S. S. HECHT.

SEPARABLE FASTENER.

APPLICATION FILED SEPT. 15, 1916.

1,268,349. Patented June 4, 1918.

Fig 1

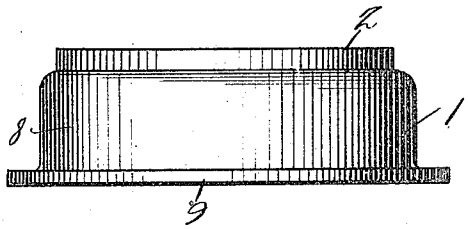


Fig 2

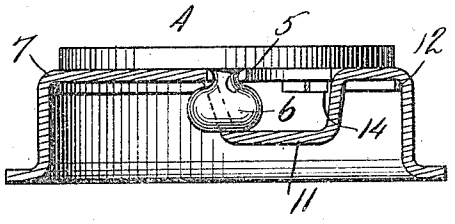


Fig 3

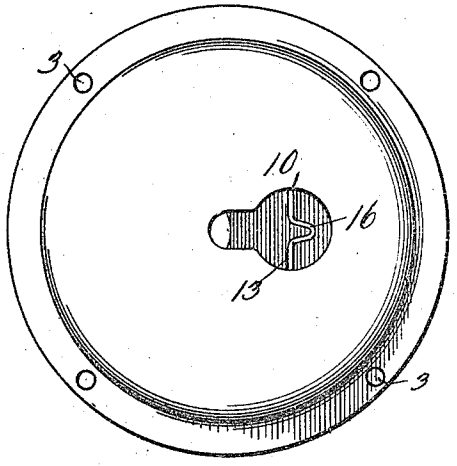
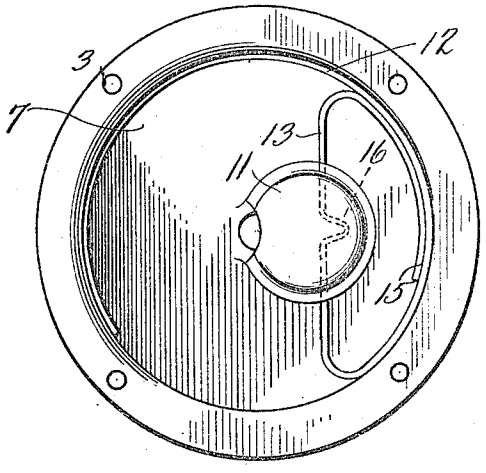


Fig 4



INVENTOR

Solomon S. Hecht.

WITNESSES

E. Schuller Jr.

Lloyd W. Patch

BY Richard B. Owen.,

ATTORNEY

UNITED STATES PATENT OFFICE.

SOLOMON S. HECHT, OF NEW YORK, N. Y., ASSIGNOR OF ONE-HALF TO NATHANIEL A. TONKONOGY, OF NEW YORK, N. Y.

SEPARABLE FASTENER.

1,268,349. Specification of Letters Patent. Patented June 4, 1918.

Application filed September 15, 1916. Serial No. 120,363.

To all whom it may concern:

Be it known that I, SOLOMON S. HECHT, a citizen of the United States, residing at New York city, in the county of New York and State of New York, have invented certain new and useful Improvements in Separable Fasteners, of which the following is a specification.

This invention relates to an improvement in separable fasteners, and more particularly to spring snap fasteners such as are adapted for use upon garments and in other like connections where a fastener is desired which will hold securely but which at the same time is capable of being released.

An object of my invention is to provide a fastener of the type described which is so constructed that a headed stud carried by one of the fastener members is adapted to be forced through the enlarged end of a key hole shaped slot provided in the remaining member, against the tension of a spring, which spring acts to move the headed stud over into the reduced end of the key hole shaped slot from which the stud is positively held against removal by the exertion of outward drawing tension and can only be released by being moved against the tension of the spring and brought back to pass through the enlarged portion of the slotted opening.

A further object is to provide a device of this character which is comparatively simple in its construction and in its operation is not materially different from separable fasteners as now used, and which may be constructed to give only slight projection from the fabric or other garment on which it may be secured in use.

With the above and other objects in view, my invention consists in certain novel features of construction and combinations of parts which will be hereinafter set forth in connection with the drawings and then more particularly pointed out in the claims.

In the drawings:

Figure 1 is a view in elevation of the fastener with the two members thereof in the assembled relation.

Fig. 2 is a transverse vertical sectional view through the socket members of the fastener with the second member in the secured position.

Fig. 3 is a top plan view of the socket member.

Fig. 4 is a bottom plan view of the member as disclosed in Fig. 3.

The device comprises in the main, the member 1 which is provided with the socket and the member 2 which has the headed stud carried thereby, it of course being understood that the details of these parts will be hereinafter fully set forth, and it is preferable that these members be provided with the thread receiving openings 3 through which stitches may be run to secure the members upon the parts of the garment or other portions to be fastened.

The member 2 comprises the base 4 from which the stud 5 is extended, and this stud is enlarged to form the head 6, and here it might be stated that this member 2 can be constructed of sheet metal pressed out to the proper form, of stamped metal, or might even be cast, the one essential feature being that the stud must either be made integral with the base 4 or must be secured thereto in such a manner that it will not be likely to break off or become displaced from the base.

The socket member 1 is shaped to provide the top 7 which is supported on the rim portion 8 in such relation that it is raised above the fabric or other material on which the member is to be secured, and the outstanding flange 9 is provided around this rim 8 to form a broader bearing for the member, the thread receiving openings 3 being formed through this outstanding flange. The metal of the top 7 is bent and expanded downwardly to provide the key hole shaped socket opening 10, the metal thus expanded being formed into the shield 11 which is interposed over the fabric to which the member 1 is secured and thus prevents threads of the fabric finding their way into and through the socket or the fabric itself coming into close proximity to the socket opening 10. As the socket opening 10 is key hole shape, when the headed stud 5 is fitted through the enlarged end thereof, and is then given movement toward the center of the top 7, the head 6 will pass through the enlarged portion and then when the reduced portion of the key hole shaped socket opening 10 is reached, the head will be held against withdrawal by force exerted in a direction to tend to draw the two members apart, however, in the use of the fastener, and with the parts as above described, it is only necessary to move the headed stud over

to the point that the enlarged end of the socket opening 10 is reached when the head 6 can be withdrawn and thus the two members can be readily separated.

To offer resistance to the movement of the headed stud in such a relation that it is readily withdrawn from the socket opening, and also to positively insure that the stud will be moved over with the stem thereof in the reduced end of the socket opening, I provide the spring 12 which is bent around in its main extent to fit within the rim portion 8 of the member 1 in close proximity to the top 7 thereof and is then brought up in a modified volute form to dispose the portion 13 thereof across beneath the socket opening 10, it of course being understood that the shield portion 11 is cut away or slotted as shown at 14 to allow this portion 13 of the spring to have resilient movement. The end 15 of the spring is bent around and is preferably in bearing engagement against the main portion 12 so that the thickness of the portion 13 is increased. The portion 13 of the spring 12 has the kink 16 formed therein at the approximate center of the socket opening 10.

In the use of the device described, the members 1 and 2 will be secured on the two portions of the garment or the two members which are to be separably fastened together, and when it is desired to connect the members, the head 6 of the stud 5 will be forced through the enlarged end of the key hole shaped socket opening 10 in such a manner as to displace the portion 13 of the spring 12 by forcing the same to one side, and as the head passes through and down into the shield 14, the spring will flex back and will exert pressure to move headed stud 5 over into the reduced end of the key hole shaped socket opening where the head holds the stud against displacement through outward drawing tension. The shield portion 11 will protect the stud from being caught in the fabric or other material to which the member 1 is connected, and the portion 13 of the spring 12 will resiliently oppose movement of the stud to a position that the head may be withdrawn through the enlarged end of the socket opening 10, the kink 16 of the spring acting to center the stud as the same is to be withdrawn from the fastener and to thus insure that the stud will be drawn out of the socket opening without engaging with the side edges thereof, when the portion 13 of the spring has been forced over by manual shifting of the two members.

From the foregoing it will be seen that I have provided a separable fastener which has the parts thereof constructed to be readily applicable and equally attached to the parts of a garment or other structure which are to be separably connected, and which presents structure so arranged that after the two members have been manually assembled in the securing relation, they are positively held against disconnection or separation until again manually manipulated, and while I have herein shown and described only one specific form of the device, and have set forth only specific adaptations of the same, it will be understood that a number of changes and variations might be resorted to in the form and arrangement of the parts without departing from the spirit and scope of my invention, and hence I do not wish to be limited to the exact disclosure but rather to the points set forth in the claims.

I claim:

1. A separable fastener comprising a member having a substantially key hole shaped socket opening through the top thereof, a second member adapted to coöperate with said first member and having a headed stud carried thereby to be fitted through the enlarged end of the socket opening and brought to a relation that the stem thereof is in the restricted end of the opening where the head holds the second mentioned member against separation from said first member, and a spring mounted in conjunction with the first mentioned member extending with a part of the body thereof transversely disposed across the enlarged end of the key hole shaped socket opening to thus act to force the headed stud to a position that the stem thereof is in the restricted end of the opening and to hold the stud against movement to a position that the head may be withdrawn through the enlarged end of the opening.

2. A separable fastener comprising a member having a substantially key hole shaped socket opening through the top thereof, a second member having a headed stud carried thereby and capable of being fitted through the enlarged end of the socket opening and brought to a relation with the stem thereof in the restricted end of the opening where the head holds the second mentioned member against separation from said first member, and a spring member mounted in conjunction with the first mentioned member having a part of the body portion thereof extending transversely across the enlarged end of the key hole shaped socket opening and kinked in that portion exposed through the opening.

3. A separable fastener comprising a sheet metal member cut and bent to provide a substantially key hole shaped socket opening through the top thereof with a shield portion disposed beneath said socket opening, a second member adapted to coöperate with said first member and provided with a headed stud capable of being fitted through the enlarged end of the socket opening and brought to a relation within the restricted end thereof to thus hold the second men-

tioned member against separation from said first member, said shield portion having alined openings in the sides thereof at the enlarged end of the key hole shaped socket opening, and a spring mounted in conjunction with said first mentioned member having a portion of the body thereof extended through the alined openings to be disposed substantially centrally and transversely across the enlarged end of the socket opening, said spring having that portion exposed through the socket opening kinked.

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

SOLOMON S. HECHT.

Witnesses:

NATHANIEL A. TONKONOGY,

FANNIE HECHT.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."