

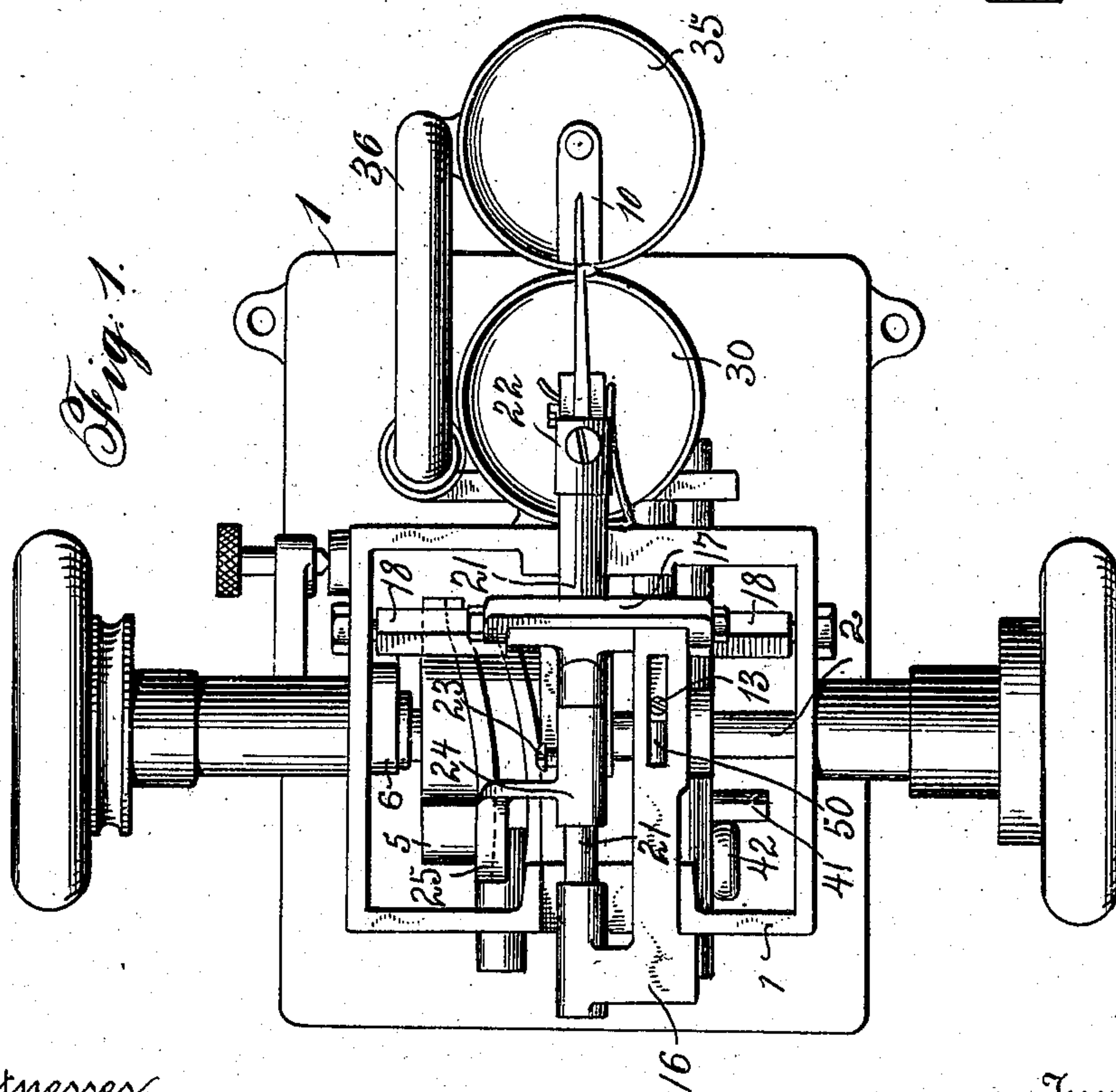
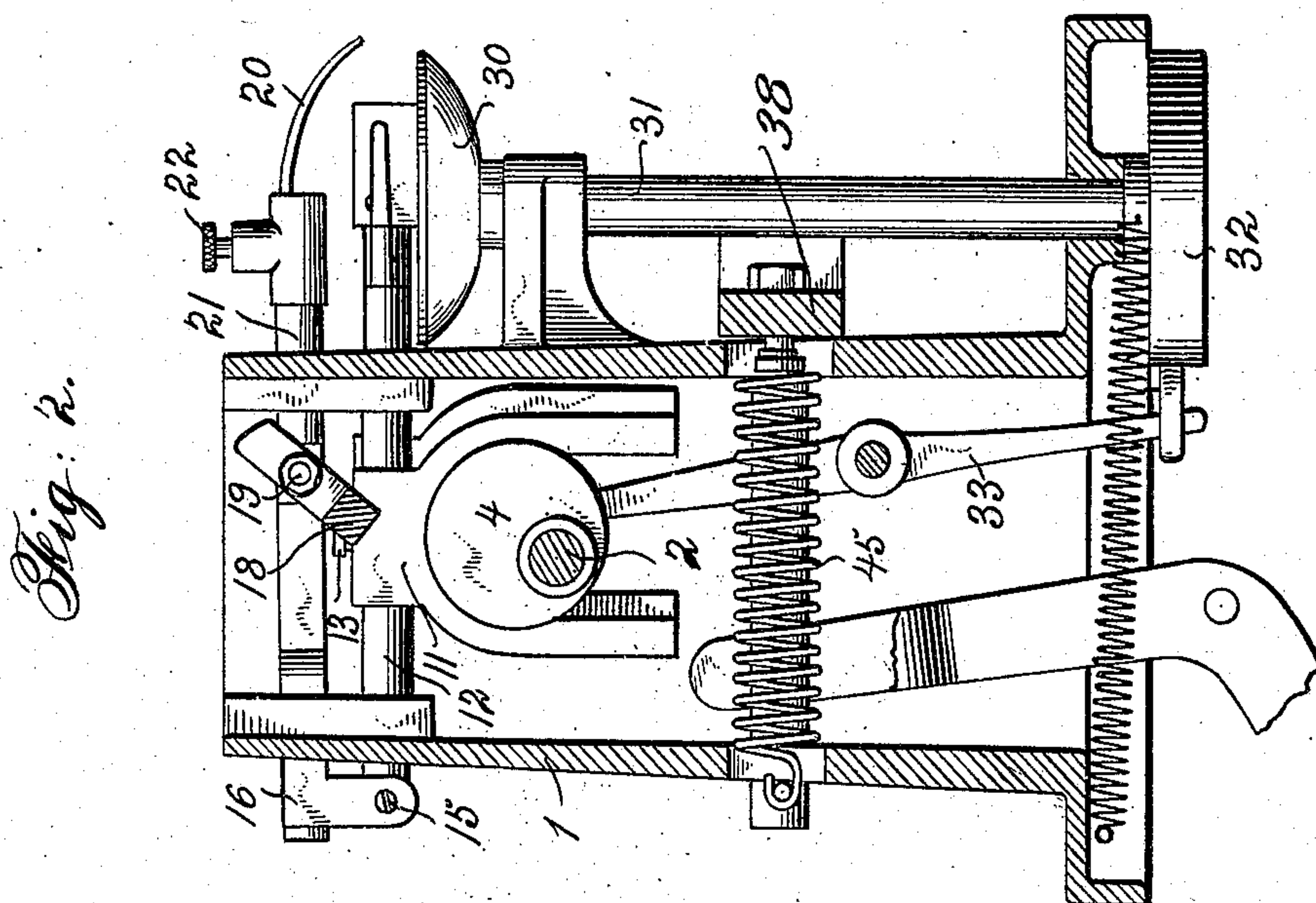
No. 847,940.

PATENTED MAR. 19, 1907.

A. J. HARTWICH.
SEWING MACHINE.

APPLICATION FILED DEC. 1, 1905.

3 SHEETS—SHEET 1.



Witnesses
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W. H. Erichton - Clarke

By

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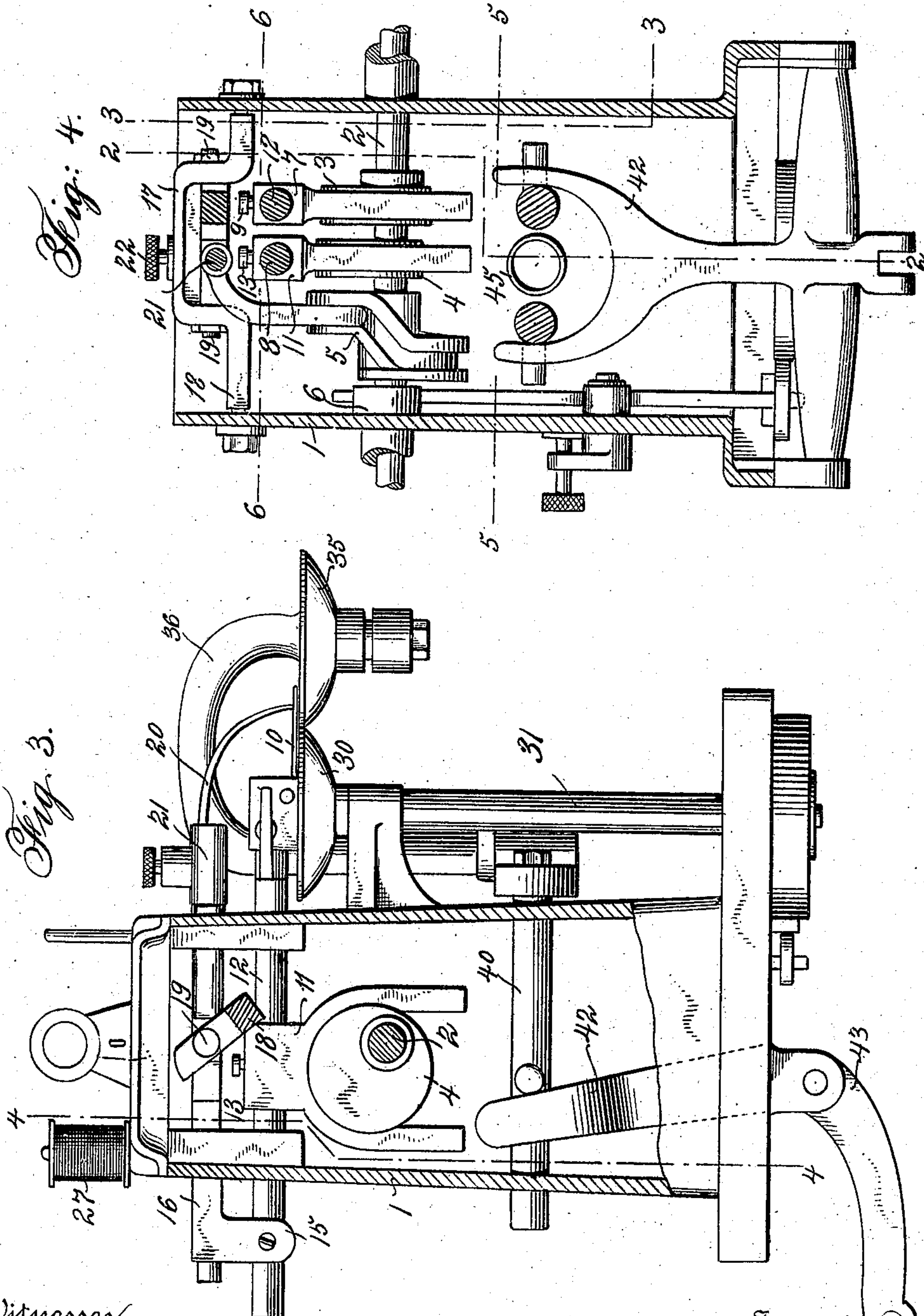
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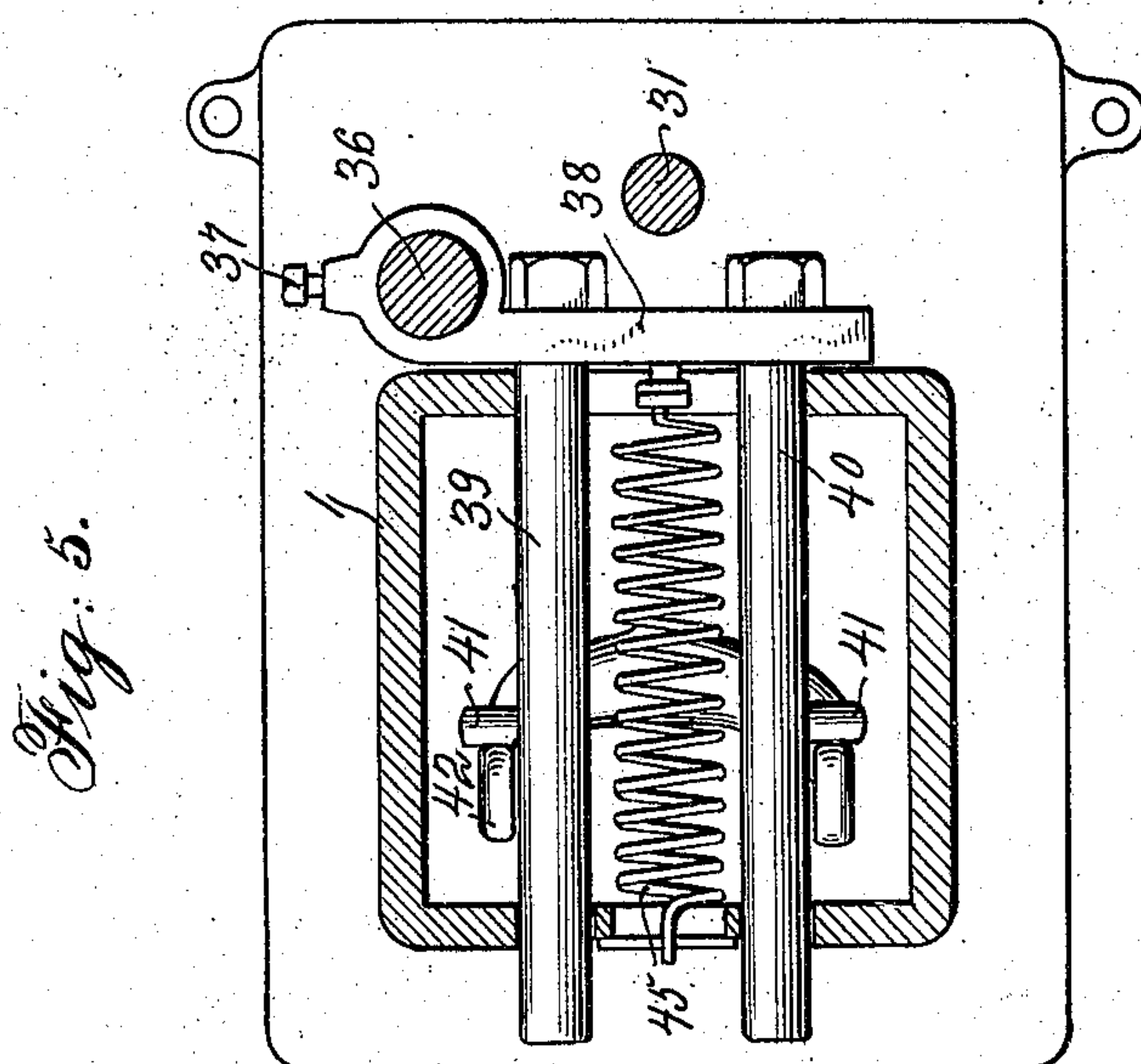
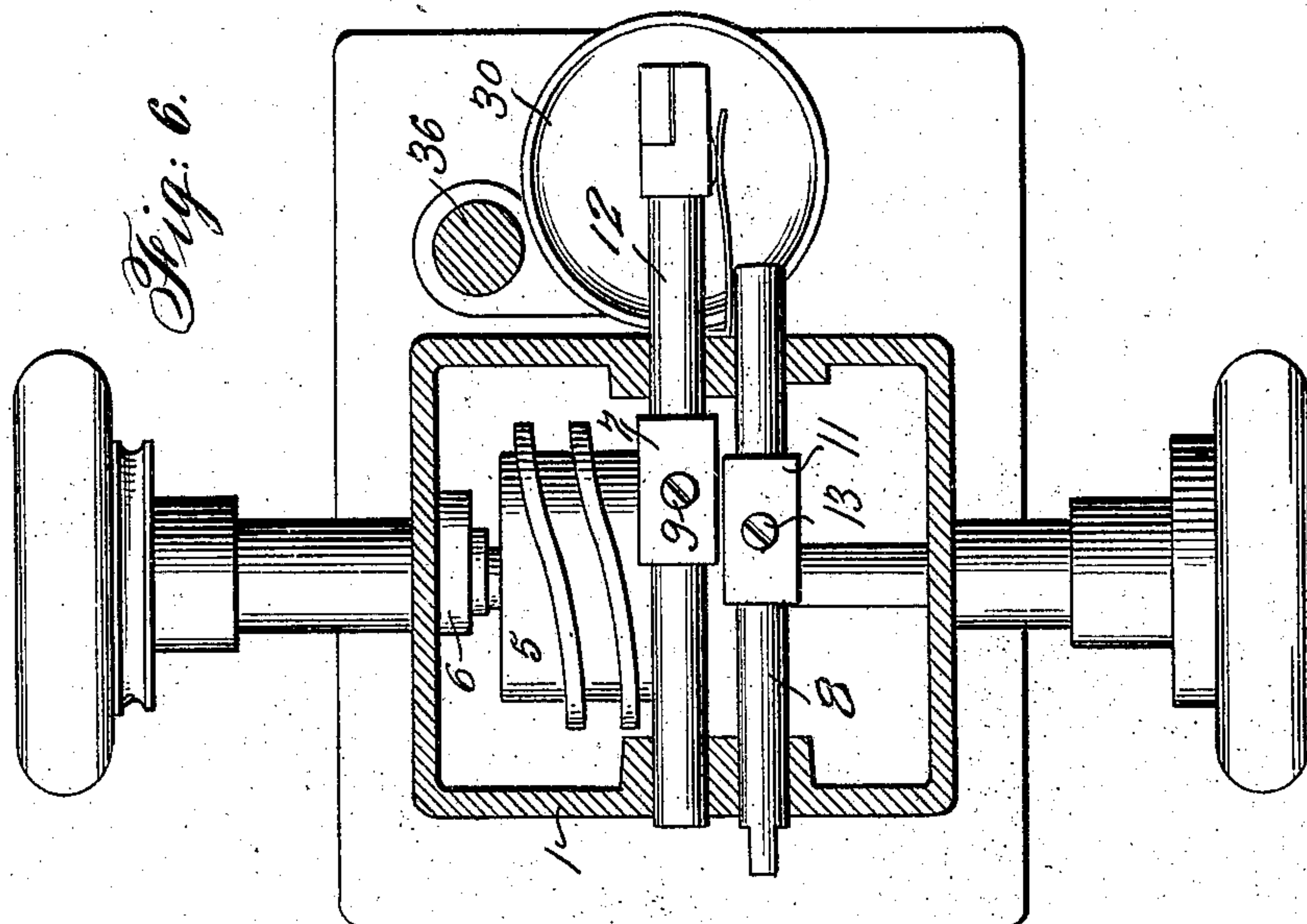
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3 SHEETS—SHEET 3.



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UNITED STATES PATENT OFFICE.

ALBERT J. HARTWICH, OF NEW YORK, N. Y., ASSIGNOR OF ONE-HALF TO
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SEWING-MACHINE.

No. 847,940.

Specification of Letters Patent.

Patented March 19, 1907.

Application filed December 1, 1905. Serial No. 289,865.

To all whom it may concern:

Be it known that I, ALBERT J. HARTWICH, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented new and useful Improvements in Sewing-Machines, of which the following is a specification.

This invention relates generally to sewing-machines, and particularly to the class of such devices technically known as "over-seaming-machines."

The principal object of the invention is to improve the construction and operation of such machines, first, by providing improved means for imparting the necessary up-and-down movement to the looper-bar, and, second, by providing improved means for separating the feeding-disks.

With the foregoing and other objects in view, which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed as a practical embodiment thereof.

In the accompanying drawing, forming part of this specification, Figure 1 is a plan view of the improved sewing-machine. Fig. 2 is a section taken on the line 2 2 of Fig. 4. Fig. 3 is a section taken on the line 3 3 of Fig. 4. Fig. 4 is a section taken on the line 4 4 of Fig. 3 looking toward the right, it being understood that the sections taken on Fig. 4 are looking toward the left. Fig. 5 is a horizontal section taken on the line 5 5 of Fig. 4. Fig. 6 is a section taken on the line 6 6 of Fig. 4.

Like reference-numerals indicate corresponding parts in the different figures of the drawing.

It may be premised that the machine of the present invention has been designed as an improvement upon the ordinary form of overseaming-machine, such as shown, for example, in United States Patent No. 620,134, granted to S. G. Howe on February 28, 1899. Certain parts of the machine illustrated in the drawing, therefore, are old and well known in the art, for which reason they will require only a general description.

The reference-numeral 1 indicates the machine-frame, which may be of any suitable form and construction. Journaled in the frame 1 is the main operating-shaft 2, on which is mounted the needle-bar-operating

cam 3, the cam 4 for reciprocating the looper-arm, the cam 5 for partially rocking the looper-arm, and the cam 6 for operating the feeding-disk. These parts are old and well known in the art.

Referring particularly to Figs. 4 and 6, the reference-numeral 7 indicates a cam-saddle, which embraces the cam 3 and is adjustably mounted upon the needle-bar 8 by means of a screw 9. The needle-bar 8 may be of any desired construction, adapted to receive the needle 10. The reference-numeral 11 indicates a cam-saddle, which embraces the cam 4 and is adjustably mounted upon the looper-arm-operating bar 12 by means of an adjusting-screw 13. It will be understood that the needle-bar 8 and the looper-arm-operating bar 12 are slidably mounted in the frame 1. Pivotaly connected with the bar 12, as indicated at 15, is the looper-arm frame 16. Intermediate its ends the looper-arm frame 16 is pivotally connected with the intermediate bend or crank portion 17 of a rock-shaft 18. This shaft extends transversely or at right angles to the looper-arm frame and is journaled at its ends in the sides of the main frame. The ends of the shaft are disposed below the plane of the looper-arm frame, while the bend or crank portion 17 incloses and projects above and over the looper-arm frame, which latter thus fits therein, as clearly illustrated in Fig. 4, the upright portions of the bend or crank being pivotally connected to the sides of the looper-arm frame by suitable pivotal connections, as indicated at 19. It will be understood that as the bar 12 is moved backward and forward by the cam 4 the crank-shaft 18 is rocked backward and forward by the looper-arm frame 16 and serves to impart to the forward end of said frame an up-and-down motion, which combines with the backward-and-forward movement of said frame 16, so as to give the proper motion to the looper-arm 20, which is mounted removably in the looper-arm shaft 21 by means of the screw 22. Adjustably mounted upon the looper-arm shaft 21, by means of a screw 23, (shown in Fig. 1,) is a sleeve 24, having an arm 25, which engages the groove of the cam 5 and serves to impart a partial rotation to the looper-arm shaft 21.

From the foregoing description it will be apparent that the mechanism described serves to impart to the looper-arm a com-

bined backward-and-forward, upward-and-downward, and partial rotating movement, so as to catch the thread carried by the needle 10 and form it into a loop in the manner well known in overseaming-machines.

Any preferred and well-known mechanism may be employed for conducting thread from the spool 27 to the needle 10, and as no claim is made in the present application to any specific mechanism for accomplishing this result a particular description thereof is deemed to be unnecessary.

The reference-numeral 30 indicates a feeding-disk, mounted upon the upper end of a shaft 31, having any suitable old and well-known ratchet mechanism 32 at the lower end thereof. The ratchet mechanism 32 is operated by means of a lever-arm 33, which is engaged by the cam 6 upon the shaft 2, so as to rotate the disk 30 in a step-by-step manner. This mechanism for operating the feeding-disk 30 is old and well known in the art.

The reference-numeral 35 indicates the idle feeding-disk, which is rotatively mounted upon the lower end of the arm 36. The arm 36 has secured to the lower end thereof, by means of a screw 37, as shown in Fig. 5, a plate 38, to which is connected a pair of parallel rods 39 40, slidably mounted in the frame 1. Each of the rods 39 and 40 is provided with a pin 41, which is engaged by a forked lever 42. (Shown in Figs. 3 and 4.) The lever 42 is provided with an arm 43. (Shown in Fig. 3.) Any suitable foot-lever can be connected with the arm 43 in such manner that when said arm 43 is forced upward the lever 42 will be rocked and will push the parallel rods 39 and 40 forward, so as to separate the disk 35 from the disk 30 when it is desired to insert or remove the fabric to be operated upon. When the foot-pressure upon the lever 42 is removed, the feeding-disk 35 is drawn toward the disk 30 by means of a coil-spring 45, mounted between the parallel rods 39 and 40, said spring 45 being connected at one end with the plate 38 and at the opposite end with the machine-frame 1.

In assembling the different parts of the machine it is necessary to regulate and adjust the movement of the needle-bar 8, and the looper-arm-operating bar 12. This adjustment is secured by loosening the screws 9 and 13 and moving the cam-saddles 7 and

11 to the proper position upon the bars 8 and 12. In order to permit free access to the screw 13, so as to permit proper adjustment of the cam-saddle 11 without removing the looper-arm frame 16, said frame 16, as shown in Fig. 1, is formed with a slot 50, through which a screw-driver may be passed to loosen the screw 13.

The improved overseaming-machine of this invention is strong, simple, durable, and inexpensive in construction as well as thoroughly efficient in operation.

Having thus described the invention, what is claimed as new is—

1. In a sewing-machine, the combination of a main frame, a main shaft, a sliding operating-bar, a reciprocating looper-arm frame pivotally mounted to vibrate upon the bar, means for reciprocating the bar from the main shaft, a looper-arm shaft carried by the looper-arm frame, means actuated by the main shaft for oscillating said looper-arm shaft, and a transverse rock-shaft having its ends arranged below the plane of the looper-arm frame and journaled on the main frame and provided with an intermediate bend or crank projecting upwardly above and over the looper-arm frame, whereby said frame extends through the crank, the side portions of the bend or crank being pivotally connected to the sides of the looper-arm frame, whereby the said looper-arm frame as it reciprocates will directly rock said shaft and be vibrated thereby on its pivotal connection.

2. In a sewing-machine, the combination of a main frame, a pair of feeding-disks, one movable toward and from the other, a rod carrying said movable disk and extending below the same, a pair of sliding rods carried by the frame and coupled to the first-named rod, said sliding rods having projecting pins, a pivoted yoke engaging said pins and adapted to be operated to communicate forward movement to the rods, and a retracting-spring disposed between the pair of rods and operatively connected at one end therewith and at the other end to the main frame.

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

ALBERT J. HARTWICH.

Witnesses:

LEON GREENBERG,
W. H. CRICHTON-CLARKE.