March 23, 1937. S. QUISLING 2,074,369

FLEXIBLE FASTENER

Filed March 12, 1934

Fig. 1.

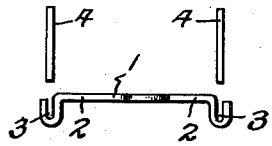


Fig. 2.

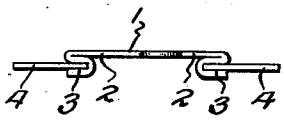


Fig. 3.

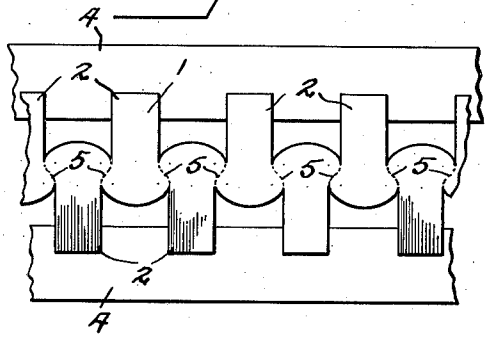


Fig. 4.

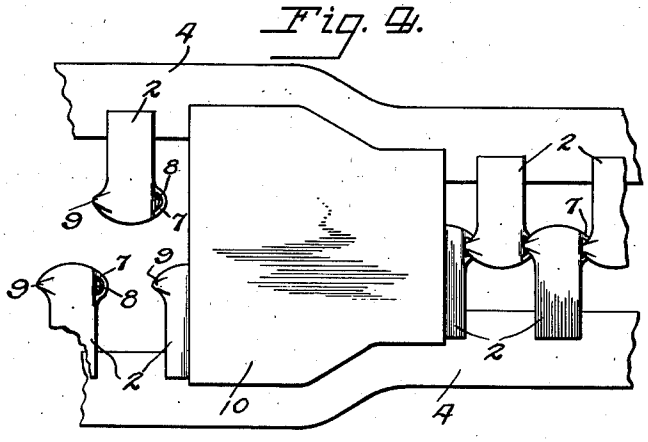
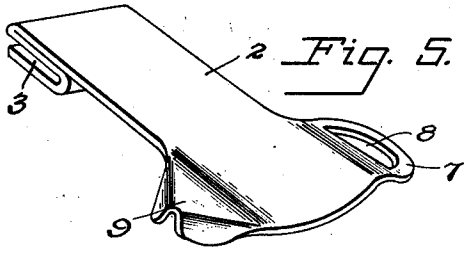


Fig. 5.



Inventor

Sverre Quisling

Patented Mar. 23, 1937 2,074,369

UNITED STATES PATENT OFFICE

2,074,369

FLEXIBLE FASTENER

Sverre Quisling, Madison, Wis., assignor to Hookless Fastener Company, Meadville, Pa., a corporation of Pennsylvania

Application March 12, 1934, Serial No. 715,210

3 Claims. (Cl. 24—205)

This invention relates to slide fasteners and more particularly to an improved form of such fastener adapted to be made by my improved method which is the subject of application Serial No. 699,012, now Patent No. 2,030,895.

One object of the invention is to provide a fastener whose elements may be secured to a tape before the elements are severed from one another.

The invention also contemplates an improved fastener which can be manufactured by forming opposing rows of elements simultaneously, tapes being secured to each set of elements before the elements are completely formed thereby insuring proper spacing of the elements upon the tape.

Altho the invention in its present embodiment may be manufactured at a minimum cost, it provides a very efficient closure.

With these and other objects in view, the invention resides in the combination and arrangement of parts hereinafter described and claimed, it being understood that changes may be made in the precise embodiment shown without departing from the scope of what is claimed.

In the drawing:—

Figure 1 is an end view of a strip of partially formed elements about to receive the tapes;

Figure 2 is a similar view with the tapes in place;

Figure 3 is a plan view of Figure 2;

Figure 4 is a plan view of the device after the elements have been separated and a slide has been positioned thereon, and

Figure 5 is an enlarged perspective view of one of the units.

Referring to the drawing in detail, a strip of material 1 is stamped out in the shape shown in full lines in Figure 3. The body portions 2 of the fastener elements, yet to be completed, are bent down near their outer ends and the outer ends turned up forming channels 3 into which the tapes 4 are inserted, as is shown in Figure 1. The end portions are then bent under the body portion and the tapes clamped tightly in place.

The elements are next severed from one another by cutting along the dotted lines 5 shown in Figure 3. One side edge of the head 6, formed when cutting the elements apart, is bent downward as at 7 and a suitably shaped eye 8 punched therein. The opposite side edge of the head, has its edges pressed inwardly forming a more or less pointed projection or hook 9.

Each of the elements or interlocking members of the fastener may thus be described as constituting a substantially rectangular and generally flat piece of rigid material lying in a plane parallel to the plane of the stringer and projecting from the edge of the stringer, and having at its free end, extensions on opposite side edges thereof projecting from the element in a direction parallel to the edge of the stringer. One of the extensions forms the eye 8, and the other the hook 9. By "generally flat piece of material" is meant a piece which is flat throughout the greater part of its area and has portions bent out of the plane of the flat material or cut out, as the case may be, to form the member to the desired shape.

When opposite sets of elements are brought together at the proper angle by means of a slide 10, the projection 9 of one element will enter the opening 8 of the adjacent oppositely disposed element. When a series of the elements have been thus brought together, an intermeshing that is proof against accidental displacing is set up. The slide may be of a type that will ride against the shoulders on the elements and thus save wear on the tape.

Having thus described my invention, what I claim is:—

1. A separable fastener of the class described comprising a pair of flexible stringers, cooperating series of interlocking members arranged on said stringers in staggered relation, said interlocking members each comprising a generally flat piece of rigid material formed at one end to provide attachment means for securing it to the stringer, said piece of rigid material lying in a plane parallel to the stringer and projecting outwardly from the edge of the stringer, the projecting end having an eye formed on one side edge adapted to receive a projecting hook of an adjacent member and a projecting hook formed on the other side edge adapted to enter in the eye of an adjacent member.

2. A separable fastener of the class described, comprising a pair of flexible stringers, cooperating series of interlocking members arranged on said stringers in staggered relation, said members each comprising a generally flat piece of metal parallel to the plane of the stringer and having attachment means formed at one end for securing it to the stringer and having at its other end a head wider than said attachment end, and a body portion connecting said ends, the central portion of said head having substantially the same thickness as the body portion, said members being spaced apart on the stringers so that the distance between the attaching ends is equal to the over-all width of the head portion whereby

the members on two stringers can be cut from a single strip of material, said wide projecting end having on opposite side edges male and female interlocking elements adapted to interlock with corresponding interlocking elements on adjacent members.

3. A separable fastener of the class described comprising a pair of flexible stringers, cooperating series of interlocking members arranged on said stringers in staggered relation, each interlocking member comprising a substantially rectangular and generally flat piece of rigid material in a plane parallel to the plane of the stringer, having means at one end for securing it to the stringer, said member projecting from the edge of the stringer and having at its free end, extensions on opposite side edges thereof projecting from the element in a direction parallel to the edge of the stringer, one of said extensions having an eye formed therein adapted to receive the projection of an adjacent member and the other of said extensions having a projection adapted to enter in an eye of an adjacent member when the fasteners are interlocked.

SVERRE QUISLING.