No. 618,892. Patented Feb. 7, 1899.

R. MIEHLE.

PAPER JOGGER.

(Application filed Dec. 15, 1897.)

(No Model.) 2 Sheets—Sheet 1.

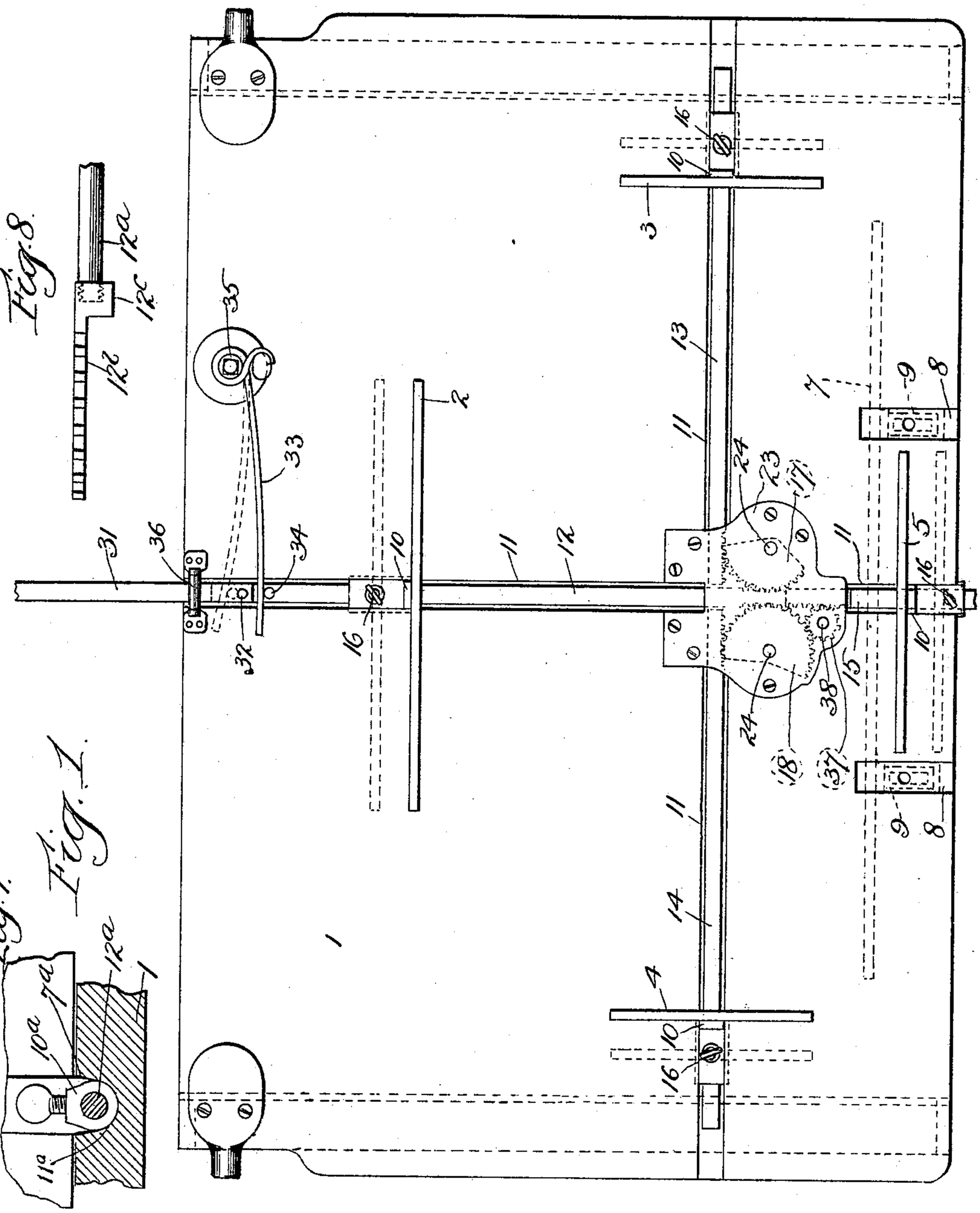

Fig. 8.

Fig. 1.

Fig. 7.

Witnesses
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(No Model.) 2 Sheets—Sheet 2.

Fig. 2.

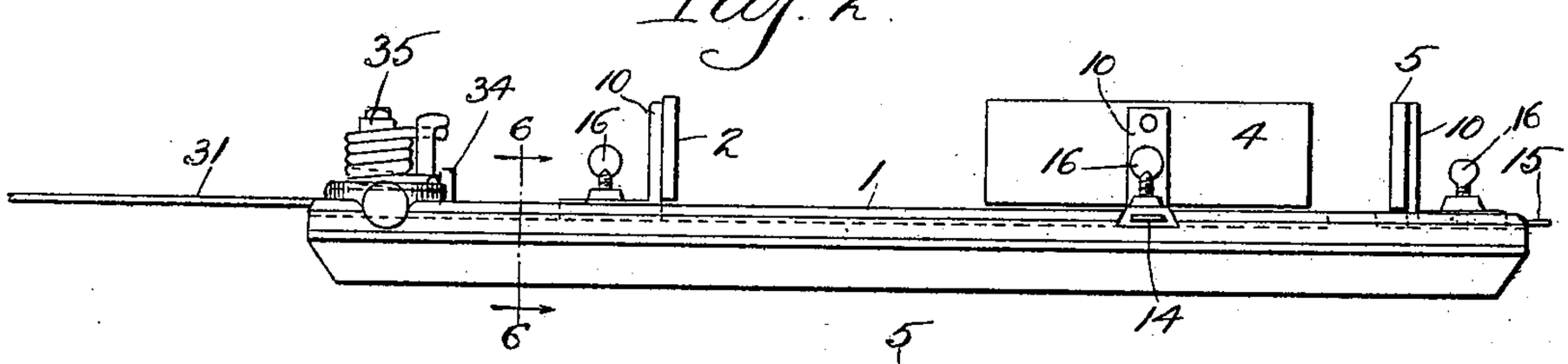


Fig. 3.

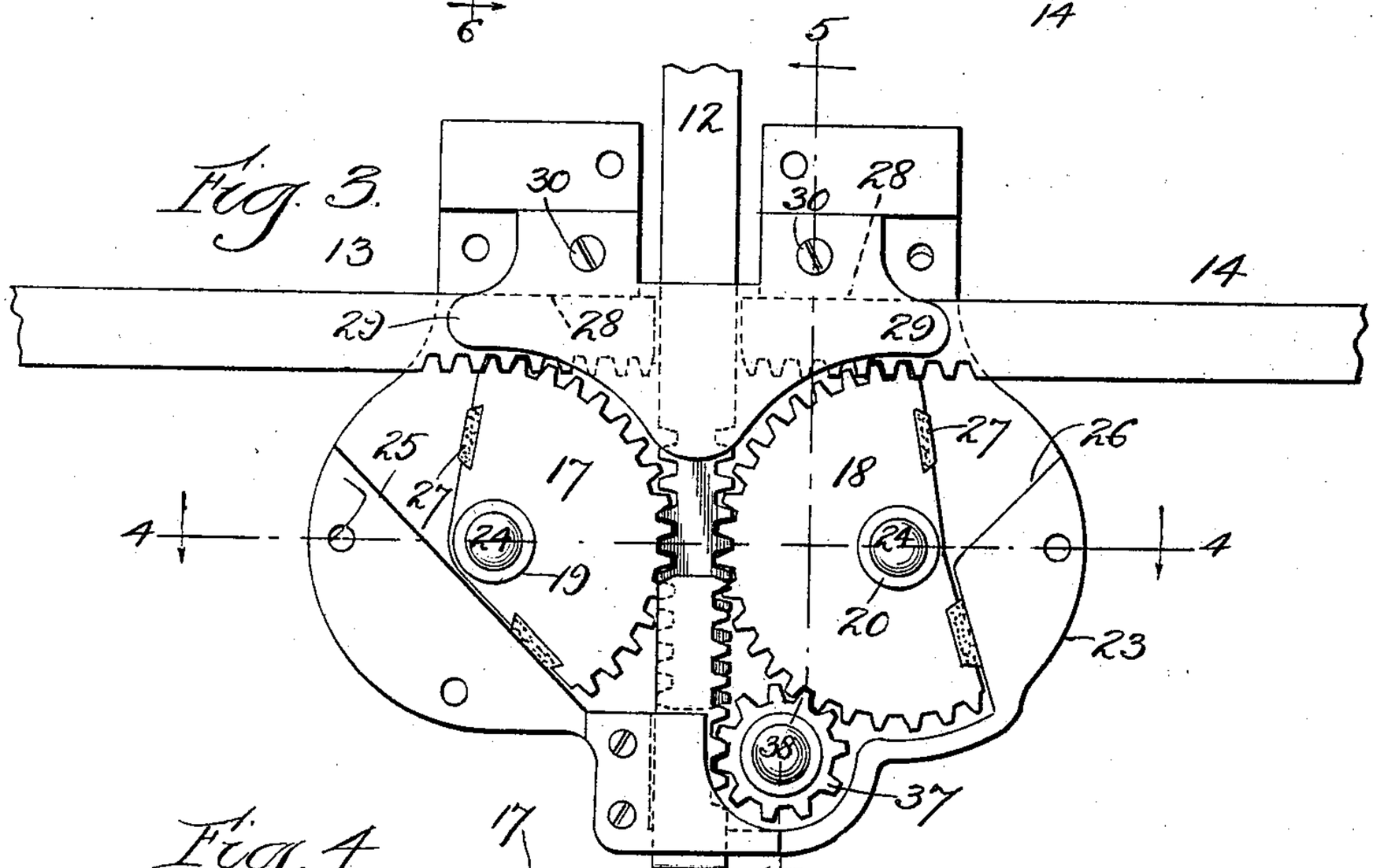


Fig. 4.

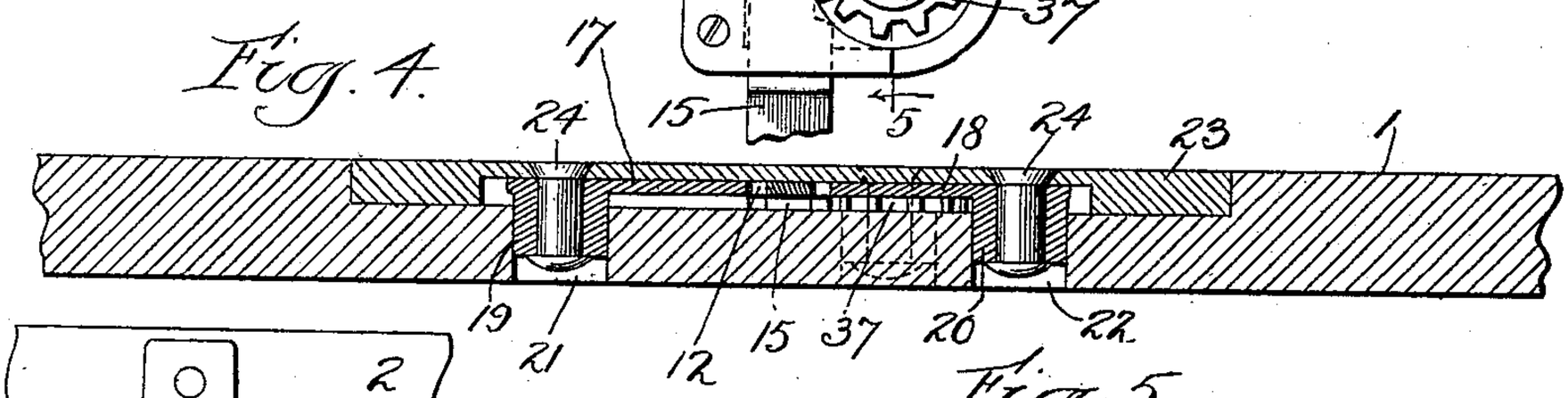


Fig. 5.

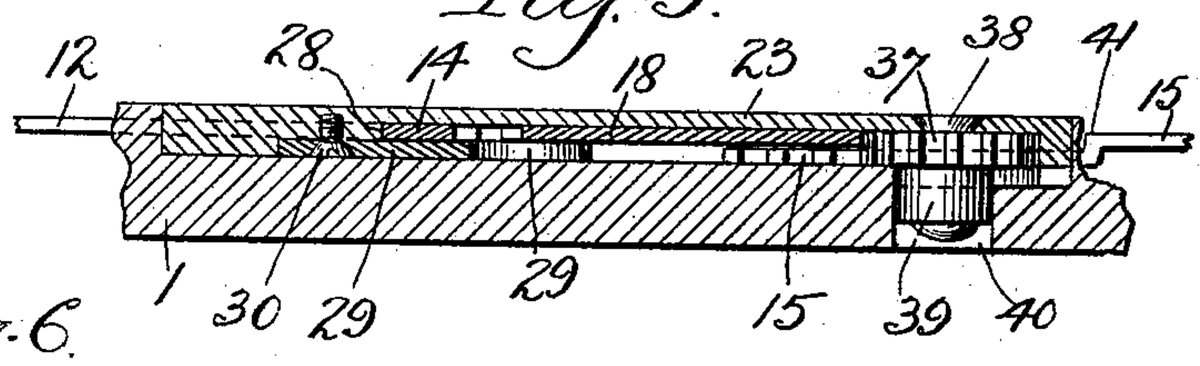
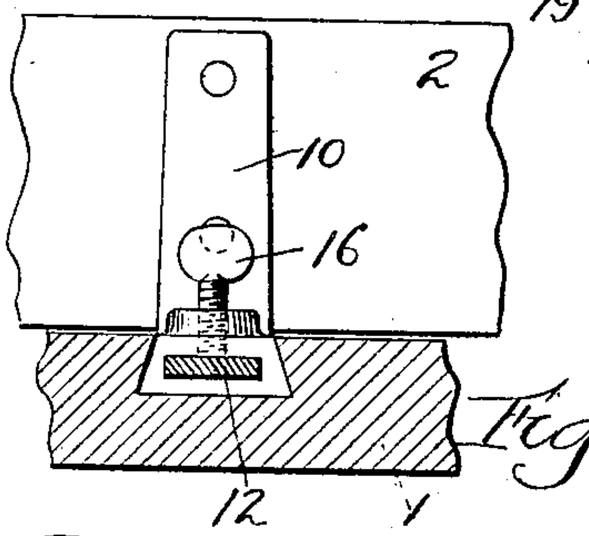


Fig. 6.



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ROBERT MIEHLE, OF CHICAGO, ILLINOIS.

PAPER-JOGGER.

SPECIFICATION forming part of Letters Patent No. 618,892, dated February 7, 1899.

Application filed December 15, 1897. Serial No. 661,951. (No model.)

To all whom it may concern:

Be it known that I, ROBERT MIEHLE, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Paper-Joggers, of which the following is a full, clear, and exact specification.

My invention relates to devices commonly known as "joggers" for truing up the pile of paper as the sheets are delivered on the piling-table from a press or other source; and my invention has for its primary object to provide an improved, simple, and compact form of mechanism for operating the jogging-blades, which may be embedded in a piling-table of minimum thickness and flush with its surface.

In carrying out my invention I employ one or more revolving or oscillating segments or toothed members which have operative connection with the arms of the jogging-blades and which derive their oscillatory movement from the press or any other suitable source of power. The segment or segments being arranged in the same horizontal plane with the arms, the entire mechanism occupies but little vertical depth, and beyond being simple and effective may be embedded flush with the table of minimum thickness.

With these ends in view my invention consists in certain features of novelty described and claimed herein and shown in the accompanying drawings, by which the said objects and certain other objects hereinafter appearing are attained.

In the said drawings, Figure 1 is a plan view of a piling-table provided with my improved jogger. Fig. 2 is an end elevation thereof. Fig. 3 is an enlarged bottom plan of the mechanism for operating the jogging-blades. Fig. 4 is a transverse sectional view taken on the line 4 4, Fig. 3, showing the mechanism of Fig. 3 in position on the table. Fig. 5 is a transverse sectional view taken on the line 5 5, Fig. 3. Fig. 6 is a transverse sectional view taken on the line 6 6, Fig. 2, but on an enlarged scale. Fig. 7 is a modified form of slide for the arms, and Fig. 8 is a side view of a modified form of arm.

1 represents the piling-table, which may be of any suitable construction and upon which are mounted the jogging-blades 2 3 4 5, any suitable number of the jogging-blades being employed—only two, if desired. In the drawings I have shown four of these; but, if desired, one of them—the blade 5, for instance—may be entirely removed and a stationary board against which to pile the sheets may be employed in its stead, or, if desired, the stationary board may be placed in front of the blade 5, as shown at 7 in dotted lines in Fig. 1, thus allowing the blade 5 to reciprocate with the others, but without touching the pile of paper. To this end the edge of the table may be provided with the usual dovetailed grooves 8 for the reception of the sliding brackets 9, (shown in dotted lines,) by which the fixed board 7 is supported and adjusted to the desired position. When it is desired to jog the pile on four sides, however, the brackets 9 and board 7 may be entirely removed, so as not to interfere with the operation of the blade 5.

Each of the jogging-blades may be supported in any suitable manner, so as to be capable of sliding back and forth. I have shown each mounted upon a slide 10, inserted in one of the dovetailed radiating grooves or channels 11 and having an aperture for the reception of the outer end of one of the arms 12 13 14 15, which operate the jogging-blades, respectively, and which arms rest in the grooves 11 below the surface of the table, so as not to interfere with the sheets thereon. Each of the slides 10 is provided with a set-screw 16, whereby it may be secured at any desired point to the arm.

17 18 are the segments before referred to, having hubs 19 20 entering the counterbores 21 22 in the table 1 and being pivoted to a surface plate 23 by means of pivot-pins 24. Each of these segments is limited in its oscillatory movement by a stop 25 26, formed on the bottom of the plate 23, the edges of the segments, if desired, being supplied with cushions 27 for deadening the noise and preventing shock. The operative connection between the arms 12 13 14 is preferably effected by means of a series of teeth cut on the periphery of each of the segments 17 18 and a complementary series of teeth cut on the opposed edge of each of the said arms, the arms 13 14 being inserted under the plate 23, between

shoulders 28, formed thereon, and the toothed edges of the segments, thus holding the inner ends of the arms 13 14 against lateral movement, while their outer ends are held and guided by the slides 10. Their inner ends may also be held against downward movement by an underlying plate 29, removably secured by screws 30 to the bottom of the plate 23.

The inner end of the arm 12 is provided with a series of teeth on each side, and it extends in between the inner ends of the arms 13 14, substantially at right angles thereto, and engages with both of the segments 17 18, both segments and the three arms 12 13 14 being preferably arranged in the same horizontal plane. By means of this construction it will be seen that should either of the arms 12 13 14 be reciprocated a like reciprocating movement will be imparted to the other two, all of the arms moving inward and outward together. A convenient manner of imparting this movement to the arms is that which is more clearly shown in Figs. 1 and 2 of the drawings, wherein I have illustrated a strap 31 or other connection having one end attached to the printing-press or to any other moving member of the machinery and its other end attached by rivet 32 to the outer end of one of the arms, preferably the arm 12. The arm is pulled outwardly by the strap 31, and it is forced inwardly by a spring 33, bearing against a lug 34 and being adjustably secured to a post or support 35 on the piling-table. The strap, if desired, may be passed under a pulley or roller 36, so that it may be carried upwardly from the table without lifting the arm 12 out of place.

In order that the fourth arm 15 may go through a like reciprocating movement and operate in unison with the other arms, I make one of the segments (the segment 18) of sufficient circumferential extent to engage with and operate a pinion 37, the latter being journaled upon pin 38, depending from the plate 23 and having its hub or bearing 39 inserted in a counterbore 40, and this pinion engages with and reciprocates the inner toothed end of the arm 15, as clearly shown in Fig. 3. The inner end of the arm 15, however, is bent downwardly or offset, as shown at 41, so as to underlie the inner end of the arm 12 and not interfere with the reciprocal movements of the latter, while at the same time engaging with the pinion 37.

In securing the mechanism to the piling-table the surface of the latter may be recessed for the reception of the surface plate 23, which is embedded in such recess and secured in any desired way, so as to be flush with the surface of the table, as clearly shown in Figs. 1, 4, and 5.

In Figs. 7 and 8 I have shown a two-part jogger-blade arm instead of the one-piece flat arm, like 12 13 14. The outer end 12^a of this arm is round, while the separate rack or toothed portion 12^b is flat and has an offset or bend 12^c, into which the inner end of portion 12^a is screwed or otherwise secured. The grooves in the table instead of being dovetailed are round, as shown at 11^a, Fig. 7, and the slides 10^a of the jogger-blades are also rounded and fit and slide therein, so as to support and guide the outer ends of the jogger-blade arms.

It is of course apparent that while I have shown and described four blades my invention might nevertheless be employed for reciprocating the arms of a jogger comprising but two arms.

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

1. A paper-jogger having in combination a piling-table, a pair of oscillatory segments mounted thereon, a pair of jogger-arms each provided with a jogger-blade, each arm having operative connection with one of said segments, and means for oscillating said segments in opposite directions, substantially as set forth.

2. A paper-jogger having in combination a piling-table, a pair of oscillatory segments mounted thereon, a pair of jogger-arms each provided with a jogger-blade and each arm having operative connection with one of said segments, a third arm having operative connection with both of said segments, and means for effecting the oscillation of said segments, substantially as set forth.

3. A paper-jogger having in combination a piling-table, a pair of oscillatory segments mounted thereon, a pair of jogger-arms each provided with a jogger-blade, each arm having operative connection with one of said segments, a third arm having operative connection with both of said segments and means for oscillating said segments through the intermediary of one of said arms, substantially as set forth.

4. A paper-jogger having in combination a piling-table, a pair of oscillatory segments mounted thereon, a pair of jogger-arms each provided with a jogger-blade, each arm having operative connection with one of said segments, a third arm having operative connection with both of said segments, a fourth arm having operative connection with one of said segments, and means for oscillating said segments, substantially as set forth.

5. A paper-jogger having in combination a piling-table, a pair of oscillatory segments mounted thereon, a pair of jogger-arms each provided with a jogger-blade, each arm having operative connection with one of said segments, a third arm having operative connection with both of said segments and means for oscillating said segments, said arms and segments being arranged in the same horizontal plane, substantially as set forth.

6. A paper-jogger having in combination a piling-table, a pair of oscillatory segments mounted thereon, a pair of jogger-arms each provided with a jogger-blade, each arm hav-

ing operative connection with one of said segments, a third arm having operative connection with both of said segments, a fourth arm having operative connection with one of said segments, and means for oscillating said segments, said arms and segments being arranged in the same horizontal plane and the said fourth arm having its inner end offset and lapped with one of the others so as to pass it, substantially as set forth.

7. A paper-jogger having in combination a piling-table, a pair of toothed segments, arms provided with jogger-blades and having teeth, each arm engaging with one of said segments and a third arm having teeth arranged between and engaging with both of said segments and means for reciprocating one of said arms, substantially as set forth.

8. A paper-jogger having in combination a piling-table, a pair of toothed segments, arms provided with jogger-blades and having teeth, each arm engaging with one of said segments, a pinion engaging with one of said segments, another arm having teeth engaging with said pinion and means for reciprocating one of said arms, substantially as set forth.

9. A paper-jogger having in combination a piling-table having grooves or channels, slides in said channels carrying jogger-blades, toothed arms operating said slides and being guided thereby at their outer ends, a toothed member having operative connection with and guiding the inner ends of said arms, means for oscillating said toothed member, and means for holding said arms in engagement with the latter, substantially as set forth.

10. A paper-jogger having in combination a piling-table, the plate 23 having the stops 25 26, the segments 17 18 pivoted to said plate and having the cushions 27 adapted to strike said stops 25 26, the jogger-arms having operative connection with said segments, and means for oscillating said segments, substantially as set forth.

11. A paper-jogger having in combination jogger-blade arms provided with teeth or racks, and overlapping each other, a toothed member engaging with the teeth of one of said arms and a pinion engaging with the teeth of the other of said arms and also meshing with said toothed member, substantially as set forth.

12. A paper-jogger having in combination cylindrical jogger-blade arms having separate toothed portions at their ends having the offset portions into which said cylindrical portions are secured, and toothed members engaging with said toothed portions for reciprocating said arms, substantially as set forth.

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