April 24, 1934. E. O. CAMERON 1,955,945

SNAP FASTENER ALIGNING MEANS

Filed Dec. 15, 1931

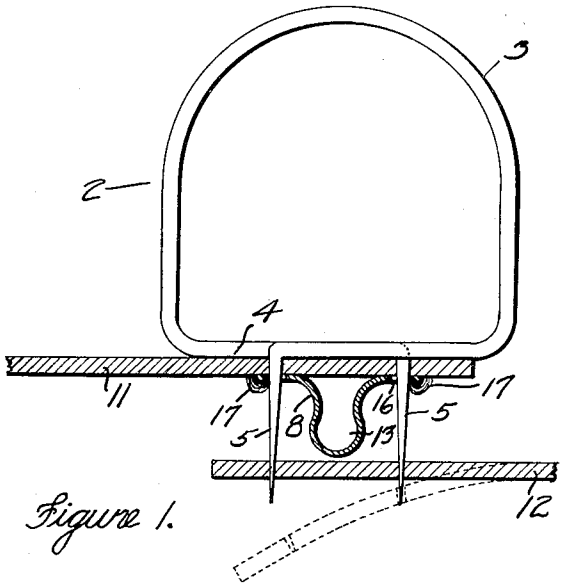


Figure 1.

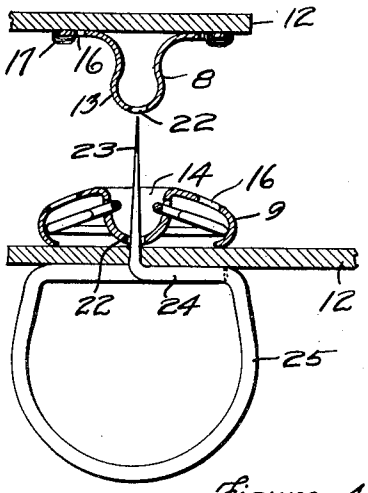


Figure 4.

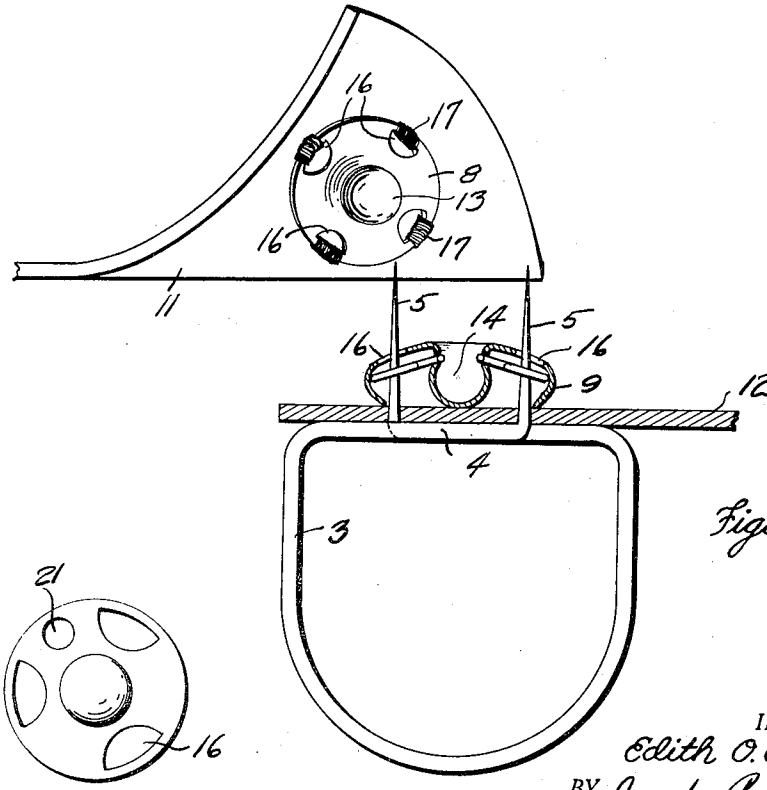


Figure 2.

Figure 3.

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Patented Apr. 24, 1934 1,955,945

UNITED STATES PATENT OFFICE

1,955,945

SNAP FASTENER ALIGNING MEANS

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Application December 15, 1931, Serial No. 581,145

4 Claims. (Cl. 223—54)

The invention relates to a means for use in affixing snap fasteners to the cloth portions arranged to be secured thereby, and relates more particularly to a means for insuring the affixing of the cooperating members of the fastener to the cloth portions in proper relative position.

An object of the invention is to provide an extremely simple means of the character described which will not only insure the proper relative positioning of the cooperating fastener members on the different cloth portions, but will facilitate the ease and effectiveness with which each member of the fastener may be sewed or otherwise affixed to the cloth portion associated with the member.

Another object of the invention is to provide means of the character described which may, if desired, be used with fasteners of existing design and construction without requiring any change or modification of such fasteners.

The invention possesses other objects and features of advantage, some of which, with the foregoing, will be set forth in the following description of the preferred form of the invention which is illustrated in the drawing accompanying and forming part of the specification. It is to be understood, however, that variations in the showing made by the said drawing and description may be adopted within the scope of the invention as set forth in the claims.

Referring to said drawing:

Figure 1 is a side elevation, partly in section, showing the aligning member in one of the positions assumed in effecting the alignment of the fastener elements.

Figure 2 is a fragmentary side view somewhat similar to Figure 1, but showing the parts positioned in a further step in the operation.

Figure 3 is a plan view of a fastener element of somewhat modified form.

Figure 4 is a side view partly in section, showing the aligning means of my invention modified for use with a further modified form of fastener.

As illustrated in the drawing, the aligning means of my invention includes an aligning and marking member 2 which in the form of the invention illustrated in Figures 1 and 2 comprises a finger engaging or gripping portion 3, a cloth backing portion 4, and a cloth piercing and fastener element engaging portion 5. The aligning member as previously pointed out is arranged for use in connection with the well known type of snap fastener made up of two elements 8 and 9 adapted for attachment to the opposed cloth portions 11 and 12 for the releasable securing together of which the fastener is utilized.

The elements 8 and 9 are formed with stud and socket portions 13 and 14 respectively which are designed for releasable connection in a well known manner. Attachment of the individual elements to the associated cloth portions is usually effected by sewing the former to the cloth, suitable openings 16 being invariably provided in the body portions of the elements so that the needle may be threaded therethrough and the threads looped over the side edges thereof.

Much difficulty is usually encountered in securing the elements in proper cooperating relation on the separate cloth portions, particularly when the elements are of small size. Heretofore, attempts have been made to obtain a centralizing of the elements by providing a central opening in the stud and socket portions of the cooperating elements whereby after one of the elements has been affixed to a cloth portion, a needle may be passed through such openings to mark or otherwise indicate the proper position for the cooperating element on the other cloth portion. This arrangement however, as may be readily seen, involves a special construction of fastener element, as most fasteners have at least one of the elements imperforate at the center. Then too, the use of an ordinary needle or pin for holding the second element in place during the sewing operation, is not satisfactory since the holding of the needle by the sewer is sometimes awkward and results in the latter unconsciously shifting the element or rumpling and puckering the cloth under and adjacent the element to thus cause the element to be sewed in place in an ungainly manner and more or less out of position. With my device and arrangement, however, the proper securing and aligning of the elements on the cloth are possible without requiring any special construction of the snap, or if desired, as will be hereinafter pointed out, the aligning member may be modified for use with specially constructed fasteners and still afford the advantages of neat and proper attachment.

In adapting my device for use without involving any change in the construction or design of existing fasteners, I utilize the openings 16 provided therein as aforesaid for sewing the elements to the cloth. Almost invariably in all fasteners, two of such openings 16 are disposed in each of the elements in diametrically opposed relation with the spacing between the openings substantially the same in both elements, and as shown in Figures 1 and 2, the piercing portion 5 of the aligning member is in the form of a pair of prongs spaced the same as the opposed openings so that both prongs may simultaneously enter the openings. Preferably the member 2 is formed of one piece of material, such as relatively inflexible wire, with the extremities of the wire defining the prongs.

In using the device, after one of the elements, as for example the stud element 8, has been sewed in position on the associated cloth portion 11, the latter is placed over the other cloth por-

tion 12 in the position in which the cloth portions are arranged to be secured together. Then, as indicated in Figure 1, the aligning member is placed on the free side of the cloth 11 and manipulated to extend the prongs through the latter material and a pair of opposed openings 16 and likewise clear through the cloth 12, it being noted that the openings are large enough to permit ready penetration of the prongs therethrough notwithstanding the presence of the looped threads 17. The member 2 is then retracted, leaving a pair of well defined marks in the cloth 12. Thereupon the member 2 is placed on the outer side of cloth 12 and the prongs extended therethru at the points defined by the markings aforesaid. With the prongs thus extended the cooperating element 9 of the fastener is inserted over the prongs with the latter projected through a pair of opposed openings as clearly shown in Figure 2. The element may now be sewed to the cloth 12 by use of two or more of the openings 16 not engaged by the prongs, and as soon as this is effected the aligning member is withdrawn and the element further sewed to the cloth by use of the openings vacated by the prongs. It will thus be seen that the element 9 will through the medium of member 2 be sewed in a position directly controlled by the position of element 8.

As previously explained the aligning member of my invention is so designed that it will not only indicate the proper position for the cooperating element, but it will insure the sewing of the element to the cloth in correct alignment and neat execution. By reference to the drawing it will be seen that between the prongs and the finger engaging portion of the member, is the backing portion 4 which serves as a means of insuring the penetration of the prongs at right angles to the cloth portions and what is more important provides a support or backing for the second element and the cloth covered thereby during the sewing operation. This portion 4 in the present embodiment is designed as a part of the loop 3 adapted for the reception of the sewer's finger, and comprises a portion of the wire bent at right angles to the prongs and extending practically the full width of the member. It will be seen that when the prongs are fully extended through the cloth 12 and the associated fastener element, the backing portion of the member will be firmly held against the cloth and the latter thus in turn firmly held between the backing portion and fastener element. In this manner during the time the fastener element is being sewed in position with the aligner member operatively engaged therewith, the element cannot shift on the cloth and the material under or adjacent the element will not pucker and result in the undesired condition as before explained. It is also to be noted that the proper retention of the element and cloth is facilitated by the design of the device to permit the sewer's finger to rest directly against the backing portion and centrally of the prongs. As a further means of insuring the proper sewing of the element on the cloth 12, a double thickness of the wire is provided for at least part of the backing portion 4, such increased thickness being preferably provided by overlapping the wire at the sides of the backing portion.

While it is preferable that the aligning member be arranged for cooperation with the existing sewing holes of the fastener, it is obvious that in instances such as where the sewing holes in a fastener are unsuitable for engagement by the prongs, or where the holes in the separate elements are not readily alignable, there may be provided one or more special holes or the equivalent, such as at 21 in Figure 3. In the latter instance the hole 21 serves together with the diametrically opposed opening 16 for engagement by the prongs.

Where as in Figure 4, each of the fastener elements is formed with a special single aligning opening 22 at the center, the aligning member I prefer to use with this construction, is provided with but one prong 23, the backing portion 24 and finger engaging portion 25 being retained.

It will now be clear that the aligning means of my invention is well adapted to the accomplishment of the objects hereinbefore referred to.

I claim:

1. Means for use with a snap fastener having cooperating elements designed to be sewed to separate cloth portions and having registerable aligning parts, comprising a prong arranged for engagement with said aligning parts simultaneously, a backing portion presenting a backing face at right angles to the axis of said prong and designed to support one of the elements on the associated cloth portion during the sewing operation, and a holding portion for receiving a finger of the sewer to hold the aligning means in position.

2. Means for use with a snap fastener having cooperating elements designed to be sewed to separate cloth portions and having pairs of registerable aligning portions, comprising a wire member having a central portion formed into a holding portion for the reception of the sewer's finger, a pair of parallel prongs defining the end portions of the wire member and arranged to simultaneously engage all of said aligning portions, and a backing portion arranged between said prongs and the ring and providing a supporting face for one of the elements and the associated cloth portion at the base of and at right angles to said prongs.

3. Means for use with a snap fastener having cooperating elements designed to be sewed to separate cloth portions and having registerable aligning portions, comprising a wire member having a prong arranged for simultaneous engagement of said aligning portions, a backing portion of a double thickness of wire at the base of said prong and forming a supporting surface for one of the elements and associated cloth at right angles to the prong, and a holding portion for the finger of the operator designed to position the finger below the part of the backing portion directly at the base of the prong.

4. Means for use with a snap fastener having cooperating elements designed to be secured to separate cloth portions and having registerable aligning parts, comprising a prong arranged for engagement with said aligning parts simultaneously, a backing portion presenting a backing face laterally disposed to the length of said prong and designed to support one of the elements on the associated cloth portion during the sewing operation, and a holding portion engageable by a finger of the sewer to hold the aligning means and the backing face in position.

EDITH O. CAMERON.