

No. 670,445.

Patented Mar. 26, 1901.

N. M. CRIPE.  
BELT LACING NEEDLE.

(Application filed Mar. 31, 1900.)

(No Model.)

Fig. 1.

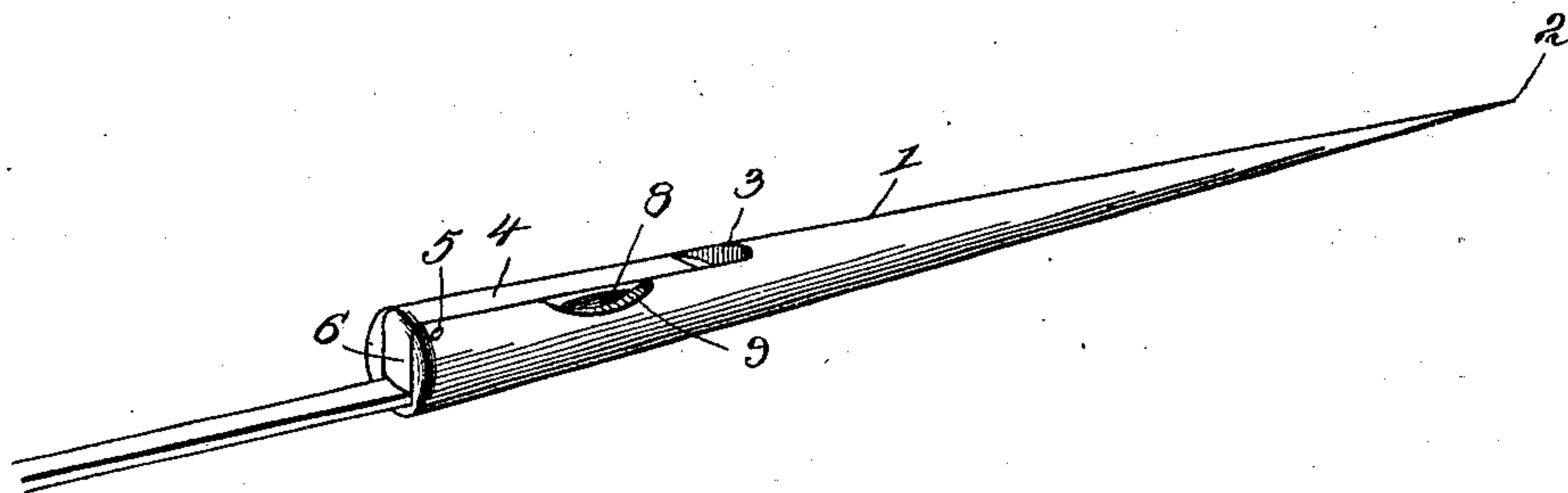


Fig. 2.

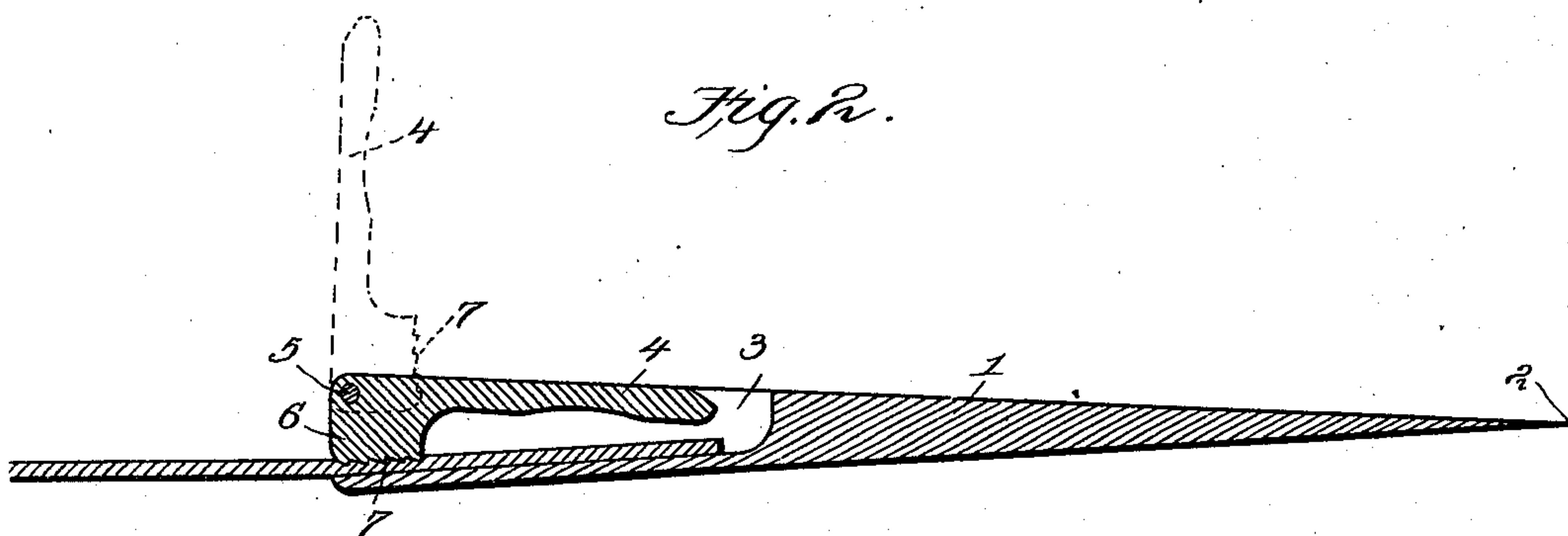


Fig. 3.

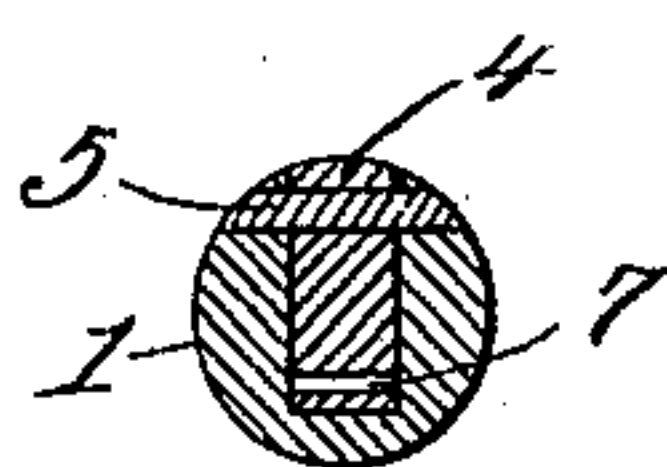
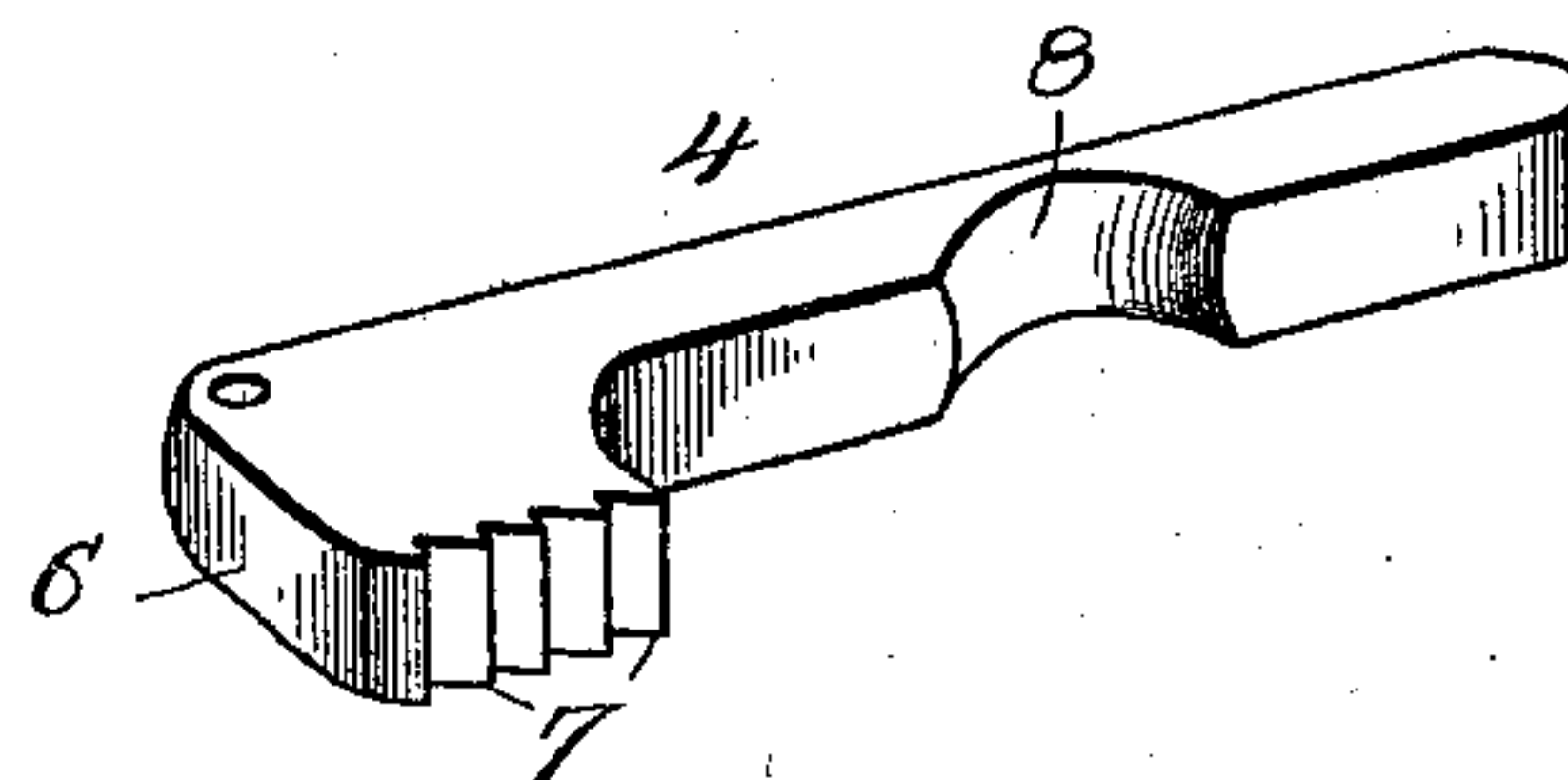


Fig. 4.



Witnesses

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## BELT-LACING NEEDLE.

SPECIFICATION forming part of Letters Patent No. 670,445, dated March 26, 1901.

Application filed March 31, 1900. Serial No. 10,957. (No model.)

*To all whom it may concern:*

Be it known that I, NOAH M. CRIPE, a citizen of the United States, residing at Elma, in the county of Chehalis, in the State of Washington, have invented a new and useful Belt-Lacing Needle, of which the following is a specification.

This invention relates to improvements in lacing-needles.

One object of the invention is to provide a needle of the class stated which is designed more especially for use in lacing belts; and to this end the invention contemplates the provision of a needle which is simple in construction and embodying in its structure efficient means for readily and detachably connecting the lacing-strip to the needle.

A further object of the invention is to so construct the needle that after the lacing-strip has been inserted therein and pressure applied thereto for drawing the strip through the belt the tension upon the strip incident to such pressure will bind the clamping means in close relation to the lacing-strip, and thereby preclude the possibility of the latter being detached from the needle.

With these and other objects in view, which will appear as the nature of the improvements is better understood, the invention consists, substantially, in the novel construction, combination, and arrangement of parts, as will be hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the appended claims.

In the drawings, Figure 1 is a perspective view of a lacing-needle constructed in accordance with the present invention, a lacing-strip being shown attached thereto. Fig. 2 is a longitudinal sectional view thereof, the dotted lines indicating the position which the clamping-lever assumes when introducing the lacing-strip into the needle. Fig. 3 is a transverse sectional view through the pivot of the clamping-lever. Fig. 4 is a detail perspective view of the clamping-lever.

Referring to the drawings, the numeral 1 designates the shank of the herein-described needle, which shank is elongated, substantially circular in cross-section, and gradually tapers from its rear end to the forward end thereof, at which latter end the shank ter-

minates in a penetrating-point 2. The shank 1, at its rear end and at one of its sides, is provided with a longitudinally-extending groove or slot 3, the depth of said groove extending approximately the full diameter of the shank, and said slot or groove 3 is adapted to receive a lacing-strip in order that the latter may snugly fit and lie therein.

For the purpose of retaining the lacing-strip within the groove 3 a clamping-lever 4 is employed, and said lever is pivotally retained by means of a transversely-extending pin 5 within the rear end of the groove or slot 3. It will be noted that the pin 5 lies adjacent to the outer edges of the walls of the groove or slot 3, and said lever 4 has at its rear end an engaging head 6, the inner face of which is provided with a series of serrations or teeth 7. In the closed position of the lever 4 the same lies within the groove or slot 3, and the serrations or teeth 7 engage the lacing-strip, so as to bind the latter in said groove or slot; but in order that the lever 4 may be readily engaged by the fingers for swinging the same outwardly, and thereby releasing the engaging head 6 from the lacing-strip, the inner side of the shank of the lever 6 is provided with a concavity 8, which concavity when the lever 4 is closed lies adjacent to and registers with a pair of notches 9, formed in the outer edges of the walls of the groove or slot 3. It is therefore obvious that when it is desired to swing the lever 4 outwardly the nails of the fingers may be easily inserted into the notches 9 and into the concavity 8, whereupon a secure grasping of the lever may be had in order to apply the necessary pressure thereon for swinging the same outwardly. It will also be noted that the pin 5 passes through the engaging head 6 at such a point that when pressure is applied to the needle 1 for drawing the same through the apertures in the belt the tension upon the lacing-strip incident to such pressure will serve to more firmly bind the clamping-lever 4 upon said strip, and thereby preclude the possibility of the strip being withdrawn from said needle. The serrations or teeth 7 are also inclined away from the pivot of the lever 4, and by such arrangement an increased grasping of the engaging head 6



upon the lacing-strip during the tension of the latter is had.

The manner of manipulating the herein-described needle is as follows: To introduce  
5 a lacing-strip into the needle, the clamping-lever 4 is first swung outwardly approximately to the position shown by the dotted lines in Fig. 2, after which the end of the lacing-strip is passed under the end of the  
10 clamping-lever and into the slot or groove 3. When the strip has become so positioned, the clamping-lever 4 is swung into said slot or groove, and the serrations or teeth 7 of the engaging head 6 are thereby brought into con-  
15 tact with the lacing-strip. The lacing-strip is thereby securely fastened within the needle and is incapable of removal therefrom until the clamping-lever has been swung out-  
20 wardly in order to free the serrations or teeth 7 from engagement with the strip. When, however, such disengagement is desired, the clamping-lever 4 is grasped at the notches 9, and upon pressure being applied thereto the lever readily moves outwardly under the in-  
25 fluence of such pressure, and the serrations or teeth 7 are thereby freed from contact with the lacing-strip.

Having thus fully described my invention,

what I claim as new, and desire to secure by Letters Patent, is—

1. A needle of the class described, comprising a shank formed with a recess to receive the lacing-strip, and a clamping-lever pivoted in said recess and formed with a cam-head having a serrated surface engaging and clamp-  
35 ing said lacing-strip, substantially as described.

2. A needle of the class described, comprising a shank formed with a recess receiving the lacing-strip, and a clamping-lever pivoted in said recess and swinging forwardly and  
40 inwardly in clamping said strip, substantially as described.

3. A needle of the class described, comprising a shank having a recess formed in its  
45 rear end to receive the lacing-strip, and a cam-clamping head pivoted at the outer end of said recess and having a forwardly-extending handle portion fitting in said recess when the strip is clamped, substantially as de-  
50 scribed.

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