May 7, 1940. J. A. WOODS 2,199,515

LOOM

Filed Dec. 20, 1938 2 Sheets-Sheet 1

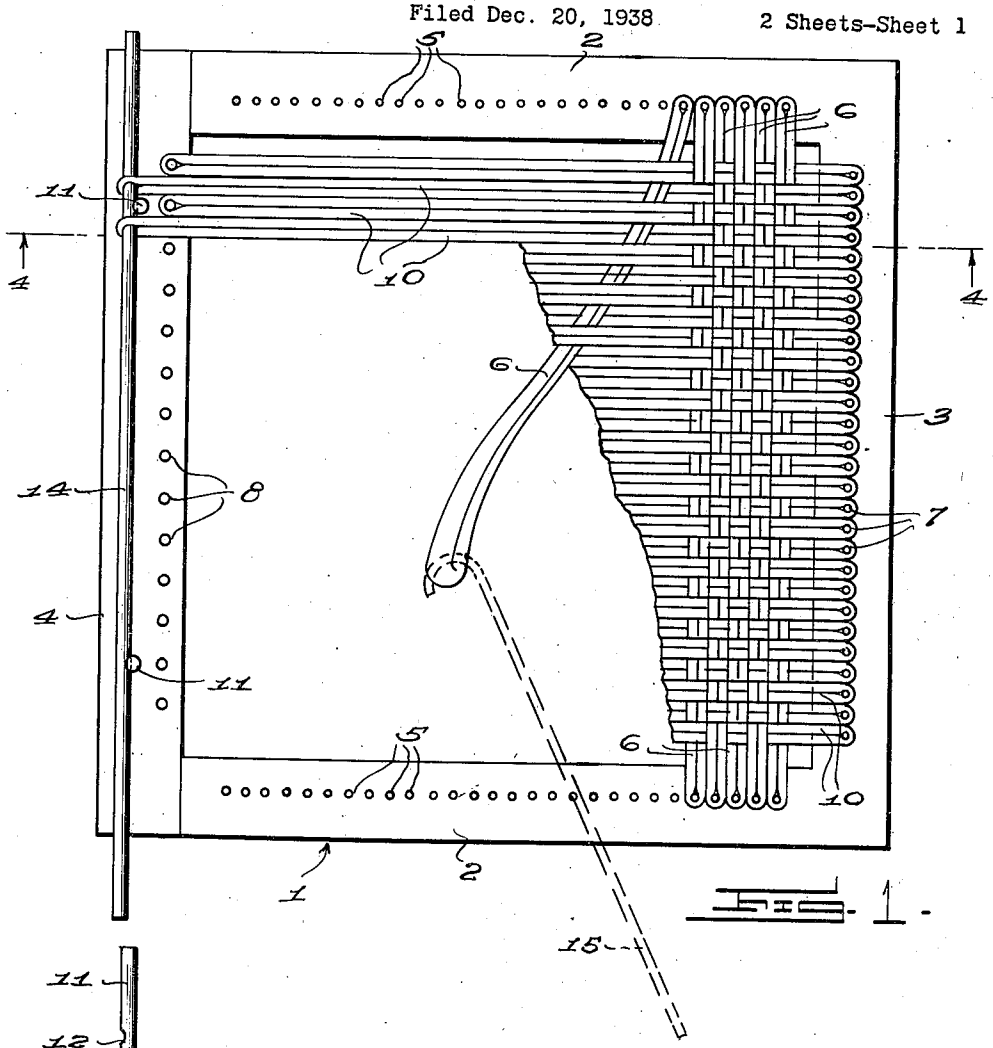


FIG. 1.

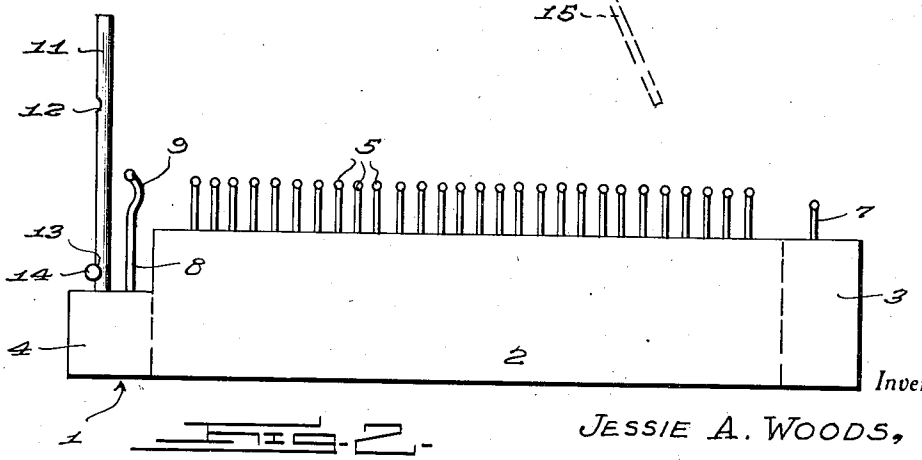


FIG. 2.

Inventor

JESSIE A. WOODS,

By Clarence A. O'Brien and Hyman Berman

Attorneys

May 7, 1940. J. A. WOODS 2,199,515

LOOM

Filed Dec. 20, 1938 2 Sheets-Sheet 2

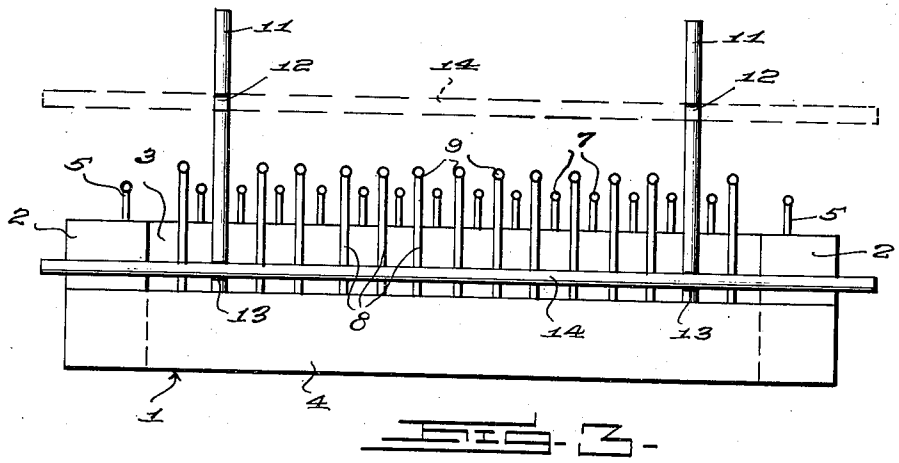


FIG. 2

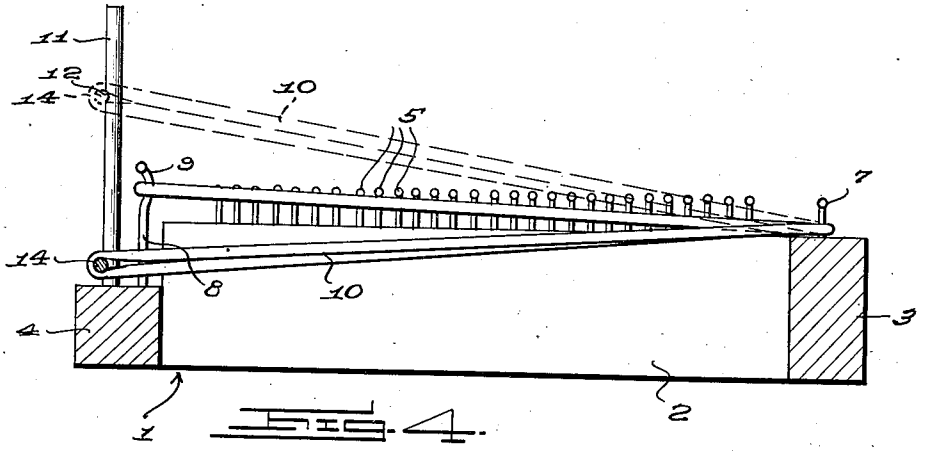


FIG. 4

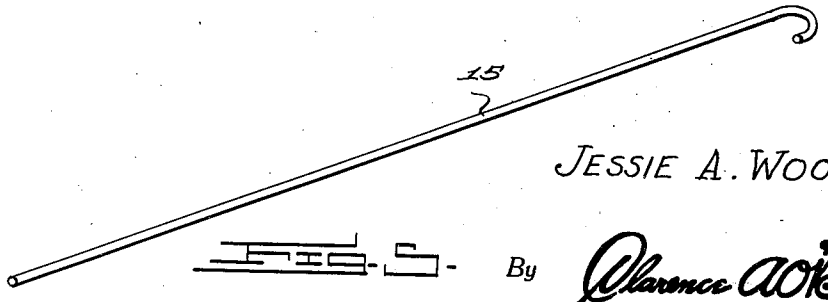


FIG. 5

Inventor

JESSIE A. WOODS,

By Clarence A. O'Brien and Hyman Berman

Attorneys

Patented May 7, 1940

2,199,515

UNITED STATES PATENT OFFICE

2,199,515

LOOM

Jessie A. Woods, Ashland, Ky.

Application December 20, 1938, Serial No. 246,879

2 Claims. (Cl. 139—34)

The present invention relates to new and useful improvements in looms of the hand type and has for its primary object to provide, in a manner as hereinafter set forth, a device of this character embodying novel means for manipulating certain of the warp elements in a manner to form sheds to facilitate the insertion of the weft.

Other objects of the invention are to provide a loom of the aforementioned character which will be comparatively simple in construction, strong, durable, highly efficient and reliable in use, compact, light in weight and which may be manufactured at low cost.

All of the foregoing and still further objects and advantages of the invention will become apparent from a study of the following specification, taken in connection with the accompanying drawings wherein like characters of reference designate corresponding parts throughout the several views, and wherein:

Figure 1 is a top plan view of a hand loom constructed in accordance with the present invention, showing the device in use.

Figure 2 is a view in side elevation thereof.

Figure 3 is a front elevational view.

Figure 4 is a vertical sectional view, taken substantially on the line 4—4 of Fig. 1.

Figure 5 is a perspective view of the weft hook.

Referring now to the drawings in detail, it will be seen that the embodiment of the invention which has been illustrated comprises a substantially square frame of any suitable dimensions and material which is designated generally by the reference numeral 1. The frame 1 includes side members 2, a back member 3 and a comparatively low front member 4. Rising from the side members 2 of the frame 1 are headed pins 5 over which the weft elements 6 are looped. Comparatively short headed pins 7 rise from the back member 3 of the frame 1. Rising from the comparatively low front member 4 of the frame 1 are headed pins 8 which, as shown to advantage in Fig. 2 of the drawings, comprise bowed upper end portions 9.

It will be observed that there are half as many pins 8 as pins 7 and it will also be noted that the spacing between said pins 8 is double that of the pins 7. The reference numeral 10 designates the warp elements which are looped around the pins 7. Then, the other ends of every other warp element 10 are looped around the pins 8 and engaged in the bowed upper end portions 9 thereof. In the embodiment shown, the weft and warp elements 6 and 10, respectively, to be made into the fabric are hosiery rings or loops which, to a considerable extent, now constitute waste in the hosiery manufacturing industry. Of course, other materials may be used on the loom.

Also rising from the front member 4 of the frame 1 is a pair of posts 11 having formed therein upper and lower notches or recesses 12 and 13, respectively. The notches 12 and 13 are for the reception of a heddle 14 in the form of a metallic rod which is slidable vertically against the outer sides of the posts 11.

It is thought that the operation of the loom will be readily apparent from a consideration of the foregoing. One end of the warp elements 10 are looped over the pins 7 and the other ends of every other of said elements 10 are looped over the pins 8. The heddle 14 is then inserted through the other end portions of the remaining warp elements 10. It should perhaps be here stated that when thus mounted on the loom the warp elements 10 are under tension. This tension frictionally clamps the heddle 14 against the posts 11. With the heddle 14 in lowered position in the notches 13, a shed is formed, as shown in full lines in Fig. 4 of the drawings. One end of the first weft element 6 is then looped over one of the pins 5 on one of the side members 2 of the frame 1 and said weft element is pulled through this shed and the other end thereof looped over the corresponding pin 5 on the other frame member 2. This operation is facilitated through the use of an elongated hook or other suitable instrument 15. The heddle 14 is then slid upwardly on the posts 11 and snaps into the upper notches 12, thus forming another shed, as illustrated in broken lines in Fig. 4 of the drawings. The next weft element 6 is then pulled through this shed and the foregoing operation is repeated until the work is completed. The edges of the completed fabric may be prevented from unravelling in any suitable manner.

It is believed that the many advantages of a hand loom constructed in accordance with the present invention will be readily understood and although a preferred embodiment of the device is as illustrated and described, it is to be understood that changes in the details of construction and in the combination and arrangement of parts may be resorted to which will fall within the scope of the invention as claimed.

What is claimed is:

1. A hand loom comprising a relatively small rectangular shaped frame with a recessed portion at one side having guide posts positioned thereon, and outwardly extending pins providing yarn holding units on the upper surface, characterized

in that the pins on three of the sides are straight whereas the pins on the fourth or recessed side are crooked adjacent their upper ends preventing yarn slipping therefrom, and further characterized in that there are only half as many pins on the said fourth or recessed side as on the other three sides, and these are positioned in line with corresponding pins on the side opposite, and a bar adapted to be held against the said guide posts on the said fourth or recessed side by loops of yarn on the loom with the opposite ends of the loops on the pins on the side opposite, said bar adapted to be moved upward and downward during weaving to move alternate loops of yarn upward and downward.

2. A method of weaving on a hand loom with endless loops of material on a rectangularly shaped frame having spaced projections on the upper faces of the four sides thereof and a bar cooperating with guide posts therefor on one side, comprising placing one end of a plurality of loops forming the warp over the projections at one side of the frame with the opposite ends of one-half of said loops of the warp placed over projections on the side opposite of the frame and with the alternate loops comprising the other half of the warp loops placed over the said bar and holding the bar against the posts; and then moving the said bar downward holding the ends of one-half of the loops below the other half, placing a weft loop across the loom between the loops forming the two halves, and then moving the bar upward above the loops of the other half and placing another weft loop between the loops of the two halves, and continuing this process until all of the weft loops are placed alternately across the warp loops and their ends placed over the oppositely spaced projections of the two opposite sides of the frame.

JESSIE A. WOODS.