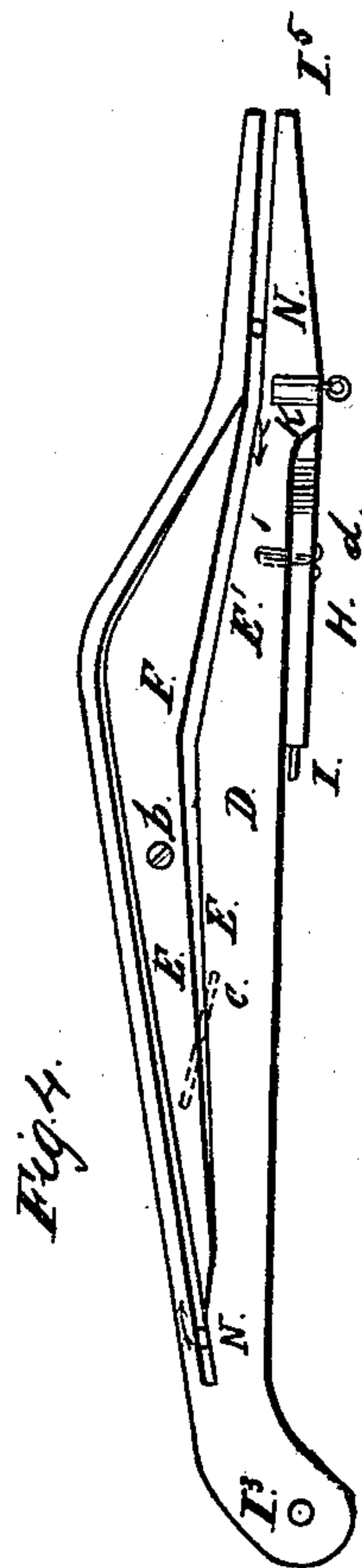
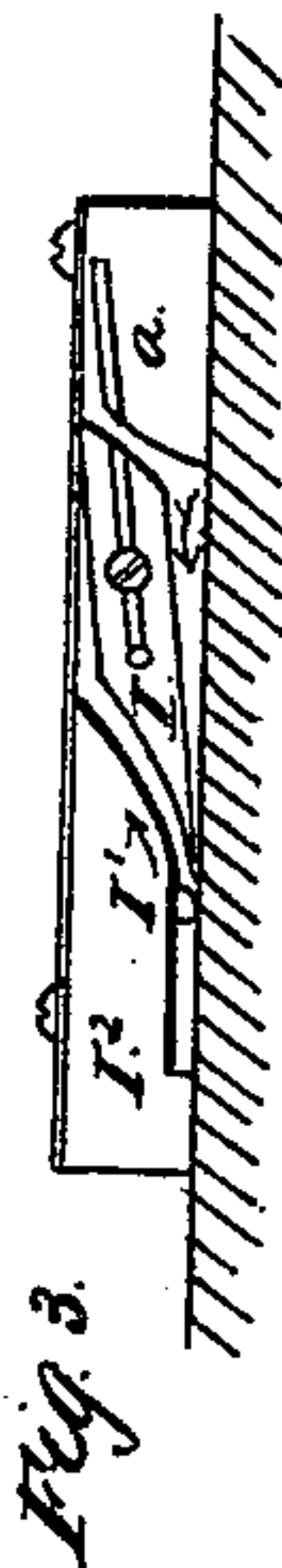
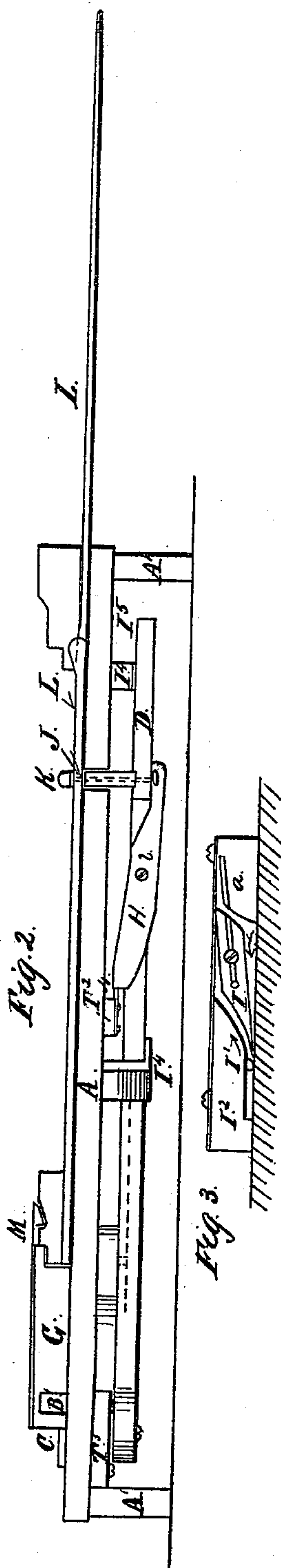
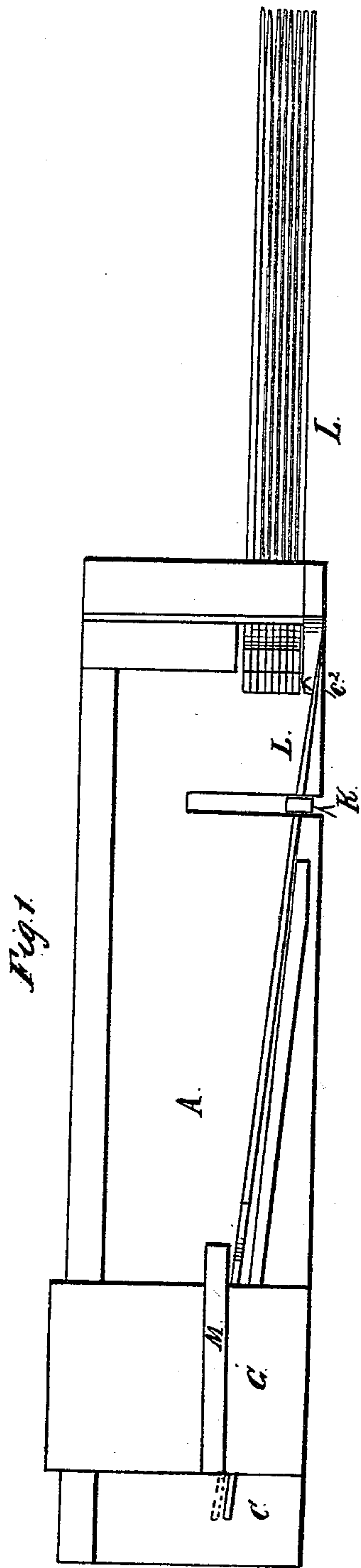


W. Webster.

Pile Fabric Mach.

N^o 82,773.

Patented Oct. 6, 1868.



Witnesses:
John P. Schump
William H. Webster

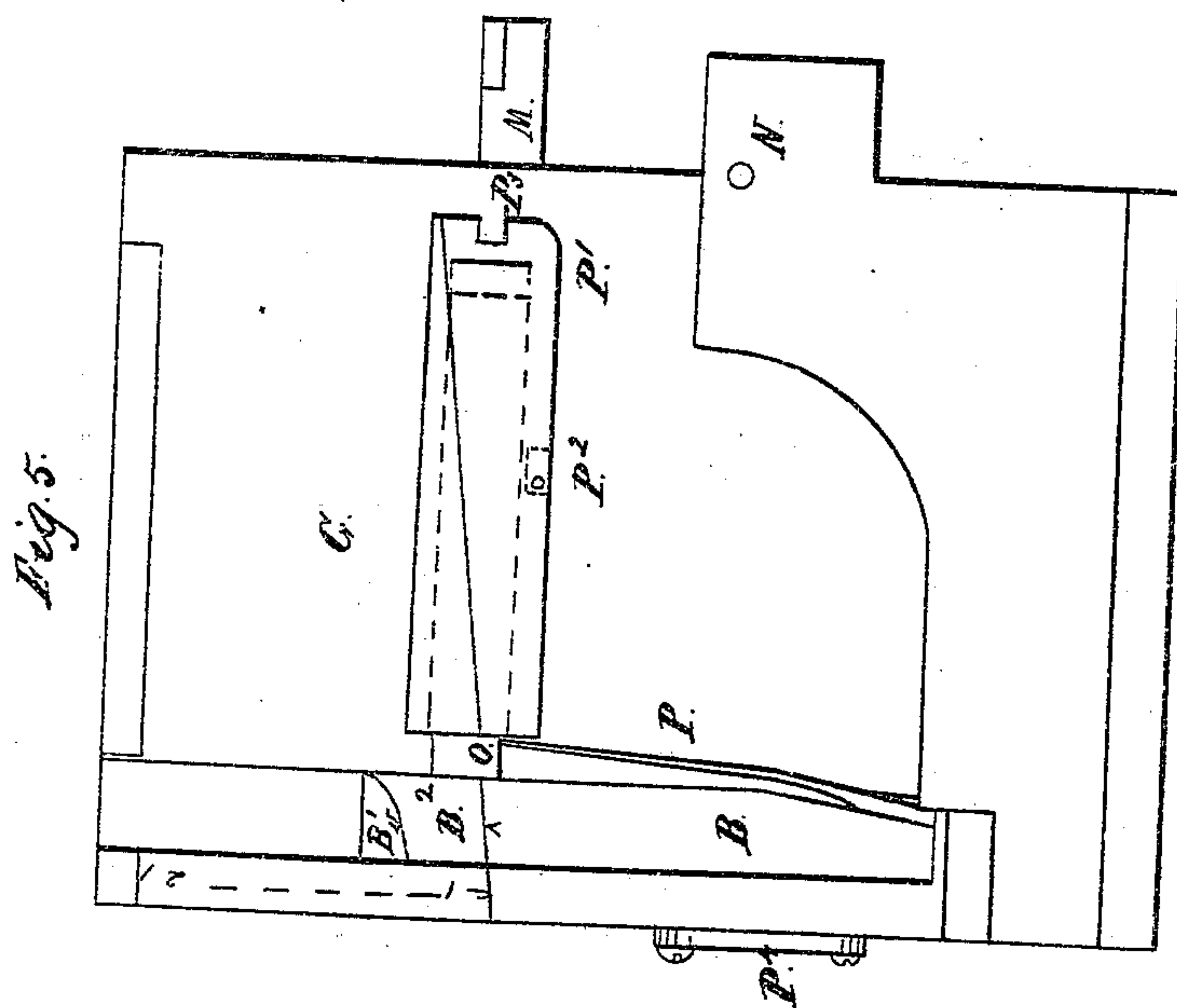
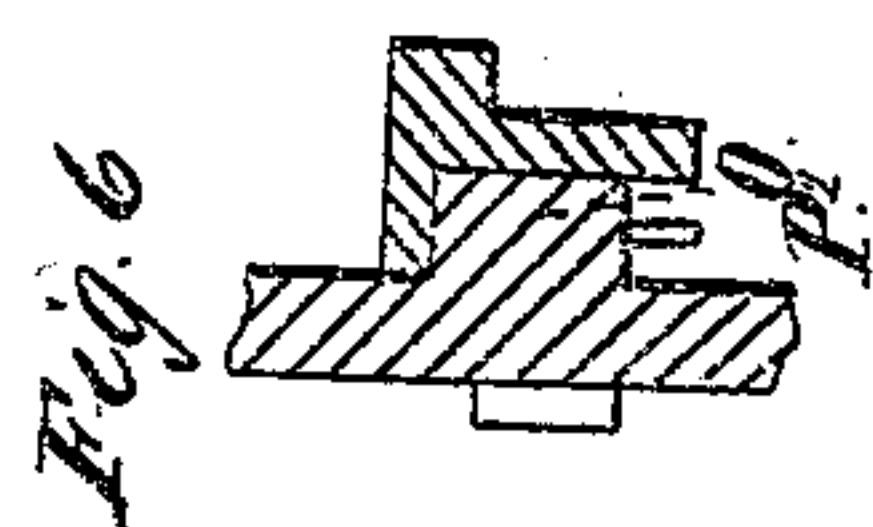
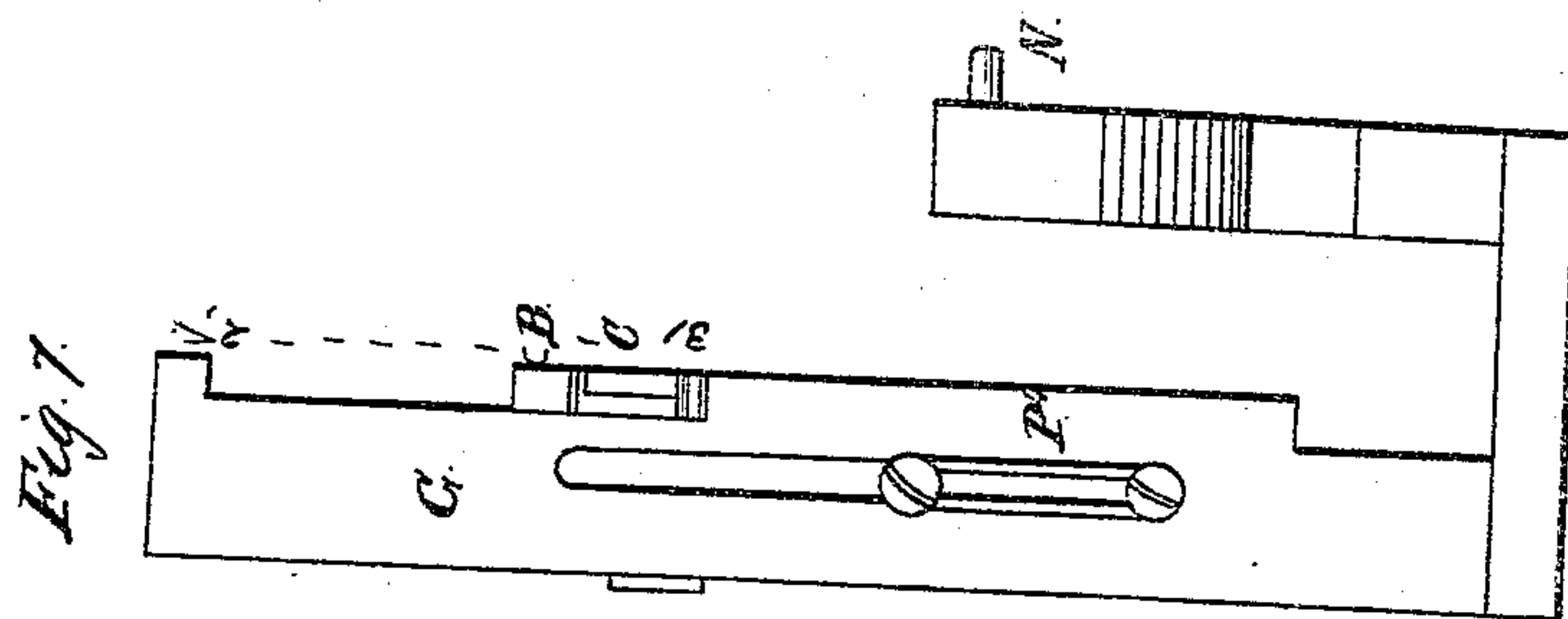
Inventor.
William Webster

Sheet 2. 2 Sheets

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Witnesses
John P. Schumpp
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Inventor
William Webster

UNITED STATES PATENT OFFICE.

WILLIAM WEBSTER, OF MORRISANIA, NEW YORK.

IMPROVEMENT IN LOOMS FOR WEAVING PILE FABRICS.

Specification forming part of Letters Patent No. 82,773, dated October 6, 1868; antedated August 24, 1868.

To all whom it may concern:

Be it known that I, WILLIAM WEBSTER, of Morrisania, in the county of Westchester and State of New York, have invented a new and useful Improvement in Machinery for Weaving Pile Fabrics, &c.; and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawings, which make a part of this specification.

The nature of my invention consists, first, in so constructing a table and guide, relative to the sliding block and pusher that, after a wire is withdrawn from the cloth for insertion, the point of it is directed to a point quite or nearly opposite to the fell of the cloth, or where a wire is left on being beat up by the reed; second, the application and use of a vibrating lever having one or more grooves, and so constructed, arranged, and combined relative to the pusher that, after the pusher is drawn back, the projecting end of the vibrating lever, holding the point of the wire, is carried forward, and on pushing the wire forward, or into the open shed, the vibrating lever takes its original position to support another wire, as before; third, the application and use, in combination with the aforesaid vibrating lever, with or without one or more grooves, of the oscillating lever, the oscillating block having incline planes and sliding rod, or their mechanical equivalents, for the purpose of holding the wire more securely while being directed and pushed into the shed.

The following is a description of my improvement and its operation, in which Figures 1 and 2 represent top and side views (looking at it from the rear or loom side) of the table A, pusher G, sliding block B, guide C, vibrating lever D, oscillating lever H, and sliding rod J, which holds the wires L in the projecting end of the vibrating lever D, as shown at K. A' A' represent lugs or ears by which the table A is or may be secured to the frame-work of the loom. Other means may be employed. M represents the latch that catches into notches made in the heads of the wires, by which they are drawn from out the cloth.

Fig. 3 represents a sectional part of Fig. 2, showing the oscillating block I, having incline planes, which is provided with a spring, a, to keep the point of the block down, to prevent the return of and direct the course of the pin I¹ up and around the planes, from which rotating movement of the pin I² the oscillating lever H, with its sliding rod J, receives its up-and-down motion to hold and to liberate the wire, as shown in Fig. 2, at L, at certain times, as required. This lever works on a fulcrum, d. The block I², Fig. 2, incasing the block I, is adjustable; consequently, a channel or groove is made at either or both ends of the plane, so as to allow the pin I¹ length of room to be at rest at times, while the wire is being carried forward. This channel or groove, with its plane, will be varied in its construction and operation according to the extent of the distance a wire is to be moved or operated.

Fig. 4 is a plan, showing the upper face of the vibrating lever D, having two grooves, E E', the interior walls of which are formed by the edges of the oscillating guide F, which works on a fulcrum, b. The extreme points or ends of said guide are made to bear against the opposite sides of the grooves by a spring, c, thereby causing the pin N or pusher G to traverse around the guide F, Fig. 4, in the direction of the arrows. The fulcrum-block I³, Fig. 2, is or may be made adjustable, so that shifting it one way or the other changes the position of the fulcrum. Thus a relative change will be produced by the grooves being thrown out of their former line, and in relation to the pusher, the effect of which change causes the end of the lever holding the wire to be carried more or less forward, according to the size of the open shed required. I⁴ I⁴ are ways or guides to keep the vibrating lever D in its proper position.

Fig. 5, Sheet 2, represents the under side of the pusher G, showing the sliding block B, which has a notch, B², cut into it, the depth and length of it to correspond with the thickness and width of the guide C, as shown at C, Fig. 7. The end of this guide C is made to yield as the sliding block B, at B¹, bears against it in its return movement, and to spring inside,

and into the notch B^2 , when that part of it, as shown at B^1 , Fig. 7, has passed beyond the end of the spring. O represents a piece projecting out from the sliding block B sufficiently far to receive another piece, P^1 , which is made to slide over it, as shown, and is prevented from sliding out too far by the pin P^2 .

Fig. 6 is an end view. P is a spring to press the piece P^1 with its nick, P^3 , against and to hold the head of the wires in an upright position.

Fig. 7 is an end view of the pusher G, showing the end of the sliding block, as caught over the end of the spring or guide C, as shown at B^1 . The space from 1 to 2 is to allow room for the pusher G to slide over the guide C. N, the pin that slides in the grooves of the vibrating lever D to operate it; P^4 , the elastic spring connected with and to withdraw the sliding block B, when liberated from the head of the wires.

The operation of the sliding block, &c., is as follows: When the latch M has hold of the wire to withdraw it, the piece P^1 is pressed back by coming in contact with the wire-heads; but as soon as the pusher G is being drawn back with its wire, the piece P^1 presses forward with its nick P^3 over the head of the wire, and holds it while being carried forward and pushed into the open space c^2 , Fig. 1. Said sliding block, with its wire, is directed to the end of its stroke by the guide C. The instant the wire is pushed home the piece P^1 , with its nick, P^3 , being pressed back by coming in contact with the heads of the other wires, the sliding block B, with its appendages, is instantly drawn back by the spring P^4 , and catches the head of another wire, as before.

The levers carrying the point of the wire forward, and holding it while being pushed into the open shed, are operated as follows, viz: When the pusher G is being drawn back, the pin N, Fig. 4, is slid through the groove E' , which mostly runs bias to a parallel line with the table A, thereby moving the vibrating lever D, with its projecting part K holding the wire, to a point nearly opposite to the open shed, and, on the wire being pushed forward, the pin N is switched into the other groove E. This also, being bias to a straight line, causes the lever to be moved back to its first position for the reception of another wire.

This vibrating lever D may be operated directly from a driving-shaft by means of a cam, or otherwise than by the pusher G. The point of the wire is carried forward more or less by changing the position of the fulcrum I^3 of the vibrating lever D. The grooves in this lever may be made with many changes in their course and direction, according to circumstances. The shape and channel of the

incline plane I, which operates the lever H, may also, as well as the other parts, be varied in construction and operation, without deviating from the main features of my invention, according to the movement it is desired to impart to the wire.

For the further information of persons acquainted with loom machinery, I will state that, by the application and use of my improvement, it is or may be necessary that the shuttle-box on the wire-motion side be detached or made separate, or not attached to the lay. Nevertheless it can be made to receive its vibrating, oscillating, swinging, or sliding motion from it or with it by means of a spring, cam, incline plane, or some other mediate or intermediate attachment therewith, or the loom, or from a cam or other device from off the driving-shaft. I lay no claim to any such devices—only refer to such, as they will be readily understood from my suggestions.

Having thus fully explained my improvement, and the manner of constructing and operating the same, I do not wish to confine myself to any particular form or position of any of the several parts—for instance, the block I, with its adjustable block I^2 , can be moved to the opposite end of the lever, say at I^5 , and the oscillating lever H reversed accordingly. Neither do I wish to confine myself to the use of the latch M, as constructed and arranged, as I lay no claim to it. Neither do I claim directing or guiding the wire while being pushed into the open shed by means of a tongue, when such tongue does not of itself guide the wire to the end of the stroke, or to a point where a wire is left on being beat up by the reed. Neither do I claim supporting a wire by means of a sliding block, when such sliding block is not guided and directed to the end of its stroke by the same guide.

What I claim as my improvement in machinery for weaving pile fabrics, &c., and desire to secure by Letters Patent, is—

1. The guide C, pusher G, and sliding block B, in combination, when constructed, arranged, and operating substantially as described, and for the purpose set forth.

2. The vibrating lever D, having grooves E E' , and oscillating guide F, or its equivalent, in combination with the pusher G, or its equivalent, for the purpose set forth.

3. In combination with the vibrating lever D, with or without the grooves E E' , and oscillating guide F, the oscillating lever H, oscillating block I, having incline planes, and sliding rod J, substantially as herein described, and for the purpose set forth.

WILLIAM WEBSTER.

Witnesses:

JOHN T. SCHLUMPF,
WILLIAM H. WEBSTER.