No. 637,412. Patented Nov. 21, 1899.

G. POOLE.

STOP MOTION MECHANISM FOR LOOMS.

(Application filed Oct. 3, 1898.)

(No Model.) 2 Sheets—Sheet 1.

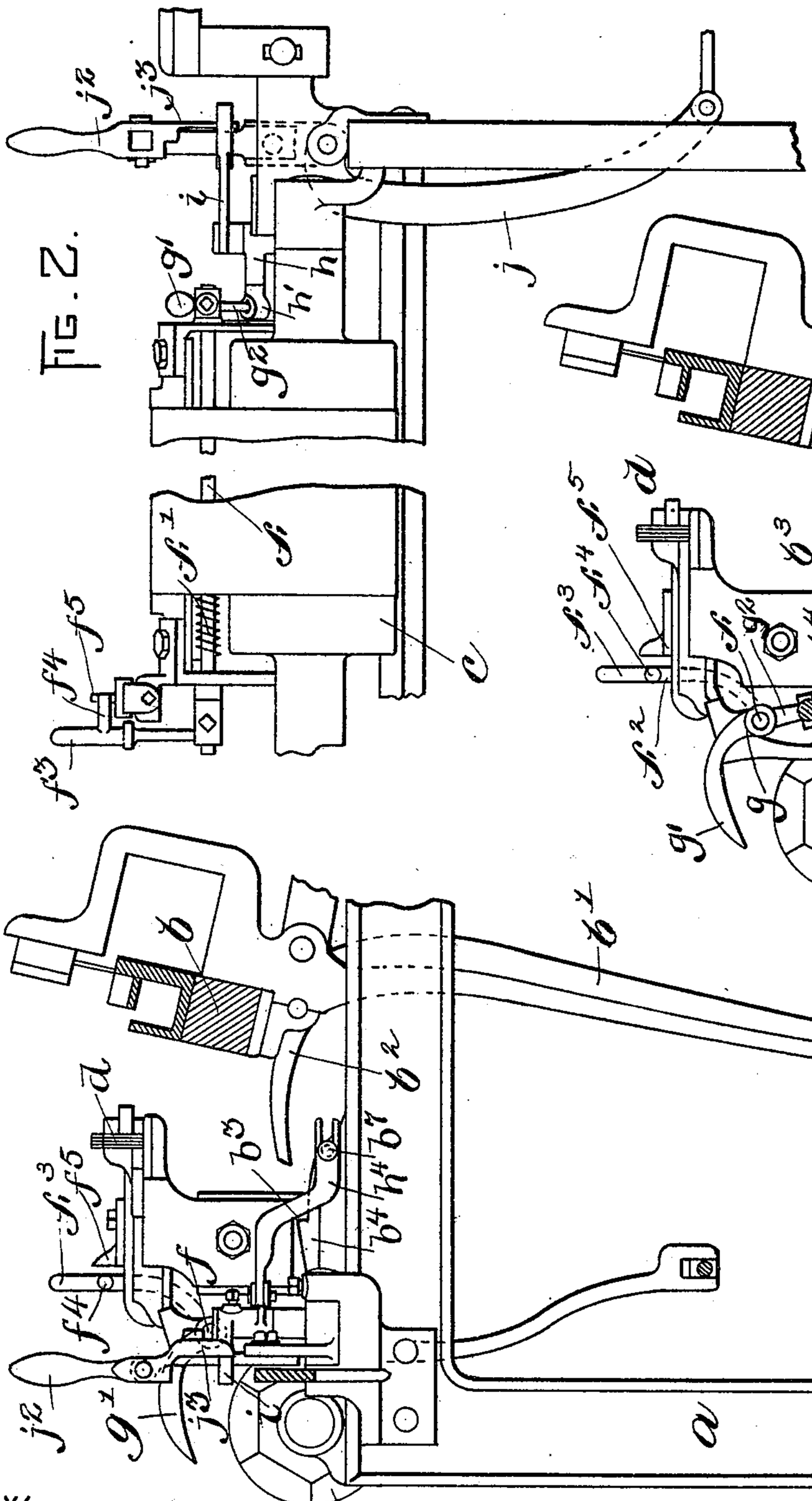

FIG. 2.

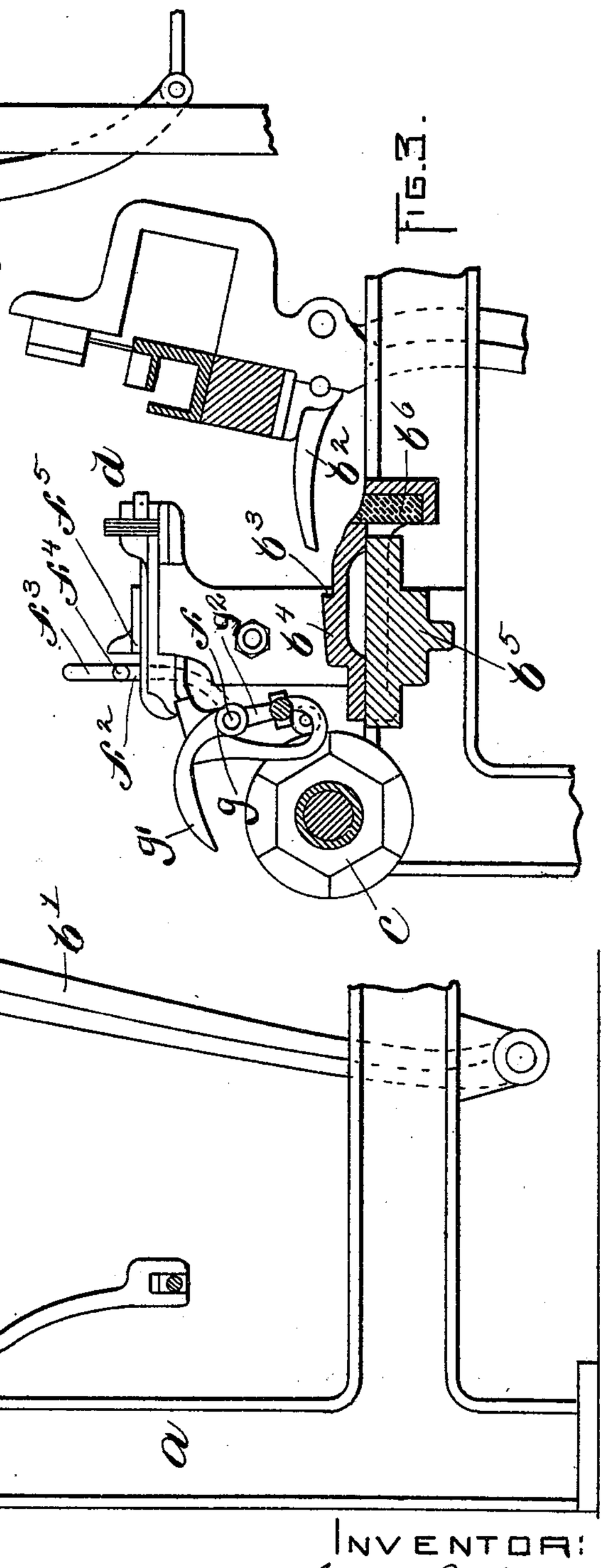

FIG. 3.

FIG. 1.

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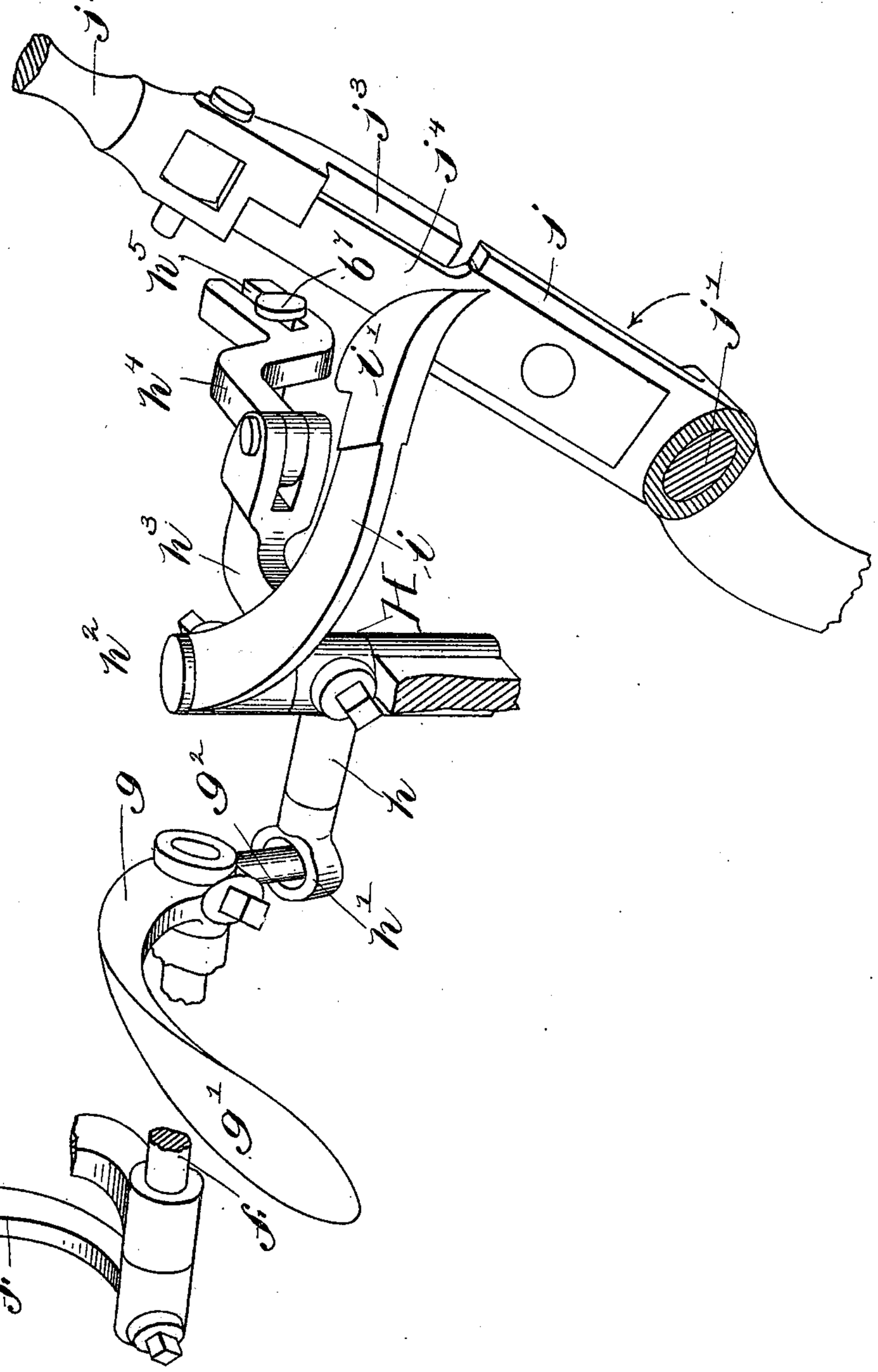
FIG. 4.



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UNITED STATES PATENT OFFICE.

GEORGE POOLE, OF THOMPSONVILLE, CONNECTICUT.

STOP-MOTION MECHANISM FOR LOOMS.

SPECIFICATION forming part of Letters Patent No. 637,412, dated November 21, 1899.

Application filed October 3, 1898. Serial No. 692,478. (No model.)

To all whom it may concern:

Be it known that I, GEORGE POOLE, of Thompsonville, in the township of Enfield, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Stop-Motion Mechanism for Looms, of which the following is a specification.

This invention has relation generally to looms for weaving plush and other similar "pile fabrics," and more particularly to the stopping mechanisms therefor, having for its object to provide certain improvements therein whereby the loom may be stopped manually or automatically to meet certain conditions and requirements.

The invention consists in a loom possessing certain features of construction and relative arrangement of parts, all as fully illustrated upon the drawings, now to be described in detail, and finally pointed out in the claims hereunto appended.

Reference is to be had to the accompanying drawings, and to the letters marked thereon, forming a part of this specification, the same letters designating the same parts or features, as the case may be, wherever they occur.

Of the drawings, Figure 1 represents in side elevation, partially in section, a portion of a loom embodying my invention. Fig. 2 represents a front elevation of the same, parts being broken away. Fig. 3 represents a section taken through the slide or bunter. Fig. 4 represents a perspective view of the connections between the various stopping mechanisms.

Referring to the said drawings, the standard a, the lay b, the swords b', the take-up c, and the magazine d are all of the ordinary construction. The lay carries the usual dagger b^2, which in case of a mispick is allowed to drop to engage a shoulder b^3 on a slide or bunter b^4 on the support b^5. The rear end of the bunter bears against a block b^6 of rubber, which cushions it to prevent jarring of the loom.

Extending across the front of the loom is a rock-shaft f, encircled by a spring f', which normally holds it yieldingly against movement. Secured to the end of this shaft farthest from the magazine is an upright arm f^2, terminating in a handle f^3 and provided with a lug f^4 to receive the thrust of the filling stop-slide f^5. I have not shown the filling stop-motion, which comprises a fork and its coacting parts, as they are familiar to those skilled in the art to which this invention relates. On its other end the shaft is provided with a two-armed lever g, one of its arms g' projecting forwardly, as shown in Fig. 3, and terminating in a handle, and the other shorter arm g^2 being cylindrical and projecting downwardly into an eye h', swiveled in the end of one arm of a two-armed lever H, secured upon a vertical rock-shaft h^2. The arm h of said lever is arranged perpendicularly to said arm g^2 and carries said eye, while the other, h^3, is pivoted to a connecting-rod h^4, having its free end slotted, as at h^5, to receive a stud b^7, projecting laterally from the bunter or slide b^4. There is a head on the stud b^7, as shown in Fig. 4, to prevent its being disengaged from the slotted end of the connecting-rod h^4. By this arrangement it will be seen that the rocking of the shaft f or the actuation of the bunter b^4 will cause the vertical shaft h^2 to rock also. Secured to said shaft h^2 is an arm or latch i, the hook or stop i' of which is adapted to engage the shipper-lever j, which is fulcrumed at j'. This lever is provided with a pivoted handle j^2, having a finger j^3, adapted to move past the edge of the reduced portion j^4 thereof, the parts being so arranged that when the shipper-lever is swung in the direction of the arrow in Fig. 4 to start the loom the hook i' engages the edge of the said reduced portion j^4. In order, therefore, to disengage the lever from the hook, the handle j^2 is pushed rearwardly and its finger j^3 engages the end of said hook and thrusts it out of engagement with the said lever, the usual spring forcing the shipper-lever into position to disengage the clutch members on the power-shaft and stop the loom. The loom may also be stopped manually by means of the handles f^3 or g', one at each side of the loom, so as to be quickly grasped by the operative in whatever position he may be with relation to the loom. The said handles f^3 g' are drawn forward to rock the shipper-shaft f, which in turn swings the stud g^2 rearwardly, thereby rocking the shaft h^2 and throwing the hook out of engagement with the shipper-lever. The warp stop-motion (not shown) may be likewise con-

nected with the devices previously described, whereby it will be seen that in case of a mis-pick, the failure or breakage of a filling-thread, or the breakage of a warp-thread the loom will be automatically stopped.

Having thus explained the nature of the invention and described a way of constructing and using the same, though without attempting to set forth all of the forms in which it may be made or all of the modes of its use, I declare that what is claimed is—

1. In a loom, the combination of a latch, and a shipper-lever adapted to be engaged thereby, said lever being provided with movable means additional to the part which engages said hook or latch for disengaging the hook therefrom.

2. In a loom, the combination with a movable hook or latch, of a shipper-lever adapted to be engaged thereby, said lever being provided with movable means for forcing said hook or latch out of engagement with said lever.

3. In a loom, the combination with a hook or latch, of a shipper-lever adapted to be engaged thereby, and a handle pivoted on said lever and having a finger to disengage said hook or latch therefrom.

4. In a loom, the combination with a hook or latch, a shipper-lever adapted to be engaged by said hook or latch, a stop-motion adapted to disengage said latch from said lever, and a handle pivoted on said lever for disengaging said latch from said lever.

In testimony whereof I have affixed my signature in presence of two witnesses.

GEORGE POOLE.

Witnesses:
C. C. STECHER,
A. D. HARRISON.