

(No Model.)

I. G. PLATT.

MECHANISM FOR ASSEMBLING BUTTON PARTS.

No. 520,999.

Patented June 5, 1894.

Fig. 2.

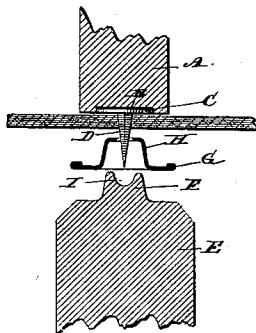


Fig. 3.

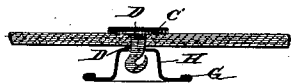
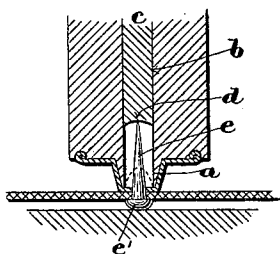


Fig. 1.



Witnesses:

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UNITED STATES PATENT OFFICE.

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MECHANISM FOR ASSEMBLING BUTTON PARTS.

SPECIFICATION forming part of Letters Patent No. 520,999, dated June 5, 1894.

Application filed June 7, 1889. Serial No. 313,486. (No model.)

To all whom it may concern:

Be it known that I, IRVING G. PLATT, residing at Waterbury, in the county of New Haven and State of Connecticut, have invented certain new and useful Improvements in Mechanism for Assembling Button Parts; and I do declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to an improvement upon the device for attaching buttons to fabrics which forms the subject-matter of United States Patent No. 329,336, granted to me on the 27th day of October, 1885, and which although a practical and effective device, has been found objectionable for the following reasons:—First, that in order to make the recess in its plunger large enough to receive and curl the point of the tack properly, there has been the necessity of employing a plunger so large as to nearly equal the diameter of the boss for centering the button-head, whereby the consequent necessary enlargement of the cylindrical opening formed to receive the plunger has reduced the boss to the form of a thin annulus, which in practice often breaks down, causing annoyance and expense. Second, that the patented device containing no means for holding the tack against lateral displacement with respect to the button-head during the operation of curling the point of the tack, the tendency of the tack to move is not resisted, so that the button-head and the tack are not always in truth in the completed product.

The object of my present invention is to avoid the objections above recited, and to produce a simple, durable and effective mechanism.

With these ends in view, my invention consists in a mechanism having certain details of construction and combinations of parts as will be hereinafter described and pointed out in the claims.

In the accompanying drawings Figure 1 is a view in vertical section of a device constructed in accordance with my patented invention above referred to. Fig. 2 is a view in vertical section of a die and tack-holder constructed in accordance with my present invention, together with a button-head, a tack

and a section of cloth; and Fig. 3 is a view showing the cloth, the tack and the button-head after the point of the tack has been curled to form a head securing the said parts to the cloth.

Fig. 1 of the drawings shows the frail, thin annular boss *a*, resulting from the necessity of forming the bore *b*, nearly equal in diameter to the said boss in order that the pin or plunger *c* used may be of a size to secure an upsetting cavity *d* of sufficient capacity to receive and contain the curled end of the shank *e* of the tack, the head *e'* whereof, be it noted, is not confined against lateral displacement.

As shown in Figs. 2 and 3 of the drawings, which represent my present invention, the tack-holder *A*, is provided at its lower end with a shallow circular recess *B*, having straight end walls, and a flat bottom, and adapted in dimensions to receive and snugly confine against lateral displacement the flat head *C*, of a tack, which has a pointed shank *D*. The die *E*, has its upper face provided with a central boss *F*, and is thus conformed to the shape of the button-head which has a rim *G*, and a centrally perforated hub *G'*, and is centered by the said face and boss of the said die. A cup-shaped recess *I*, is formed in the top of the said boss to receive and curl up the pointed end of the shank of the tack. The said recess has therefore converging walls and is adapted in capacity and form to contain the curled end of the tack and shape the same into a retaining end or head.

In using my improved mechanism, the head of the tack is introduced into the recess in the lower face of the tack-holder, and the button-head placed upon the die, and the cloth introduced between them. Either or both the tack-holder and die are now brought together, whereby the shank of the tack is caused to penetrate the cloth and engage with the bottom of the cup-shaped recess in the die, and the end of the shank caused to be curled up upon itself to form a head occupying the inside of the hub of the button-head, and holding the same and the tack together on opposite sides of the cloth. As the end of the tack, must in being curled as described, be deflected one way or the other out of truth with its head, a strong tendency to displace the head of the tack with reference to the

button-head arises, and this is overcome by the tack-holder, which is constructed to hold the tack firmly against lateral displacement, whereby in the completed product the head of the tack and the button-head are always in truth, so that under my improved mechanism, I secure a uniformly perfect product. Furthermore by forming the recess which curls the point of the tack, in the die, instead of locating it in a plunger reciprocating within the die, I avoid the described objections incident to the use of my previously patented construction, and secure a device which is at once simple, durable and effective.

15 The tack is held in place with its head in the recess of the tack-holder, preparatory to passing its shank through the fabric and the button-head and into the recess of the die, by magnetizing the tack-holder, or employing some suitable means, such as jaws arranged to support the tack, and then retire when the tack-holder and die, either or both, are brought together. Magnetization is a well known expedient for the purpose specified, and the use of jaws is also well known, and needs no illustration or detailed description. An example of the jaws of the type referred to may be seen in my Patent No. 495,753, granted to me April 18, 1893.

30 Having fully described my invention, what I desire to secure by Letters Patent is—

1. The herein described tack-holder and die for assembling button-heads with tacks, the

said tack-holder being constructed to receive the head of a tack and hold the same against lateral displacement, and the said die being constructed to receive a centrally perforated button-head, and having formed in it a recess having converging walls with which the shank of the tack is directly engaged, and adapted in capacity and form to contain the curled end of the shank of the tack and shape the same into a retaining end or head, substantially as described.

2. The herein described tack-holder and die for assembling button-heads with tacks, the said tack-holder being constructed with a shallow recess conforming in size to the head of a tack which it holds firmly against lateral displacement; and the said die being constructed to receive and retain a centrally perforated button-head and made with an annular boss containing a central recess having converging walls with which the shank of the tack is directly engaged, and adapted in capacity and form to contain the curled end of the tack and shape the same into a retaining end or head, substantially as described.

In testimony whereof I hereby sign this specification in the presence of two subscribing witnesses.

IRVING G. PLATT.

Witnesses:

CHAS. B. SHUMWAY,
WM. T. BOOTH.