March 8, 1932. K. HOWIE 1,848,294

METHOD OF MAKING NEEDLE BARS

Original Filed Jan. 16, 1930

Fig.1.

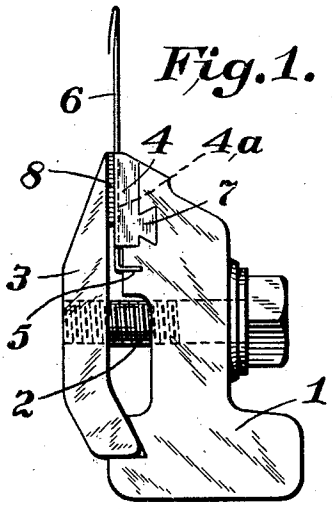


Fig.4.

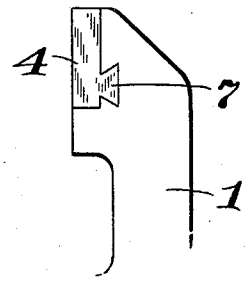


Fig.2.

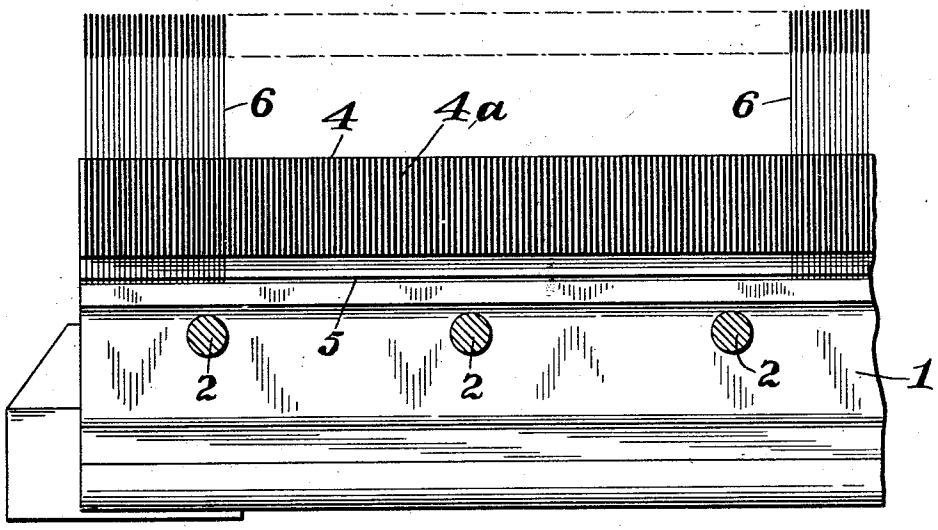
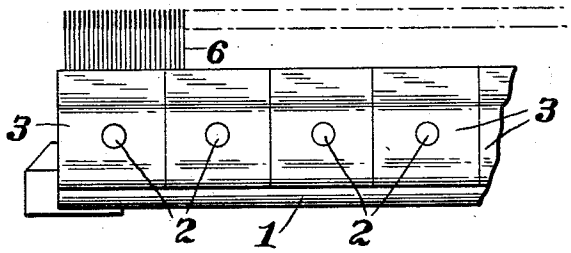


Fig.3.



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UNITED STATES PATENT OFFICE

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METHOD OF MAKING NEEDLE BARS

Original application filed January 16, 1930, Serial No. 421,174. Divided and this application filed January 2, 1931. Serial No. 506,229.

This invention relates to a process of making a needle bar for a full fashioned knitting machine such as is disclosed in application for Letters Patent of the United States filed by me January 16, 1930, Serial No. 421,174 of which this case is a division.

Referring to the drawings:

Fig. 1 is an end view of the needle bar.

Fig. 2 is a front elevation of the needle bar with the clamping plates removed and the bolts shown in section.

Fig. 3 is a front view of the needle bar on a reduced scale showing the clamping plates in place.

Fig. 4 is a view of the needle bar of Fig. 1 as it is when removed from the mold and before it is finished and slotted.

In the drawings, 1 represents the body of the needle bar through which bolts 2 pass at intervals to threadedly connect with clamping plates 3 arranged side by side along the bar.

The needle bar 1 is provided with a vertically grooved needle spacing portion or bar 4 at its upper end. The vertical grooves for spacing the needles are indicated at 4*a*.

Beneath the needle spacing member 4 and in the vertical face of the body 1 is provided a longitudinal groove 5 for receiving the heels of the needles 6. The uniform groove 5 contributes to accuracy in that it is readily and accurately formed, as compared to the separate pin holes heretofore formed in needle bars for receiving the individual needle heels. The separately formed holes were difficult to make with accuracy as they were apt to be bored at an angle or on a slant or slightly out of position.

Heretofore it has been the practice to secure the needle spacing member 4 to the needle bar body 1 by first finishing the contacting surface of the needle bar body and also finishing the contacting surface of the spacing member and then fastening the two together by screws.

The present invention contemplates a process which does away with all machining on the contacting faces.

According to the present invention the needle spacing bar 4 with its dove-tail projection 7 is placed in the needle bar molding flask in proper position and the needle bar body 1 is cast around it in the flask.

The molding process requires no finishing of contacting surfaces and a more strong united product results.

Preferably the needle bar body 1 is cast of aluminum while the needle spacing member 4 is preferably of brass. The clamping plate may be of drawn steel and is preferably provided with a facing 8 of pasteboard.

The needle spacing member is simply a drawn shape, preferably of brass, cut off to length requiring no machining before the casting in the mold.

In Fig. 4 is shown the casting as it appears when removed from the mold in unfinished condition with the aluminum of the needle bar body cast around the brass needle spacing member. The casting of Fig. 4 is then machined and finished and provided with the vertical grooves or slots 4*a* in the needle spacing member, the body member 1 being cut back beneath the member 4 and provided with the longitudinal groove 5.

The needle spacing member 4, if desired, may be extended downwardly so that the longitudinal groove 5 may be cut in it instead of in the body 1.

I do not desire to limit my invention to the specific materials mentioned nor to the exact construction shown as it will be apparent that modifications may be made without departing from the scope of the invention as set forth in the claim.

I claim:

The hereindescribed method of making a needle bar for a full fashioned knitting machine comprising casting a body of metal in connection with a needle spacing bar to form

a foundation or body therefor, machining the body at a point below the spacing bar to leave the said spacing bar overhanging said machined face, cutting vertical grooves for the needles in said spacing bar and through the upper face and the downwardly directed face of said overhanging portion, and grooving longitudinally the machined face of the body below said overhanging portion of the spacing bar to receive the heels of the needles.

In testimony whereof, he affixes his signature.

KENNETH HOWIE.