

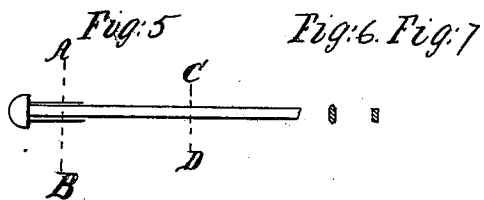
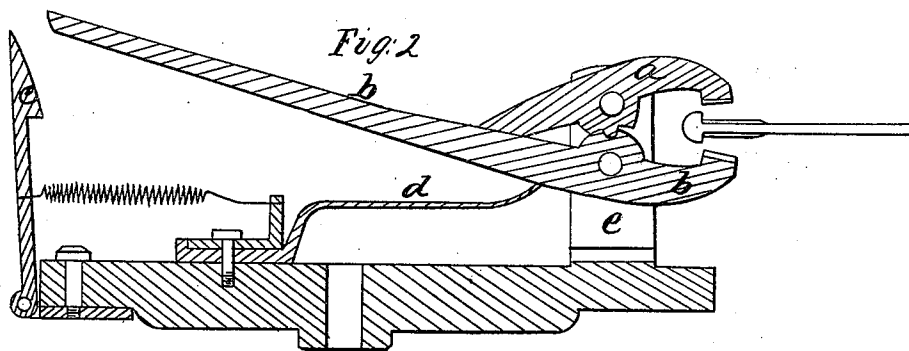
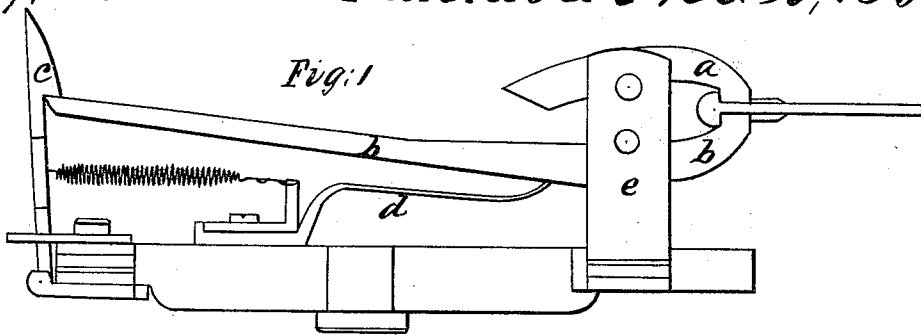
Sheet 1, 3 Sheets.

E. B. Bigelow.

Weaving Pile Fabric.

N^o 9,363.

Patented Nov. 2, 1852.

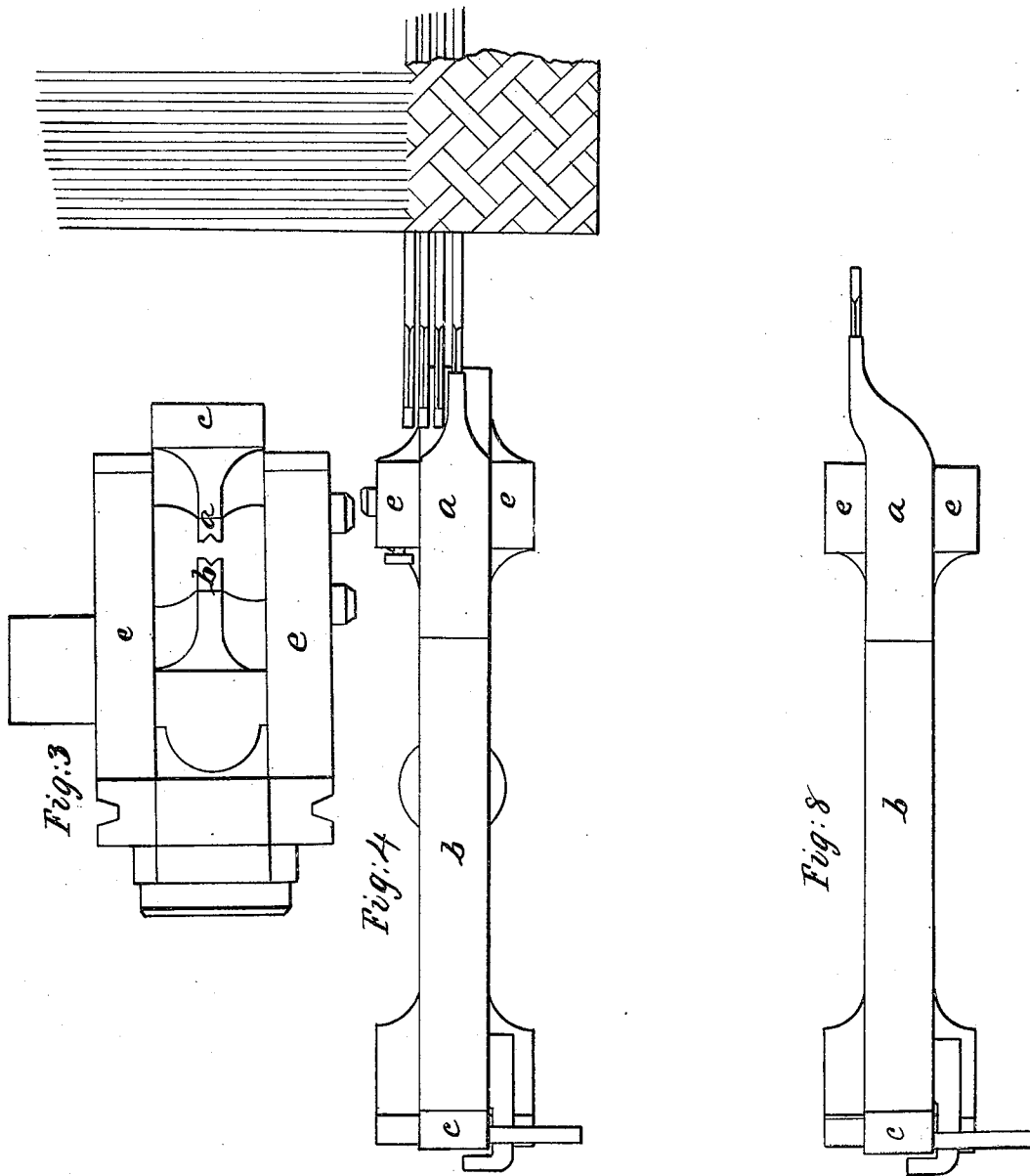


E. B. Bigelow.

Weaving Pile Fabric.

N^o 9,303.

Patented Nov. 2, 1852.

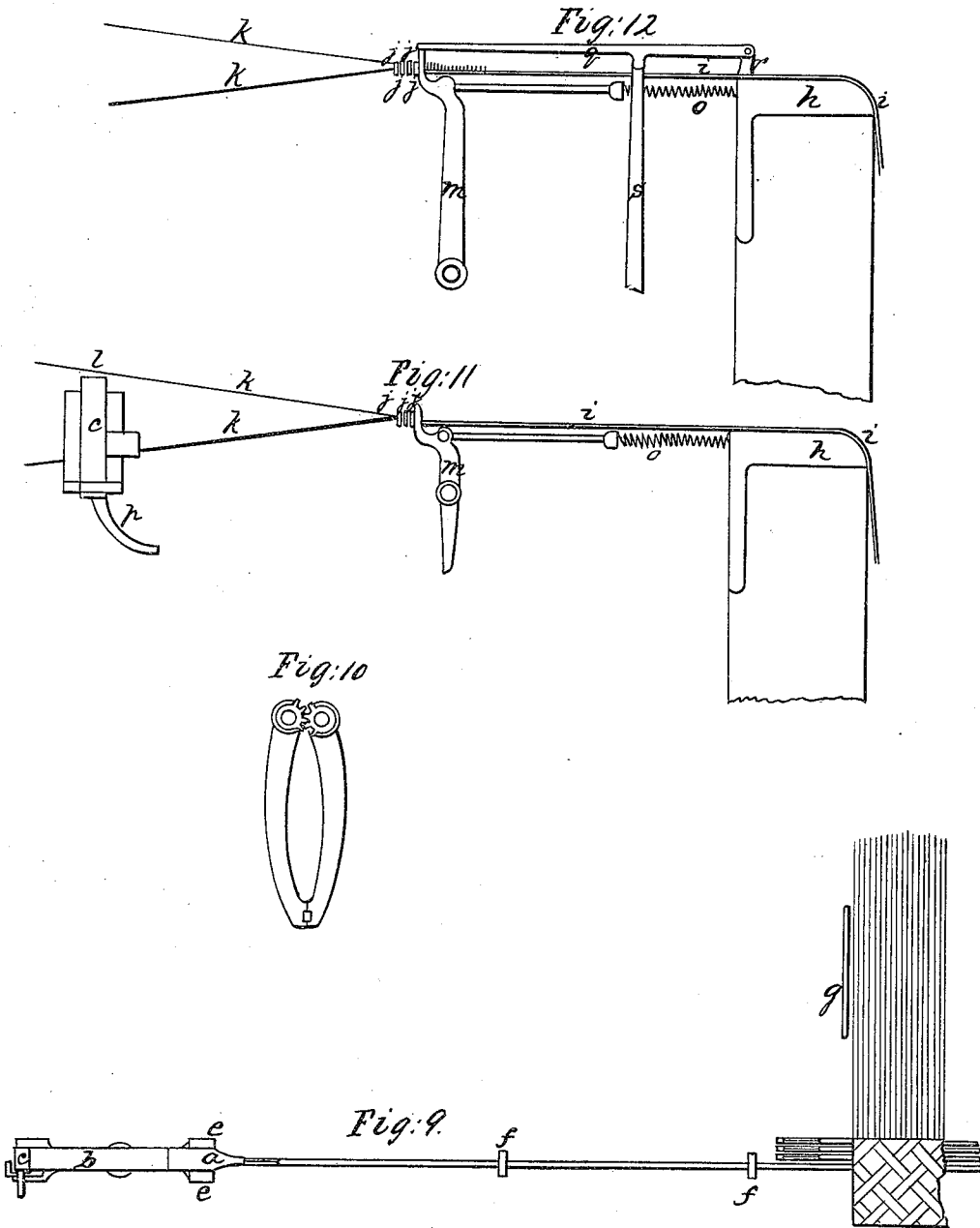


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N^o 9,363.

Patented Nov. 2, 1852.



UNITED STATES PATENT OFFICE.

E. B. BIGELOW, OF CLINTON, MASSACHUSETTS.

PILE-WIRE AND PINCERS FOR WEAVING PILE FABRICS.

Specification of Letters Patent No. 9,363, dated November 2, 1852.

To all whom it may concern:

Be it known that I, ERASTUS B. BIGELOW, of Clinton, in the county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in Pincers and Pile-Wires for Weaving Piled Fabrics, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, which form a part of my specification, in which—

Figure 1, is a side elevation of the pincers and wire. Fig. 2, is a longitudinal section through the center, the pincers being open; Fig. 3, is an end view showing the mouth of the pincers in a closed state. Fig. 4, is a plan of the pincers and part of the cloth and wires. Fig. 5, is a side view of the pile wire. Fig. 6, is a cross section thereof on the line A, B. Fig. 7, is another cross section on the line C, D, Fig. 8 is a plan showing a modified form of the pincers. Fig. 9, represents a part of the cloth and wires with the pincers.

The same letters indicate like parts in all the figures.

In my patent for improvement in looms for weaving coach lace, &c., granted April 20th 1837, the pincers are represented with flat jaws of the width of several wires, which wires are round and of a uniform size their whole length. My present improvements are more particularly applicable to flat or oval shaped wires which require to be kept with their edges upward during the operation of weaving, but they may be used to advantage in working round wires. In my improved pincers the faces of the jaws are made narrow,—that is about the width of a pile wire,—and grooved to conform to the shape of said wire.

The nature of my invention consists in making that part of the wire which is grasped by the pincers wedged form or oval shaped, so that it will readily enter the grooves in the jaws of the pincers, and be prevented from turning therein when grasped, said grooves being made to conform to the shape of said wire.

Fig. 5, represents the novel part of my improved wire with a portion of the part which works in the cloth broken off. Fig. 6 shows the shape of the part which is grasped by the pincers, and Fig. 7, that part which works in the cloth. Figs. 1 and 2, represent the pincers, the general construc-

tion of which is the same as those in common use.

(a) is the upper blade or jaw and (b) is the bottom blade or jaw of the pincers.

(c) is the latch which holds the pincers in a closed position, and (d) the spring which throws them open when the latch (c) is released.

(e) is the stand which carries the pincer blades or jaws.

Fig. 3, represents the mode of grooving the jaws of the pincers to receive the wires. By inspecting these grooves in the jaws of the pincers and the shape of the wire in Fig. 6 it will be seen that they conform well and readily engage with each other when the pincers are closed upon the wires.

I employ these pincers to successively draw out the pile wires from the cloth—carry them back toward the lathe, insert them in the open sheds of the warps. The pincers are then opened and moved forward toward the breast beam to seize another wire. I also employ the pincers in a manner to grasp the wires without their having been previously pushed toward them, and to prevent the pincers from acting on more than one wire at the same time, I make that part of the jaws which grasp the wires, narrow as represented in Fig. 4. To prevent the pincer stand from coming in contact with the lathe I sometimes bend the pincer jaws back as represented in Fig. 8. This however is not necessary when the shuttle box on the side of the loom where the pincers are located is made separate from or made movable as regards the reed whereby it will not advance far enough to come in contact with the pincer stand when the lathe beats up. The pincers may also be prevented from coming in contact with the shuttle box lathe when it beats up the cloth, by causing the pincers to move forward toward the breast beam, that is to say, after the pincers have drawn a wire from the pile, and the lathe is advancing to beat up the cloth, the pincers move forward carrying the said wire at the proper time to clear the lathe, then move back in conjunction with the lathe to insert it.

I employ these pincers in connection with a guide or guides to support the wires after they are drawn from the cloth, which guides move forward in unison with the pincers to carry the wires in succession to the point

where they are to be introduced into the open shed. Fig. 9 represents the pincers with a wire drawn nearly out of the cloth. (f, f,) represent the guides for supporting
5 the wires, an end view of one of which is given in Fig. 10. These guides are mounted on an axis over the wires and are provided with an opening in their lower ends for the wires to slide through. They are
10 also made to open and close. They open to allow the pincers to pass as they advance and recede from the cloth to withdraw and insert a wire; but are closed to encircle the wire when it needs to be guided or sup-
15 ported. When very long wires are used, so as to require additional support, guide plates may be made to rise up between the warps for the wires to slide upon, similar in form to that represented by (g) Fig. 9.
20 These guides are not generally required however in weaving cut pile fabrics as the ends of the wires opposite to the pincers may be turned up in the form of an eye

which rests upon the warps and forms a sufficient support to the wires as it is intro- 25
duced between them.

Having pointed out the nature of my invention and its mode of operation, I would remark that I do not wish to confine myself to the precise form of the parts represented 30
nor do I claim as new constructing pile wires with heads or eyes; for this is the usual mode of constructing them for hand looms; but

What I do claim and desire to secure by 35
Letters Patent is,

Making one part of the pile wires which is to be grasped by the pincers wedged form or oval shaped in combination with grooves in the jaws of the pincers to conform thereto 40
substantially in the manner and for the purpose specified.

E. B. BIGELOW.

Witnesses:

HORACE FAULKNER,
H. M. SIMPSON.