

A. H. GREENEBAUM.  
DETACHABLE SNAP FASTENER STUD.  
APPLICATION FILED JAN. 16, 1911.

993,518.

Patented May 30, 1911.

Fig. 1.

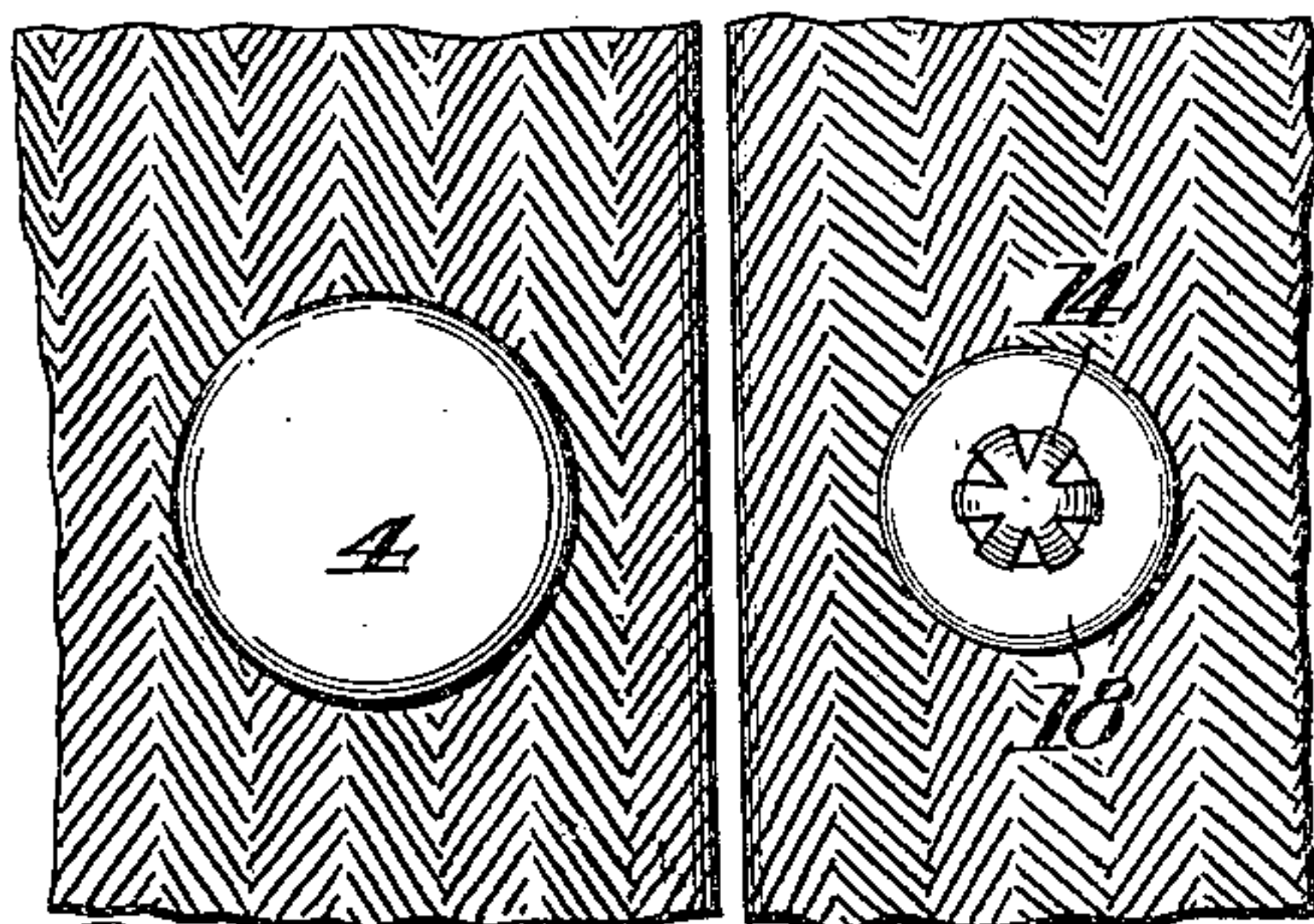


Fig. 2.

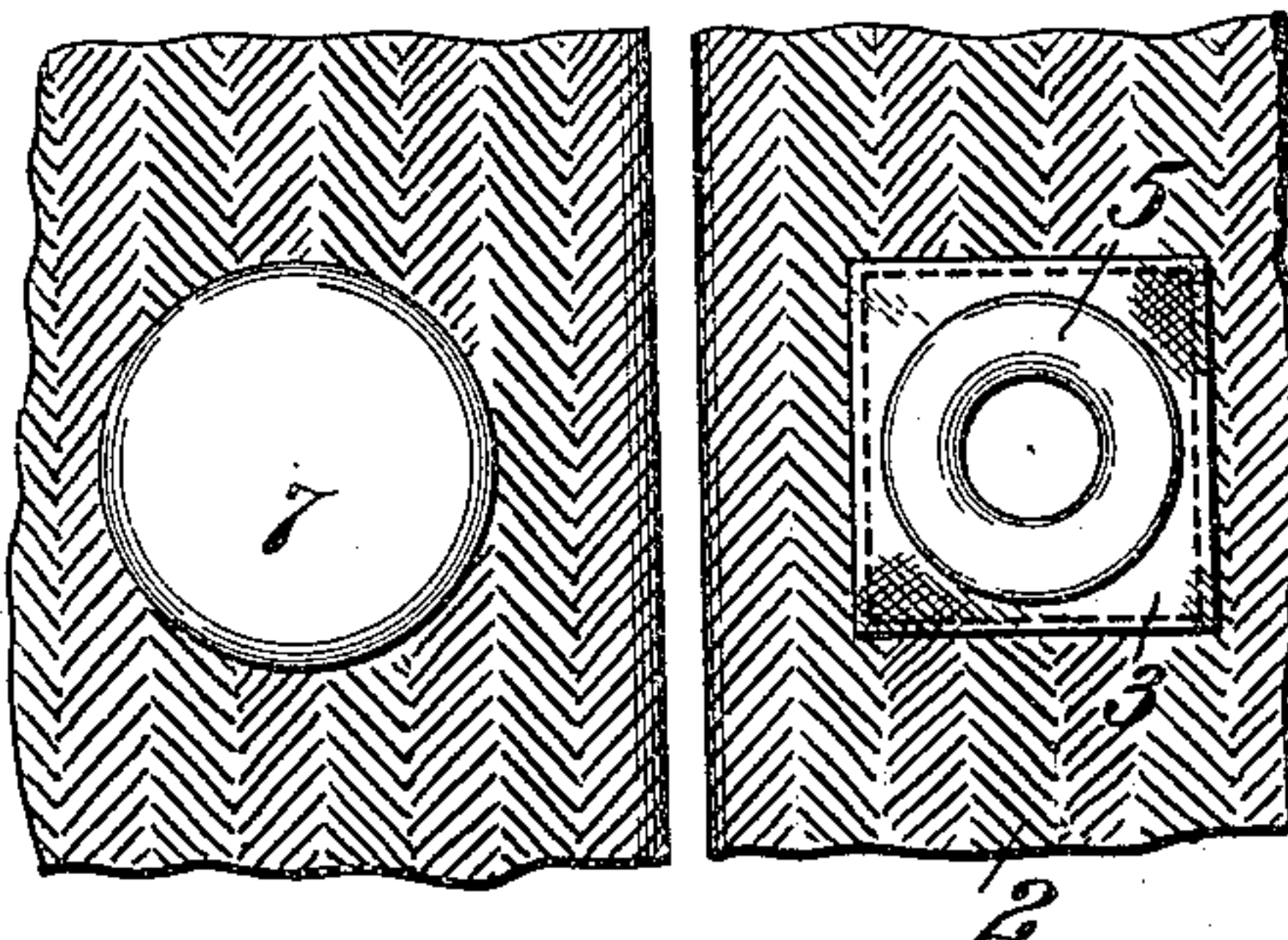


Fig. 3.

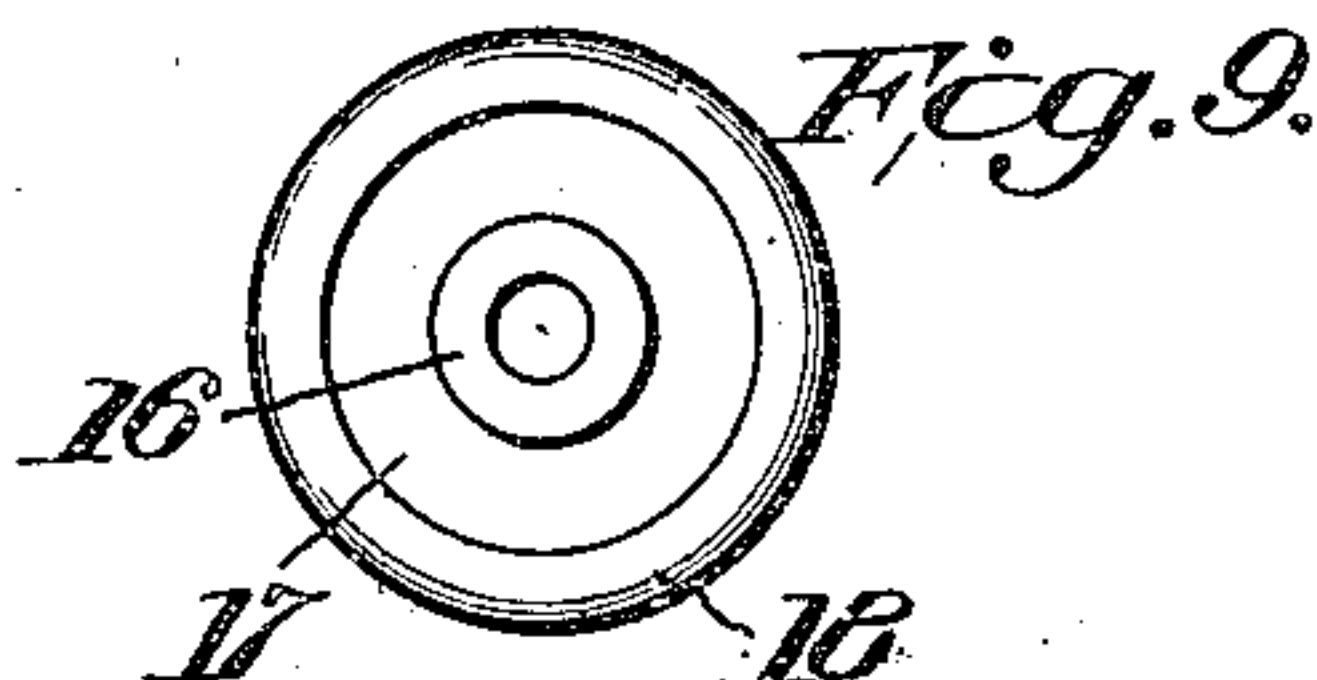
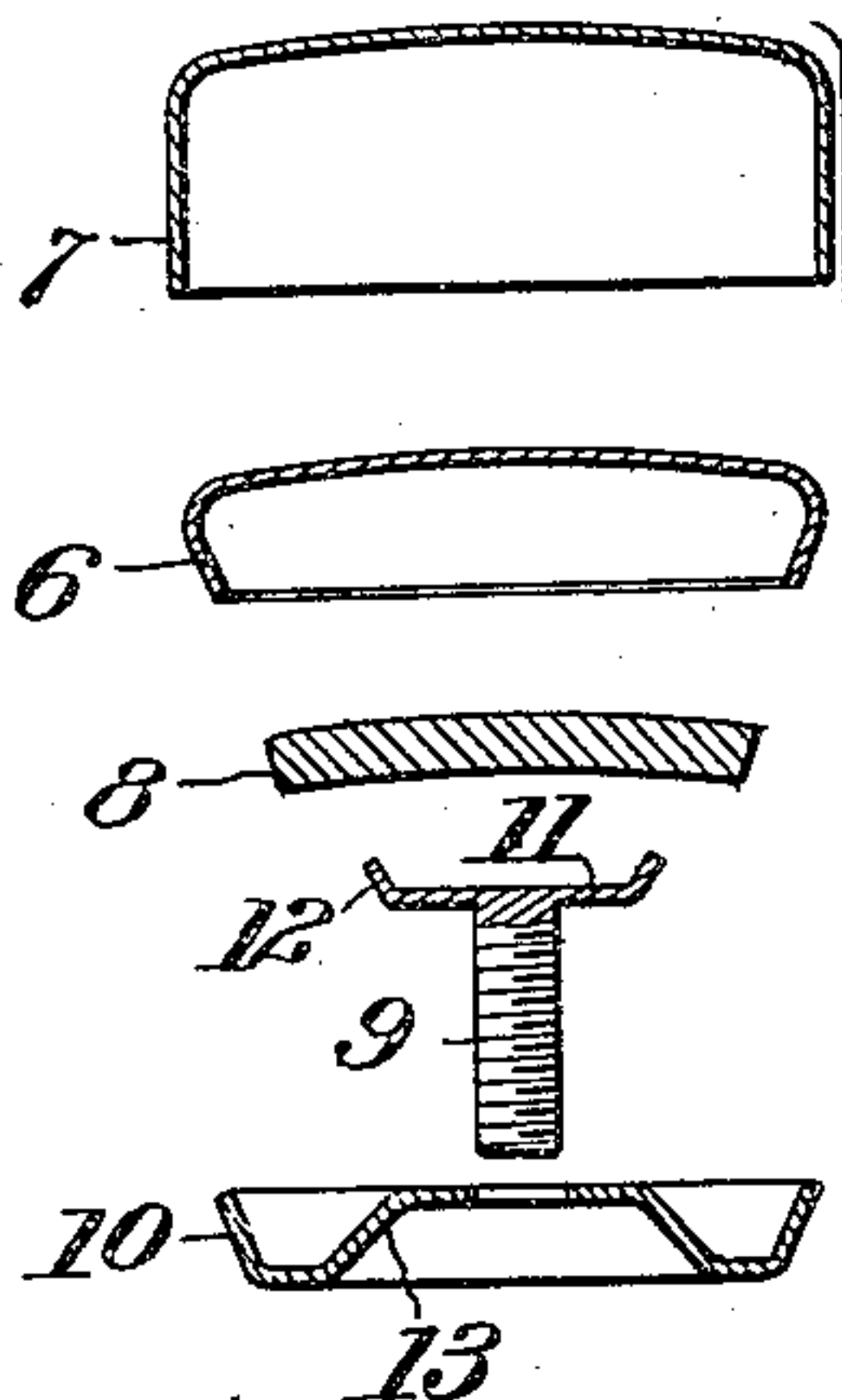
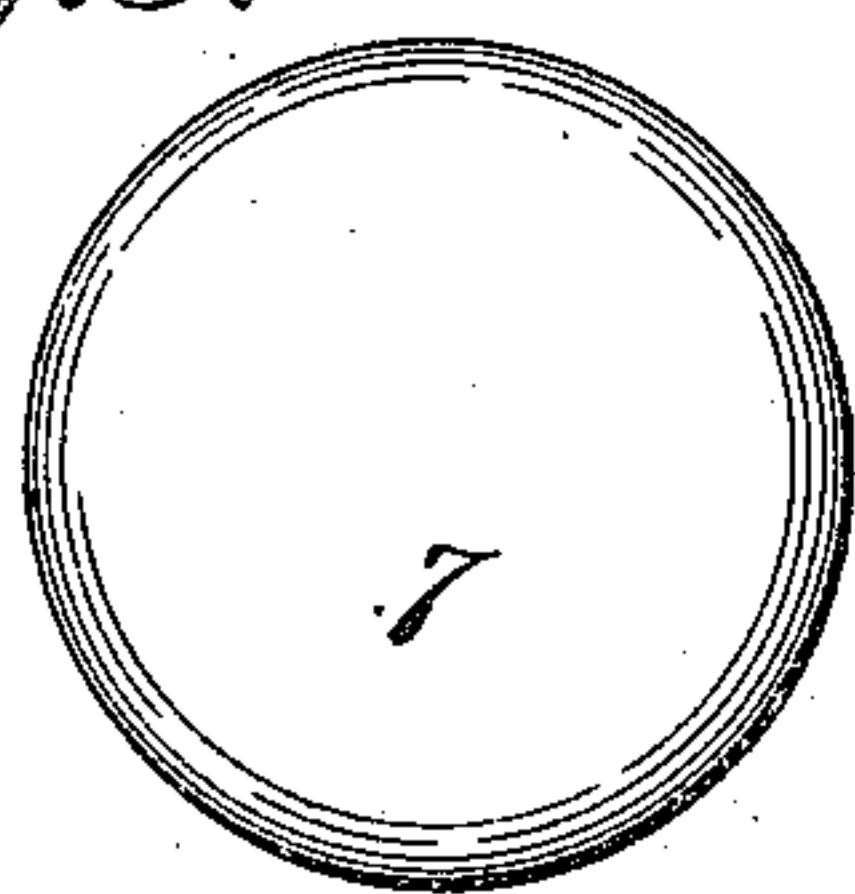


Fig. 4.

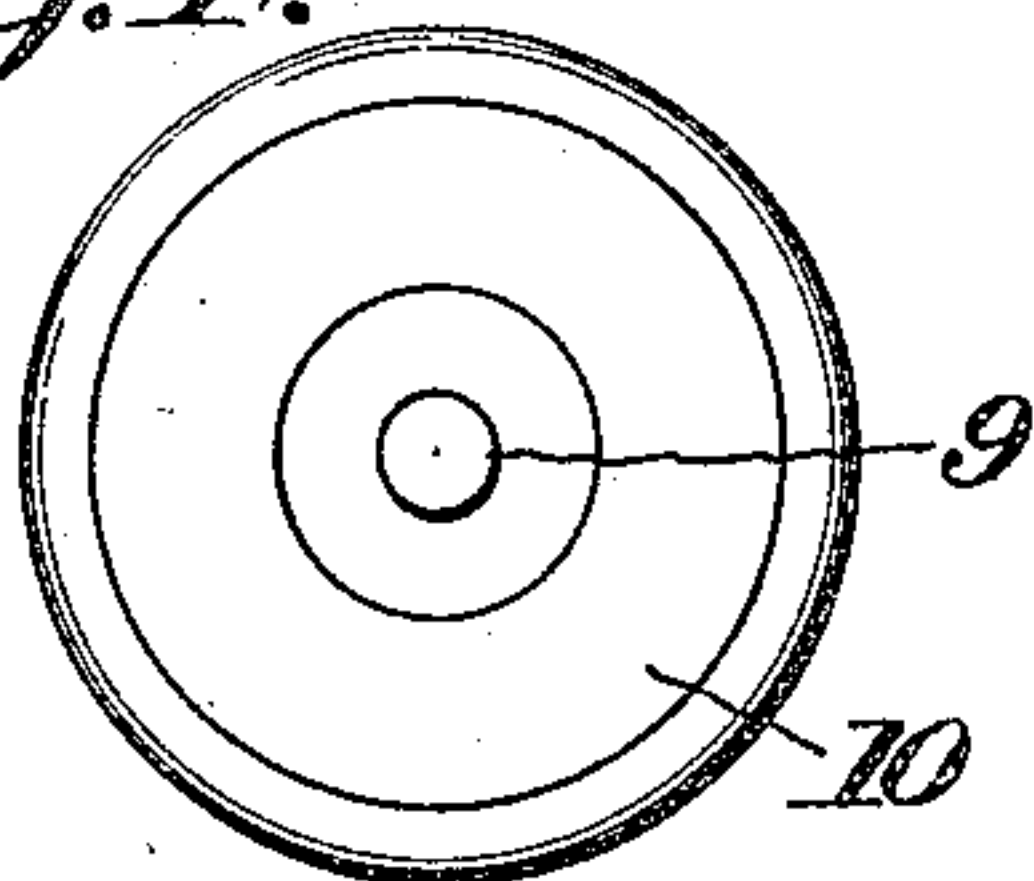


Fig. 6.

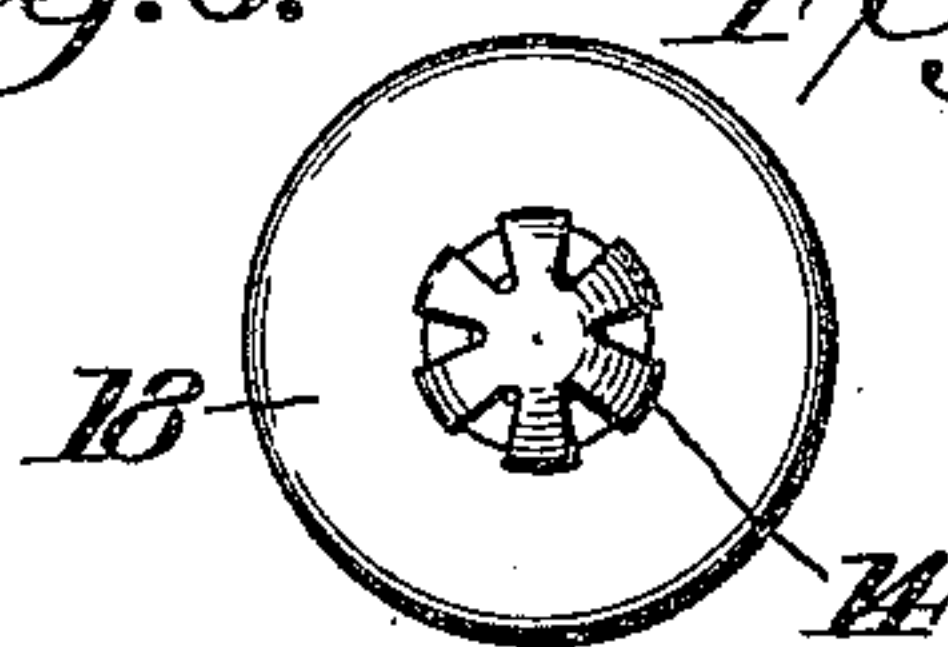


Fig. 10.

Fig. 5.

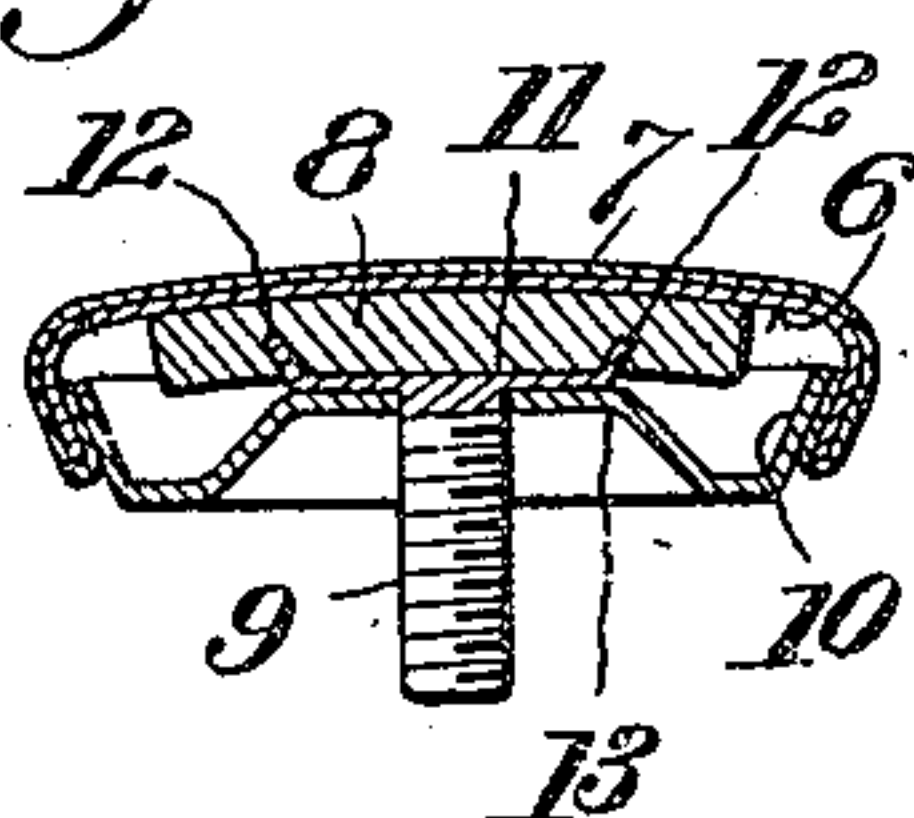


Fig. 8.

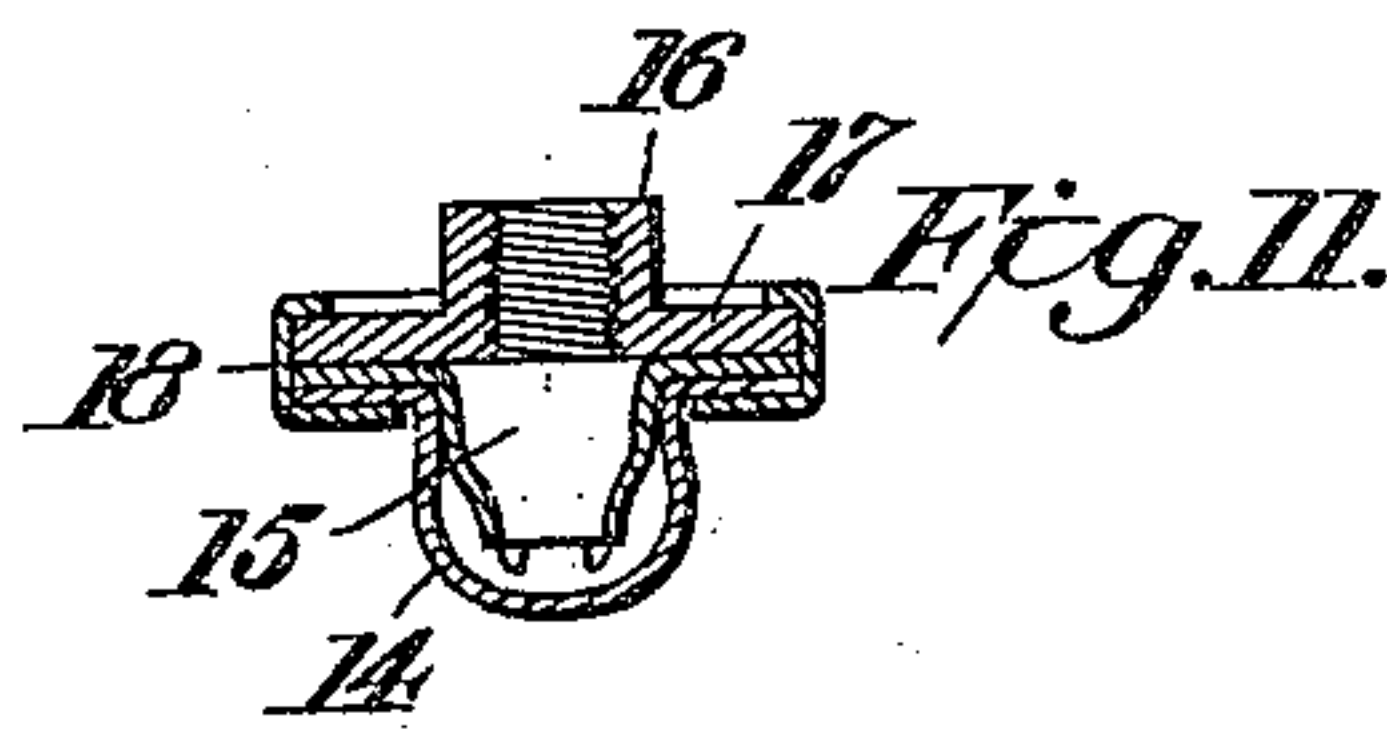
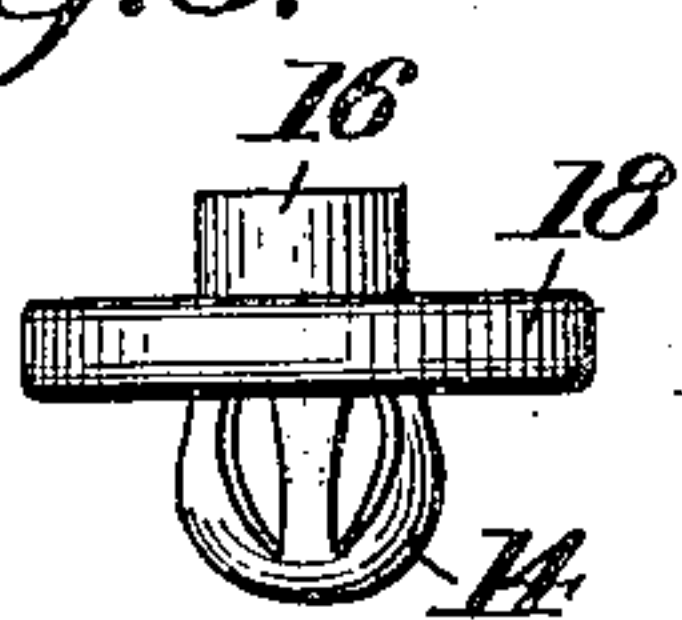
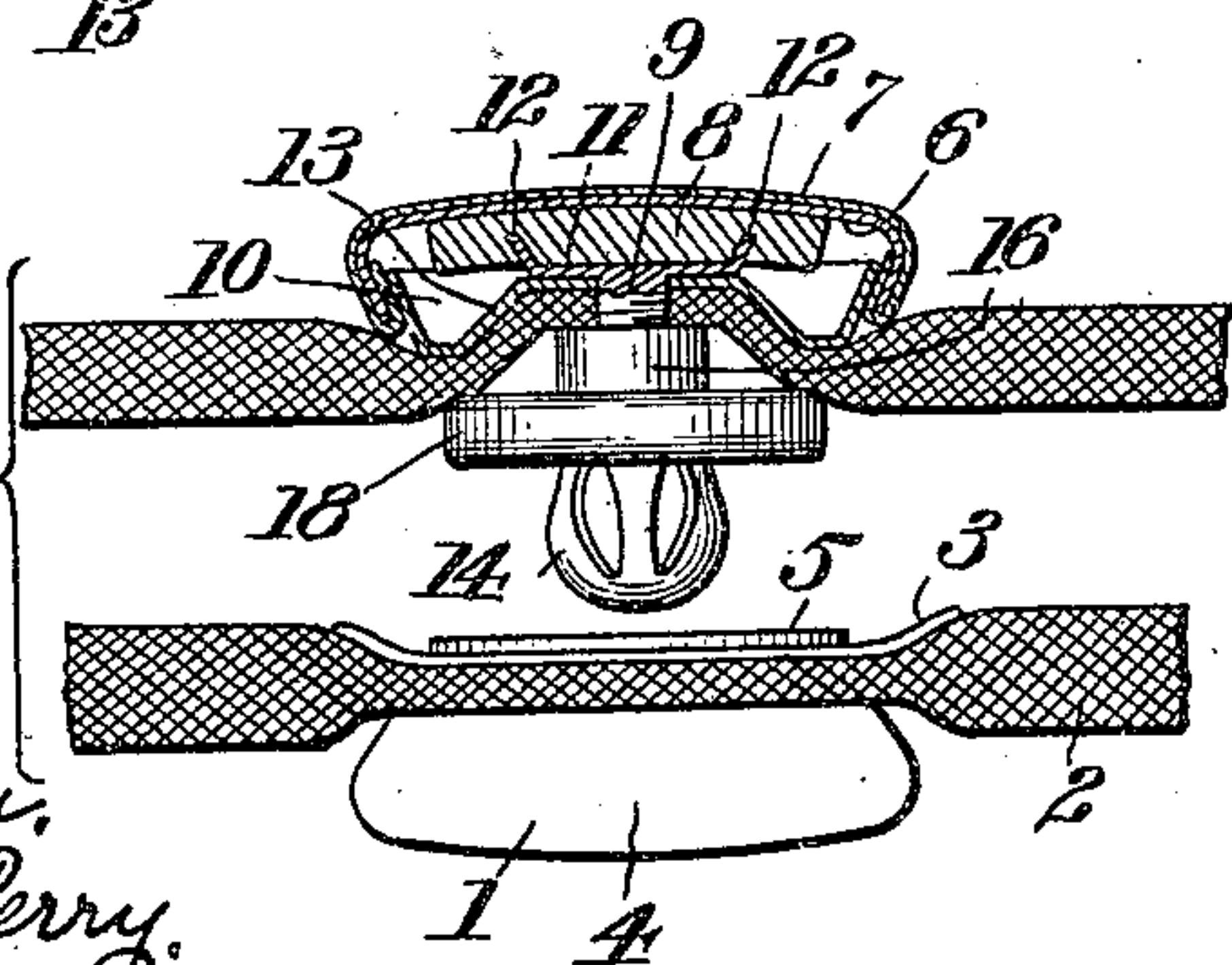


Fig. 13.



Witnesses

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# UNITED STATES PATENT OFFICE.

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## DETACHABLE SNAP-FASTENER STUD.

993,518.

Specification of Letters Patent.

Patented May 30, 1911.

Application filed January 16, 1911. Serial No. 602,966.

*To all whom it may concern:*

Be it known that I, ABRAHAM H. GREENEBAUM, a citizen of the United States, residing at Baltimore, in the State of Maryland, have invented a certain new and useful Improvement in Detachable Snap-Fastener Studs, of which the following is a full, clear, and exact description.

Garments, such as knitted mufflers for wearing about the neck, are being made and sold, in various sizes, and supplied with snap fasteners to fasten them about the person. In order to fit necks of different size it is necessary either to carry a large stock of garments of many sizes, or else to provide for movable fasteners that can be reset to suit the purchaser. It is not possible to reset the fasteners at present in use without more or less marring the garment, especially when the garment is knit, or is made of similar elastic or stretchy fabric; and if the fastener is very firmly set in the first instance, it is impracticable to reset it. To furnish such garments to retailers and require them to apply the fasteners to suit their customers, would involve the carrying by the retailers of a stock of fasteners to match the garments, at least in color, and to provide themselves with setting tools and an operator, thus involving an expensive outlay wholly unwarranted by the price obtainable for the goods.

With these and other related conditions in mind, I have devised a fastener which may be set and reset by dealer or purchaser at pleasure, so that the merchant may carry a very few sizes of garments and by merely resetting one member of the fastener, easily and accurately adapt a given garment to various sizes without marring or defacing the garment to any perceptible extent.

Preferably the invention is applied to the stud member of a snap fastener, and the invention consists of a screw-cap piece adapted to engage a nut in the head of the stud, and so disposed as to find its way through the fabric without noticeably marring it, and when the two parts are connected, the fabric is clamped or gripped very securely between them at two places, and so firmly as to preclude the fastener from pulling out or being pulled out of the fabric in use. Incidentally the stud cap and the socket cap are made alike, so that the garment may be re-

versed and the fastener have the same appearance on both sides of the garment.

In the accompanying drawings, illustrating the invention, in the several figures of which like parts are similarly designated, Figure 1 is a plan view of one side of portion of a garment showing the cap of the socket at the left and the head of the stud at the right. Fig. 2 is a similar view of the reverse of the garment, showing the cap of the stud at the left and the mouth of the socket at the right. Fig. 3 is a top plan view, Fig. 4 is a bottom plan view, and Fig. 5 is a cross-section of the stud screw-cap. Fig. 6 shows in cross-section the five parts of the screw-cap. Fig. 7 is a perspective view of one form of screw. Fig. 8 is a side view, Fig. 9 is a bottom plan view, Fig. 10 is a top plan view, Fig. 11 is a cross-section, and Fig. 12 shows in cross-section the several parts of the screw-stud head. Fig. 13 shows partly in cross-section and partly in elevation the stud and socket applied to pieces of fabric.

The socket 1 may be of any approved construction, and it is intended to be applied permanently to the garment 2, or other article, by the manufacturer of the latter, in any suitable way, and with or without a reinforce 3, Figs. 2 and 13, as desired or necessary. Its outer finish may be of any design or character, and usually it will match the garment or other article in color. As is well known, these sockets are usually composed of a cap piece 4, which is fastened on one side of an article by means of an eyelet-like device 5 inserted into it from the opposite side of the article and clenched therein; the article being firmly clamped or gripped between the two parts 4 and 5. The device 5 also serves as the socket proper, with which the stud has a snap engagement to fasten together the parts of the article to which they are respectively attached, much after the manner of a buttonhole and button, for which, in fact, they are substitutes.

As already indicated, the socket is fixed, but if the stud were also fixed, a merchant would have to carry an unprofitably large stock of sizes of an article in order to fit his customers. To obviate this, I make the stud removable and adjustable, and to this end it has a cap piece composed of a shell 6 and an outer cover 7, preferably of like finish and shape to the corresponding part of the



socket, and this cap piece has within it a filler 8 of pasteboard or equivalent yielding material, a screw 9 and a collet 10 about which the cap piece is closed, as seen in Figs. 5 and 13, in a rigid manner. In order to prevent the screw from turning in the cap piece, its head 11 may be supplied with up-turned portions 12, or other means to engage or sink into the filler. The parts just described form what is herein referred to as the screw-stud cap. An especially important feature of this cap is the countersink or recess 13 in the collet immediately surrounding the screw shank, the function or purpose of which is to cooperate with the stud head, Figs. 8 and 13, to grip or clamp the fabric, as will appear more in detail hereinafter.

The stud head comprises a spring element 14, an internal spring supporting eyelet-like device 15, a nut having a hub 16 and a flange 17 and a collet 18, which collet is closed down upon the flanges of these parts to unite them and collectively form the flange of the stud. The eyelet (it is so known in the art) 15 serves to prevent the lateral collapse of the spring 14. The hub 16 projects some distance beyond the collet, and as shown in Fig. 13, this hub crowds the goods up into the recess in the collet of the screw cap when the screw cap is screwed into the nut, and clamps or grips the goods firmly around the place where the screw passes through the goods, and when these two parts are screwed together tightly, then the collet of the cap and the flange of the stud further clamp or grip the goods between themselves, so that the goods are forcibly engaged by the screw cap and stud at two distinct places, separated from one another, and hence there is a minimum of liability of the fastener elements being drawn out of the goods by strains of use, or of the goods pulling away from the stud.

A screw of very small diameter may be used so that the hole it makes in the goods for its passage is quite inconspicuous, and indeed no hole at all need be made in some kinds of loosely knitted or loosely woven goods, it being sufficient merely to displace the threads to permit the passage of the screw through the goods into the nut. One advantage of this construction is that when it is desired to change the location of the stud, a few slight brushings will restore the fabric where the stud has been to its original condition. Now, it will be understood that this screw stud may be moved from one place to another on an article by the merchant or by the purchaser, as desired, so that the article may be fitted to the person according to taste or inclination. As will

be also understood, the ease with which the stud may be adjusted enables the merchant to utilize a very few sizes, or even only one or two sizes of an article, in supplying the demands of many customers, and consequently need not lay in a stock of a great number of sizes. Still another advantage possessed by the invention and growing out of the similarity of cap finish of the fastener members, is that the garment or article may be worn either side exposed with a similar fastener effect, as clearly indicated in Figs. 1 and 2.

While I have shown and described a preferred construction, it is to be understood that variations are within the scope and purview of the invention as claimed.

Obviously the invention is not limited to its application to mufflers. It is plain that it may be used wherever a detachable or movable fastener is useful or desired.

What I claim is:—

1. A detachable snap fastener stud, comprising a cap, provided with a countersunk collet forming the back, a screw arranged in said cap and projecting outwardly through the countersunk collet, means to hold the screw from turning in the cap, and a stud having a hubbed nut and a flange, whereby when the cap and stud are screwed together the hub serves to force the material of the article to which the stud is applied down into the countersink in the collet of the cap and to grip it between its face and the bottom of the countersink, and the flange serves to grip the material of the article between itself and the collet of the cap, so that the article is gripped at two independent places in order to overcome the tendency of the article to separate from the stud.

2. A detachable snap fastener stud, comprising a cap, a filler therein, a screw restrained from independent rotation by means of said filler, and a collet surrounding the screw beneath its head and engaged by the cap and having a countersink, combined with a stud having a laterally extending flange and an outwardly projecting hub, said hub screwthreaded to serve as a nut for the screw and adapted to engage the material of an article between itself and the bottom of the recess in the cap, said article being also engaged between the collet of the cap and the flange of the stud.

In testimony whereof I have hereunto set my hand this 14th day of January A. D. 1911.

ABRAHAM H. GREENEBAUM.

Witnesses:

HERMAN KERNGOOD,  
NELLIE DOYLE.