thereof has been cut out. Fig. 5 is a side elevation of the same after the center has been cut out. Fig. 6 is a side elevation of the same after its central annular flange has been spread or flared outwardly. Fig. 7 is a diametrical section of a button-head having a 25 central circular undercut socket or recess to receive the central annular flange of my improved pin-fastener. Fig. 8 shows said pin-fastener secured in position upon the button-head in the socket or recess thereof, said pin-fastener being shown in side elevation and the button being shown in diametrical section. Fig. 9 is a plan view of my improved pin-fastener in position upon the back side of the button. Fig. 10 is a side elevation of the pin 30 used in said device. Fig. 11 is a side elevation of a button provided with my improved pin-fastener, the pin-tongue being disengaged from the pin-catch. Fig. 12 is a side elevation of the same with the end of the pin-tongue 40 engaged with the pin-catch. Figs. 13, 14, and 15 show modified forms of my said invention.

My invention relates to the class of pin-fasteners; and it consists of the novel construction and combination of the several elements 45 all formed integral of one piece of sheet metal, as hereinafter more particularly described, and specifically set forth in the claims.

From a strip of sheet metal I cut by a suitable die and plunger a blank of the shape 50 shown in Fig. 1, consisting of a bar A B, hav-

ing a central circular enlargement C, which is cupped, a transversely-directed head D at the outer end of the bar A, and a foot or transverse piece E at the outer end of the bar B, all these being made of one piece of metal. 55 The head D has formed thereon two pivot projections *a a* and two projections or stops *b b*. This piece after it has been cut from the sheet stock and as a part of the same operation has its head D bent, as shown in Fig. 2, 60 (but best in Fig. 3,) so as to stand angularly but divergingly out from the bar A to form ear-pieces *c c*. The foot E is transversely curved and longitudinally bent to form a rigid pin-catch *d*, and the central circular portion 65 C is cupped, as seen in Figs. 3, 4, 5, and 6. As shown in Fig. 4 the cupped portion C has an integral bottom *e*; but this bottom *e* is cut out, leaving an annular edge, as shown in Fig. 5. This annular edge is drawn out to form a 70 flaring sharp-edged annular flange *f*, as shown in Fig. 6.

In Fig. 7 is shown a circular button-head F, preferably made of mother-of-pearl and having a central circular recess or socket *g*, 75 whose edge is undercut all around. The annular flaring flange *f* is inserted in the circular undercut recess or socket *g* of the button F, and by pressure applied by suitable means the annular flange *f* is spread radially to underlie and engage the dovetailed edge of the undercut recess or groove *g* of the button, and so the pin-fastening and button are secured together, as illustrated in Figs. 8 and 9. 80 The pin-tongue G has an eye *m*. The ear-pieces *c c* are pinched or bent together, so as to be substantially at right angles with the portion A of the bar and to be parallel with each other. The projections *a a* of the ears *c c* thus enter into the eye *m* of the pin-tongue 90 G and practically abut each other, thus constituting a pivot upon which the pin-tongue G turns. The projections *b b* of the ears *c c* form bearings or fulcrum-points upon which the pin-tongue is sprung, as seen in Fig. 12, 95 to engage the pin-catch *d*.

In Figs. 13, 14, and 15 I show a modified form of my invention in which the central circular enlargement C' is made with two opposite segmental flanges *n n* integral there- 100

with; but said central portion C' is not perforated, as in Fig. 5.

I claim as a novel and useful invention and desire to secure by Letters Patent—

- 5 1. The blank for a pin-fastener herein described, consisting of a bar A, B, having a central approximately circular enlargement C provided with a central annular flange of a diameter less than that of the enlargement C,
10 a tongue E extending at a right angle from the outer end of the bar B, a cross-head D with rounded ends each of which has a pivot projection *a* and also on the inner edge next to the bar A a square projection *b*, all of said
15 parts being formed in one piece of metal integral throughout, substantially as specified.

2. The one-piece improved pin-fastener herein described, consisting of a bar having
20 at one end two ear-pieces each provided with a pivot projection and a fulcrum-point and also having at its opposite end a pin-catch and also having a single, sharp-edged central an-

nular flange adapted to be spread radially to form an increased diameter of its outer edge, substantially as specified. 25

3. The combination of a button having on one side thereof a circular recess or groove with an undercut edge, a one-piece pin-fastener, comprising a bar having on one end a hinge-joint and on the opposite end a pin-catch and also having a central enlargement
30 by extending beneath the undercut edge of said recess or groove, and a pin-tongue pivotally mounted at one end in said hinge-joint 35 and having its opposite end engageable with said pin-catch, substantially as described.

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

FRANK E. FARNHAM.

Witnesses:

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