No. 607,377. Patented July 12, 1898.

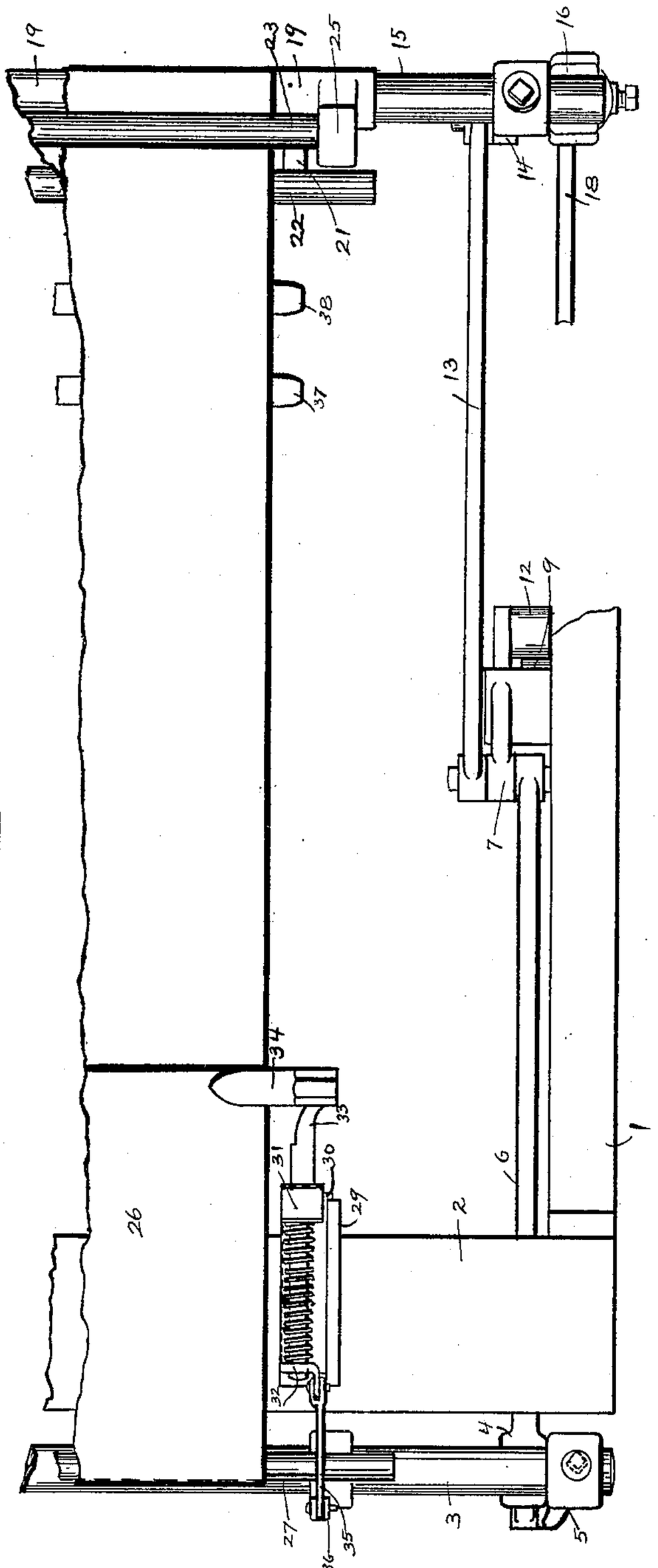
G. F. HUTCHINS.

LOOM TEMPLE.

(Application filed Oct. 4, 1897.)

(No Model.) 4 Sheets—Sheet 1.

FIG. 1.



Witnesses
Arthur S Cowan
Frank C. Heath

Inventor
George F. Hutchins.

By Attorney
L. C. Dewey.

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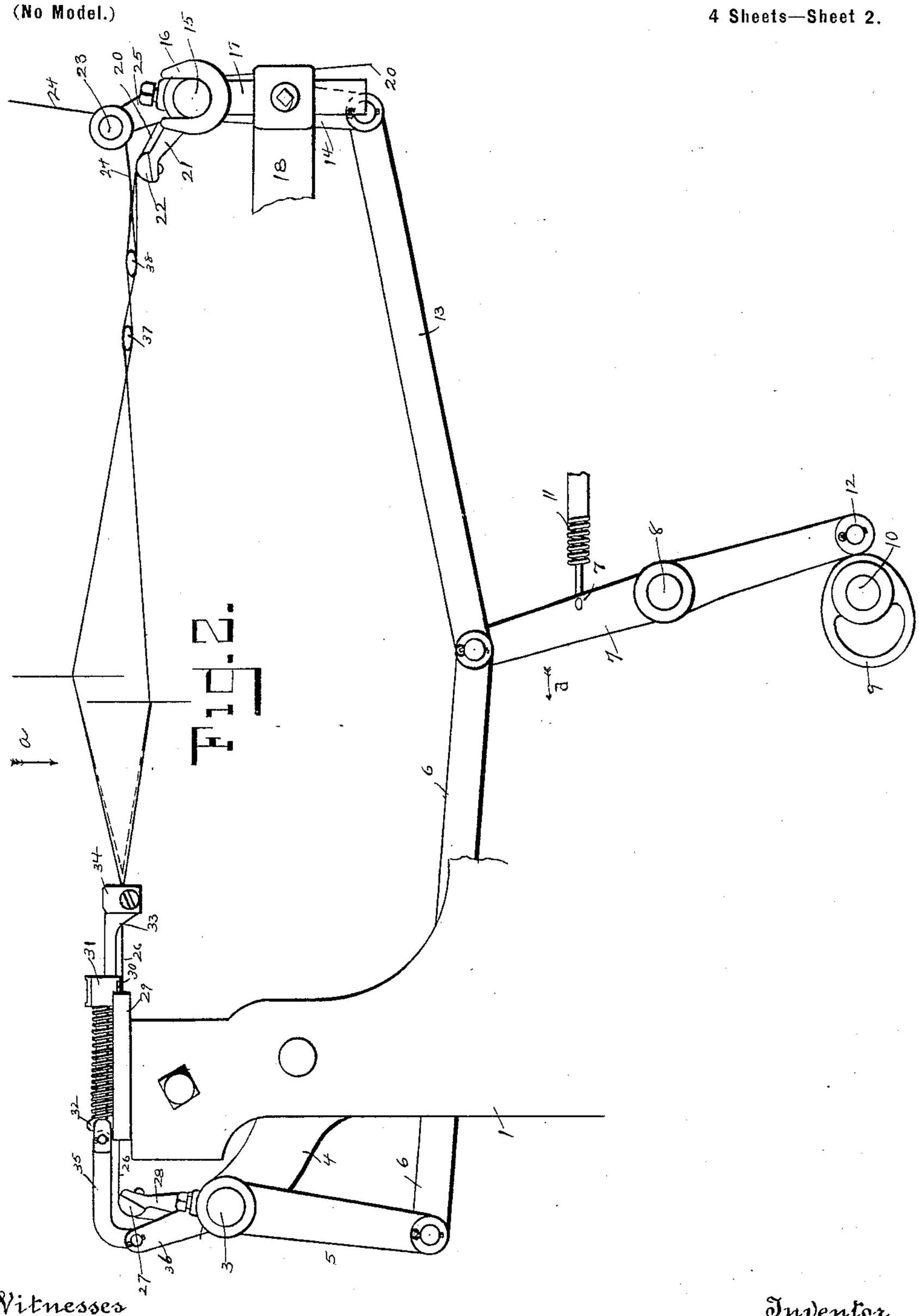

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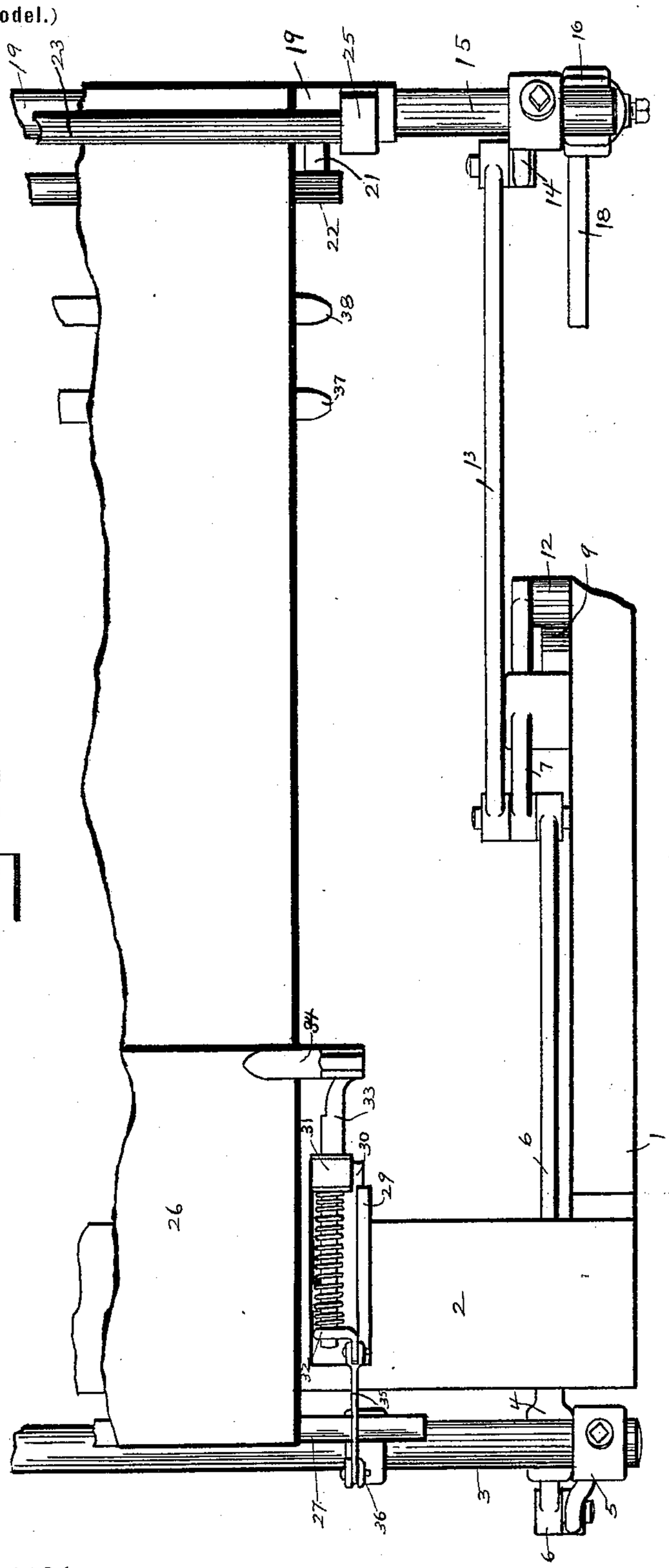
(No Model.) 4 Sheets—Sheet 3.

Fig. 3.



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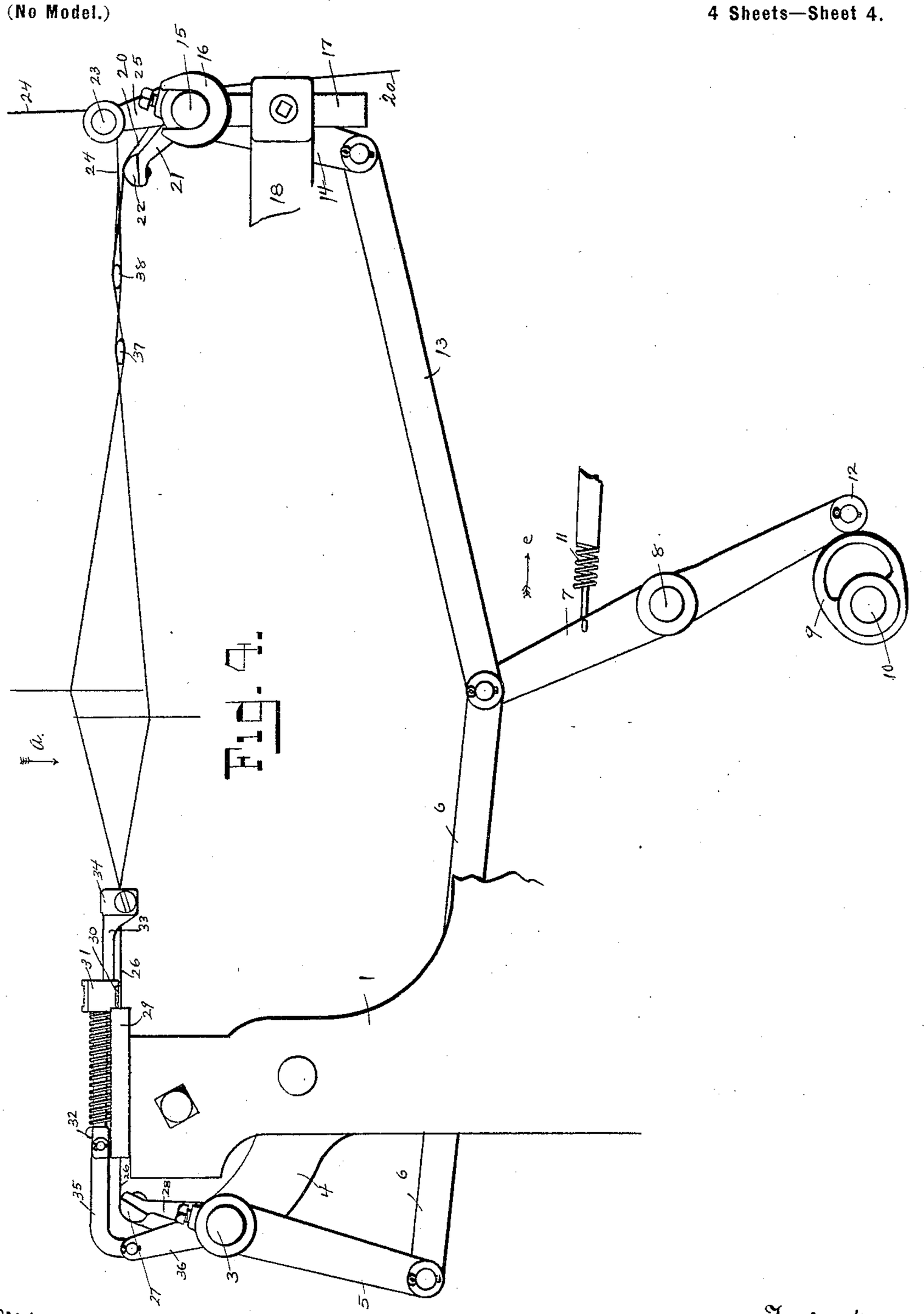

Fig. 4.

Witnesses
Arthur S Cowan
Frank C. Heath

Inventor
George F Hutchins

By Attorney
J. C. Dewey.

UNITED STATES PATENT OFFICE.

GEORGE F. HUTCHINS, OF WORCESTER, MASSACHUSETTS, ASSIGNOR TO THE CROMPTON & KNOWLES LOOM WORKS, OF SAME PLACE.

LOOM-TEMPLE.

SPECIFICATION forming part of Letters Patent No. 607,377, dated July 12, 1898.

Application filed October 4, 1897. Serial No. 654,056. (No model.)

To all whom it may concern:

Be it known that I, GEORGE F. HUTCHINS, a citizen of the United States, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in Loom-Temples, of which the following is a specification.

My invention relates to loom-temples, and more particularly to a loom-temple to be used on looms for weaving Turkish-towel goods or other similar fabrics in which a certain number of filling-threads are put in by the fly-shuttles, and then the fabric and warp-threads are drawn back toward the rear of the loom, and the beating up of the lay causes the warp-threads to form the raised loops, which extend out on both sides of the Turkish-towel goods or other similar fabrics. Heretofore in weaving this class of fabrics loom-temples of ordinary construction have been used, having the supporting plate or stand rigidly attached to the breast-beam, so that when the fabric is drawn back to allow the warp-threads to be beaten up to form the loops and then drawn forward after the loops are formed the fabric is drawn through the temple and the teeth thereon will tear and abrade the fabric and injure the appearance thereof.

The object of my invention is to make a loom-temple with a movable plate or support with a connection to some operative part of the loom to cause said movable plate or support and the temple to be moved at the proper time and at regular intervals, so that when the fabric is moved back to form the loops the plate or support will move and the temple will move with it, and when the fabric is moved forward after the loops are formed the plate or support and the temple will move with the fabric, thus preventing the fabric from being drawn through the temple in the operation of forming the loops above referred to.

My invention consists in certain novel features of construction of my loom-temple mechanism, as will be hereinafter fully described.

I have only shown in the drawings detached portions of a loom of the class referred to sufficient to illustrate the construction and operation of my loom-temple attachment applied thereto.

Referring to the drawings, Figure 1 is a plan view, looking in the direction of arrow *a*, Fig. 2, of my loom-temple attachment and of the operative parts of the loom connected therewith, showing the temple in its forward position. Fig. 2 is a side view of the parts shown in Fig. 1, looking in the direction of arrow *b*, same figure. Fig. 3 corresponds to Fig. 1, but shows the temple in its rear position; and Fig. 4 is a side view of the parts shown in Fig. 3, looking in the direction of arrow *c*, same figure.

In the accompanying drawings, 1 is a detached portion of the right-hand end or side of a loom. 2 is the breast-beam. 3 is a rock-shaft extending in front of the breast-beam and mounted to turn in bearings on the arms or stands 4, bolted to the loom-frame. (See Fig. 2.) An arm or lever 5 is fast at its upper end on the rock-shaft 3 and is pivotally attached at its lower end to one end of a connector 6. The rear end of the connector 6 is pivotally attached to the upper end of the lever 7, centrally pivoted at 8, and positively operated at regular intervals by a cam 9 on a driven shaft 10. A spring 11 acts to keep the roll 12 on the lever 7 in engagement with the cam 9. A second connector 13 is also pivotally attached at one end to the upper end of the lever 7 and at its other end to a lever or arm 14, fast on the back-roll shaft 15, mounted in bearings 16 in the upper end of a vertically-moving bar 17, which is adjustably supported in the side bar 18 of the loom-frame.

The back-roll shaft 15 carries the back roll 19, over which the warp-threads 20 from the lower warp-beam (not shown) pass, and also on arms 21, fast on the back-roll shaft 15, the bar or whip-roll 22, over which the warp-threads pass. The back roll 23, under which the warp-threads 24 from the upper warp-beam (not shown) pass, is supported on arms 25, fast on the back roll 19. The woven fabric 26 passes over a bar 27 in front of the breast-beam 2 and supported on the arms 28, fast on the rock-shaft 3.

All of the above parts are of the ordinary construction and operation in the class of looms referred to.

On the breast-beam 2 is secured the station-

ary plate or stand 29 of the temple attachment, and on said plate is mounted to slide in ways thereon in the direction of the length of the fabric a plate 30, having stands or bearings 31 and 32 thereon, in which is supported to slide the longitudinally-moving spring-actuated rod 33 of the temple 34, which may be of ordinary construction. The rear stand 32 of the temple-plate 30 is connected in this instance by a link 35 to the upper end of an arm 36 on the rock-shaft 3. The warp-threads 20 and 24 are separated at the rear part of the loom by the lease-rods 37 and 38 in the usual way, and the edge of the woven fabric in front of the fell-point passes through the temple 34 in the ordinary way and over the bar 27 in front of the breast-beam to the take-up roll. (Not shown.)

From the above description, in connection with the drawings, the operation of my loom-temple attachment will be readily understood by those skilled in the art.

In practice two picks of filling are put in, and then the woven fabric is moved toward the rear of the loom to allow the warp-threads to be beaten up and form the sets of loops extending transversely of the fabric. As stated above, when the woven fabric is moved back the edges thereof are drawn through the temples in the ordinary construction of the temple, causing the edges of the fabric to be abraded and injured. In my improved construction when the lever 7, through cam 9, is moved to the left in the direction of arrow *d*, Fig. 2, to the position shown in Fig. 4, and the woven fabric and warp-threads moved back, through connectors 6 and 13, arms 5 and 14, shafts 3 and 15, and bars 22 and 27, in the ordinary way to allow the warp-threads to be beaten up to form the loop, the plate 30, carrying the temple mechanism, through link 35, connected by the arm 36 with the rock-shaft 3, is also moved back in the direction of the length of the fabric. After the loops are formed the reverse movement of the lever 7 in the direction of arrow *e*, Fig. 4, and from the position shown in Fig. 4 to the position shown in Fig. 2 will, through the intervening mechanism, as above described, cause the temple device to move from its rear position (shown in Fig. 4) to its forward position (shown in Fig. 2) with the woven fabric as the same is moved forward preparatory to putting in additional filling-threads and forming a new set of loops—that is, as the woven fabric is moved back toward the rear of the loom and forward toward the front of the loom in forming the loops the temple-plate 30 is moved with it instead of remaining stationary, as is customary.

It will be understood that the details of construction of my loom-temple attachment and the manner of operating the same may be varied, if desired.

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

In a temple attachment of a loom, the combination with a stationary plate or stand, and a movable plate carrying the temple, of a connection intermediate said movable plate and a rock-shaft, and said rock-shaft, and means for actuating the same to automatically move the plate carrying the temple, at regular intervals, in the direction of the length of the fabric, substantially as shown and described.

GEORGE F. HUTCHINS.

Witnesses:
J. C. DEWEY,
M. J. GALVIN.