

March 5, 1929.

G. GASTRICH

1,703,928

TESTING DEVICE FOR KNITTING MACHINE NEEDLES

Filed May 23, 1928

Fig. 1

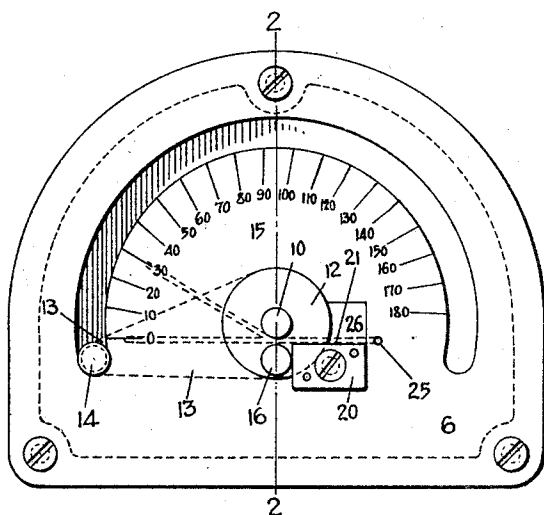


Fig. 2

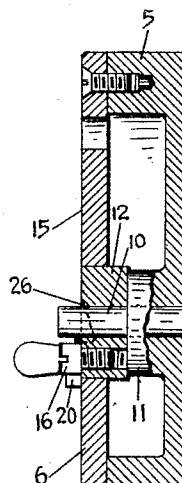
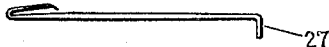


Fig. 3



Gustav Gastrich,

INVENTOR.

BY *W. E. P. Munn*  
ATTORNEYS.

## UNITED STATES PATENT OFFICE.

GUSTAV GASTRICH, OF WYOMISSING, PENNSYLVANIA, ASSIGNOR TO THE TEXTILE MACHINE WORKS, OF WYOMISSING, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA.

## TESTING DEVICE FOR KNITTING-MACHINE NEEDLES.

Application filed May 23, 1928. Serial No. 279,896.

My invention relates to tension-measuring devices, and particularly to improved means for testing the resiliency of knitting machine needles so as to insure against either distortion or breakage under the strains to which they are recurrently liable in service; and it consists in the improved means hereinafter fully set forth in connection with the accompanying drawings, the novel features of which are clearly defined in the subjoined claims.

Fig. 1 is a plan view of a device embodying my invention in preferred form.

Fig. 2 is a cross-sectional view on line 2—2 of Fig. 1; and Fig. 3 indicates a known form of knitting needle for testing of which the device is especially adapted.

The base piece 5 is shown as a shallow casing of approximately semi-circular form, to which is rigidly secured a top plate 6 having a pivot post 10 extending therethrough from an interior boss 11. This post has mounted upon it a disc 12, which is rotatable thereon by means of a fixed arm 13 located below the cover plate but having a handle 14 extending above a calibrated segment 15 of the plate.

The post 11 is at the center of this calibrated segment 15 of the top plate; and the rotatable disc 12 fits in an enlarged aperture in said plate, with its upper surface flush with that of the plate excepting as to an eccentrically located needle-roll projection 16 rising therefrom so as to be swung about the upper portion of the post 11 by movement of the disc handle 14 about the calibrated segment 15.

On the top plate is a stop block 20 for the disc, adapted to normally locate the needle-roll projection 16 on the latter, and having a tangentially arranged needle-contacting face 21; this arrangement providing for the placing of a needle which is to be tested, between the projecting post 11 and needle-roll 16 with its shank portion bearing against said face 21; a small needle-butt aperture 25 being provided in the top plate to secure the needle in position on the plate tangential to the post 10. To facilitate the placing and removing of the needle a finger-depression 26

is provided in the top plate adjacent the contacting face 21.

The material quality of knitting machine needles is of particular importance so far as the combining of a high limit of elasticity with toughness sufficient to insure against breakage is concerned, so that costly failure under the trying strains of service may be avoided; and careful selection is therefore called for either individually or by samples from uniformly treated lots. By means of my improved device each needle is quickly and accurately placed by engaging its butt portion 27 in the plate aperture 25 so as to be flatly supported on the flush surfaces of the top plate 6 and disc 12, tangential to the periphery of the post 10 and in contact with the fixed supporting face 21; and any desired bending strain is applied to it by turning the disc handle 14 to a determined marking on the calibrated segment with a corresponding rolling-over of the needle bar upon the periphery of the closely spaced post 10 by the eccentric tensioning contact 16 on the disc; a determined minimum of elasticity without breakage, or comparative maximums of different needles, being thus quickly ascertained.

What I claim is:

1. A needle testing device comprising a base portion having a disc-supporting post; a top plate having a calibrated segment concentric with said post, a stop-block with a tangential needle-supporting face, and an aligned needle-butt perforation; and a rotatable disc on said post having a needle-roll projection arranged to swing in spaced relation to said post.

2. A needle testing device comprising a base portion having a disc-supporting post; a top plate having a calibrated segment concentric with said post, a stop-block with a tangential needle-supporting face, and an aligned needle-butt perforation; and a rotatable disc on said post having its top surface flush with that of the top plate and a needle-roll projection arranged to swing in spaced relation to said post.

3. A needle testing device comprising a

base portion having a disc-supporting post; a top plate having a calibrated segment concentric with said post, a stop-block with a tangential needle-supporting face, and an alined needle-butt perforation; and a rotatable disc on said post having a needle-roll projection arranged to swing in spaced relation to said post, its top surface flush with

that of the top plate and a needle-roll projection arranged to swing in spaced relation to said post; said top plate having a finger-depression adjacent said needle supporting face.

In testimony whereof I affix my signature.

GUSTAV GASTRICH.