Jan. 6, 1953 J. V. ISLEY 2,624,098

REED KNIFE

Filed Aug. 2, 1950

Fig. 1

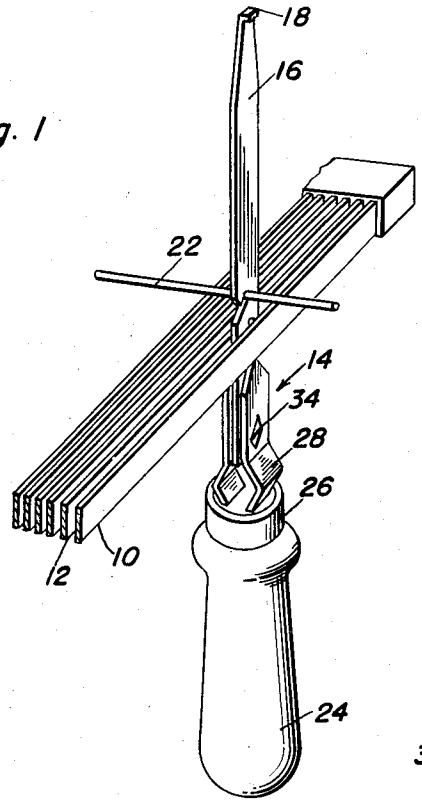


Fig. 3

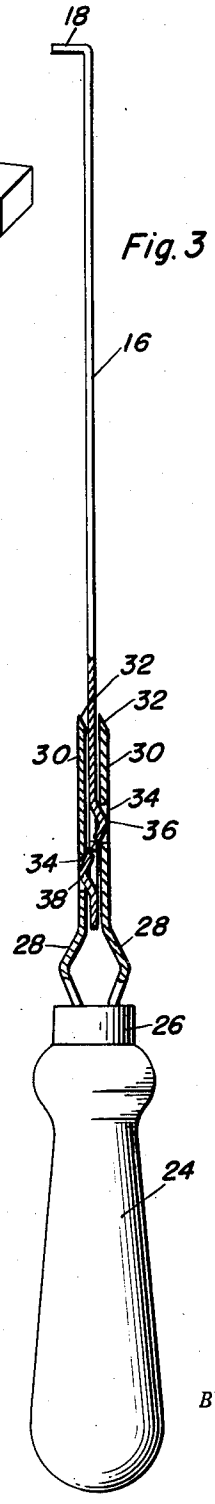


Fig. 2

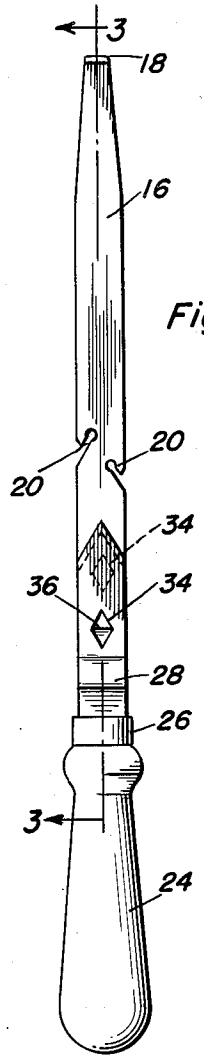
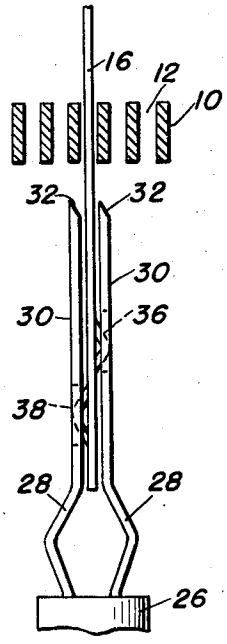


Fig. 4



John V. Isley

INVENTOR.

BY Clarence A. O'Brien and Harvey B. Jacobson, Attorneys

Patented Jan. 6, 1953 2,624,098

UNITED STATES PATENT OFFICE

2,624,098

REED KNIFE

John V. Isley, Graham, N. C.

Application August 2, 1950, Serial No. 177,168

1 Claim. (Cl. 28—45)

1

This invention relates to an improved hook for use in drawing the warp thread through the reeds employed in weaving looms.

The primary object of this invention is to provide a hook which advances gradually and automatically along the successive splits in the reed during the operation of drawing the several warp threads therethrough.

Another important object of this invention is to provide a reed knife of the character described which is relatively simple in design and construction, inexpensive to manufacture, and very easy to manipulate in such a manner that an up and down movement of the knife will cause it to advance automatically in step-wise fashion along the reed as the warp threads are being drawn through the successive splits.

Yet another object of this invention is to provide a warp drawing hook comprising a blade formed with a notch intermediate its ends for the reception of the thread, a handle, pair of resilient supports secured in said handle and receiving the lower end of said blade, and means yieldingly securing said blade to said supports whereby the hook is gradually and automatically advanced along the successive splits in the reeds in response to an up and down movement of the hook.

These, together with various ancillary objects and features of the invention which will later become apparent as the following description proceeds, are attained by the device, a preferred embodiment of which has been illustrated by way of example only in the accompanying drawings, wherein:

Figure 1 is a perspective view of the device;

Figure 2 is an end elevational view of the device;

Figure 3 is a sectional view taken substantially on the plane of section line 3—3 of Figure 2, some parts being shown in elevation; and,

Figure 4 is a fragmentary side elevational view of the device shown engaged in the splits between the reed, the latter being shown in vertical section.

Specific reference is now made to the drawings. In the several views in the accompanying drawings and in the following specification reference characters indicate corresponding elements throughout.

Indicated generally at 10 are the conventional reeds employed in weaving looms separated from each other to form the split 12. The present device is indicated generally at 14 and includes a relatively flat elongated blade 16 having a hook 18 at its upper end serving as a stop to limit the

2

downward movement of the device, the blade being received slidably in the split 12 between the reeds 10 and including oppositely extending, open-ended notches 20 for hooking and receiving the warp threads 22.

The device further includes a handle 24 having a collar 26 at its upper end. Secured by any appropriate means in the upper end of the handle 24 are the outwardly bowed or angulated portions 28 of a pair of vertically extending supporting plates 30, the upper free ends of the supporting plates including beveled ends 32 which are inclined in the same direction. Both plates 30 are provided with vertically spaced, preferably diamond-shaped apertures 34 and the blade 16 at its bottom end extends between the plates 30.

The plates 30 are resilient and may be spread apart but are so tensioned as to be normally urged towards each other and the blade 16 is yieldingly retained between the spaced plates 30 in the following manner. Adjacent its bottom end, the blade 16 is provided with oppositely extending, vertically spaced, laterally bowed or angulated portions 36 and 38 which are normally engaged in the diamond shaped apertures 34 as shown clearly in Figure 3.

In use, the blade 16 is extended between the reed 10 through the splits 12 and made to engage the warp thread 22 in the manner clearly shown in Figure 1. The blade is then moved downwardly by means of the handle 24 whereby the thread 22 is made to extend between a pair of adjacent reeds. Subsequent upward movement of the device will cause one of the inclined edges 32 to engage one of the adjacent reeds and ride in the split therebetween, while the inclined end 32 of the other plate 30 will engage the other reed and ride in the next adjacent split. This other reed will in effect be moved into the space between the bowed portions 28 of the plate beneath the bottom free edge of the plate 16 and will be pulled over so that, in effect, the blade 16 will be pulled into the next adjacent split 12, as will be readily understood by those skilled in the art. Thus, by an up and down movement of the device, the blade will be moved stepwise from split to split across the reed for the proper drawing of the warp thread through the reed.

In view of the foregoing description taken in conjunction with the accompanying drawings it is believed that a clear understanding of the device will be quite apparent to those skilled in this art. A more detailed description is accordingly deemed unnecessary.

It is to be understood, however, that even

though there is herein shown and described a preferred embodiment of the invention the same is susceptible to certain changes fully comprehended by the spirit of the invention as herein described and the scope of the appended claim.

Having described the invention, what is claimed as new is:

A warp drawing hook comprising a blade formed with a notch intermediate its ends for the reception of the thread, a handle, a pair of resilient supports secured in said handle and receiving the lower end of said blade, means yieldingly securing said blade to said supports whereby the hook is gradually and automatically advanced along the successive splits in the reeds in response to an up and down movement of the hook, said supports including plates having upper edges inclined in the same direction and spaced from the blade, said means including vertically disaligned apertures in said support plates and vertically spaced, oppositely extending laterally

bowed portions struck from said blade in opposite directions and engaged in said apertures, said plates being yieldably tensioned and urged toward said blade, and a stop on the upper end of said blade limiting downward movement thereof.

JOHN V. ISLEY.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
855,521	Mattausch	June 4, 1907

FOREIGN PATENTS

Number	Country	Date
205,916	Great Britain	Nov. 1, 1923
322,090	Great Britain	Nov. 28, 1929
369,090	France	Oct. 30, 1906