

No. 788,462.

PATENTED APR. 25, 1905.

J. FRYDMANE & L. CHAMBON.

ROCKING PRINTING TABLE FOR CASH REGISTERING APPARATUS.

APPLICATION FILED MAR. 10, 1904.

6 SHEETS—SHEET 1.

Fig. 1

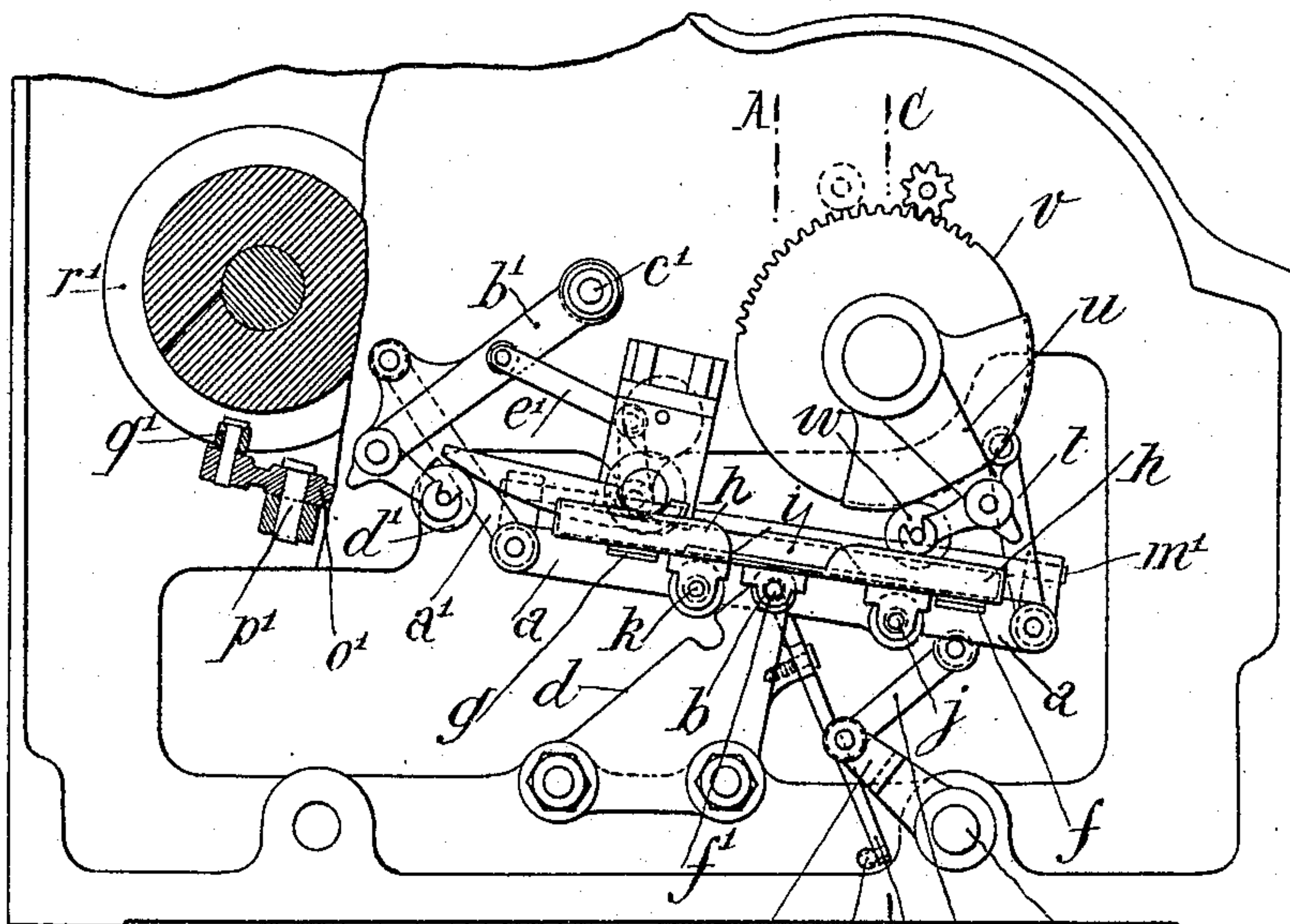
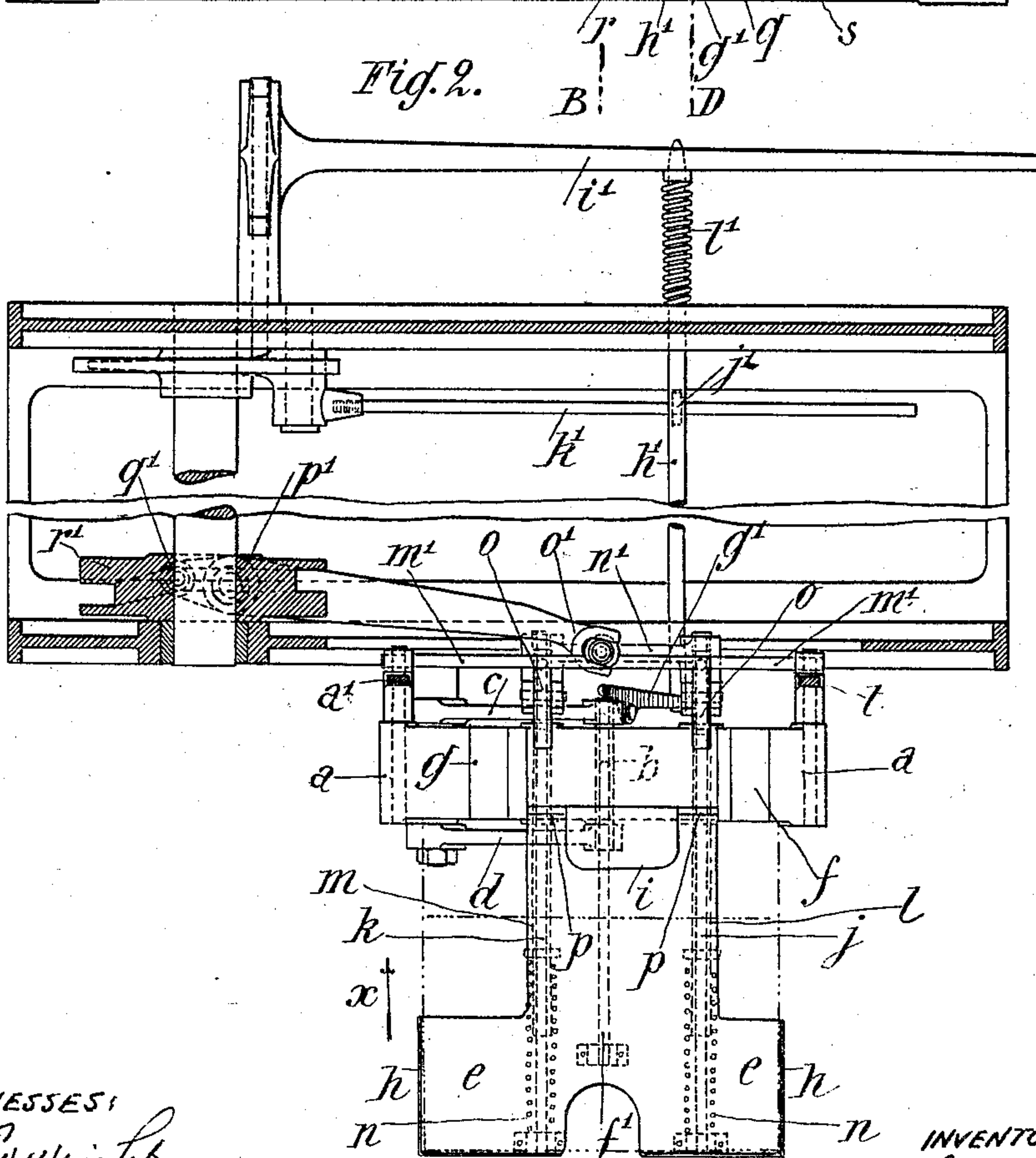


Fig. 2.



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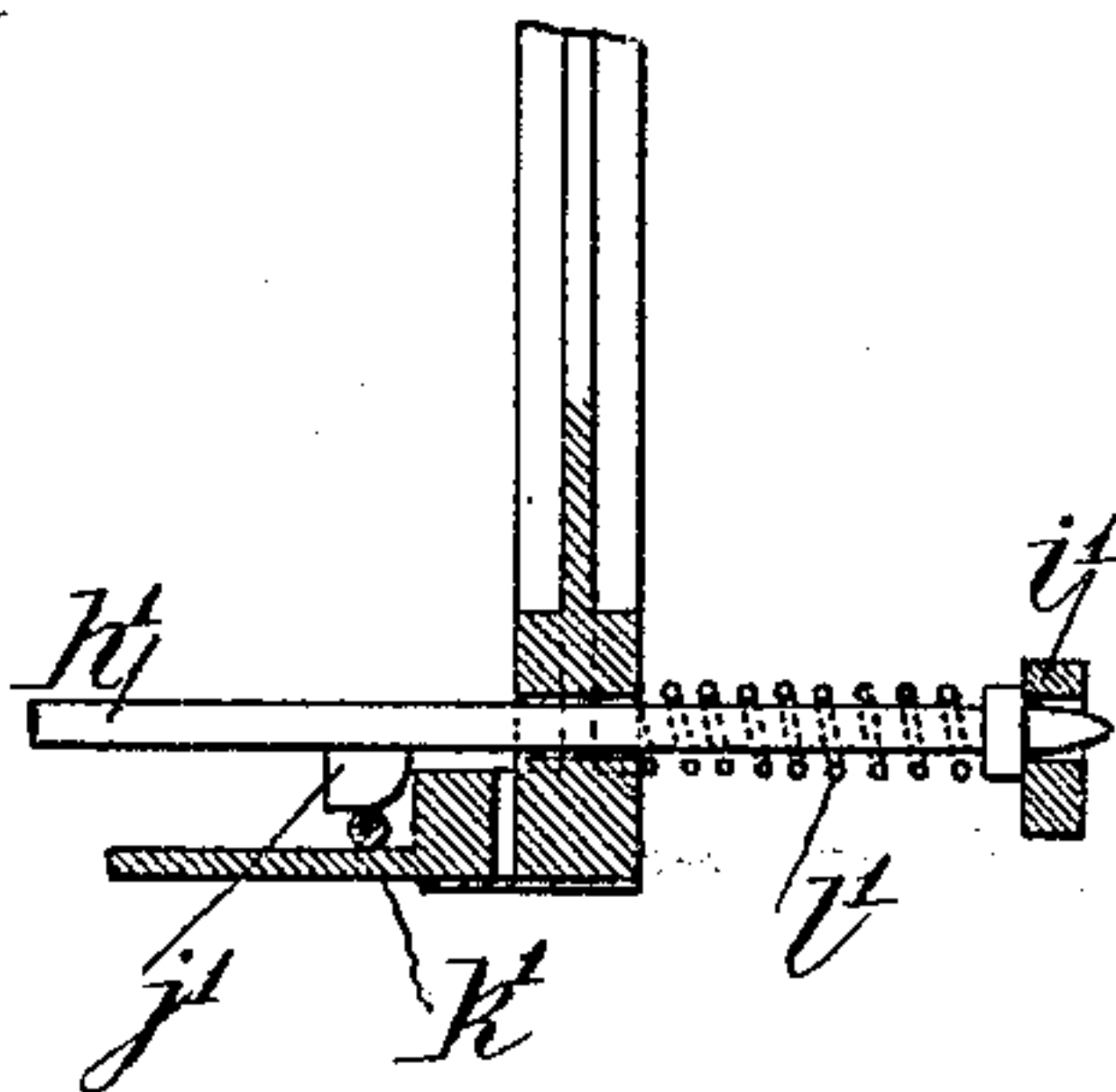
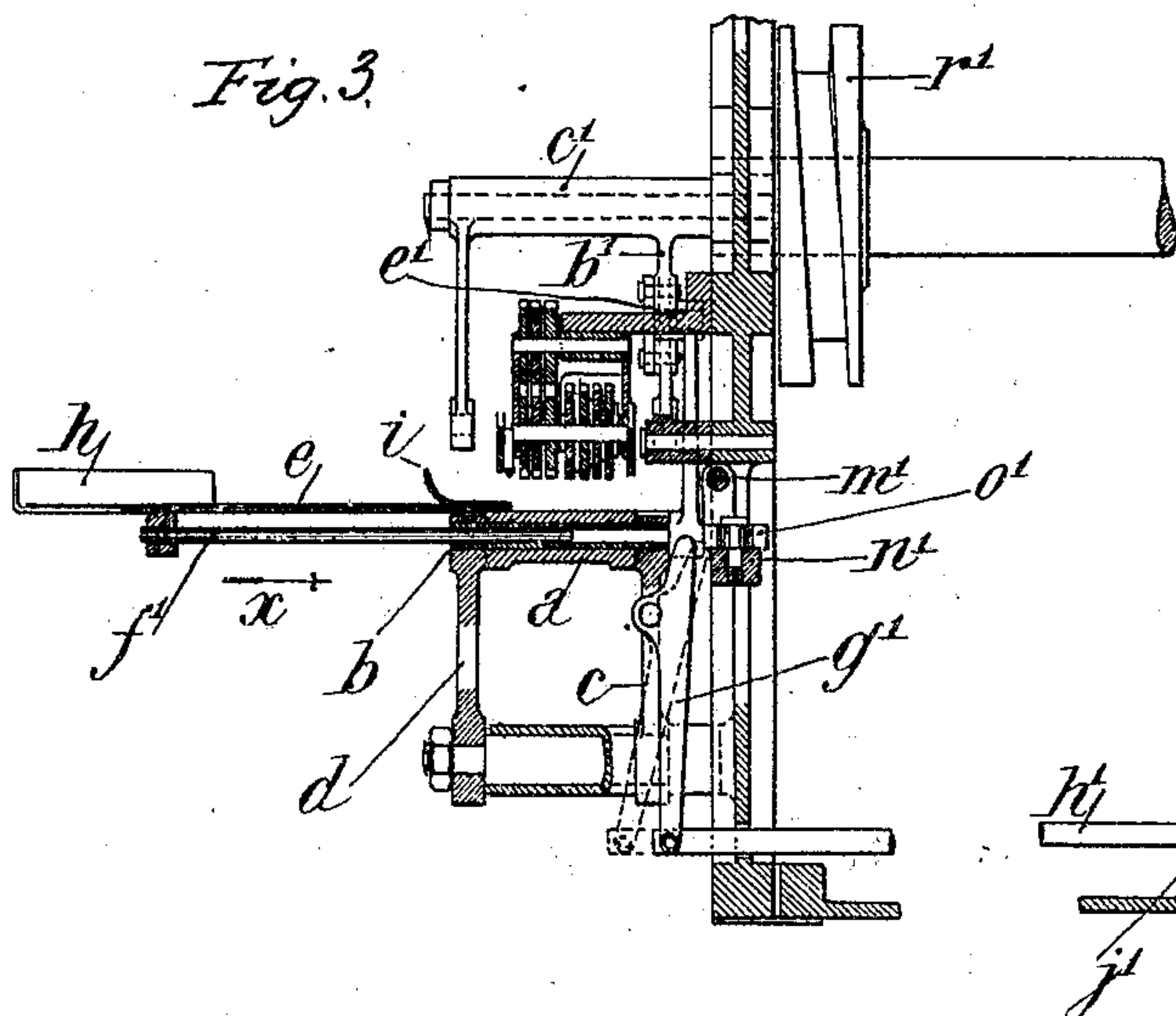
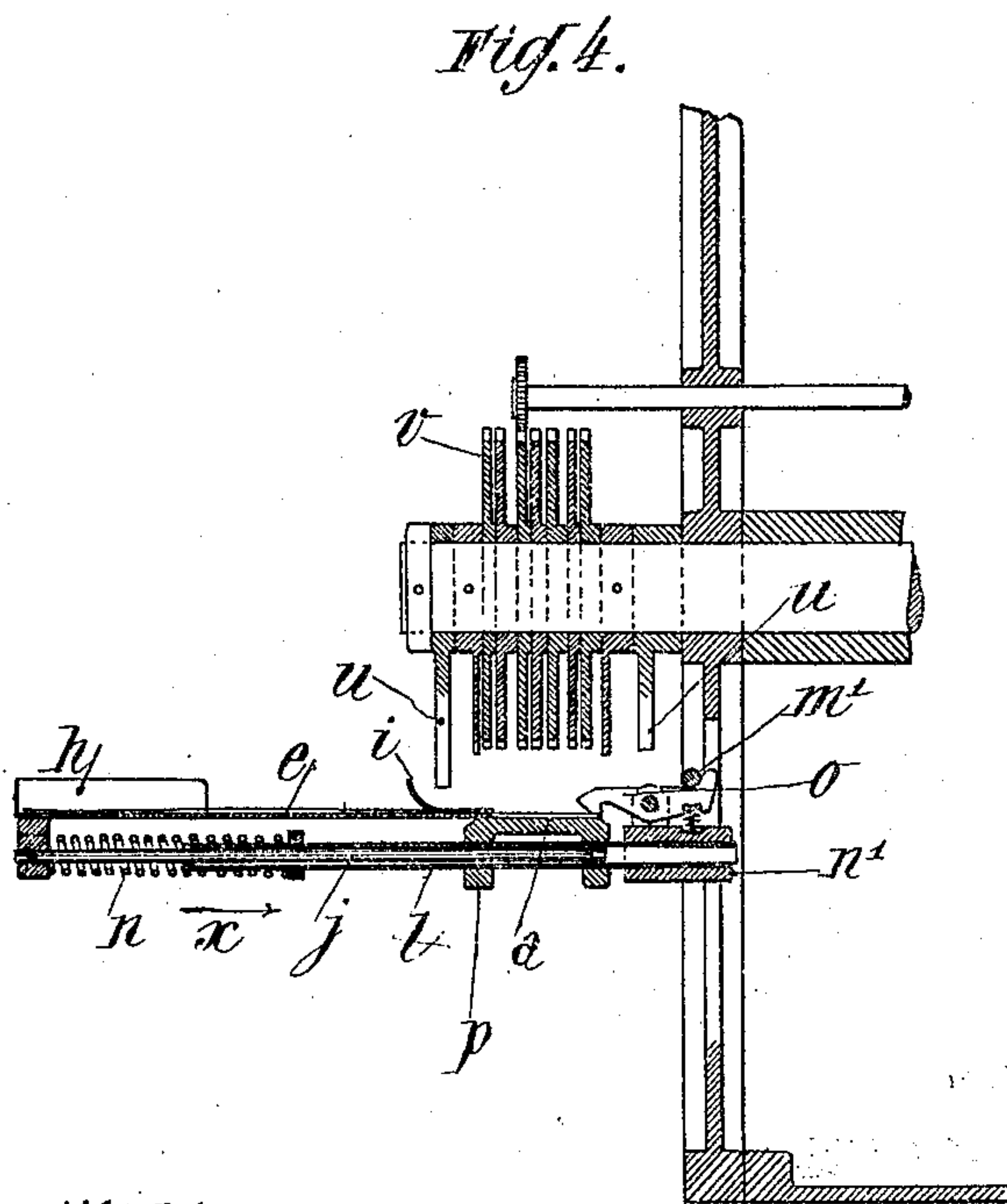


Fig. 5.



2	50	Wheat	25.50	63.75	63.75
50	25	Wheat	51	251.25	251.25
10	30	Wheat	4.25	42.50	42.50
4	10	Wheat	0.50	2.00	2.00
1	1	Corn		5.65	5.65
				363.75	363.75
			Total =	Total	

*Fig. 6.*

	A 10W-0075	A 10M-0075
2	63 75	63 75
2	89 50	89 50
50	23 84	26 1 28
10	4 25	42 50
4	0 50	2 00
1	5 65	5 65
Total:	36 165 75	36 1 15
	36 165 15	36 1 15

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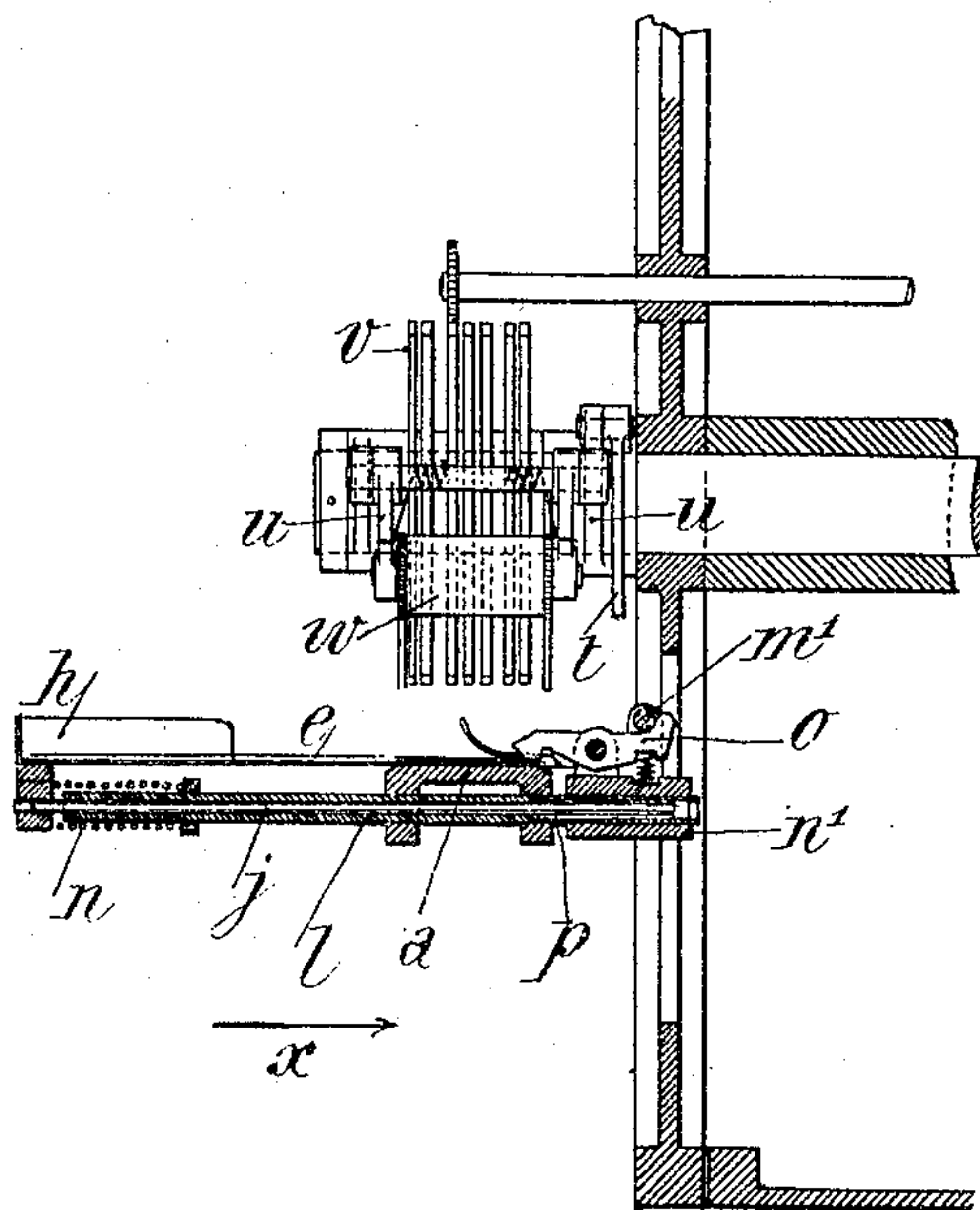
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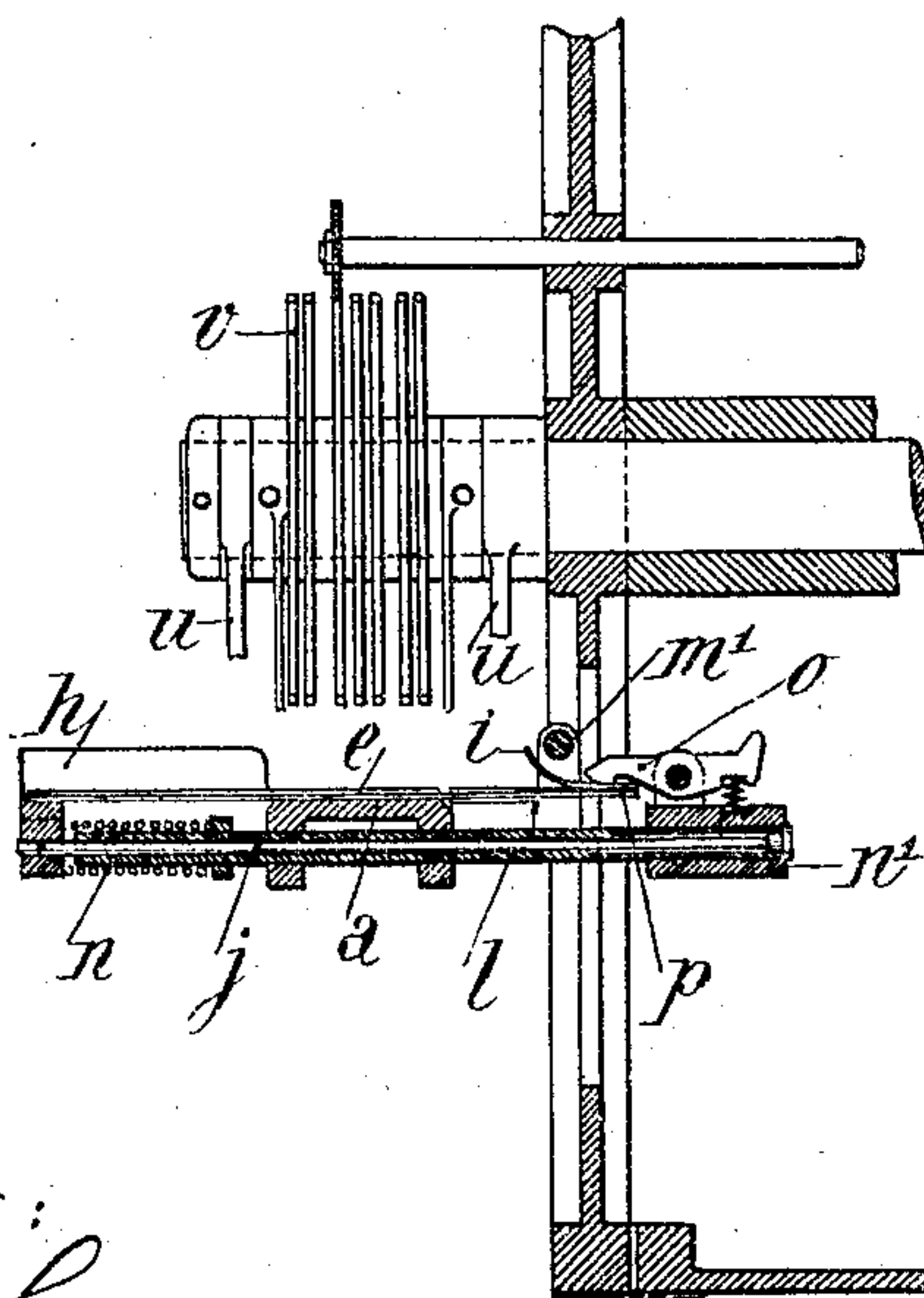
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6 SHEETS—SHEET 3.

*Fig. 7.*



*Fig. 8.*



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6 SHEETS—SHEET 4.

Fig. 9.

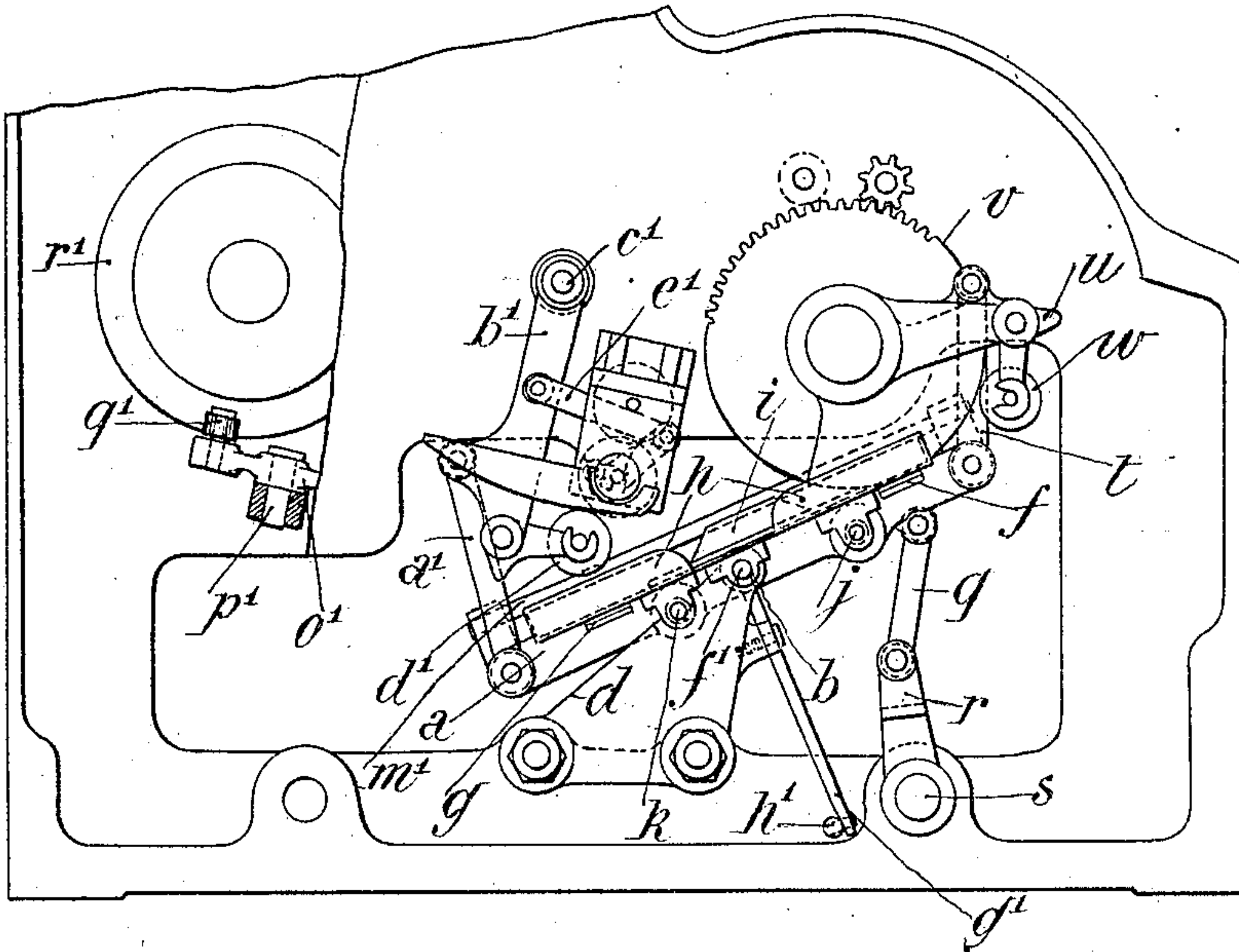
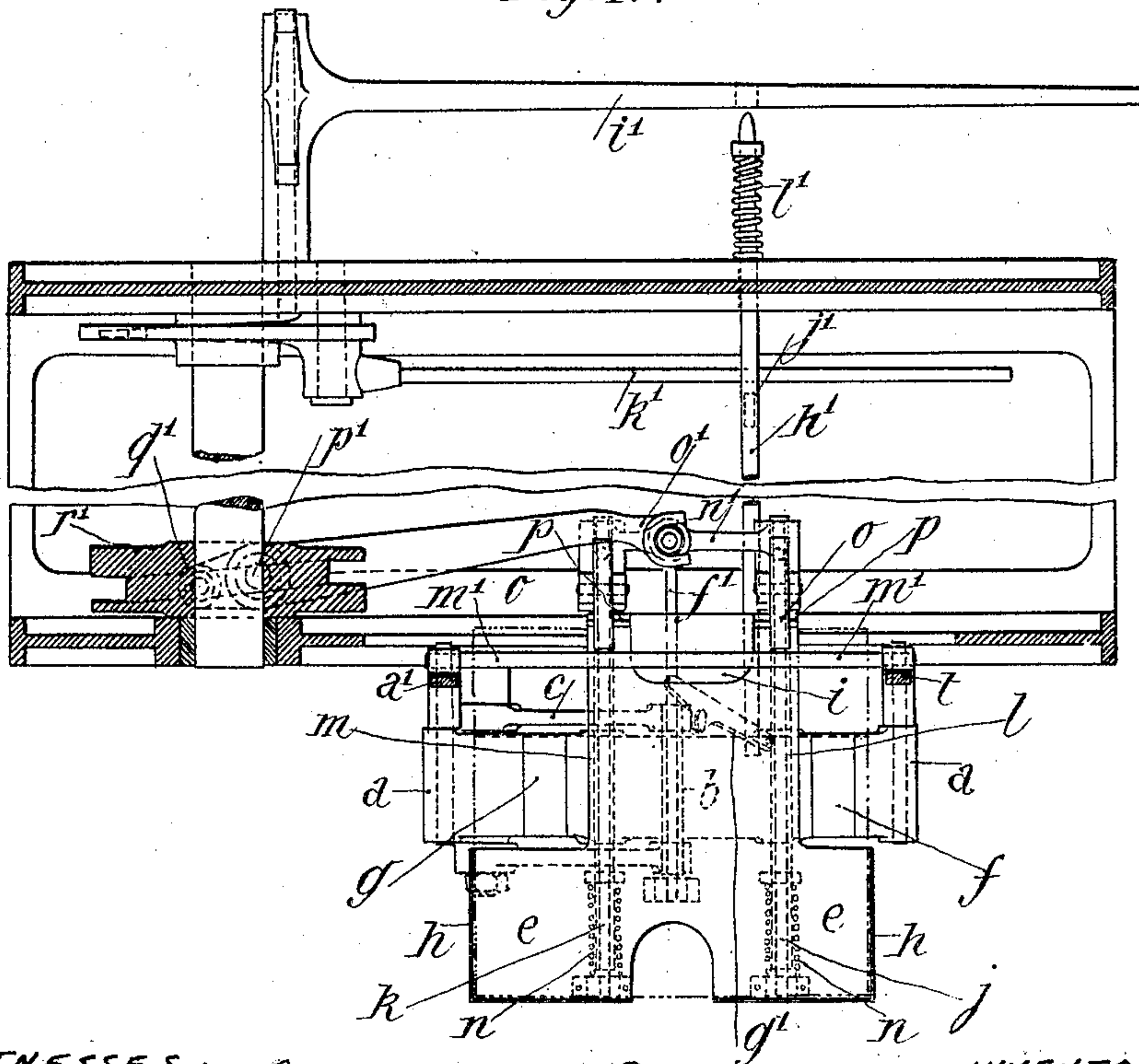


Fig. 10.



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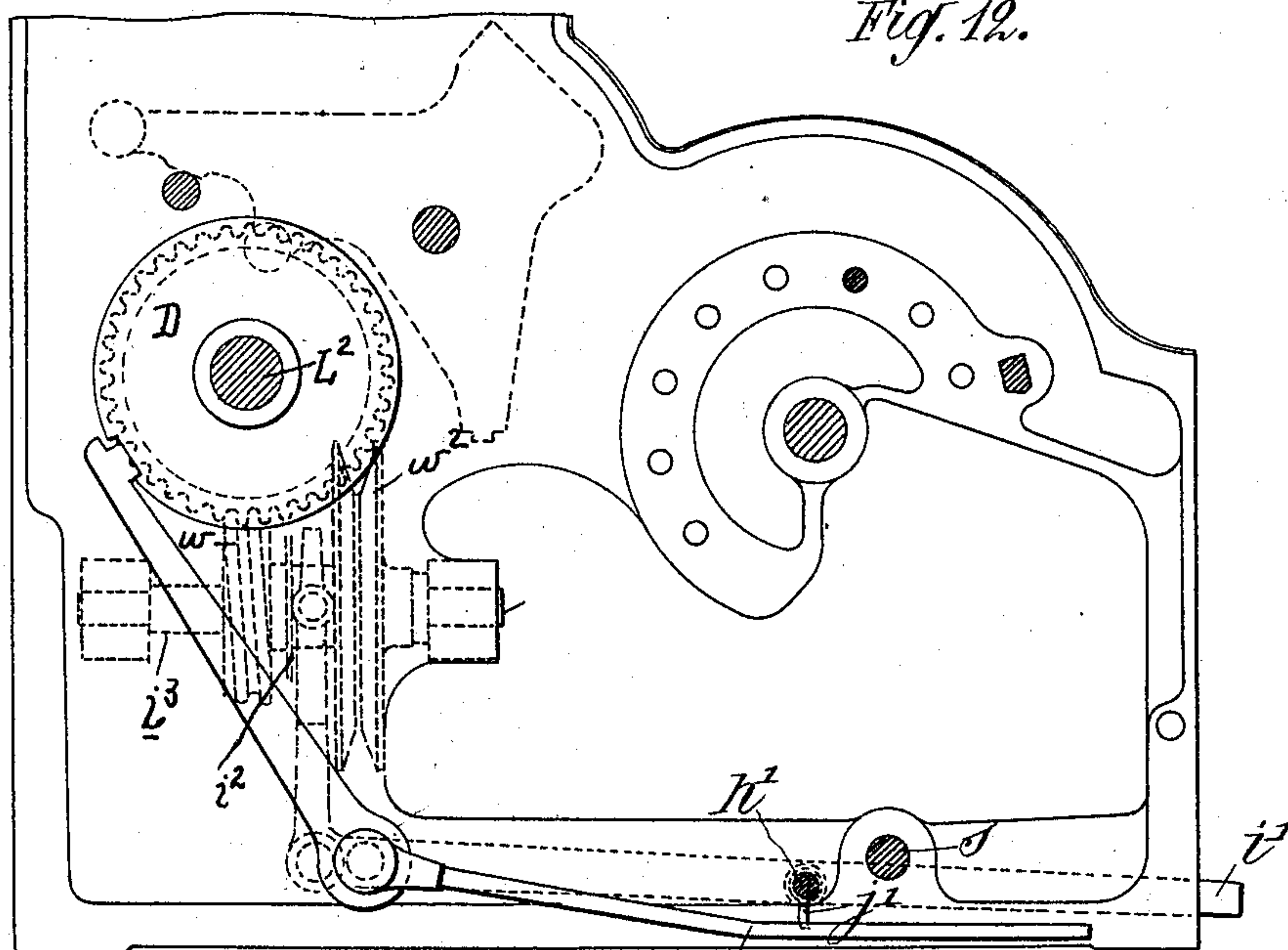
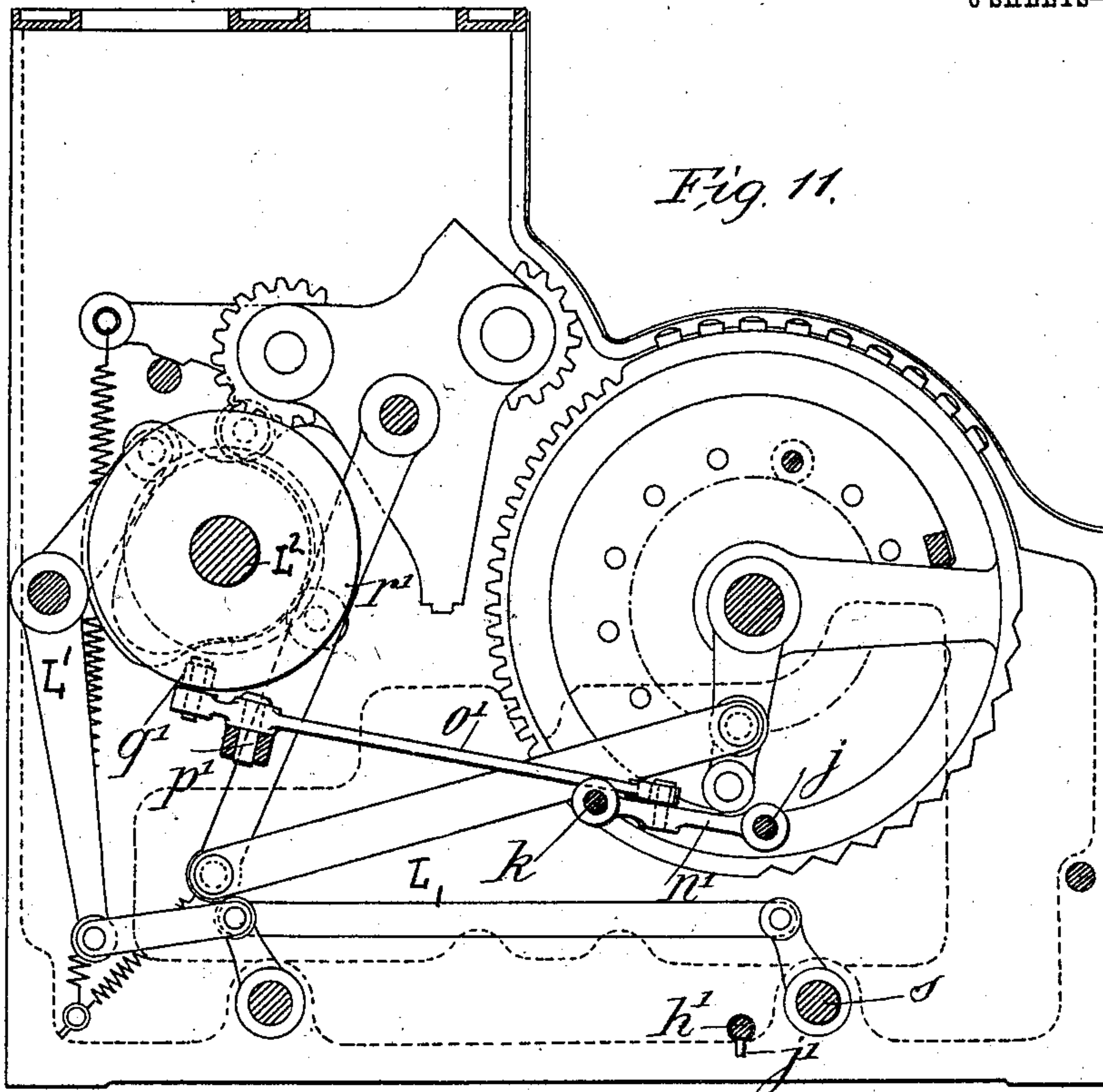
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6 SHEETS—SHEET 5.



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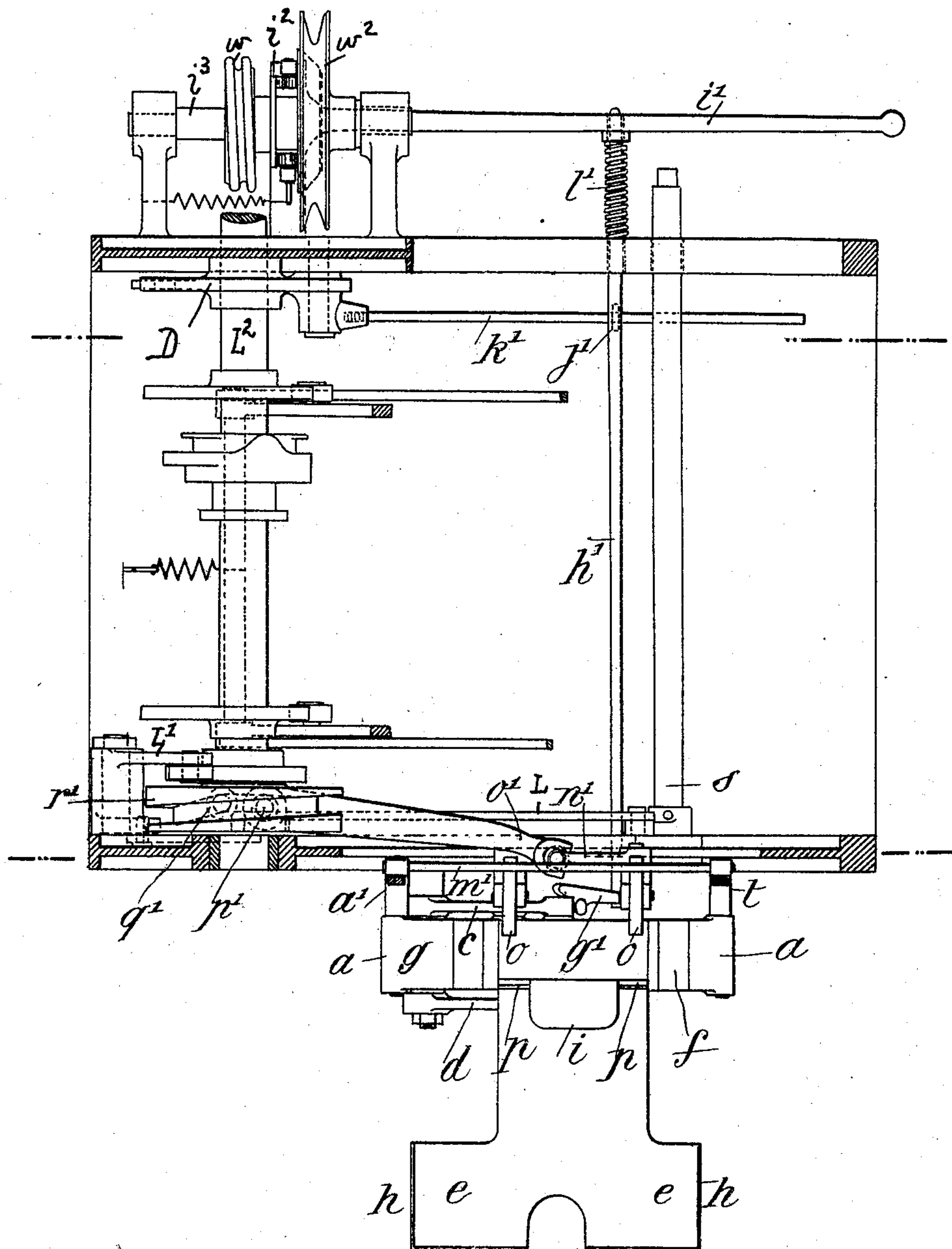
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ROCKING PRINTING TABLE FOR CASH REGISTERING APPARATUS.

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6 SHEETS—SHEET 6.

Fig. 13.



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# UNITED STATES PATENT OFFICE.

JULES FRYDMANE AND LOUIS CHAMBON, OF PARIS, FRANCE.

## ROCKING PRINTING-TABLE FOR CASH-REGISTERING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 788,462, dated April 25, 1905.

Application filed March 10, 1904. Serial No. 197,582.

*To all whom it may concern:*

Be it known that we, JULES FRYDMANE and LOUIS CHAMBON, citizens of the Republic of France, and residents of Paris, France, have  
5 invented certain new and useful Improvements in Printing Mechanism for Cash-Registers, of which the following is a specification.

This invention has for its object a rocking printing-table for cash-registering apparatus,  
10 permitting of verifying directly and simultaneously the detail-sheets of the salesman and also the stub or counterfoil of these sheets. This printing-table takes the place in the checking and registering appliances described  
15 in the specification of United States Patent No. 738,670 of the printing device for the double tickets cut from a band of paper. It permits of printing upon the manuscript-sheets and of reproducing upon their stubs  
20 particulars—such as the amount of the sale, the number of the salesman, the series number of the sheet, the complete date, and so on—so that any subsequent falsification of the books is rendered impossible. A construc-  
25 tional form of this improved printing-table is represented, by way of example, in the accompanying drawings, in which—

Figure 1 shows in side elevation this table as supplied to a checking and registering ap-  
30 pliance of the kind described in the aforesaid prior specification. Fig. 2 is a corresponding plan view. Figs. 3 and 4 are cross-sections on the lines A B and C D, respectively, of Fig. 1. Fig. 5 shows a bill-sheet and its counterfoil before the impression of the checking  
35 and verifying particulars. Fig. 6 shows the same after the printing of these particulars. Figs. 7 and 8 show in cross-section the successive positions assumed by the table for printing on the bill and its stub. Fig. 9 rep-  
40 represents in side elevation the position of the printing-table at the moment of printing the amount of the debit. Fig. 10 is a corresponding plan view. Fig. 11 shows in elevation the relation between the main cam-shaft of  
45 the apparatus and the parts which impart the rocking movement and the movement of lateral displacement to the impression table and plate. Fig. 12 shows in elevation the lever  
50 acting in combination with a clutch to con-

nect at proper times the operating mechanism with the apparatus for moving the table. Fig. 13 shows in plan the connection of swinging impression-table with the operating  
55 means.

The "printing-table," properly so called, *a*, is mounted upon a tubular horizontal spindle *b*, carried by two small triangular side  
56 pieces *c* and *d*, fixed by means of stayed bolts to the lower part of the left-hand-side plate  
60 of the cash-registering apparatus to which the table in question is applied. Upon this table is arranged a thin plate *e* of the size of the bill-sheet (including the stub) which it is in-  
65 tended to receive. This plate is cut away at the sides in such a manner that it always un-  
66 covers, no matter what its position on the table may be, the elastic or compressible parts  
67 *f* and *g* of this latter and which are intended to facilitate the impression. It is provided  
70 at its front portion with a recess, permitting of arranging the bill in position and of with-  
71 drawing it, and also with a flange *h*, serving as a stop or support for the bill, and, further,  
72 at the rear with a small finger *i*, under which  
73 the bill passes. The plate *e* is provided with two rods *j* and *k*, passed, respectively, Figs.  
74 2 and 4, within the tubes *l* and *m*, freely passed through the table. The rods *j* and *k*, and  
80 consequently the plate *e*, are constantly acted upon in the direction of the arrow *x* by spiral  
81 springs *n*. Each of the tubes *l* and *m* is provided at its free extremity with a socket, upon  
82 which pivots a spring-hook *o*, serving to en-  
83 gage at the proper moment a corresponding  
84 nose *p* of the plate *e*. A link *q*, Figs. 1 and 9, connects the table *a* to a lever *r*, keyed upon  
85 the extremity of the shaft *s* of the checking appliance and to which an angular movement is  
86 communicated at the proper moment when  
87 the apparatus is operative, through a link *L* and lever *L'*, receiving its motion from a cam  
88 on the main cam-shaft *L*<sup>2</sup>. A second link *t* connects the table *a* to a lever *u*, rocking upon  
89 the spindle for the printing-disks *v* and upon  
90 which is mounted, by means of a spring, the inking-roller *w* for these disks. The charac-  
91 ters are inked in the manner described in Pat-  
92 ent No. 738,670. A third link *a'* connects the  
93 table *a* to a lever *b'*, rocking at *c'*, and upon  
94 100



which are mounted the inking-roller  $d'$  of the numberer and dater, and a connecting-rod  $e'$  connected to the said numbering device and serving to automatically effect the changing  
 5 of the series number. The numbering and dating device operates and is inked in the manner described in the above-mentioned prior United States patent, No. 738,670. The plate  $e$  also presents between the spring-rods  
 10  $j$  and  $k$  a third rod  $f'$ , Figs. 2 and 3, the extremity of which, guided in the tubular spindle  $b$  of the table  $a$ , is intended to encounter a lever  $g'$ , rocking upon the small side plate  
 15  $c$ , and which is connected, on the other hand, to a rod  $h'$ , which normally locks the checking appliance. This rod passes, in fact, through an eye of the engaging lever  $i'$  of the said apparatus and by means of a nose  $j'$  locks the immobilizing-rod  $k'$ . (See prior United  
 20 States patent, No. 738,670.) A spring  $l'$  constantly tends to maintain the rod  $h'$  in the locked position or position of repose represented in Fig. 3. It will be observed that the bell-crank locking-lever  $i'$  oscillates on a fixed  
 25 axis, Figs. 12 and 13, one end embracing a clutch  $i^2$  on a shaft  $i^3$ , carrying a worm-wheel  $w$ , meshing with a worm  $w'$  on the cam-shaft  $L^2$ . A pulley  $w^2$  normally turns free of the shaft  $i^3$ , but may be clutched therewith by the  
 30 clutch  $i^2$ . The table  $a$  also carries a fixed rod  $m'$ , serving as a stop for the heels of the hooks  $o$  for the purpose of lifting these latter and permitting of the release of the plate  $e$  when this latter moves back after the impression  
 35 upon the bill-sheet and upon its stub of the particulars enumerated above. Finally, the sleeves upon which the said hooks rock are connected by a kind of traverse  $n'$ , connected with a lever  $o'$ , pivoted at  $p'$ , and of  
 40 which the opposite extremity carries a roller  $q'$ , engaged in the groove of a cam  $r'$ , which serves to produce when the cash-registering apparatus is operative the transverse displacements of the bill-supporting plate  $e$ , as here-  
 45 inafter described.

Operation: Each of the debit-slips or bills, Fig. 5, drawn up directly by the salesman is placed upon the plate  $e$  in the manner indicated above and in such a way that the portion forming the stub is situated on the same  
 50 side as the finger  $i$ . When this has been done, the operator presses the plate  $e$  in the direction of the arrow  $x$ , Figs. 2, 3, and 4, compressing the springs  $n$   $n$  in such a manner  
 55 that it is seized by the hooks  $o$   $o$  and that the stub portion of the bill-sheet is situated beneath the printing-disks  $v$ , Fig. 7. In this movement the rod  $f'$  has encountered the lever  $g'$  and caused it to assume the position indicated in dotted lines, Fig. 3, thus releasing the  
 60 engaging lever  $i'$  and the immobilizing-rod  $k'$ . The cash-registering apparatus, the composing-disks of which have been suitably manipulated, as specified in the aforesaid prior specification, for reproducing the total of the

debit-sheet engaged upon the plate  $e$  and also the salesman's number, may then be operated. Under the influence of this operation the shaft  $s$  operates the lever  $r$  in such a manner that the table  $a$  rocks and approaches the  
 70 printing-disks  $v$ , so that these latter may print upon the debit-sheet stub the particulars 1 in Fig. 6—that is to say, the salesman's number "32" and the total of the debit  
 75 "365.15." As soon as this impression has been made the cam  $r'$  becomes operative, and by the intermediary of the lever  $o'$  and of the hooks  $o$   $o$  advances the plate  $e$  still in the direction of the arrow  $x$  in such a manner that the sheet itself is beneath the printing-disks  
 80  $v$ , Figs. 8 and 10, and that on a fresh rocking movement of the table  $a$  these disks print at 2, Fig. 6, the same particulars as those previously printed on the stub. In this same  
 85 rocking movement in the reverse direction the table  $a$  also presents the "bill-sheet," properly so called, to the dater and numberer, which prints thereon at 3, Fig. 6, a reference-letter "A," the complete date, "10  
 90 April," and the series number "0075" of the sheet. Then the cam  $r'$  releases the plate  $e$ , so that it may return under the influence of the springs  $n$   $n$  to the position shown in Fig. 7, and when this has taken place the table  $a$   
 95 is again rocked toward the dater and numberer, which prints upon the stub of the sheet at 4, Fig. 6, the particulars previously printed upon the body of the sheet itself. Finally, the cam  $r'$  again acts upon the lever  $o'$ , causing it to execute a supplementary travel such  
 100 that the heels of the hooks  $o$   $o$  in encountering the fixed rod  $m'$  of the table  $a$  rock and release the plate  $e$ , which under the influence of the springs  $n$   $n$  automatically resumes the position shown in Figs. 2, 3, and 4. It will  
 105 be noticed that in this position the lever  $g'$  has resumed its original place, Fig. 3. The rod  $h'$  through the block  $j'$  is adapted to act on the bell-crank cam-shaft-locking lever  $k'$  so as to cause it to enter a notch in the disk  
 110 D on the cam-shaft  $L^2$  to stop the machine by locking the cam-shaft against further rotation. At the same time the rod  $h'$  may engage the clutch-lever  $i'$  to disconnect the pulley from the worm-wheel shaft. It will also  
 115 be noted that it is then possible to withdraw the bill upon which all the verification particulars are printed, these particulars both upon the bill itself and upon its stub corresponding exactly with the particulars which  
 120 have been registered by the apparatus and inscribed upon the checking and registering band with which it is provided.

We claim as our invention—

1. A cash-register, having printing means  
 125 in combination with a paper-carrying plate, means for rocking said plate to give a printed impression, means for transversely moving it into a different operative position with reference to the printing means, and means for  
 130



then rocking it to give a second impression, all during the printing of a single transaction.

2. A cash-register, having printing means for the amounts registered and numbering or dating printing means, a plate and means to rock it against both said printing means, in combination with means for transversely moving said plate to bring a different portion thereof under the action of the printing means.

3. A cash-register, having a cam-shaft and printing means, in combination with a table and plate, a spindle on which the table is mounted, mechanism adapted to rock said table and actuated from said cam-shaft, and means also actuated from said cam-shaft for transversely moving said plate into different operative position beneath said printing means.

4. A cash-register, having printing means, in combination with a table and means for rocking it, a plate mounted for transverse movement upon said table, springs between the table and plate, and means for rocking said table, and for transversely moving it.

5. A cash-register, having printing means in combination with a table and means for rocking it, a plate mounted for transverse movement upon said table, springs between the table and plate, and means for rocking said table and for transversely moving it automatically upon the movement of the plate against its springs.

6. A cash-register, having printing means in combination with a rocking table, a plate movable transversely thereon, springs between plate and table, locking-pawls adapted to engage said plate when moved against its springs, mechanism for transversely moving said pawls and the engaged plate and means for rocking the table.

7. A cash-register, having printing means in combination with a rocking table, a plate movable transversely thereon, springs between plate and table, locking-pawls adapted to engage said plate when moved against its springs, mechanism for transversely moving

said pawls and the engaged plate and means for rocking the table, and means for automatically disengaging said pawls upon an excessive motion of said mechanism.

8. A cash-register, having printing means and a rocking table beneath them in combination with a plate transversely movable on said table and adapted to occupy a position free of the printing means, and also two different positions beneath the printing means.

9. A cash-register, having printing means and a rocking table beneath them in combination with a plate transversely movable on said table and adapted to occupy two different positions beneath the printing means.

10. A rocking printing-table for a cash-register, a plate mounted thereon, tubular rods and catches thereon mounted to slide transversely within the table, rods slidable on said tubular rods and springs secured to the plate and means for moving the catches to bring the plate into different transverse positions upon the table, in combination with printing means above the table and means for rocking said table.

11. A rocking printing-table for a cash-register, a plate mounted thereon, tubular rods and catches thereon mounted to slide transversely within the table, rods slidable on said tubular rods and springs secured to the plate, and means for moving the catches to bring the plate into different transverse positions upon the table, in combination with printing means above the table and means for rocking said table, and an automatic locking means adapted to be unlocked upon the movement of the plate by hand into its first position beneath the printing means.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

JULES FRYDMANE.  
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Witnesses:

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