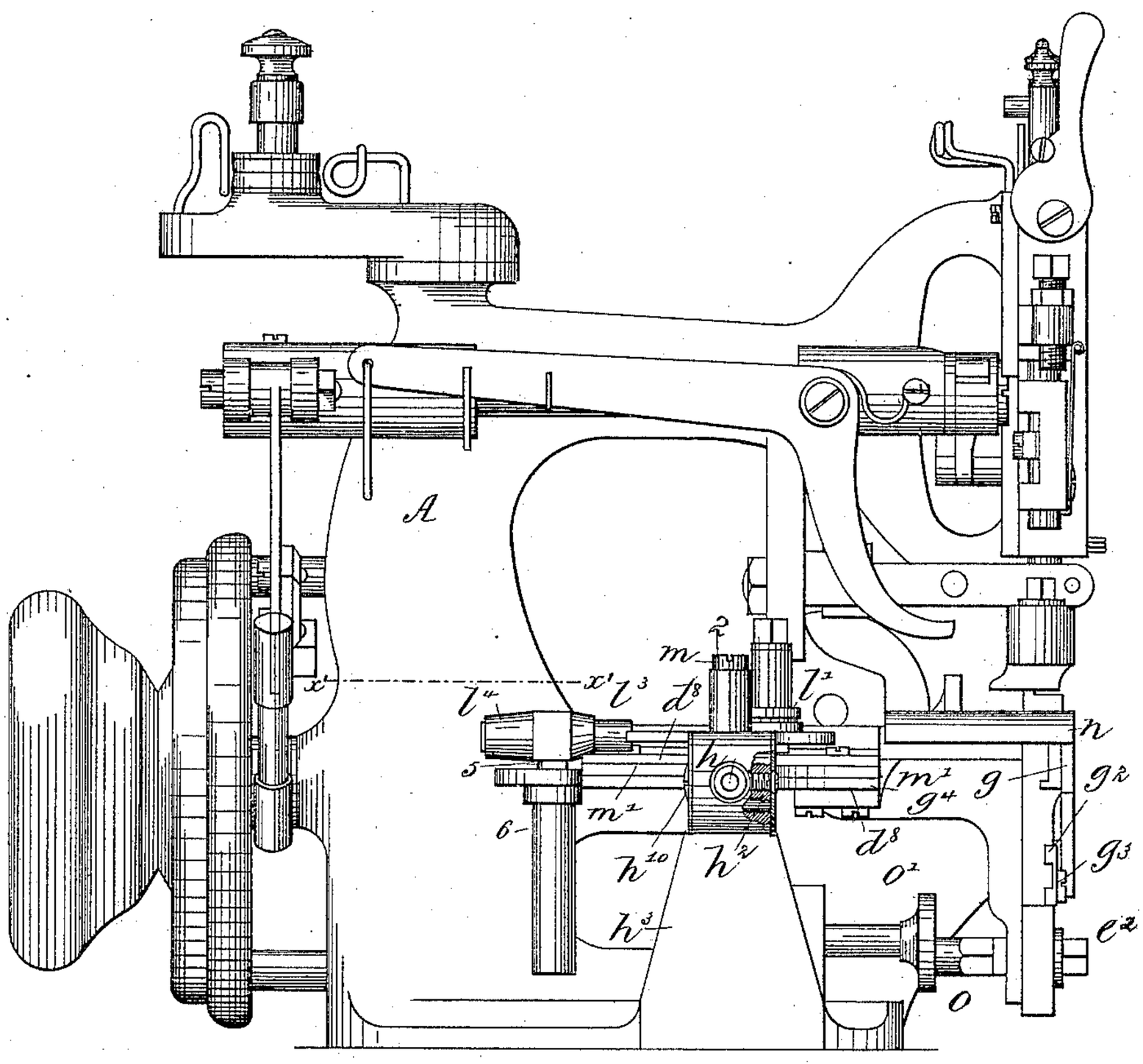
(No Model.) 2 Sheets—Sheet 1.

M. MARCIL.

FEEDING MECHANISM FOR SEWING MACHINES.

No. 331,205. Patented Nov. 24, 1885.

Fig: 1.



Witnesses.
J. A. Rennie.
H. L. Emery.

Per; Inventor.
Michel Marcil
Crosby & Gregory
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(No Model.) 2 Sheets—Sheet 2.

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Fig. 2.

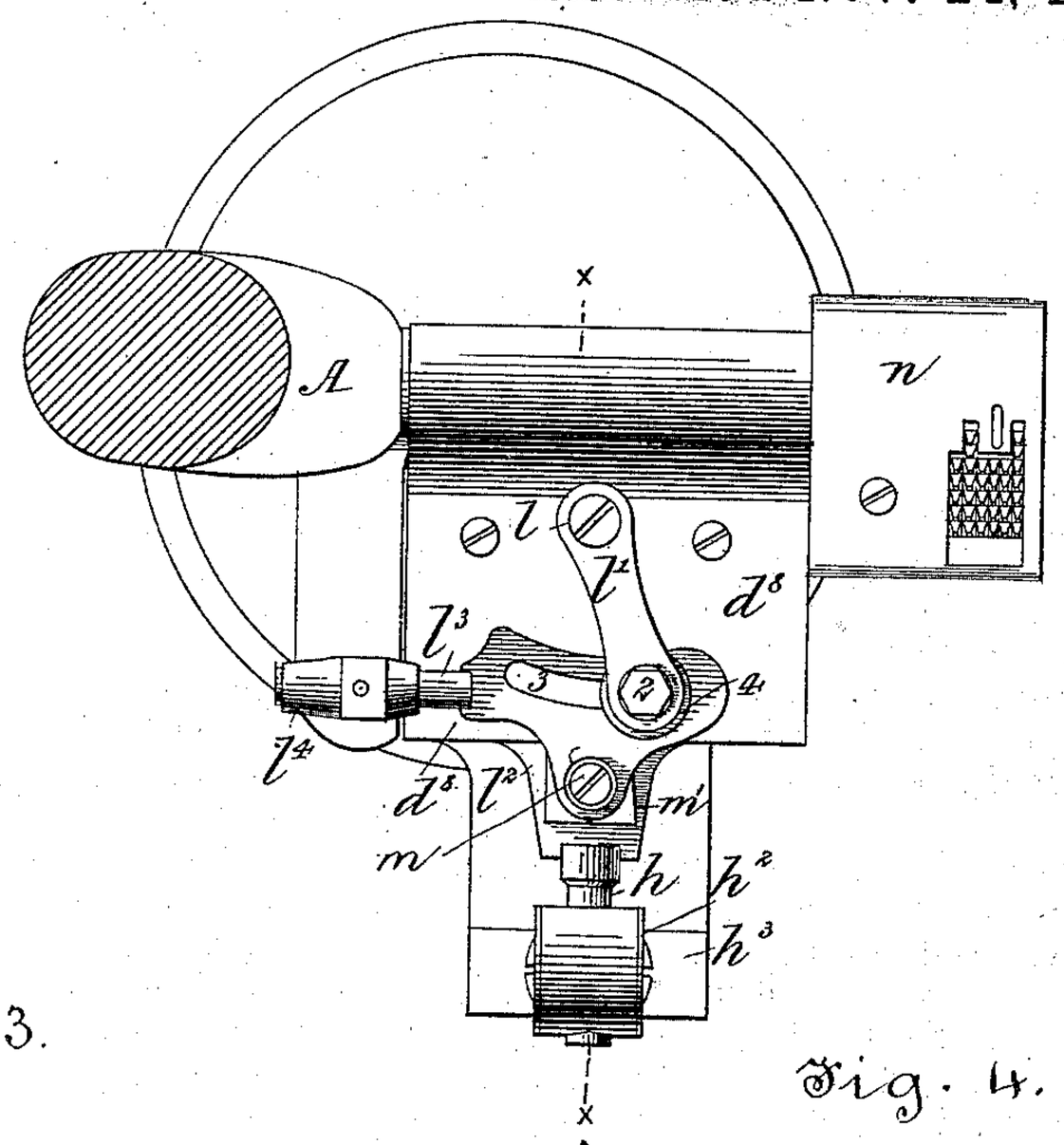


Fig. 3.

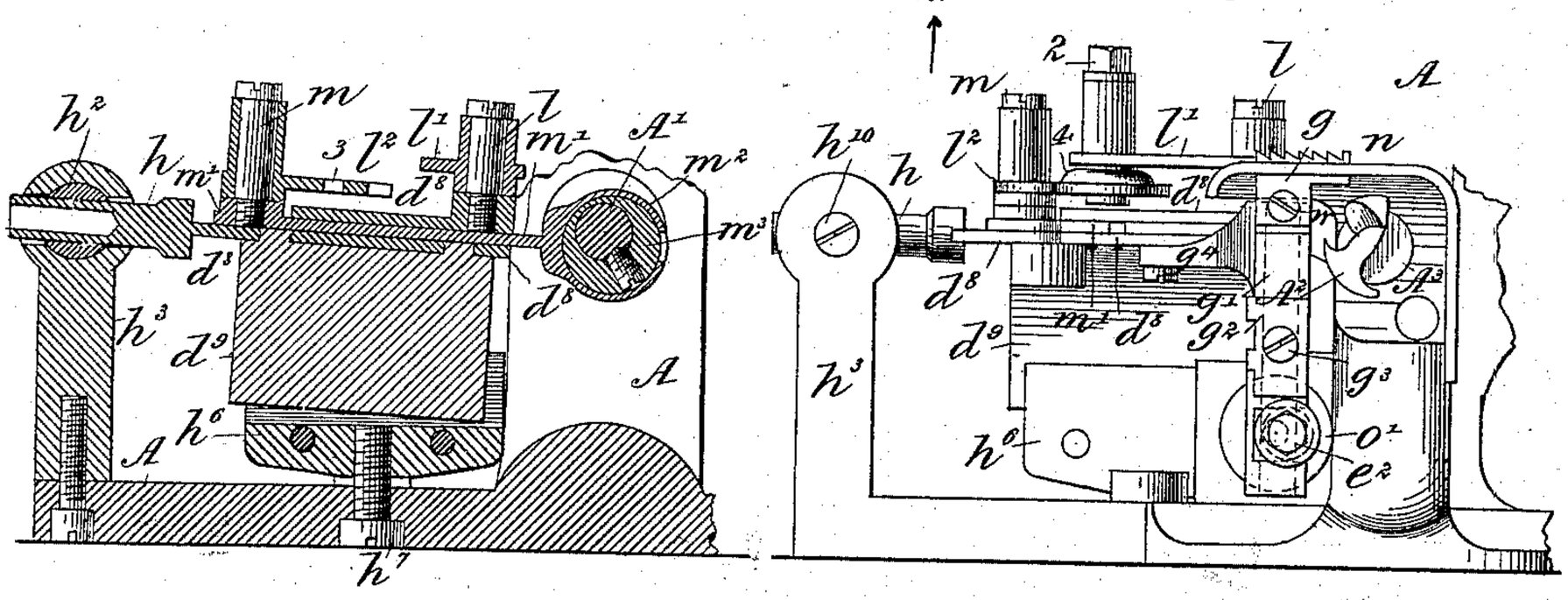
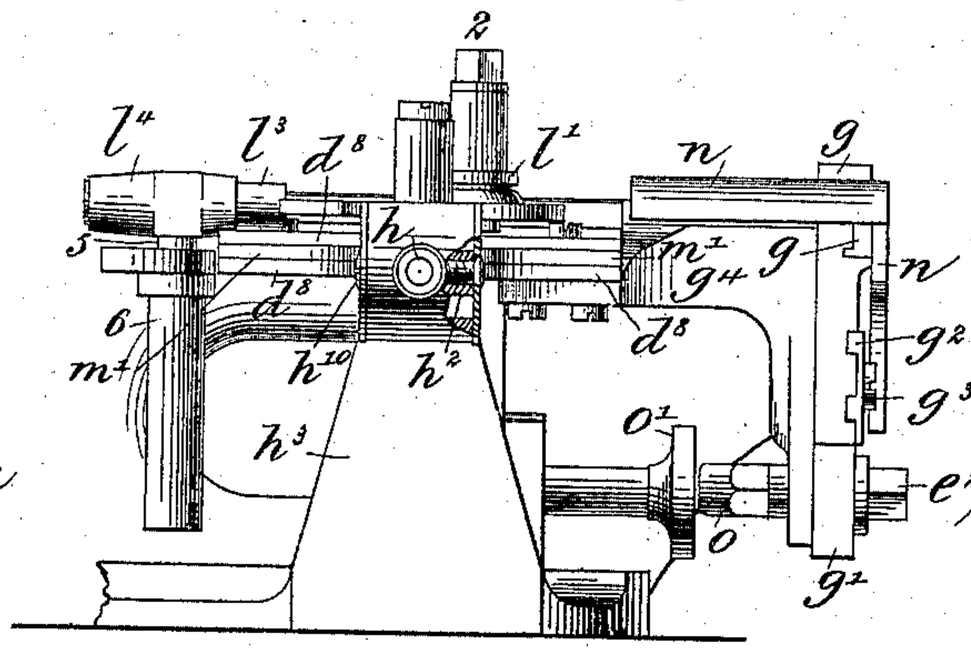


Fig. 4.

Fig. 5.



Witnesses:
J. A. Rennie
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UNITED STATES PATENT OFFICE.

MICHEL MARCIL, OF AMHERST, MASSACHUSETTS, ASSIGNOR TO THE HILLS COMPANY, OF SAME PLACE.

FEEDING MECHANISM FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 331,205, dated November 24, 1885.

Application filed July 11, 1885. Serial No. 171,319. (No model.)

To all whom it may concern:

Be it known that I, MICHEL MARCIL, of Amherst, county of Hampshire, State of Massachusetts, have invented an Improvement in Feeding Mechanism for Sewing-Machines, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

This invention has for its object to improve the feeding mechanism of sewing-machines, and especially those used for sewing straw braid.

My invention consists, essentially, in a feed-carrier supported at one end in an oscillating bearing, a feed-block and dog attached to the said carrier, a feed-regulating plate, and an adjustable link combined with a tongue connected with the feed-regulating plate, and with a shaft and an eccentric thereon to move the said tongue, substantially as will be described; also, in a feed-carrier provided with a heel, a shank, and a guide, the shank entering an oscillating bearing, combined with means, as will be described, for moving said carrier.

Other features of my invention will be set forth in claims at the end of this specification.

Figure 1, in side elevation, represents a sewing-machine containing my improved feeding mechanism. Fig. 2 is a view of Fig. 1 below the dotted line x' x', the gage and parts above the throat-plate being removed. Fig. 3 is a section of Fig. 2 in the line x x. Fig. 4 is a right-hand end view of Fig. 1, all but the feeding device and throat-plate being omitted; and Fig. 5 is an elevation of Fig. 2, looking at it in the direction of the arrow.

The frame-work A of the machine, of proper shape to sustain the working mechanism, has a main rotating shaft, A′, provided at its front end with a hook, A^2, of well-known construction, to co-operate with the usual eye-pointer needle in the formation of a chain-stitch. The feed-dog g is fastened by screw w to the upper end of a block, g', frictionally attached to a part, g^4, of the feed-carrier by a spring-plate, g^2, and screw g^3, the said block near its lower end having an opening to receive the eccentric part of an eccentric pin, e^2—such as described by like letter in my Patent No. 292,124—and by which the said block may be adjusted vertically, as may be desired, to adapt the feed to the material to be stitched. The feed-carrier is composed of the depending portion g^4, the recessed or double plate d^8, and the depending plate or keel d^9. The rear end of the double plate has a round shank, h, which enters an oscillating bearing, h^2, pivoted at h^{10} in a standard, h^3, erected on the frame-work A. The plate or keel d^9 enters a guide, h^6, held in place by a screw, h^7, such guide preventing lateral or twisting movement of the feed-carrier as it is reciprocated. The upper plate, d^8, of the feed-carrier has a stud, l, which receives the hub of a link, l', through a hole in the outer end of which and into a block, 4, in the curved slot 3 of the feed-regulating plate l^2 is passed the clamping-stud 2, having preferably a square or other many-sided head to be engaged by a wrench.

To increase the length of the stitch, the screw-stud is loosened and the block 4 is slid in the slot 3, movement of the block and stud toward the left shortening the stitch, and vice versa. This feed-regulating plate has its end or shank l^3 preferably made round, extended loosely into a hub-like bearing, l^4, and having a round foot or shank, 5, (see Figs. 1 and 5,) which is extended into a sleeve, 6, fixed with relation to the frame-work A. The shank 5 of the bearing l^4 is free to oscillate and to slide up and down in the sleeve 6, and the shank l^3 is free to both oscillate and slide out and in the bearing l^4.

The feed-regulating plate l^2 between its ends is connected by a stud, m, with the tongue m', guided between the two parts of the double plate d^8 of the feed-carrier, the opposite end of the said tongue being provided with an attached eccentric strap, m^2, (see Fig. 3,) which embraces the feed-moving eccentric m^3, fast on the hook-shaft A′.

The rotation of the shaft A′ causes the eccentric, acting on the tongue m', to raise and lower the feed-carrier and its attached feed-dog, which thus engages and releases the straw braid or other material laid on the throat or cloth plate n, and between it and the presser-foot f^2, (shown lifted in Fig. 1,) and as the tongue m' is moved horizontally by the eccentric it causes the feed-regulating plate l^2 to be vibrated about the shank 5 as a center, the

said plate, through the link l', moving the feed-carrier forward and backward for a distance depending upon the point at which the said link is attached to the feed-regulating plate l^2.

The devices described will impart to the feed-dog the usual four motions. To further prevent the feed-carrier from being twisted or tipped out of position as the feed-dog engages the braid or material being sewed, I have provided the depending portions g^4 of the feed-carrier with a laterally-extended foot, o, which as the feed-carrier is moved, travels over the smooth face of the stop or abutment o', connected with the frame-work.

The needle-bar-actuating mechanism herein shown, but not described, forms the subject-matter of an application, Serial No. 143,133, and the presser-foot-lifting mechanism the subject-matter of an application, Serial No. 171,320, the application claiming only the feeding mechanism.

I claim—

1. The feed-carrier d^8, the shank h, the oscillating bearing h^2 for the said shank, a support for the said bearing, the feed-block g^4, and dog attached to the said carrier, the feed-regulating plate l^2, and the adjustable link l', combined with the tongue m', connected with the feed-regulating plate, and the shaft A′ and eccentric thereon to move the said tongue, substantially as described.

2. The feed-carrier having the rigidly-attached downwardly-extended keel d^9, the shank h, the connected feed-block and dog, and the oscillating bearing for the said shank, combined with the guide h^6 for the said keel, and with means, substantially as described, for moving the said feed-carrier.

3. The feed-carrier provided with the shank h, and having the depending portion g, the bearing for the shank h, the feed-block g' and its attached feed-dog, and the foot o and stop o', against which the said foot travels and bears, combined with the tongue m', feed-regulator l^2, and link l', and with means, substantially as described, to actuate the said tongue, as described.

4. The feed-carrier provided with the shank h, an oscillating bearing for the same, the feed-block, the feed-dog, the feed-regulating device l^2, having a shank, l^3, the oscillating bearing l^4, its shank 5, the sleeve 6, the tongue m', and the adjustable link l' and feed-carrier, combined with means, substantially as described, to move the said tongue, as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

MICHEL MARCIL.

Witnesses:

WM. A. DICKINSON,

LEONARD M. HILLS.