

Beard & Whitney. Loom Temple.

N^o 2,536.

Patented Apr. 6, 1842.

Fig 1.

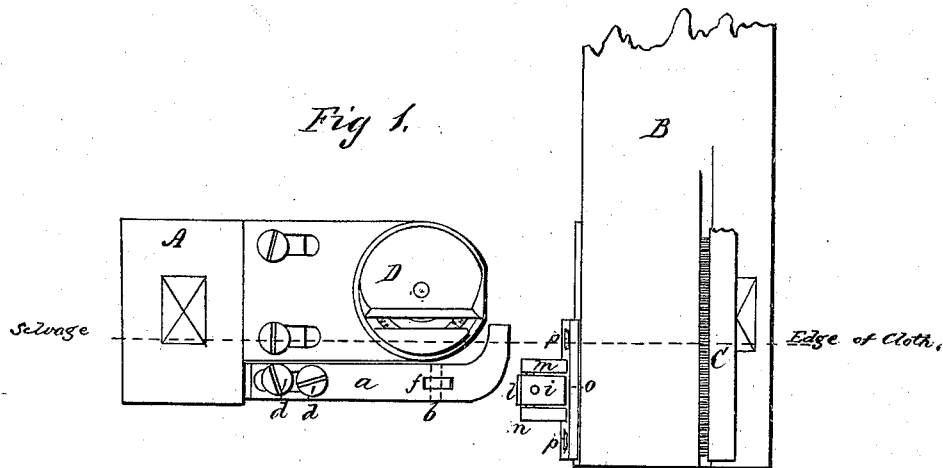


Fig. 2.

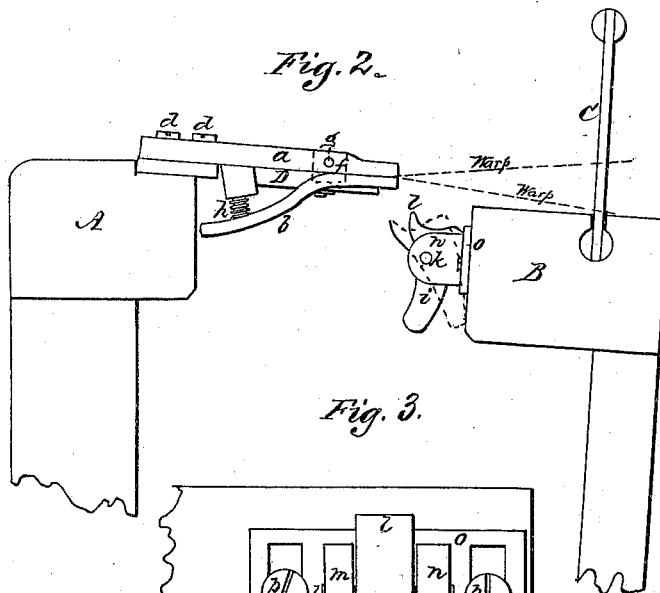
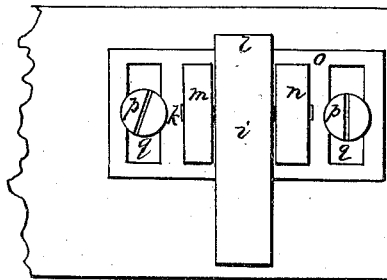


Fig. 3.



UNITED STATES PATENT OFFICE.

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IMPROVEMENT IN TEMPLES FOR LOOMS.

Specification forming part of Letters Patent No. 2,536, dated April 6, 1842.

To all whom it may concern:

Be it known that we, JOSIAH BEARD and ABRAM WHITNEY, both of Waltham, in the county of Middlesex, in the State of Massachusetts, have invented new and useful Improvements in Temples for Looms, of which the following description, taken in connection with the accompanying drawings therein referred to, forms our specification, wherein we have set forth the nature and principles of our improvements, by which they may be distinguished from others of similar character, and such parts or combinations of the same as we claim to be our invention and for which we solicit Letters Patent.

Figure 1 represents a top view of a portion of the lay and breast-beam of a loom with our improvements thereto attached. Fig. 2 is an end view of the same.

In the drawings, A represents the breast-beam, and B the lay, the former having a rotary temple attached to it and the latter carrying the reed C in the usual manner. When the shuttle is drawn forward, the strain of the thread upon the selvage edge of the cloth lying between the temple-wheel and the reed is generally so great and so unequal as to produce an uneven selvage, as well as an injurious effect upon the dents of the reed.

One object of our improvements is to obviate the above difficulty, and we do the same by arranging by the side of each rotary temple D a pair of nippers *a b*, Figs. 1 and 2, which are confined to the temple-plate by screws *d d*, passing through an elongated slot *e*, Fig. 1, formed through the rear end of the upper nipper, as seen in the drawings. The front ends or jaws of the nippers are curved round or bent at right angles in front of that part of the temple through which the cloth enters, so as to receive and grasp the cloth between them. The lower nipper *b* is connected to the upper nipper *a* by a stud *f*, Fig. 1, which in Fig. 2 is denoted by dotted lines, and which projects from the upper surface of the lower nipper just in rear of the jaw, and passes through a corresponding slot cut through the upper nipper, and is confined therein by a pin *g*, passing through the upper nipper from side to side, and through the stud *f*, the stud playing loosely on the pin. From the front of the stud the lower nipper is bent downward into the shape denoted in Fig. 2,

and is pressed downward or away from the rear end of the upper nipper, or so as to bring the jaws in contact by a helical or other suitable spring *h*, Fig. 2, intervening between the jaws. To the rear of the lay and directly under the jaws an escapement or pendulous tumbler *i* is attached, the said tumbler turning on a pin *k* and being shaped as seen in Fig. 2—that is to say, the lower part of said tumbler projects a somewhat greater distance below than the upper part does above the supporting-pin *k*, and the hole in the tumbler through which the pin *k* passes is bored nearer to that side or edge which is toward the breast-beam than the opposite or that toward the lay. By this arrangement the weight of the tumbler preponderates on the side toward the lay, so that when left free the upper part of the side of the tumbler next the lay will rest in contact with the lay or be in the position represented in Fig. 2.

The upper part of the tumbler, or the part denoted in the drawings by the letter *l*, projects upward, and is otherwise shaped, as seen in the drawings. A front view of the tumbler, exhibiting the parts also by which it is connected to the front side of the lay, is represented by Fig. 3, in which it will be observed that the tumbler is placed between two lips *m n*, projecting from a plate *o*, which is secured to the rear side of the lay B by screws *p p*, which pass into the lay through vertical elongated slots *q q*, the heads of the screws bearing upon the rear face of the plate *o* on each side of the slot. From the same it will be readily seen that the position or elevation of the tumbler may be regulated at pleasure, so as to cause it to act on the lower nipper, as will be hereinafter explained.

The selvage of the piece of cloth which is undergoing the process of being woven is passed between the jaws of the nippers, and from thence over the points of the temple-wheel or through the temple, as denoted by the dotted lines in Fig. 2. The threads of the warp separate or the filling is driven up to the warp immediately or very nearly against the front of the jaws of the nippers, the nippers retaining the selvage in its position when the shuttle is driven through the threads of the warp. Now in order that the cloth may pass regularly through the temple and nippers as it is woven it becomes necessary that

the jaws of the nippers should open or separate from each other when the blow is given to the filling by the reed and permit the reception of the cloth, and then immediately close upon the cloth, as before, and grasp or retain the selvage as the shuttle is driven back again. This operation is effected by the tumbler, whose part *l* strikes against the underside of the depressed end of the lower nipper as the lay is driven up, raising said nipper end slightly, so as to open the jaws, and the very instant the force of the blow of the reed on the cloth is expended and the lay commences its return the friction upon the end *l* of the tumbler causes said end of said tumbler to tilt forward or its lower end to retreat against the lay, or into the position denoted by the dotted lines in Fig. 2, thus permitting the jaws to close by the expansive action of the spring *h*. We also use the nip-

pers and tumblers separate from the revolving temple, as a jaw-temple is generally used.

Having thus explained our invention, we shall claim—

The combination of the revolving and jaw temples arranged together, as above described, and operating so that the selvage of the cloth intervening between the reed and the revolving temple shall be grasped and firmly held during the process of weaving, in manner and for the purpose before set forth.

In testimony that the foregoing is a true description of our said invention and improvements we have hereto set our signatures this 22d day of December, A. D. 1841.

JOSIAH BEARD.

ABRAM WHITNEY.

Witnesses:

R. H. EDDY,

EZRA LINCOLN, Jr.