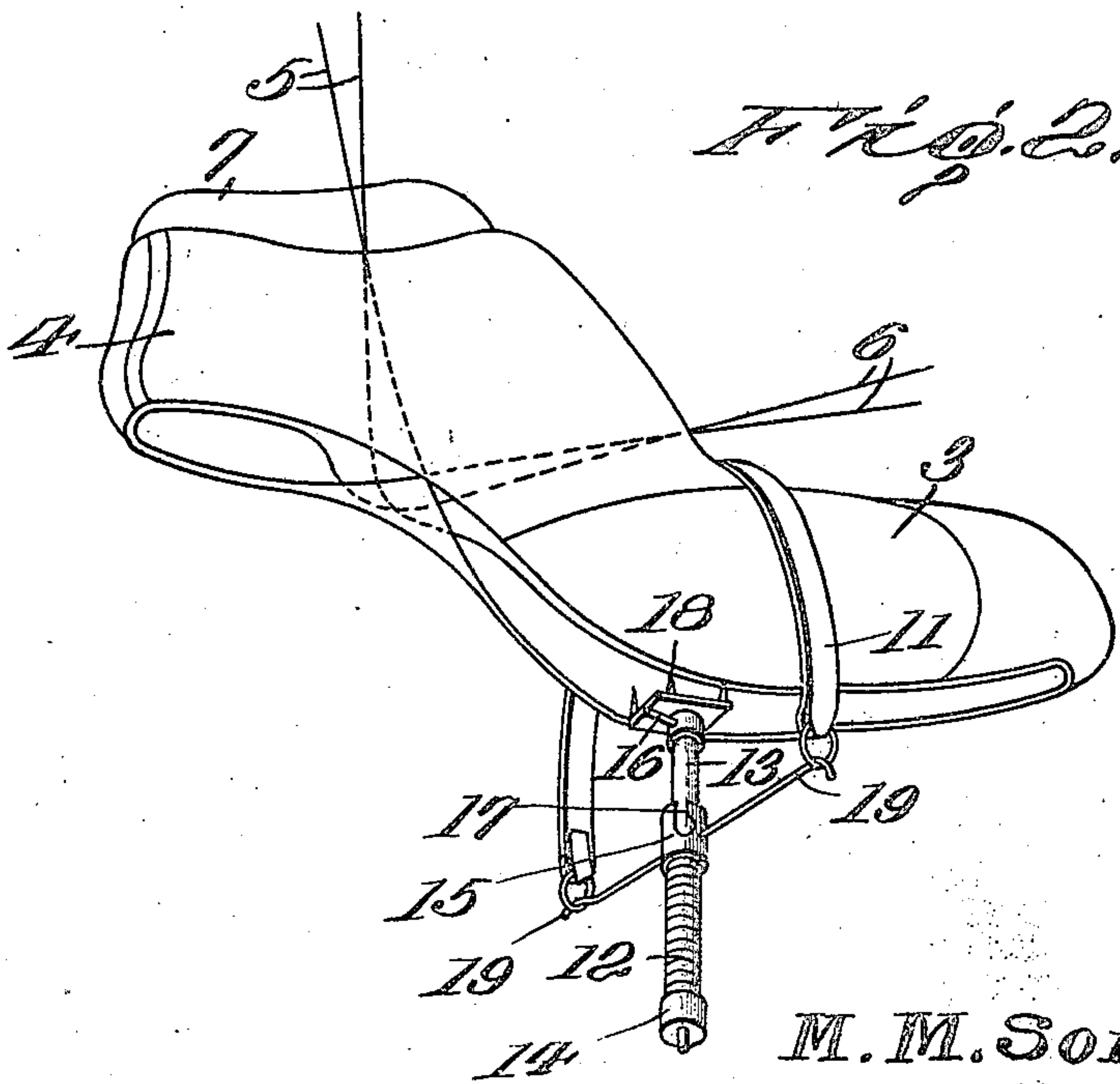
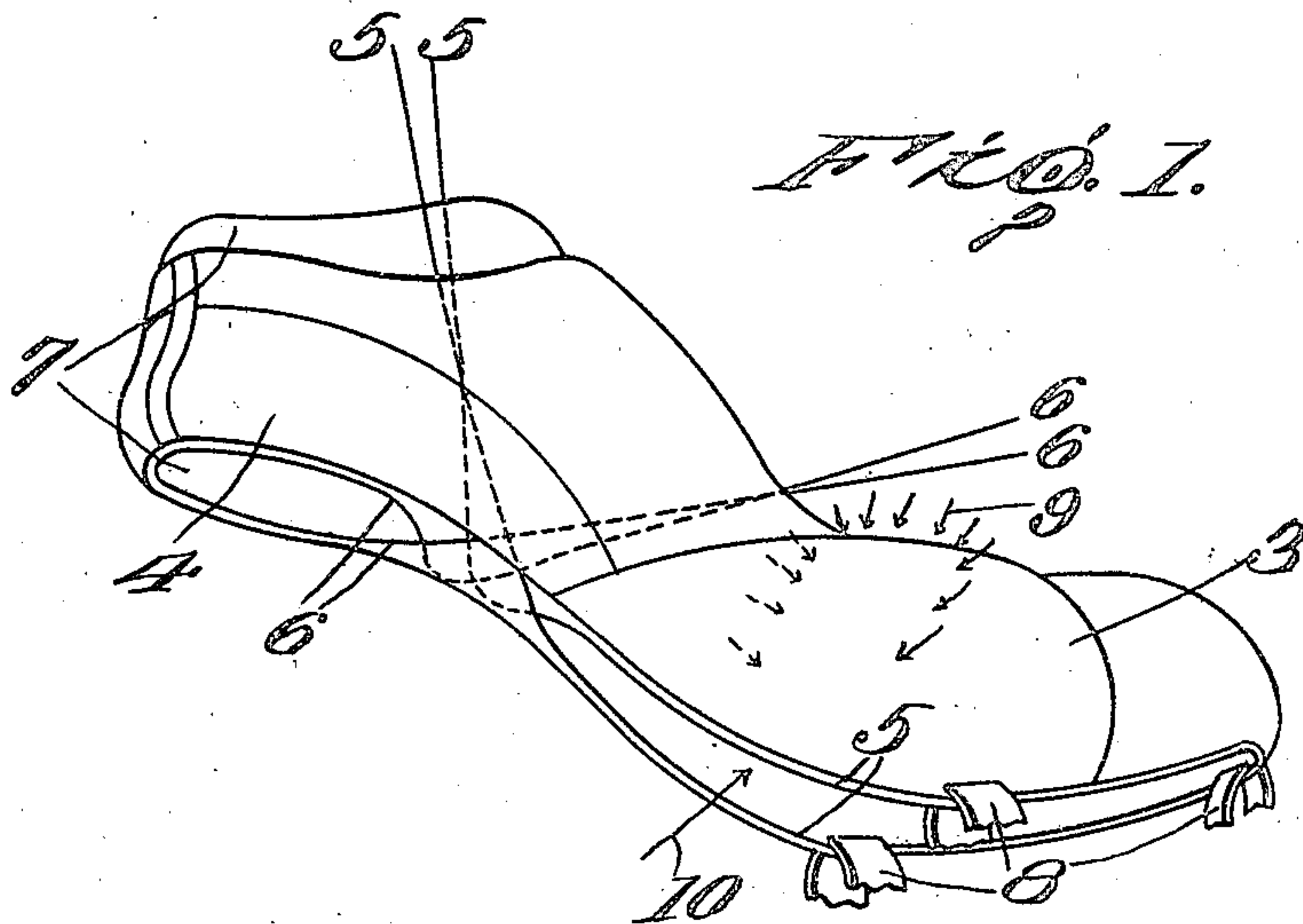


Jan. 2, 1923.

1,440,898

M. M. SORENSEN.
DEVICE FOR PULLING OVER UPPERS ON LASTS.
FILED AUG. 24, 1920.



Inventor

M. M. Sorensen,

By

H. R. Herslake.

Attorney

UNITED STATES PATENT OFFICE.

MARIUS METHILTUS SORENSEN, OF VALLEROD, NEAR RUNGSTED, ISLE OF SEALAND, DENMARK.

DEVICE FOR PULLING OVER UPPERS ON LASTS.

Application filed August 24, 1920. Serial No. 405,711.

To all whom it may concern:

Be it known that MARIUS METHILTUS SORENSEN, a subject of the King of Denmark, residing at Vallerod, near Rungsted, Isle of Sealand, in the Kingdom of Denmark, has invented certain new and useful Improvements in Devices for Pulling Over Uppers on Lasts, of which the following is a specification.

10 This invention relates to a method of pulling over shoe uppers on the last, especially uppers which are to be lasted according to the method covered by U. S. Patent No. 1224229.

15 The object of the invention is to hold the upper fast in the stretched position without the use of nails, which would complicate the ensuing lasting according to the aforesaid method, and which requires the disposal of a special nail feeding mechanism and nail-driving mechanism in connection with the pulling over mechanism.

20 With the present method after the upper is pulled over the last through the movement of the pulling grippers, a pressure on the upper, directed against the top side of the last, is exercised and maintained, so that there occurs a sufficiently strong friction between the last and the upper to hold the latter in the pulled over position.

30 The invention is illustrated in the accompanying drawing, in which Fig. 1 diagrammatically shows the aforesaid principle, and Fig. 2 shows a device intended to exercise and maintain the aforesaid pressure.

35 For the sake of simplicity the edge of the upper is shown by means of a double line, in such a manner that one line indicates the threads 5 and 6 respectively, which serves for lasting the front 3 and the back 4, respectively. 7 designates the last, and 8 represents the grippers of the pulling over mechanism.

45 When the upper, in the well-known way, has been grasped by the grippers and is pulled down over the last through the movements of these grippers, the aforesaid friction between the last and the upper is effected by pressure, as indicated by the arrows 9 and 10 in Fig. 1, and as this pressure is maintained, independent of the pull-

ing over machine, the last, with the upper pulled over it, can be removed from this machine, and can be manipulated just like the intermediate product that comes from the ordinary pulling over machines which operate with nails.

The device, independent of the pulling over machine, for producing and maintaining the aforesaid friction between the last and the upper consists, in the example shown in Fig. 2, of a strap 11, which is passed over the upper, and which can be maintained in stretched condition by means of a spring 12. This spring is of the traction spiral type and is disposed on a rod 13, with whose head 14 one of its ends is connected, while its other end is connected with a sleeve 15 shiftable on the rod. Close to the other end of the rod there is a holding-member 16, which, when the spring is pulled by the sleeve 15 approaching this end, can grip into an undercut recess 17 in the sleeve, and thus keep the spring in tension. At this end of the rod 13 there is a pressure-plate 18, which can press against the bottom of the last 7, and on the sleeve 15 there are hooks 19 on which the ends of the strap 11 can be hooked in an easily releasable manner. When the holding-member 16 is released from the recess 17, the spring 12, as it contracts, will pull the strap 11 tight over the upper, thus producing the desired friction-connection between last and upper.

It is obvious that the invention is not confined to the specific holding means shown in Fig. 2 and it is self-evident that the details of the device may be modified and changed within the scope of the following claims.

What I claim and desire to secure by Letters Patent is:—

1. A device for producing and maintaining friction between a last and an upper that is pulled over the last, consisting of a member for exercising pressure against the upper, a pressure-member for pressing against the bottom of the last, a spring, one end of which is secured to one of these members, and easily releasable means for connecting the other end of the spring with the other of these members.

2. A device for producing and maintain-

ing friction between a last and an upper
that is pulled over the same, comprising a
post adapted to be suspended from the bot-
tom of the last, a member slidably mounted
5 on said post and carrying a plurality of
hooks, a spring surrounding the post and
having one of its ends connected to the slid-
ably mounted member and its other end
fixed to the outer end of the post, and a
strap adapted to pass over the upper sur- 10
face of the upper and provided at its ends
with means engaging said hooks.

In testimony whereof I affix my signature.

MARIUS METHILTUS SORENSEN.