

Patented Apr. 7, 1925.

1,532,848

UNITED STATES PATENT OFFICE.

JOSEPHINE MARIE WEIL, OF NEW YORK, N. Y.

LOOM FOR HAND WEAVING.

Application filed February 4, 1921. Serial No. 442,395.

To all whom it may concern:

Be it known that I, JOSEPHINE MARIE WEIL, a citizen of the United States, and a resident of the borough of Manhattan, city, county, and State of New York, have invented certain new and useful Improvements in Looms for Hand Weaving, of which the following is a specification.

This invention relates to improvements in looms for hand weaving.

One object of this invention is to improve and simplify methods of hand weaving and to produce a hand operated loom in which two series of warp threads are supported in vertically spaced relationship to each other and inclined from the front of the machine to the rear thereof to enable the procurement of one shed without any relative movement of such warp threads by simply passing the shuttle between such spaced rows of threads, after which the movement of a section of the warp threads of one of such rows may be moved either by heddles or by hand into a position on the opposite side of the other row of warp threads to enable the procurement of another shed, the operation preferably being carried out by moving a section of the lower warp threads upwardly above the top warp threads and then permitting the lower row of warp threads to resume their lower position for another shed and so on.

My preferred form of warp supporting device comprises a wire screen and it will be understood that a suitable number of the holes in such wire screen may be employed to position and support the warp threads in properly spaced relationship to each other to enable an automatic shed to be first obtained and a movement by the heddles or even by the fingers of the operator to lift the lower series of threads upwardly in order to permit the passing of the shuttle between the two series of warp threads in position for a second shed.

Another object of my invention is to provide simple, practical and economical means for adjusting and retaining the warp-tensioning rollers in varying positions which comprises the provision in each of the rollers of a series of radially extending holes which are adapted upon rotation of the roller to register with a bore in one of the bearing brackets for the roller.

Another object of my invention is to produce a portable hand-operated loom adapt-

ed to be operated upon the lap of the operator and which will be light and compact in construction and will have a clothes-protecting base capable of resting on the lap without discomfort.

With these and other objects in view, the invention comprises the combination of members and arrangement of parts so combined as to co-act and cooperate with each other in the performance of the functions and the accomplishment of the results herein contemplated, and comprises in one of its adaptations the species or preferred form illustrated in the accompanying drawings, in which:—

Fig. 1 is a section of a loom embodying my invention on the line 1—1 of Fig. 2;

Fig. 2 is a plan view of the loom shown in Fig. 1;

Fig. 3 is a section on the line 3—3 of Fig. 1;

Fig. 4 is a section on the line 4—4 of Fig. 1;

Fig. 5 is a section on the line 5—5 of Fig. 4, a part of the bearing bracket being broken away to show the bore vertically therethrough; and

Fig. 6 is a detached view of the heddle frame and heddles preferably employed by me.

Referring now to these drawings, which illustrate a preferred embodiment of my invention, a base board 1 adapted to carry all the loom parts and to permit a comfortable resting thereof on the lap of the user has mounted thereon at opposite ends two pairs of bearing brackets 2—2^a and 3—3^a. A roller 4 is rotatably mounted in the rear bearing brackets 2—2^a and a roller 5 is likewise rotatably mounted in the front bearing brackets 3—3^a. The roller 4 has an outward extension 4^a adapted to provide a handle for rotating the same and a roller 5 also has an outward extension adapted to form a handle for its rotation. In order to facilitate the hand rotation of the roller 4 I preferably extend a pin 4^b through the projecting end 4^a of such roller, and in order to facilitate the operation of the roller 5 I pass a pin 5^b through the projecting end 5^a of the said roller.

In my preferred form the warp separating device comprises a wire screen 6 which furnishes the necessary apertures or holes through which the warp threads may be threaded and also by utilizing suitable rows

of holes in such screen these warp threads may be positioned in suitable spaced relationship to each other so that by the use of my improved method of weaving an automatic shed may be obtained without any movement of the warp threads by simply passing the shuttle between the two rows of threads, as illustrated in Fig. 1, after which the lower row of threads may by virtue of the resiliency of such thread be raised either by the fingers of the user or by a forward and upward movement of the heddle 7 into a position above the upper warp threads, as indicated in dotted lines in Fig. 1, so as to enable the passage of the shuttle between such warp threads in the second position thereof, whereupon the movement of the heddle frame rearwardly and the releasing thereof will permit the lower warp threads to assume their original positions and again enable another shed to be procured.

In order to adjust the rollers I preferably provide each roller with a series of radially extending bores 8 which are positioned to register with a single bore 9 in one of the roller brackets, through which bore a pin 10 extends so that when the same is extended through one of the radial bores of the roller

the latter will be locked to the bracket. It will be obvious, of course, that a roller with a series of such registerable radial bores may be locked in any desired position.

Having described my invention I claim:—

1. A loom embodying means for securing opposite ends of the warp and separating means located intermediate the warp securing means and comprising a wire screen having a suitable mesh forming substantially rectangular openings and composed of a series of transverse and horizontal wire strands.

2. A loom embodying means for securing opposite ends of the warp and separating means located intermediate the warp securing means, comprising a wire screen having a suitable mesh and heddles for moving said separated warp threads into different planes to enable the procurement of sheds.

In witness whereof, I have signed my name to the foregoing specification in the presence of two subscribing witnesses.

JOSEPHINE MARIE WEIL.

Witnesses:

HELEN V. WHIDDEN,
JULIUS H. LUTZ.