

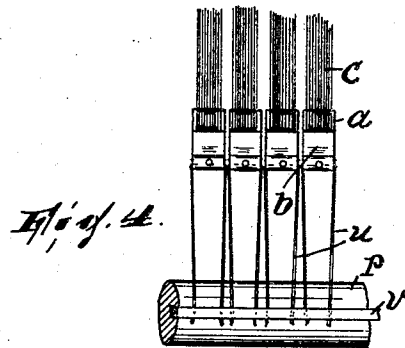
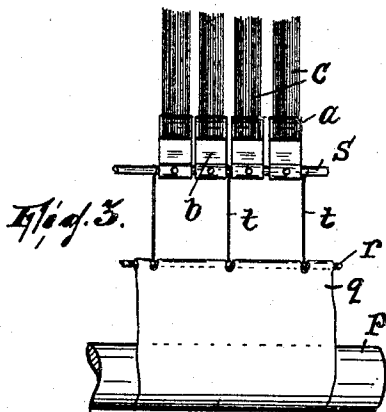
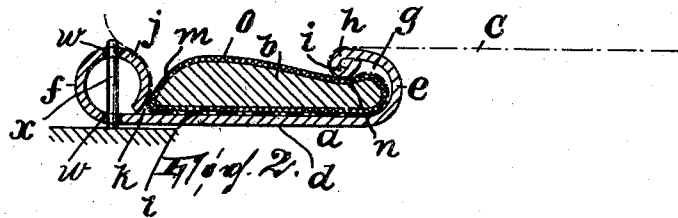
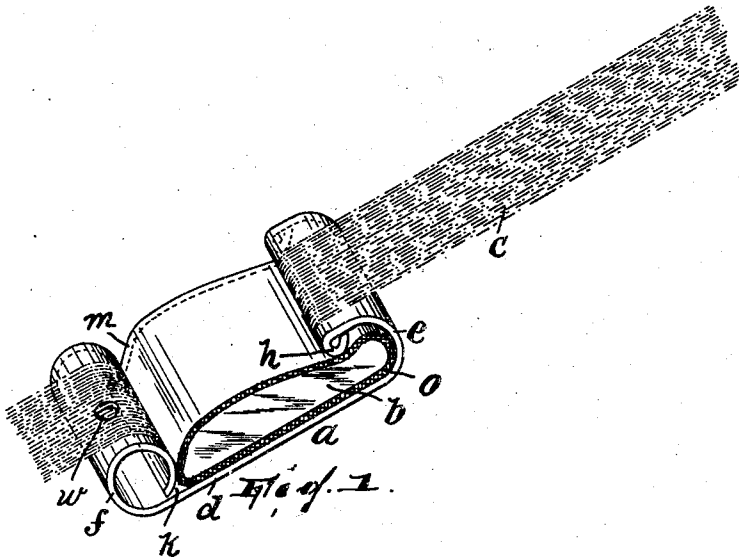
No. 788,364.

PATENTED APR. 25, 1905.

R. MAUCHLINE.

WARP CLAMP.

APPLICATION FILED FEB. 20, 1905.



WITNESSES:

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UNITED STATES PATENT OFFICE.

ROBERT MAUCHLINE, OF PHILLIPSBURG, NEW JERSEY.

WARP-CLAMP.

SPECIFICATION forming part of Letters Patent No. 788,364, dated April 25, 1905.

Application filed February 20, 1905. Serial No. 246,375.

To all whom it may concern:

Be it known that I, ROBERT MAUCHLINE, a citizen of the United States, residing in Phillipsburg, county of Warren, and State of New Jersey, have invented certain new and useful Improvements in Warp-Clamps; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

My invention is a device for holding warp-threads or the like positively in proper side-by-side disposition under all conditions where otherwise they would become crossed or variously disarranged and require combing out and readjusting in order to proceed with them in weaving and allied arts—as, for instance, in warping, beaming, and twisting-in by machine.

My invention is fully illustrated in the accompanying drawings, wherein—

Figure 1 is a perspective view showing the clamp holding a section of warp-threads. Fig. 2 is a longitudinal sectional view through the clamp. Figs. 3 and 4 are views illustrating how the clamp may be applied to connect warp-threads to the warp-beam.

In the drawings, *a* and *b* are two members, the former of which is shaped, as hereinafter described, to receive and hold in place, clamped between itself and the member *b*, the section of warp *c*.

Member *a* in the adaptation shown consists of a metallic plate whose base portion *d* is substantially flat, the ends of said plate being bent up from the base to form opposed abutments *e* and *f*. The end of the plate which forms the abutment *e* is bent back over the base *d*, forming an overhang, and thus producing a recess *g*. Its extremity terminates in a roll *h*, which both finishes off the end of the plate and affords a shoulder at *i*, projecting toward the base *d*.

The end of the plate which forms the abutment *f* is rolled into a tube *j* and with the base produces a slight recess *k*, opposed to the recess *g* and lying close, of course, to the base *d*.

The member *b* is flat at one side, as at *l*. The opposite side may be of any form, although at one end it is chamfered off, as at *m*, while near the other end it has a transverse groove *n*. Member *b* may be composed of any material, though to give it a soft contact with member *a* and insure its fitting snugly therein it may be a block of wood wrapped with a fabric covering *o*. It is assembled with member *a* as shown in the drawings—to wit, with its flat side against base *a*, its chamfered end projecting into recess *k*, and its other end projecting into the recess *g*, formed by the overhang of abutment *e*.

The parts are brought into assembled relation by first laying the threads across the abutments of member *a*. Then member *b* is laid on the warp and pushed up in under the overhang of abutment *e*, with shoulder *i* engaging in groove *n*, whereupon member *b* is pressed down flat against the base of member *a*, the rounded form of abutment *f* facilitating this.

By making the abutment *f* tubular in form a rod, pin, or cord may be passed therethrough, whereby the clamp may be held to some part, as, in Figs. 3 and 4, to a warp-beam *p*. In Fig. 3, *q* is a strip of fabric secured to the beam and carrying a rod *r*, which is connected with a rod *s*, passing through the tubular abutments *f* of several of the clamps by cords *t*. In Fig. 4 cords *u* are passed through the tubular abutments *f* of the clamps and fixed in the beam by the usual wedge *v*. Employed as just described, the clamp makes it possible in weaving to carry the tail ends of the wraps practically up to the harness of the loom, thus utilizing a part of the warp which is not now customarily woven into the goods.

In Fig. 2 is shown how the clamp may be secured to a pin extending at right angles thereto should any of the uses to which the same is put require its holding means to extend at right angles to the tubular abutment *f* instead of axially thereof, holes *w* being formed in abutment *f* to receive the pin *x*.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A clamp for maintaining threads in side-by-side disposition comprising two members

one of which consists of a base and opposed abutments thereon, one of said abutments having a recess on the side thereof toward the other abutment, and the other member being
5 received by said first-named member, fitting between the abutments thereof and projecting into said recess, substantially as described.

2. A clamp for maintaining threads in side-by-side disposition comprising two members
10 one of which consists of a base and opposed abutments thereon, said abutments having recesses on their inner sides, and the other member being received by said first-named member, fitting between the abutments thereof and
15 projecting into said recesses, substantially as described.

3. A clamp for maintaining threads in side-by-side disposition comprising two members one of which consists of a plate having its opposed ends bent up and forming opposed abutments, one of said ends being rebent to pro-

duce a recess, and the other member being received by said first-named member, fitting between the abutments thereof and projecting into said recess, substantially as described. 25

4. A clamp for maintaining threads in side-by-side disposition comprising two members one of which consists of a plate having one end rebent and forming an overhang and the opposed end bent up in the form of a roll, and
30 the other member being received by said first-named member, fitting between the bent up ends thereof and projecting in under said overhang, substantially as described.

In testimony that I claim the foregoing I
35 have hereunto set my hand this 15th day of February, 1905.

ROBERT MAUCLINE.

Witnesses:

RUTHERFORD H. LESHER,
SUSAN A. LESHER.