

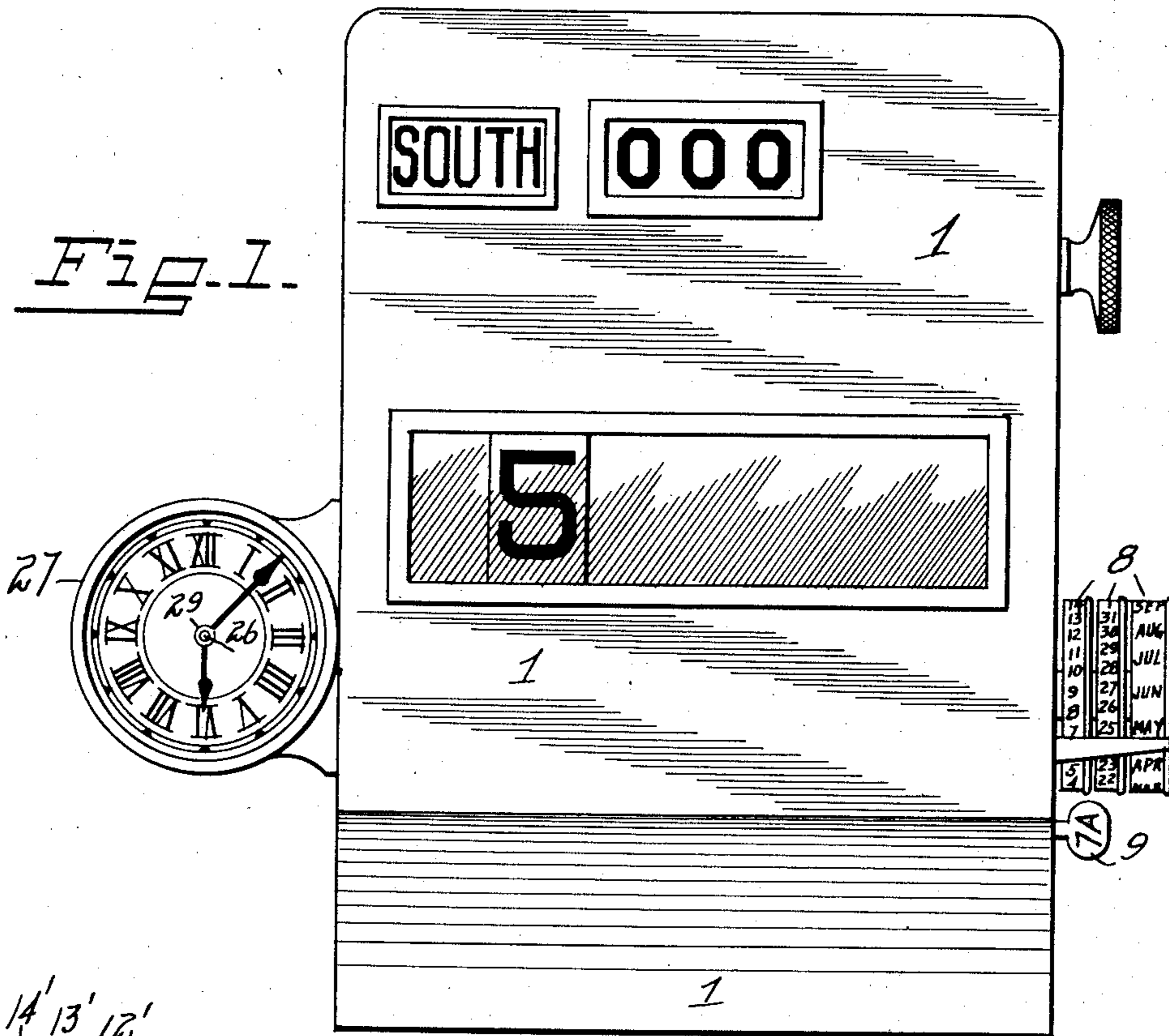
987,643.

J. F. OHMER.
FARE REGISTER.
APPLICATION FILED JUNE 14, 1909.

Patented Mar. 21, 1911.

3 SHEETS—SHEET 1.

Fig. 1.



15' 14' 13' 12'

1

19	3	0	S	7	5	4	3	8	9	5	4	3	5	7	2	5	6	4	0	1	9	8	0	125	MAY	9	7	IN53
19	1	7	S	7	3	2	9	8	8	7	2	3	5	1	2	5	5	9	9	1	9	1	1	125	MAY	9	7	7A
17	2	9	N	7	2	2	1	8	7	9	5	3	4	8	8	5	5	2	1	1	8	8	1	125	MAY	8	7	7A
15	1	8	S	7	0	3	1	8	7	0	1	3	4	0	7	5	4	8	7	1	8	1	3	125	MAY	7	7	7A
13	4	5	N	6	9	2	7	8	6	5	0	3	3	6	5	5	4	3	2	1	8	0	0	125	MAY	6	7	7A
12	1	5	S	6	8	5	4	8	6	0	0	3	3	1	7	5	4	0	1	1	7	6	5	125	MAY	5	7	7A
11	4	2	N	6	7	9	9	8	5	7	2	3	2	8	1	5	3	7	7	1	7	1	4	125	MAY	4	7	7A
10	0	8	S	6	7	0	1	8	5	1	1	3	2	0	9	5	3	2	9	1	6	5	4	125	MAY	3	7	7A
9	5	2	N	6	6	7	4	8	4	7	9	3	1	7	2	5	2	9	7	1	5	3	2	125	MAY	2	7	7A
7	3	0	S	6	6	0	0	8	4	1	3	3	1	1	4	5	2	3	1	1	4	9	1	125	MAY	1	7	7A
7	2	9	S	6	0	0	0	8	4	1	3	3	1	1	4	5	2	3	1	1	4	9	1	125	MAY	25	7	IN53
"				"				"				"				"				"								

Witnesses
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Fig. 7.
By

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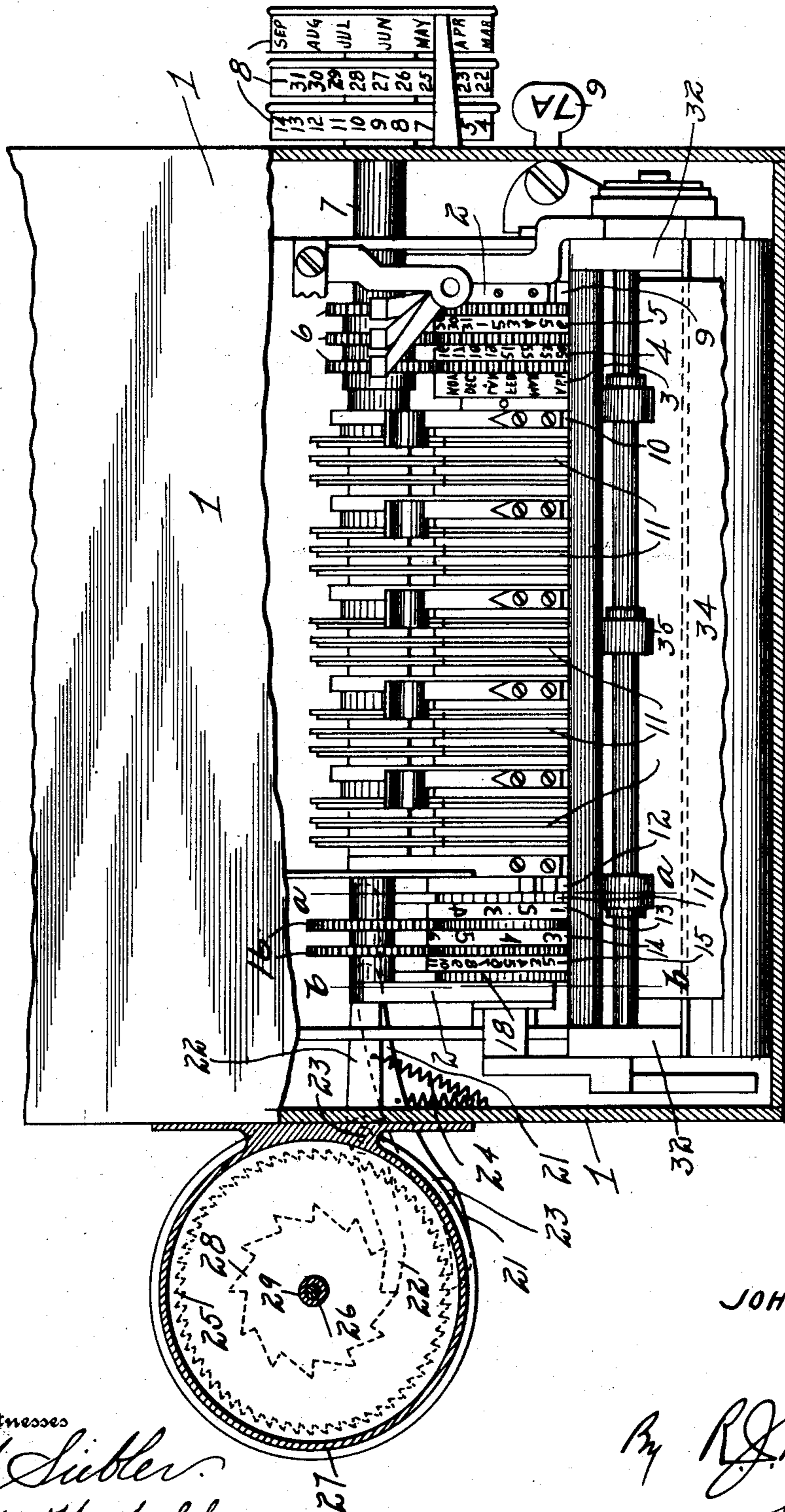
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3 SHEETS—SHEET 2.



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3 SHEETS—SHEET 3.

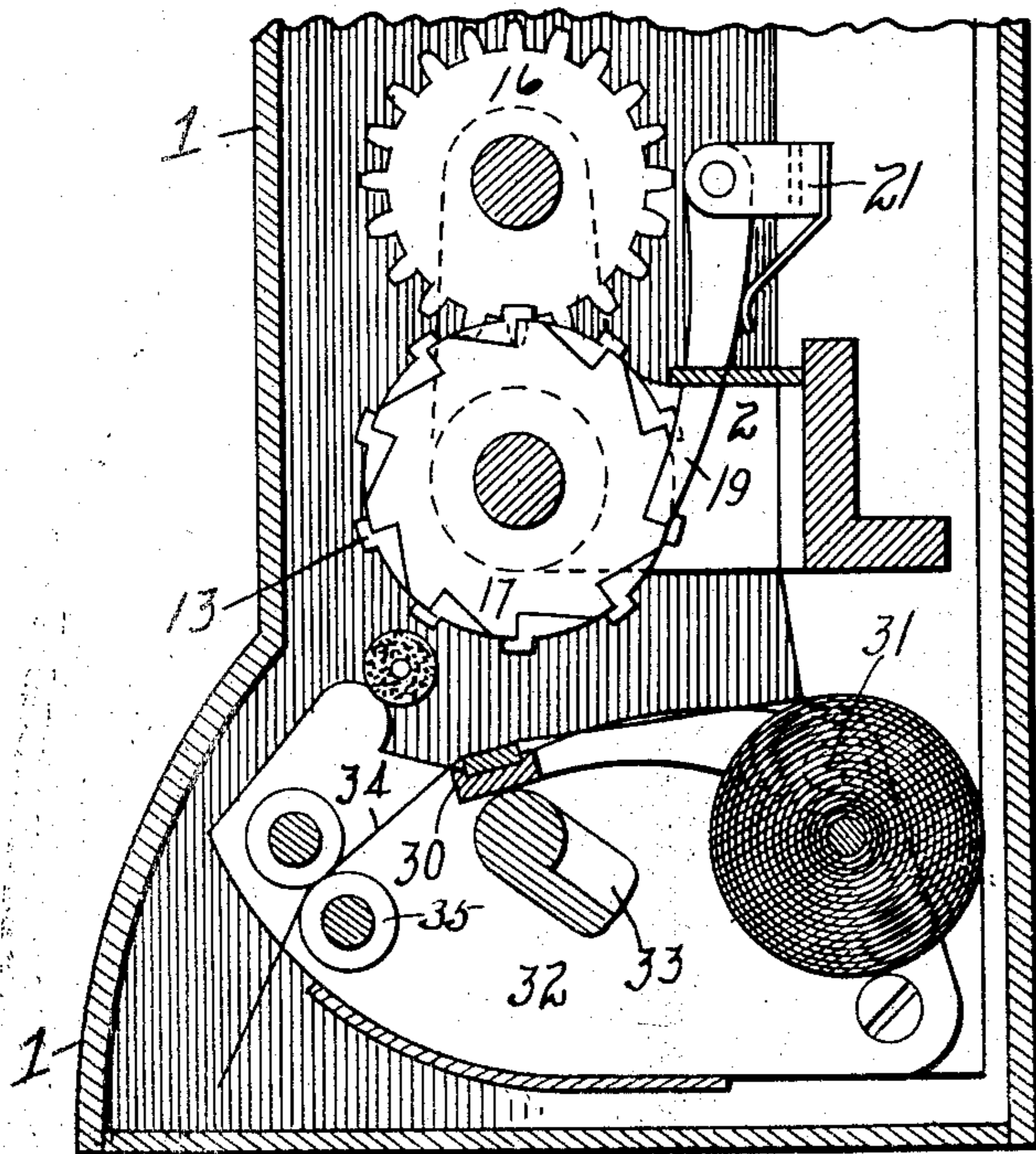


Fig. 3.

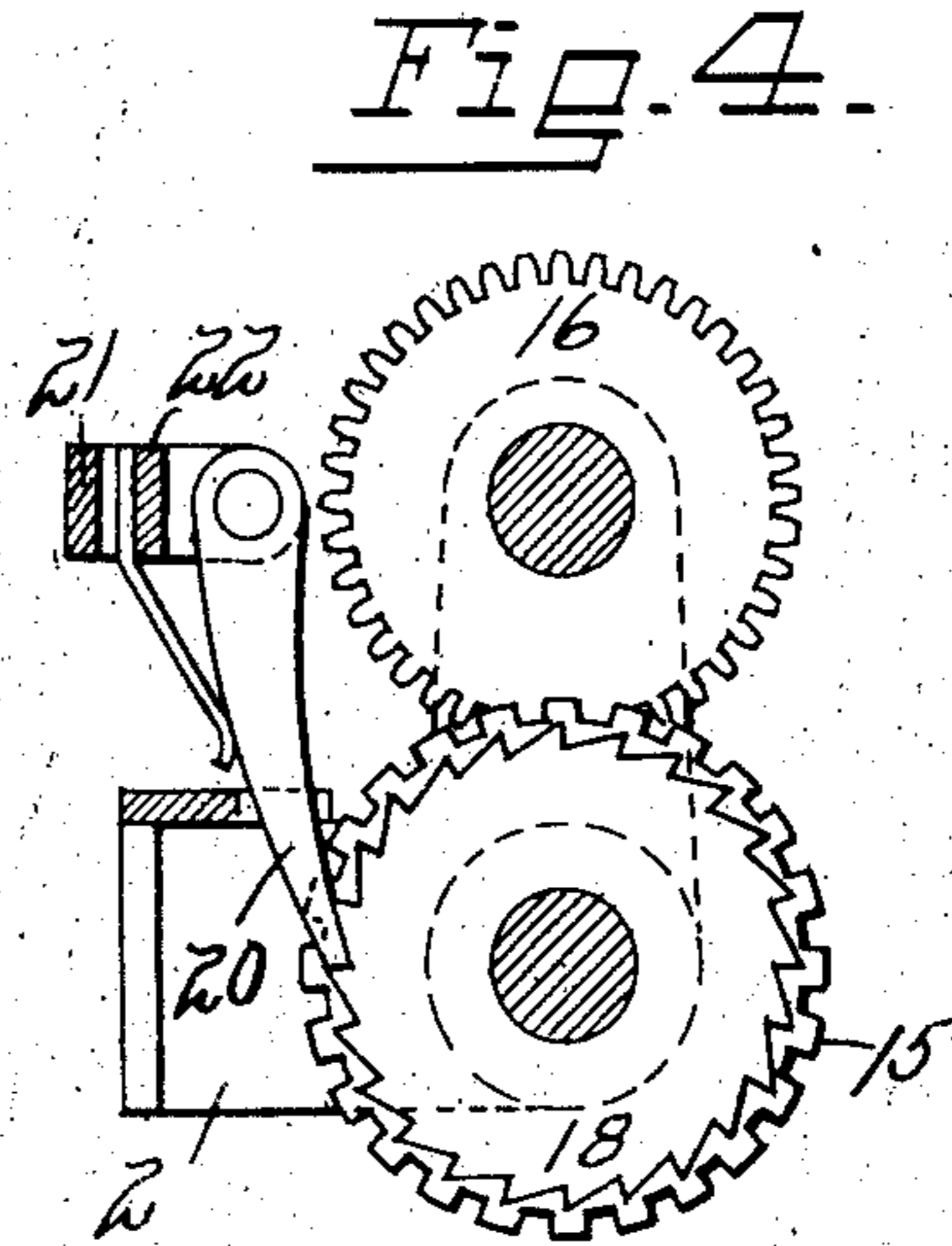


Fig. 4.

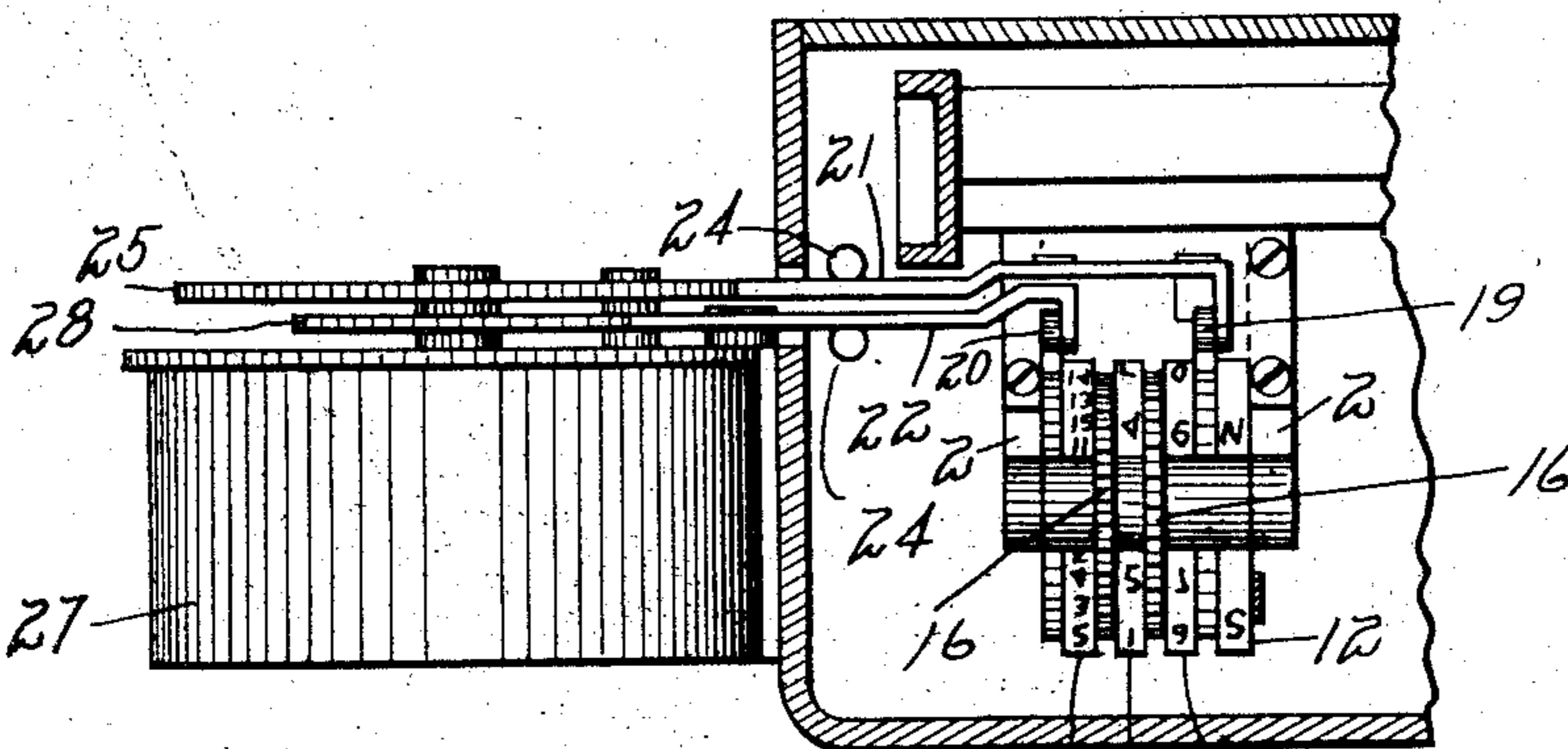


Fig. 5.

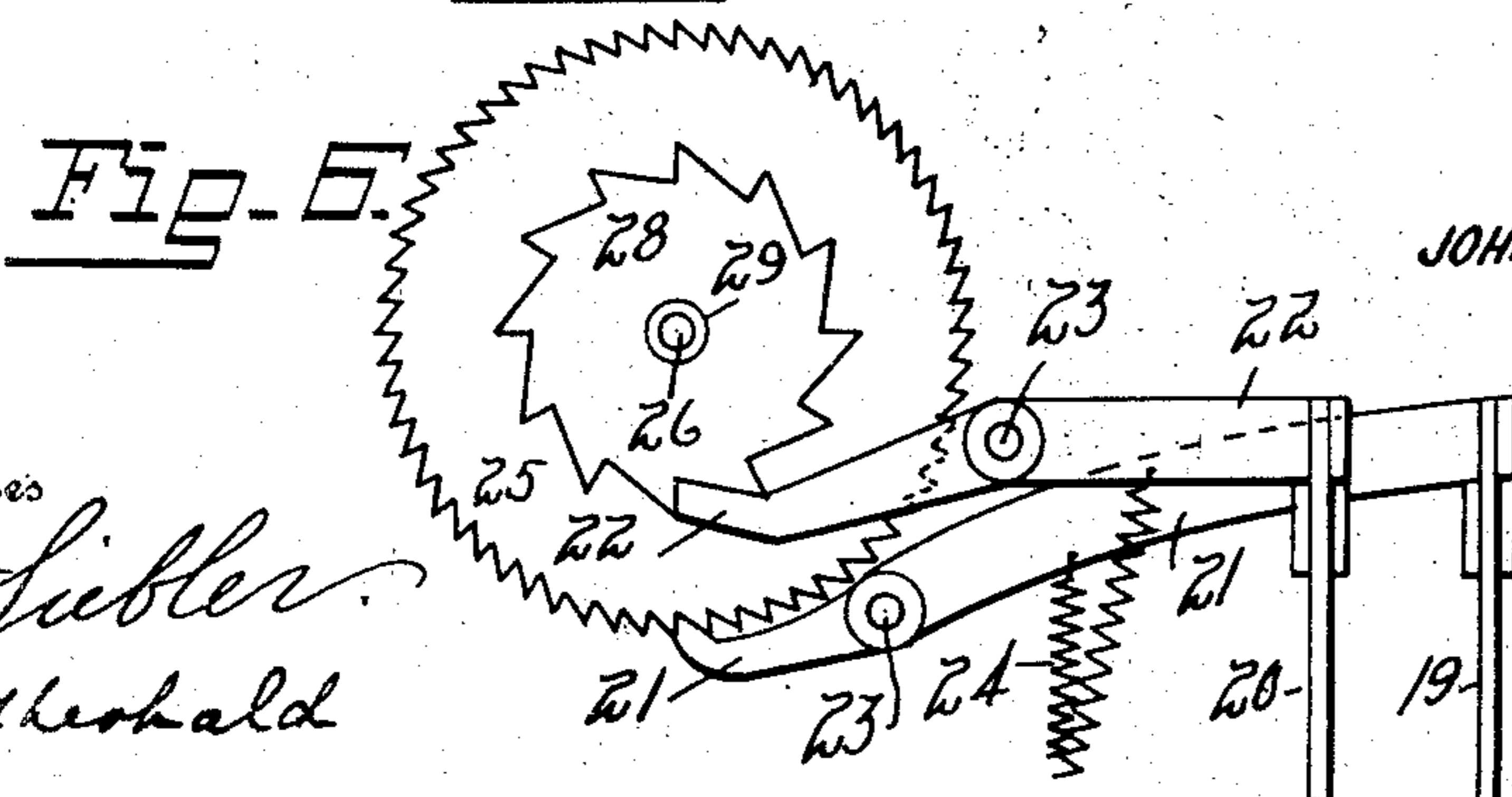


Fig. 6.

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UNITED STATES PATENT OFFICE.

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Specification of Letters Patent.

Patented Mar. 21, 1911.

Application filed June 14, 1909. Serial No. 501,929.

To all whom it may concern:

Be it known that I, JOHN F. OHMER, a citizen of the United States, residing at Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Fare-Registers; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to new and useful improvements in fare registers, and comprises more specifically speaking, clock mechanism for actuating the printing wheels which print the time on the record sheets taken from the machine.

The object of the invention is to provide more accurate means for operating the time-printing wheels, and thereby avoiding the uncertainties attending the operations of such wheels by hand.

The present improvements are applied to the devices shown and described in a former patent granted to myself March 2, 1909, No. 914,361. The said patent discloses means for printing separately, a plurality of different denominations of fares collected on a single trip or any number of trips combined, together with the month and the day, the identification number of the operator, the number of the machine, the number of the trip or trips, the time, hours and minutes each record is taken, as well as means for printing miscellaneous data, such as the weather conditions, etc. The present invention is substituted as a means for actuating the time-printing wheels from which prints or impressions are taken intermittently on the same record with other data above referred to. The clock mechanism is connected directly to the register casing, and in addition to its affording means for the occupants of a car to ascertain the time, it actuates the printing wheels. With the clock mechanism thus connected to the register, the time that each record is printed will appear accurately, and thus the carelessness on the part of the operator in first setting the time by hand, will be overcome or obviated.

In the accompanying drawings, Figure 1, is a front elevation of a fare register hav-

ing my improvements applied thereto. Fig. 2, is an enlarged front elevation of the lower portion of the machine, the register casing as well as the clock casing, being removed. Fig. 3, is a sectional view of the lower portion of the machine on the line *a a* of Fig. 2. Fig. 4, is a sectional view on the line *b b* of Fig. 2. Fig. 5, is a detail top plan view of the time-printing wheels and clock mechanism. Fig. 6, is a detail view of the ratchet and lever mechanism of the time-operating devices. Fig. 7, is a view of a portion of a statement or record taken from the machine and showing the data herein before referred to.

In a detail description of my invention, similar reference characters indicate corresponding parts.

On the interior of the casing 1 is a framework 2 located in the base thereof, and at the right end of which are mounted type wheels 3, 4 and 5 which constitute the date-printing wheels from which the month and days are printed upon the record. The said type wheels 3, 4 and 5, are provided with gear wheels 6, and they are set by drums 8 through telescopic shafts 7, the gears 6 being upon said telescopic shafts and in mesh with gears on the sides of the type wheels. The type wheel 3 as is clearly shown prints the months; type wheel 4 the day; and type wheel 5 the division over which the car is run. In the printed statement shown in Fig. 7, the record given by these type wheels 3, 4 and 5, is shown in columns 3' 4' and 5' at the lower right side of the statement. The type wheel 4 in addition to printing the day on the first impression, is adapted to print the number of the trip, on the previous impressions. To the right of the type wheels 3 4 and 5, is an interchangeable identification key 9 which is insertible to a printing position and prints upon the statement or record, to-wit: the first and last impressions, a mark by which the inspector may be identified, to-wit: "INS3" as indicated by 9' on the record or statement, Fig. 7. The intermediate impressions identify the conductor who is provided with an identification key from which is printed "7A" which identifies such conductor.

To the left of the type wheel 3 on the framework 2, is mounted a printing or type wheel 10 which is adapted to print the number of the machine or register, to-wit: 125,

as indicated on the record sheet, Fig. 7, by 10'. In addition to the above described mechanism, there is mounted in the frame-work 2, a plurality of fare counters 11 5 which are adapted to print upon the record the columns of figures indicated by 11' which show the different fares registered, such as 3c, 5c, 10c, Tic., Tra., the latter two indicating tickets and transfers. Adjacent 10 to these detail fare counters, a type wheel 12 is located to print upon the record the direction in which the car travels, and adjacent to this type wheel 12, are mounted the time-printing wheels 13, 14 and 15. 15 Wheel 13, is the unit wheel of the series and is provided on its periphery with ten characters, to-wit; 1 to 9 and 0. Wheel 14 is the tens wheel of the series and is provided with six characters, 1 to 6. Transfer mechanism 16 consisting of well-known one tooth 20 wheels, are provided between the type wheels 13 and 14 and adapted to impart a one-sixth of a revolution of the wheel 15 at the end of every revolution of the unit 25 wheel 13. The wheels 13 and 14 print the minutes of time up to 60 and repeat the same operation. Wheel 15 is the hour wheel and has upon its periphery twenty-four characters, to-wit: 1 to 24. 30 The numerals 1 to 12 represent the a. m. hours, and the numerals 13 to 24, the p. m. hours. The unit wheel 13 has a ten tooth ratchet 17 and the hour wheel 15 is provided with a 24 tooth ratchet 18, both of 35 said ratchets being engaged by pawls 19 and 20 which are mounted on minute and hour levers 21 and 22, respectively. These levers are pivoted at 23 and are controlled by springs 24, see Fig. 5. The outer end of 40 lever 21 engages a 60 tooth ratchet 25 on the minute shaft 26 of the clock 27, and the outer end of the hour lever 22 engages a 12 tooth ratchet 28 on the hour shaft 29 of the clock. The shafts 26 and 29 are driven 45 by well-known clock mechanism (not shown) and the ratchets 25 and 28 have a continuous movement during which the pawls 19 and 20 are elevated against the pressure of the springs 24. 50 When the outer ends of the levers 21 and 22 ride off the teeth of the ratchets 25 and 28, the pawls 19 and 20 snap downward, and owing to their engagement with the ratchets 17 and 18 the type wheels 13 and 55 15 are rotated to the extent of one digit. It will therefore be seen that the continuous rotary movement of the shafts 26 and 29 is transformed into an intermittent rotary movement of the type wheels 13 and 15, 60 which wheels are therefore always in printing position.

The various type wheels above described

are all mounted in printing alinement above a platen 30 pivoted at 31 to the side frames 32 in the base of the register. The said 65 platen is elevated by a cam or eccentric 33 to bring the strip of paper 34 against the type wheels. After passing over the platen 30, the paper strip 34 passes through feed rollers 35 by which it is fed forwardly for 70 each impression.

The above-described printing mechanism is fully disclosed in my prior patent hereinbefore referred to.

I do not wish to limit myself to the specific construction of the time devices, as it 75 will be apparent that some modification may be made therein without departing from the spirit of my invention, which consists broadly in transmitting movement from 80 continuous rotary shafts to intermittent rotary type wheels by means of ratchets and spring-controlled levers and pawls actuated from clock mechanism.

Having described my invention, I claim: 85

1. In a machine of the type specified, the combination with clock mechanism including minute and hour shafts 26 and 29, and minute and hour ratchet wheels 25 and 28, 90 of levers 21 and 22 actuated by said ratchet wheels, said levers being pivoted midway of their lengths and having their ends extending at right angles to their planes, springs maintaining said levers in engagement with 95 said ratchet wheels, pawls pivoted to the ends of said levers turned at right angles, minute and hour printing wheels, and ratchet wheels connected to said printing wheels, said ratchet wheels being engaged and actuated by the pawls, substantially as 100 specified.

2. In a machine of the type specified, the combination with clock mechanism including minute and hour shafts 26 and 29, and minute and hour ratchet wheels 25 and 28 105 driven from said shafts, of minute and hour levers 21 and 22 actuated by said ratchet wheels, springs maintaining said levers in engagement with said ratchet wheels, pawls pivoted to said levers, minute and hour 110 printing wheels, and ratchet wheels connected to said printing wheels, said ratchet wheels being engaged and actuated by the pawls as the latter are actuated from the clock mechanism through the intervening 115 mechanism, substantially as herein shown and described.

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

JOHN F. OHMER.

Witnesses:

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