

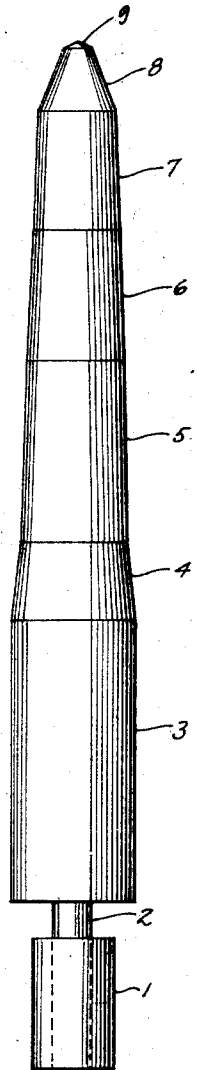
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FORM FOR INSPECTING STOCKINGS

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UNITED STATES PATENT OFFICE.

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FORM FOR INSPECTING STOCKINGS.

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The present invention relates to an improvement in stocking forms for use chiefly in connection therewith. Under present day conditions in the stocking trade it is important, particularly for the manufacturer of high grade goods, to avoid sending out stockings containing imperfections or latent weaknesses which will readily become imperfections. Some manufacturers guarantee their goods against such imperfections and weaknesses. In order to avoid an undesirable volume of returns or allowances, they subject the completed stocking to a careful inspection. Forms of various sorts have been used in this connection including relatively flat forms and more rounded ones, and in some mills the distending of certain portions of the fabric forming the stocking has been done by hand. The latter operation is very expensive and unduly fatigues the operatives. The forms commonly in use and which we know about are undesirable for different reasons depending on the type employed. One common fault is that the relative proportions of different parts of the form do not conform to the relative proportions of corresponding parts of the stocking so that in some portions of the fabric, the loops and seam stitches of the stocking, if it has any, are immediately and uncontrol-ly strained or distorted by the form as the stocking is moved into operative position thereon for inspection. Furthermore, where the nose or tip end of the form is of spherical contour, as is the case on some known forms, the operator is required to stoop or twist her body materially to observe the heel or toe portions supported thereon. In using relatively flat forms the stitches and seams are more distorted in some parts than in others, thus rendering the inspection faulty.

According to my method, the stocking to be inspected is supported on a form with the nose or tip thereof extending into the heel or toe of the stocking and normally without distortion or stretching of its loops or seam stitches. The loops or stitches of any portion to be examined are then expanded or distended to any desired degree by pulling that portion of the fabric longitudinally by hand toward the upper or enlarged end of the form with which the stocking is then rotated while the operator maintains the desired condition of loop or stitch expansion. The longitudinal pulling

of the stocking and the rotation of the form are repeated until the inspection is complete.

One object of my invention has been to provide an effective method and a form which will permit the most rapid and complete inspection of a stocking positioned thereon, and which will wholly avoid those features of known inspecting methods and devices found to be unreliable or ineffective and unduly fatiguing or uncomfortable for the operatives. These and other advantages reside in the use of a device embodying applicant's invention. Such a device or form is of curved cross sectional contour, preferably circular, and of progressively diminishing cross sectional area from the top portion to the end and terminates preferably in a tip of substantially conical shape.

The structural features of a form disclosing my invention are shown in the accompanying drawing in which 1 represents a bracket or support on which a form is mounted for rotation. A post 2 projects from the base of the form into a recess in said support. The form may be made of any suitable material and may be hollow or solid as desired. The illustrated embodiment is of metal and hollow. Its dimensions and proportions are based upon measurements of the dimensions and proportions of a great number of stockings made in different mills, and it is therefore suitable for use in examining substantially all stockings of accepted standard makes and sizes and of the appropriate type. Accordingly, the form from its base to its tip is of progressively diminishing cross sectional area, the reduction being relatively more abrupt over certain portions. Thus, the extreme base portion 3 of the form illustrated is in effect a truncated cone of gradually diminishing circumference or cross sectional area. This portion adjoins another but shorter truncated cone portion 4 having a more abruptly diminishing circumference than that of portion 3. Another less abruptly changing truncated cone portion 5 adjoins the portion 4 and is in turn succeeded by a second more abruptly attenuating portion 6. A third more gradually narrowing portion 7 is followed by a more abruptly tapering portion 8 which ends in a conical tip 9. It will be noted that the less abruptly tapering portions diminish by approximately the same amount per unit of length whereas the pitch or taper of the more abruptly tapering por-

tions varies, the angle of inclination to the central longitudinal axis of the form being more pronounced in portion 8 than in the portions 6 and 4 respectively, and that of the portion 4 being more pronounced than that of the portion 6. Furthermore, the dimensions are such that in drawing any stocking of appropriate type into operative position on said form, there will be no initial distortion or stretching of the loops or stitches.

In use, the operative easily and freely pulls the stocking while inside out into operative position on the form with the loops and stitches normally unstretched and, with the tip 9 seated in or extending into the heel of the stocking, manually pulls the stocking leg longitudinally toward the enlarged end of the form while rotating the form to present all portions of the stocking leg for inspection. On account of the shape of the form, the expansion or stretching of the loops due to said pulling is uniform in all directions and can be increased or diminished as circumstances indicate. With the leg portion remaining in position as inspected, the operative now pulls the foot portion on the form bringing the tip 9 into the toe. The foot portion is then subjected to longitudinal pulling toward the enlarged end of the form to stretch or expand the loops or stitches thereof as much or as little as necessary while the form is rotated. Upon completion of this examination, the stocking is stripped from the form by pulling the upper portions over the lower portions, thus delivering the stocking with its outer surface exposed. An advantage residing in the method and mode of operation hereinabove described is that the gradual or controlled stretching of the fabric loops and seam stitches uniformly in all directions permits the discovery of a small imperfection which can easily be mended or otherwise disposed of; whereas, in using forms which effect a substantial initial distortion of the fabric

loops when the stocking is pulled on, a minor fault is rapidly made into a fatal imperfection thus causing loss of material and labor.

I claim as my invention:

1. A form for inspecting stockings comprising a body of substantially circular cross sectional contour having a plurality of tapering portions of progressively varying diameter, some of said portions tapering with a relatively gradual pitch, and other of said portions tapering with more abrupt pitch, the pitch of each of said other portions being different from that of the remaining other portions and corresponding substantially to the narrowed portions of full fashioned hosiery.

2. An examining form for stockings comprising a body of curved cross sectional contour made up of a plurality of adjoining sections each of progressively varying diameter, and one terminal section having a cone shaped extremity.

3. In a form for receiving stockings, a body of substantially circular cross sectional contour having a plurality of progressively varying diameters, each so located and proportioned as to correspond substantially to a portion of a stocking of like progressively varying diameter, said body being provided with a pointed smaller extremity.

4. In a stocking examining form, a body of substantially circular cross sectional contour comprising a slightly tapered welt section, a relatively short section of greater taper adjoining the welt section, a slightly tapered calf section, a more tapered ankle and calf section, a slightly tapered ankle and foot section, a heel and toe section of relatively greater taper than any heretofore mentioned section, and an end section adjoining the heel and toe section.

In testimony whereof, I have signed my name to this specification this 25th day of May, 1927.

EDWARD R. AMMON.