

Nov. 30, 1943.

G. A. CARLSON

2,335,482

FASTENING DEVICE

Filed Dec. 26, 1940

Fig. 1.

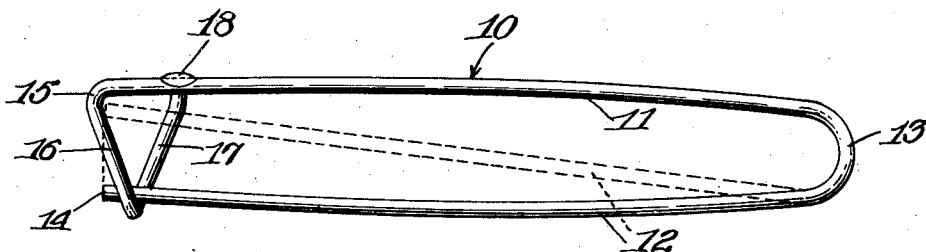


Fig. 2.

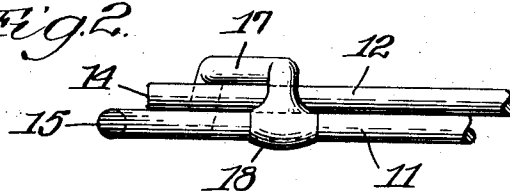


Fig. 3.

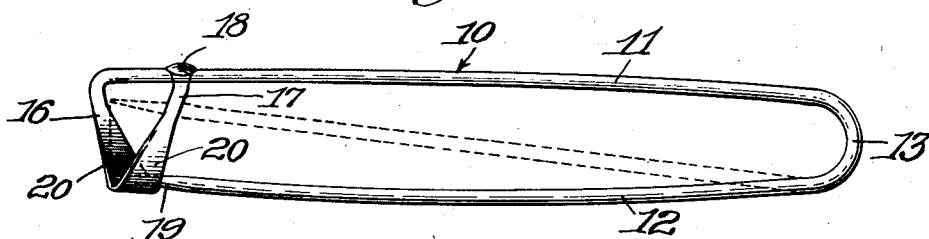
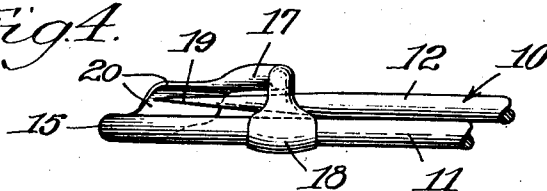


Fig. 4.



Inventor:
Gustav A. Carlson,
By Chritton, Wiles, Davies, Kirsch & Dawson,
Attys.

UNITED STATES PATENT OFFICE

2,335,482

FASTENING DEVICE

Gustav A. Carlson, Chicago, Ill., assignor to The
Boye Needle Company, Chicago, Ill., a corpora-
tion of Illinois

Application December 26, 1940, Serial No. 371,746

1 Claim. (Cl. 24—161)

This invention relates to a fastening device. It is particularly useful as a stitchholder, marker, safety pin, and similar devices.

An object of the invention is to provide an extremely simple and effective fastening means which provides a minimum of projections or obstructions which might be engaged by threads, yarn, etc. A further object is to provide a fastening member which will permit a long series of loops to be engaged and held, the loops being shifted about a long shank provided with a curved bend. A further object is to provide a fastening means effective as a safety pin or other similar device with the point thereof confined within a simple head structure guarding it and locking it against unintentional disengagement. Another object is to provide a fastening device wherein the retaining head is formed by an integral extension of the leg body, a small loop thereof being made effective as a retaining guard. Other specific objects and advantages will appear as the specification proceeds.

The invention is illustrated, in a preferred embodiment, by the accompanying drawing, in which—

Figure 1 is a side view in elevation of a fastening device embodying my invention; Fig. 2, a broken enlarged top plan view thereof; Fig. 3, a side elevational view of a modified form of the invention; and Fig. 4, an enlarged broken top plan view of the head portion of the modification shown in Fig. 3.

In the illustration given in Fig. 1, a single body member 10 forms an upper leg 11 and a lower leg 12, the two legs being connected by an integral bend 13.

The lower leg 12 is provided with a blunt end 14 to prevent it from piercing or engaging yarn as it is passed through loops formed by stitches. It is adapted to spring upward to the position shown in dotted lines in Fig. 1.

The upper leg 11 is provided at its forward end with a head 15. The head 15 may be formed integrally with leg 11, as illustrated, or, if desired, may be formed as a separate member and secured to leg 11. In the illustration given, the forward end of leg 11 is turned downwardly to form a loop, the loop consisting of a downwardly and inwardly extending loop portion 16 and an upwardly and rearwardly extending loop portion 17, the portion 17 being offset laterally from the portion 16 to provide a space therebetween adapted to receive the free end portion of leg 12. At its top, the loop portion 17 is curved back into

engagement with the leg 11 and secured thereto by welding 18, solder, or other means.

In operation, the free end of leg 12, when released from head 15, normally extends below head 15 and is readily inserted through loops formed by stitching, the stitches being passed all round the leg 12, bend 13, and leg 11 up to the loop portion 17. Thus, a very considerable number of loops may be held in the holder. When the holder is loaded with stitches as described, the end portion of leg 12 is moved to the position shown in dotted lines in Fig. 1 and moved laterally downwardly so as to bring it within the V-notch provided by the lower portion of head 15. In this position, the leg 12 is securely locked against unintentional disengagement. It will be noted that the leg 12 must travel an extremely long and vertical movement and almost touch the upper leg 11 before it is released. At the same time, it is extremely easy to bring the free end of leg 12 into locking engagement with head 15, since the loop portion 17 serves as a guide against which the leg may be swung before it is given a downward movement behind loop portion 16.

The head 15 presents a minimum of projecting surfaces, the only joint being that formed by the weld 18 and this being polished to form an extremely smooth union with leg 11. Thus, the greatest possible portion of the member 10 can be utilized for the holding of stitches while at the same time effectively locking the stitches against release.

The device is useful, not only as a stitchholder as mentioned, but also as a stitch marker, or as a fastening device for other things.

In the modification illustrated in Fig. 3, the structure is very much the same. The point, however of leg 12 is sharpened, as illustrated, at 19. Further, the loop portion 16 and the loop portion 17 have their lower portions widened, as indicated by the numeral 20, to provide a protecting band or sheath for receiving the point 19.

In the operation of the fastening device or safety pin, shown in Fig. 3, the pin portion 12 is passed through the fabric to be secured and the pin is then pressed laterally and toward the upper leg 11 so as to enable the point to clear the leg portion 16. It is then allowed to move under the force of the spring downwardly into the wide sheath portion 12 where it is securely held and guarded. To permit release, it is necessary to press the leg 11 to the extreme upper position indicated by dotted lines in order to enable it to clear the leg portion 16. Thus, there is a very effective guard against unintentional disengage-

ment. At the same time, the inclined loop portion 17 permits easy disengagement and engagement when this is desired, the portion 17 serving as a guide against which the point of leg 12 is pressed, permitting easy upward or downward movement with a certainty that the same will clear loop portion 16 as it approaches the upper leg 11.

While I have illustrated but two specific embodiments of the invention, it will be understood that a great many embodiments may be employed while using the same principle illustrated, and further the devices may be put to a great many uses not herein described. It will be noted that the new head eliminates the points, corners, and crevices of the stamped metal safety pin head now employed and in which thread and yarn tend to catch and cling. The smooth loop provided by the new structure eliminates catching of thread and yarn and further permits the shank portion of the legs to be utilized to the fullest extent for engagement with the material, yarn, etc. While the loop portion 13 is shown as a small curved bend and the same is desired when the device is used as a stitch-holder, etc., it will be understood that a double loop may be formed instead where the device is used as a safety pin or for other fastening uses.

The opening in the head formed by the offsetting of one loop portion with respect to the other may be made either a righthand or left-hand opening to suit any specific use. It will be noted

that the pin or leg 12 cannot be moved through the head from one side to the other, but must be engaged and disengaged from one side only. Thus there is eliminated the accidental disengagement commonly experienced with a safety pin head where the pin is moved into locking engagement with the head and out of locking engagement on the other side thereof under the force of the pressure exerted.

10 While in the foregoing specification, I have illustrated two methods of utilizing the invention, it will be understood that those skilled in the art will readily employ other embodiments departing widely therefrom in detail, without departing from the spirit of my invention.

15 I claim:

In a device of the character set forth, a spring member having two substantially parallel legs united by an integral bend, the upper of said legs having its end portion bent at an inclined angle downwardly and rearwardly and then upwardly and rearwardly to form a closed substantially V-shaped loop with the point of the V lying rearwardly of the forward end portion of the upper leg, said lower leg terminating in a free end and being long enough to substantially reach but clear the upper portion of the downwardly and rearwardly extending V leg member and being adapted to be received within the V point thereof.

30 of.
GUSTAV A. CARLSON.