Feb. 22, 1949. C. D. BUCKLEY 2,462,801

SNAP FASTENER ATTACHING TOOL

Filed July 10, 1945

Fig. 1.

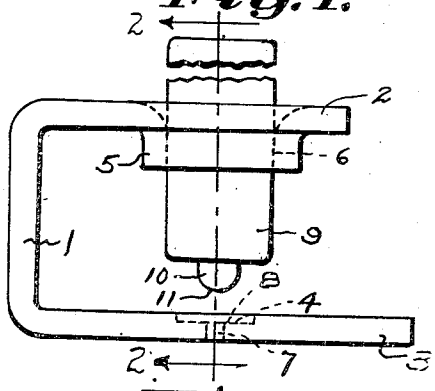


Fig. 3.

Fig. 2.

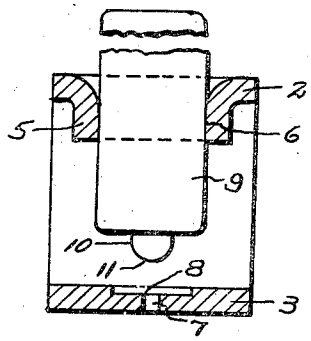


Fig. 4.

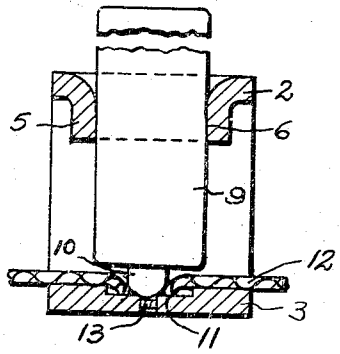
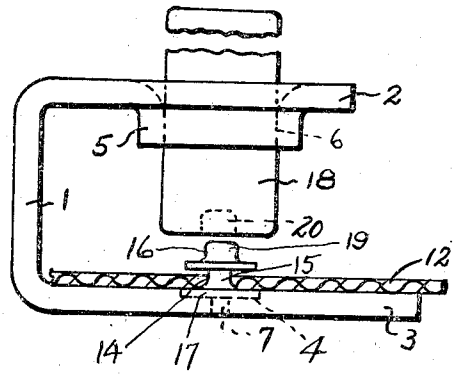
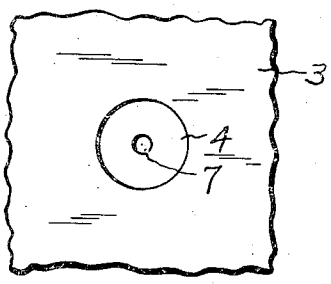


Fig. 5.





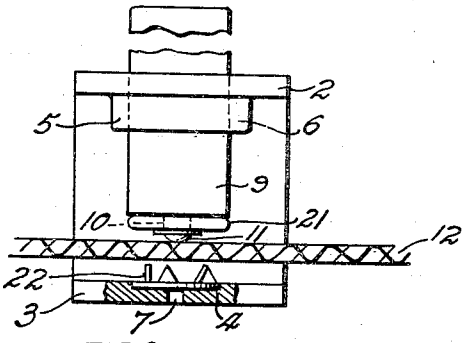


Fig. 6.

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SNAP FASTENER ATTACHING TOOL

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3 Claims. (Cl. 218—20)

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This invention aims to provide improvements in attaching tools whereby snap fasteners may be secured to a strip of material such as cloth, leather, paper or the like.

In the drawing which illustrates a preferred embodiment of my invention:

Fig. 1 is a side elevation of my improved fastener-attaching tool including a holder or supporting member and a combined material punch and fastener-setting member;

Fig. 2 is a section taken on the line 2—2 of Fig. 1;

Fig. 3 is a section similar to Fig. 2 showing the fastener-supporting material in position and just after a hole has been punched to permit passage of part of the fastener;

Fig. 4 is a side elevation of the supporting member, a fastener-setting member different from the punch member, two parts of a fastener and the punched material prior to fastener setting;

Fig. 5 is a partial plan view of that portion of the holder where the material is cut and a fastener is set; and

Fig. 6 is an end view partly in section of the device of Fig. 1 showing the fastener parts in position preparatory to attaching them to a piece of material positioned therebetween.

Referring to the particular form of my invention illustrated in the drawing, I have shown in Fig. 1 a bracket 1 which provides a support and a means for guiding one or more tools in the process of attaching fasteners to material. The bracket is substantially U-shaped and includes an upper arm 2 and a lower arm 3 in proper spaced relation. The lower arm 3 has a recess 4 shown in dotted lines, but also shown in full plan in Fig. 5. This recess 4 extends part way into the arm 3 and provides a support for a fastening element to center it relative to a bearing element 5 formed as a part of the upper arm 2. This bearing element 5 has a bore 6 to guide a tool member as hereinafter described. The lower arm 3 is also provided with an aperture 7 (Figs. 1 and 2) extending from the recess 4 through the remainder of the portion of the arm 3. This aperture is provided to form an edge 8 at the bottom of the recess 4 against which the material may be pressed by a suitable cutting tool so that a hole may be punched through the material.

In Figs. 1, 2 and 3 I have shown a tool member 9 adapted to pass through the bore 6 in the upper arm 2 and be moved back and forth through that bore. The lower end of the tool 9 is provided with a projection 10 which may serve two purposes.

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The primary purpose in this invention is to act as a punch to force the material to be cut against the edge 8 in the lower arm 3. This projection 10 therefore presents a spherical end surface 11 so that it will adapt itself to pinching a piece of the material 12 (Fig. 3) against the edge 8 surrounding the aperture 7 in the lower arm 3 when the tool 9 is struck a hammer blow. This operation will punch a piece 13 (Fig. 3) from the material 12 and force it down into the aperture 7, thus leaving a hole 14 in the material 12.

In the particular instance illustrated by the drawing the hole 14 is provided in the material 12 to permit passage of the shank 15 of an attaching eyelet (Fig. 4) which is used to secure a stud 16 to the material 12. In the assembling of the parts of the snap fastener to the material 12, as shown in Fig. 4, the flange 17 of the eyelet is placed in the recess 4 to centrally locate the eyelet with a stud-attaching tool 18 placed in the bore 6 in the upper arm 2. The material 12 is then placed so that the shank 15 of the eyelet passes through the hole 14 and then a snap fastener stud member 16 is placed over the end of the eyelet shank 15. Thereafter the tool 18 is brought down against the head 19 of the stud so that the head enters the recess 20 formed in the end of the tool 18. With the parts in this position the tool 18 is struck one or more hammer blows, thereby causing the stud member 16 to be forced toward the arm 3 which in turn causes the upper end of the shank of the eyelet to become upset inside the head of the stud and firmly secure the parts to opposite sides of the material 12.

While I am aware of the fact that hand operated attaching tools have been provided heretofore for attaching fastener parts, I do not know of any instance where a hole-punching means has been provided as a part of the fastener-attaching means. In my construction the tool 9 serves two purposes. It is used to punch a hole in a given material as pointed out hereinbefore and is also used in connection with the attaching of a snap fastener socket to a piece of material. Thus as shown in Fig. 6 the projection 10 is adapted to support a fastener socket part 21 thereon and to force it into clamping engagement with the cooperating fastener part 22 which may be a conventional pronged clinch ring, positioned in the recess 4, to thereby attach the fastener parts to a piece of material 12 held therebetween. Thus I supply a bracket and one or two attaching tool members to attach a given number of fastener parts, especially where it is

necessary to provide a hole in the material, to permit attachment of at least one member of the fastener combination. Heretofore it has been necessary to supply means other than the attaching tools for first preparing a hole in the material to be used with the attaching tools.

While I have illustrated and described a preferred embodiment of my invention, I do not wish to be limited thereto because the scope of my invention is best defined by the following claims.

I claim:

1. A device for attaching snap fastener members to textile, paper and like materials comprising a supporting member having a base portion and a superposed arm portion parallel thereto, said superposed arm portion having a guide opening therein and said base portion having a fastener-part-receiving recess therein coaxially arranged with respect to the guide opening and adapted to receive a first fastener-part, said base portion being further provided with a coaxial opening of smaller diameter than said recess and extending a substantial distance below the plane of the bottom of said recess, the joining edge between the wall of said opening and the bottom of said recess presenting a sharp edge, and a combined punch and setting member slidably mounted in said guide opening having a projection extending axially therefrom and formed to press a piece of material positioned against said sharp edge to perforate it or to support and force a second fastener-part into cooperative engagement with the first fastener-part with the material clamped therebetween.

2. A device for attaching snap fastener members to textile, paper and like materials comprising a substantially U-shaped supporting member formed of a single piece of material and having a relatively flat base portion and a superposed arm portion parallel thereto, said superposed arm portion having a guide opening therein and said base portion having a fastener-part-receiving recess therein coaxially arranged with respect to the said guide opening and adapted to receive a first fastener-part, said base portion being further provided with a coaxial opening of smaller diameter than said recess and extending a substantial distance below the plane of the bottom of said recess, the joining edge between the wall of said opening and the bottom of said recess presenting a sharp edge, and a combined punch and setting member slidably mounted in said guide opening having a projection extending axially therefrom and formed to press a piece of material positioned against said sharp edge to perforate it or to support and force a second fastener-part into cooperative engagement with the first fastener-part with the material clamped therebetween.

3. A device for attaching snap fastener members to textile, paper and like materials, comprising a supporting member having a base portion and a superposed arm portion parallel thereto and formed with a guide opening therein having a circumferential flange extending downwardly therefrom, said base portion having a fastener-part-receiving recess coaxially arranged with respect to said guide opening and adapted to receive a first fastener-part, a coaxial opening of smaller diameter than said recess extending a substantial distance below the bottom of said recess, the joining edge between the wall of said opening and the bottom of said recess presenting an angular material-cutting edge, a combined punch and setting member slidably movable in said guide opening relative to said base portion, said combined punch and setting member having on one end thereof an axial projection having a rounded end and adapted to hold a second fastener-part and when urged downwardly to force it into cooperative engagement with the first fastener-part positioned in said recess to thereby secure the two fastener-parts together with a piece of material therebetween, and said axial projection being of larger diameter than said opening to cooperate with said angular cutting edge to perforate a piece of material disposed between said base and said combined punch and setting member.

CLYDE D. BUCKLEY.

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