(Model.)

W. H. DAVIS & A. A. HAWLEY.

FELTED WOOLEN SOCK OR STOCKING.

No. 287,808. Patented Nov. 6, 1883.



Witnesses.
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UNITED STATES PATENT OFFICE.

WILBUR H. DAVIS, OF LYNN, AND ALFRED A. HAWLEY, OF MERRIMAC, ASSIGNORS TO THE MERINO SHOE COMPANY, OF BOSTON, MASS.

FELTED WOOLEN SOCK OR STOCKING.

SPECIFICATION forming part of Letters Patent No. 287,808, dated November 6, 1883.

Application filed May 15, 1882. (Model.)

To all whom it may concern:

Be it known that we, WILBUR H. DAVIS, of Lynn, and ALFRED A. HAWLEY, of Merrimac, in the county of Essex and Commonwealth of Massachusetts, have invented a new and useful Improvement in Felt Woolen Socks or Stockings, of which the following is a specification.

Our invention relates to the manner of making the sock or stocking and the stocking as made, the object of it being to produce a stocking of wool without spinning or knitting which shall be soft and pliable and in good form to fit the foot and leg and prevent the radiation of heat from the feet of the wearer, so that lumbermen and others exposed to severe cold by standing in snow for long periods may not only be protected from frost, but actually kept warm and comfortable in the severest weather; and it consists in the method hereinafter described of making a woolen stocking directly from the wool without spinning into yarn and knitting, as heretofore done, and in the stocking so made.

To practice our invention, we dispose a quantity of wool sufficient to make a stocking in a flat bat or film of uniform thickness, in form, when folded, approximating to the form of the stocking, but with an opening down one side of the leg and part of the foot. We then commence hardening the wool at the toe of the stocking, using a jigger of such form that the under plate will enter the foot of the stocking, extending the hardening toward the heel, and closing the opening in the side of the bat as the work progresses. When the heel is reached, proper form is given to it as the wool is hardened, and as the hardening proceeds up the leg the opening in the bat is closed until the whole length of the leg is hardened. From the heel upward the stocking is shaped to correspond with the form of the ankle and calf of the leg, so as to fit perfectly, and if any surplus of wool appears as the hardening is going on it is torn away, or if there is a deficiency of wool more is added to make it up. Thus the sock or stocking is formed and shaped to correspond nearly to the form of the foot and leg during the process technically called "hardening the wool." At this stage the wool is not sufficiently firm in the fabric to have proper strength and durability for wear. To give the fabric of the stocking sufficient firmness, it is subjected to a process of fulling or felting. A large mass of them is placed in a fulling-mill, and there milled until the fabric is as firm as it can be and have the stocking finish flexible and somewhat elastic and soft to the touch. While in the milling or fulling process, the stockings are constantly examined and handled to discover and correct any tendency to take improper form, and if any are found getting out of the required form they are withdrawn and the tendency corrected by manipulation, or by further use of the jigger, if necessary. When sufficiently and properly fulled or felted, the stocking is drawn onto a form or tree of the exact shape and size required for the finished stocking. In this process it is stretched either in drawing on or by expanding the form or tree after the stocking is on it. The stocking is then dried on the form or tree, and it may be finished on the outer surface by abrasive action, or not. The top of the leg is trimmed off, and may be finished with a binding or not. It is then completed by affixing at the top of the leg and encircling it a strap of leather or other suitable material, secured to the stocking by passing it through perpendicular slots cut in the felted fabric—two in front and two in the back side of the top of the leg. Other slots may be made in the sides of the leg for the same purpose, if necessary or desirable. The strap is provided with a buckle, and its purpose is to enable the wearer to contract or gather in the top of the stocking around the leg above the calf, so that it will not slip down around the ankle, and become corrugated or wrinkled.

The drawing annexed shows a sock or stocking in perspective, with the strap and buckle and the slots in the felted fabric by which is it affixed.

We are aware of the several patents of Palmer, Houghton, Hawley, and others relating to the manufacture of seamless felted shoes, and we do not claim any matter described or claimed in them; but

We do claim as new and of our invention—

1. The above-described improved method

or process of forming a soft or pliable sock or stocking from wool without spinning and knitting, consisting of depositing the wool in a flat bat of uniform thickness and suitable shape, closing the bat by joining the edge and hardening and partially felting the wool, in the manner or substantially as described.

2. As a new article of manufacture, a flexible, pliable, and somewhat elastic sock or stocking made from wool without spinning and knitting by disposing the wool in a flat bat and joining the edge of the bat and hardening and partially felting the wool, in the manner or substantially as described.

3. In combination with a flexible, pliable, and somewhat elastic stocking made from wool in the manner described, a retaining strap and buckle affixed thereto, in the manner or substantially as set forth.

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