

J. H. TITUS.
PRESSER FOOT ATTACHMENT FOR SEWING MACHINE NEEDLES.
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936,386.

Patented Oct. 12, 1909.

Fig. 2

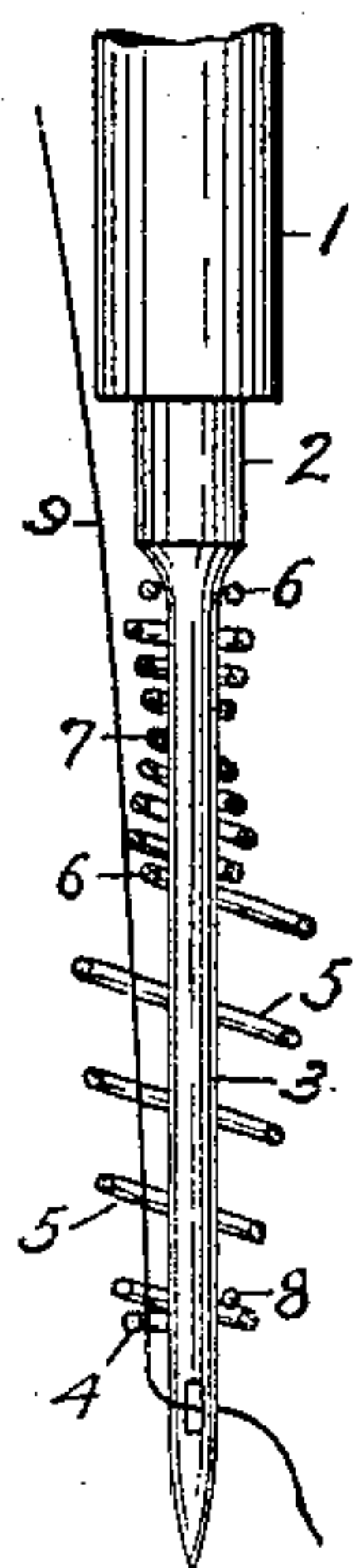
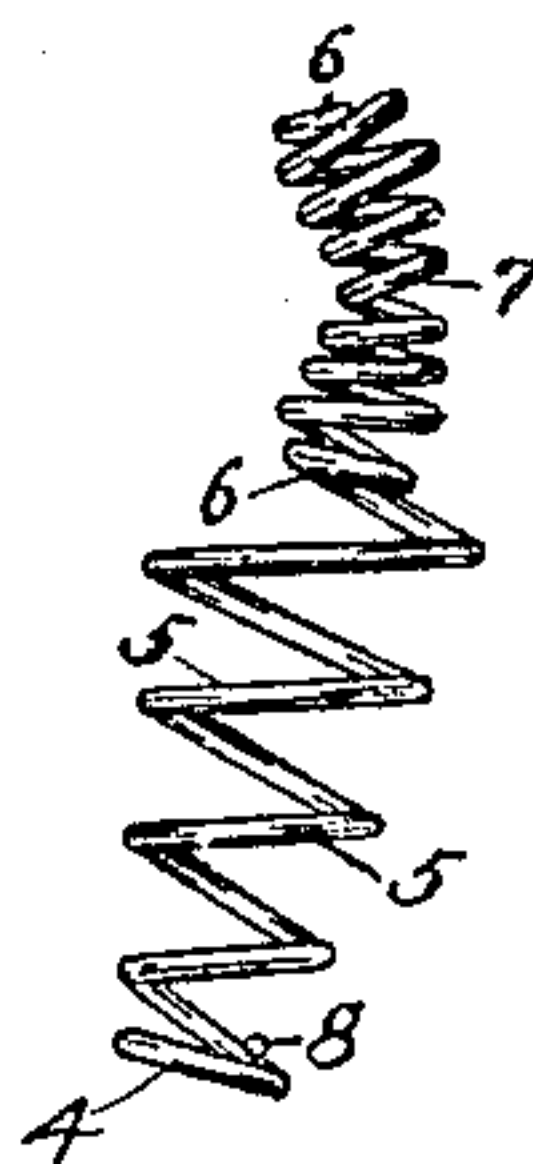


Fig. 1.



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UNITED STATES PATENT OFFICE.

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PRESSER-FOOT ATTACHMENT FOR SEWING-MACHINE NEEDLES.

936,386.

Specification of Letters Patent.

Patented Oct. 12, 1909.

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To all whom it may concern:

Be it known that I, JAMES H. TITUS, a citizen of the United States, and resident of Westfield, in the county of Union and State of New Jersey, have invented certain new and useful Improvements in Presser-Foot Attachments for Sewing-Machine Needles, of which the following is a specification.

The invention relates to improvements in presser-foot attachments for sewing-machine needles of the class employed in embroidery stitching and darning, in which the fabric may readily be fed in various directions thereof; and the object of the invention is to provide an attachment of simple construction which may readily be applied to the several sizes of standard needles and which shall include self-acting means for securely clamping the same thereon, and also adapted for resilient compression into relatively small compass.

In describing the invention in detail reference is had to the accompanying drawings, forming a part of this specification, and wherein like characters of reference are used to designate like parts throughout the several views, and in which;—

Figure 1 is a side view of the attachment embodying the invention, illustrating its normal detached shape; and Fig. 2 is a sectional view thereof showing its application to the needle.

Numeral 1 designates the lower end of a conventional needle-bar of a sewing-machine, in which is secured in the usual manner the shank 2 of an ordinary needle 3.

The presser-foot attachment is formed of a single length of spirally-wound spring-wire, having a loop 4 at its lower end, adapted to loosely encircle the needle and constituting a foot member through which the needle reciprocates. Extending from the foot member 4 are a series of gradually enlarged convolutions 5, comprising a resilient connecting means between the foot member 4 and an upper clamp member, which latter by the continuation of the winding is formed with the terminal clamping-loops 6 and the intermediate clamping-loop 7, which severally engage the needle in a yielding manner. Upon opposite sides of the intermediate clamping-loop 7 the convolutions of the wire are gradually enlarged in diameter to form outwardly-tapering coils which abruptly

terminate in the terminal clamping-loops. As normally wound, and when detached from the needle, the tapering coils on opposite sides of the clamping-loop 7 are angularly disposed, as shown in Fig. 1, and tend to straighten when the attachment is forced upon the needle, thereby exerting a supplemental clamping action thereon. By reason of the enlargement of the coils on opposite sides of the clamping-loop 7, a freedom of movement is provided for the several clamping-loops which enables them to yieldingly engage and clamp the shaft of the needle, and by suitably selecting the wire the desired clamping action may be obtained. It is to be understood that the several clamping-loops are so arranged with respect to the loop of the foot member that the axes of the several loops will lie in a straight line, when the attachment is in use, to enable the needle to pass centrally through the eye or loop of said foot member.

In operation the customary presser-foot of the machine is removed, and the herein-described attachment is forced over the needle and into the position indicated in Fig. 2, in which position it will be securely held against displacement by the action of the multiple clamping-loops. The needle of the machine is then threaded through the attachment, as indicated by numeral 9, and the fabric to be stitched is adjusted below the needle in a well-known manner. During the lower or stitch-forming portion of the needle's reciprocation, the foot member 4 of the attachment yieldingly urges the fabric against the normal work-supporting member of the machine to insure the proper action of the stitch-forming mechanism, and during the upper portion of the needle's reciprocation the foot member is raised somewhat above the work to readily permit of the latter being manually fed or guided in the various required directions. It will be clear that during the needle's downward stroke the attachment may be compressed longitudinally into a relatively small compass without impairing its elasticity by reason of the tapering form of the resilient connecting coil 5, which permits the several convolutions thereof to telescope.

During the operation of the attachment the normal mechanical feeding device upon the machine will be inoperative as regards its feeding action, the relative position of

the foot member of the attachment permitting the work to be manipulated independently thereof.

What I claim as my invention and desire to secure by Letters Patent, is;—

1. A presser-foot for sewing-machines, comprising a single length of spirally-wound spring wire looped at one end to form a foot member, and provided at the opposite end with a clamping member composed of a plurality of coils angularly disposed with respect to one another, and a series of telescoping coils resiliently connecting the foot and clamp members.
2. A presser-foot for sewing-machines, comprising a single length of spirally-

wound wire, bent at one end to form a foot member, and at the opposite end to form a clamping member, a plurality of enlarged resilient coils disposed between said foot and clamping members, said clamping member being formed with a plurality of clamping-loops having enlarged interconnecting coils and disposed in angular relation with one another.

Signed at New York in the county of New York and State of New York this 2nd day of September A. D. 1908.

JAMES H. TITUS.

Witnesses:

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