R. A. POLLOCK.

PRINTING MECHANISM.

APPLICATION FILED FEB. 12, 1906.

923,074.

Patented May 25, 1909.

3 SHEETS—SHEET 1.

Fig. 1.

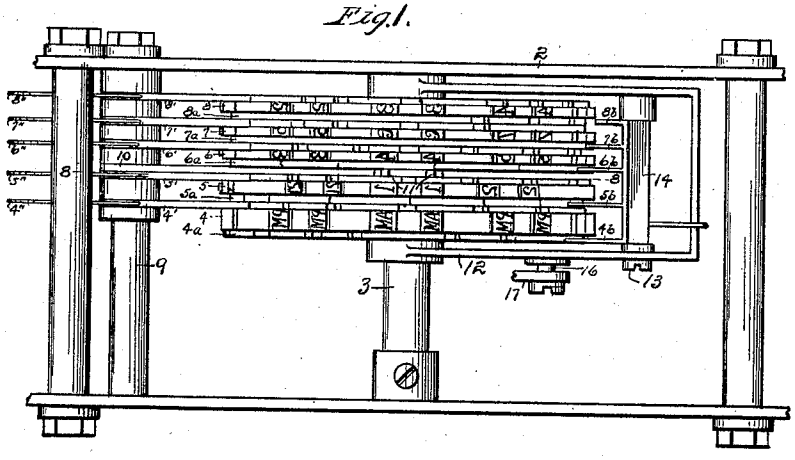


Fig. 2.

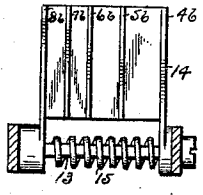
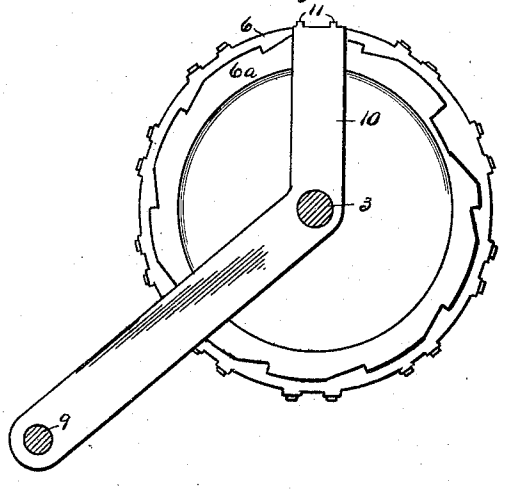


Fig. 3.



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3 SHEETS—SHEET 2.

Fig. 4

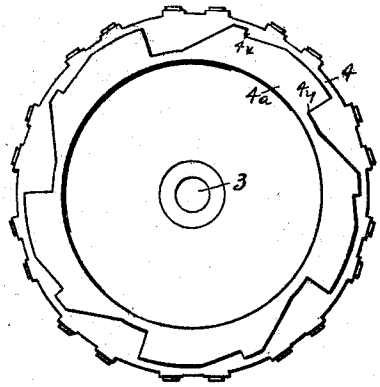


Fig. 5

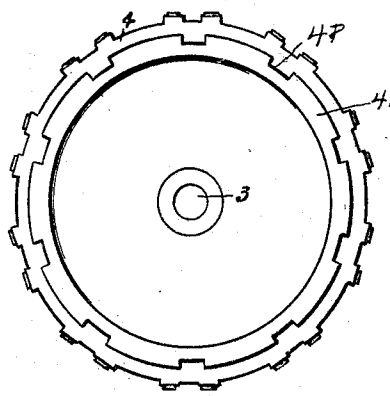


Fig. 6

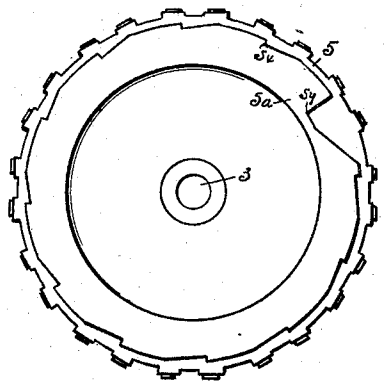


Fig. 7

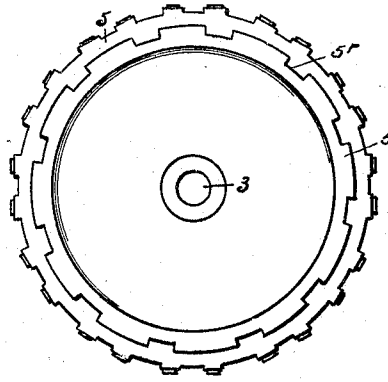


Fig. 8

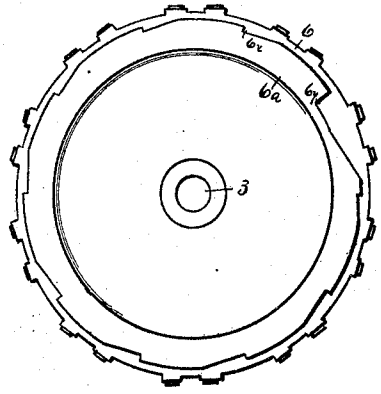
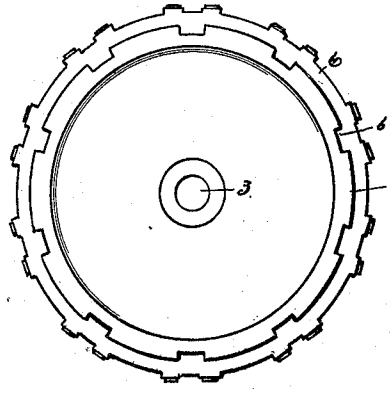


Fig. 9



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3 SHEETS—SHEET 3.

Fig. 10.

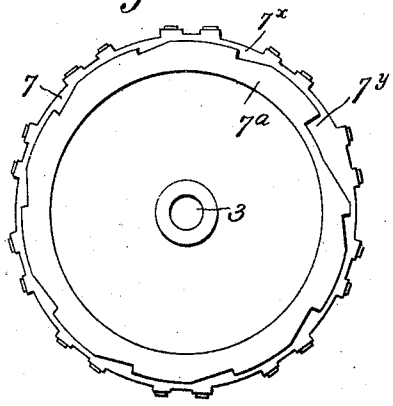


Fig. 11.

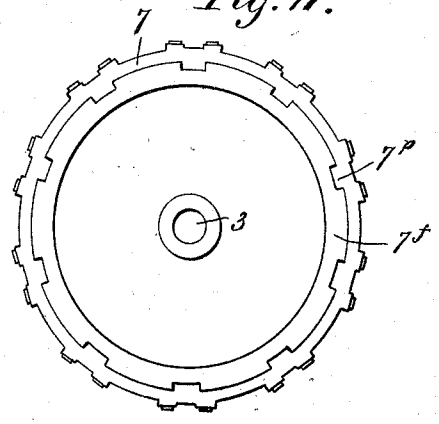


Fig. 12.

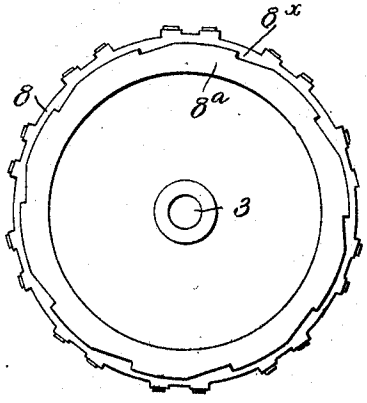


Fig. 13.

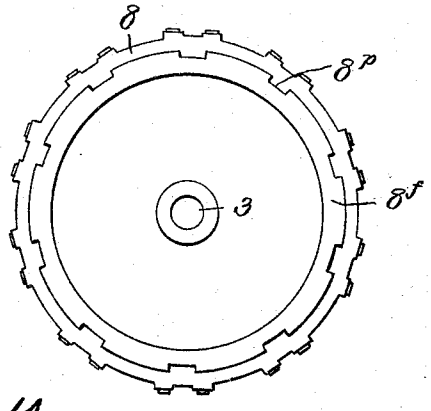
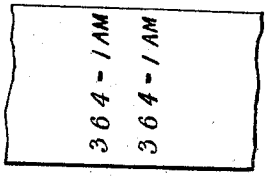


Fig. 14.



Witnesses

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UNITED STATES PATENT OFFICE.

ROBERT A. POLLOCK, OF KANSAS CITY, MISSOURI, ASSIGNOR TO AMERICAN RECORDING COMPANY, A CORPORATION OF THE DISTRICT OF COLUMBIA.

PRINTING MECHANISM.

No. 923,074. Specification of Letters Patent. Patented May 25, 1909.

Application filed February 12, 1906. Serial No. 300,700.

To all whom it may concern:

Be it known that I, ROBERT A. POLLOCK, a citizen of the United States, residing at Kansas City, in the county of Jackson and State of Missouri, have invented certain new and useful Improvements in Printing Mechanism; 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 characters of reference marked thereon, which form a part of this specification.

My present invention relates to a printing mechanism, and more particularly to a device comprising type wheels adapted for actuation by clock set mechanism and for use with a coin controlled machine for selling accident insurance, in which it is necessary to record not only the day, but also the hour of the day that a policy is delivered from the machine.

The printing mechanism consists of a set of five type wheels comprising an hour wheel, a meridian wheel and a units, tens, and hundreds day wheel, against which a policy slip is struck in any suitable manner; an impression ribbon separating the type wheels and slip for printing the record.

As my invention relates only to the printing mechanism, I have shown no main machine as any suitable device may be employed in combination with the parts disclosed.

Figure 1 is an enlarged top plan view of the type wheels and carrying parts. Fig. 2 is a detail view of the type wheel regulating arms and frame. Fig. 3 is a detail view in side elevation showing the type bar. Figs. 4 to 9 inclusive illustrate the type wheels; Fig. 4 showing the front and edge of the meridian wheel, and Fig. 5 the back of the same wheel; Fig. 6 the front and edge and Fig. 7 the back of the wheel bearing the hour numerals and Fig. 8 the front and edge; Fig. 9 the back of the wheel bearing units day numerals. Fig. 10 the front and edge, and Fig. 11 the back of the wheels bearing tens day numerals; Fig. 12 the front and edge, and Fig. 13 the back of the wheel bearing the hundreds day numerals. Fig. 14 shows a fragment of a ticket upon which a record has been printed by the duplicate stamps.

There being 365 days in the year, it is necessary to have separate wheels bearing units, tens, and hundreds numerals; as these three wheels are similar, the units wheel only has been illustrated.

My device, as before stated, is adapted for use with a main machine which is not disclosed. Within the main machine is mounted a frame 2, in which are located the type wheels before mentioned. On the back of frame 2 is mounted a suitable clock mechanism which is connected with and controls the operation of said wheels, but being of any well known construction, is not illustrated.

In the top of frame 2 is rigidly secured an axle 3 on which are revolubly mounted a set of five type wheels, the face of the first of which is the meridian wheel (reference numeral 4) and bears at regular intervals the insignias A. M. and P. M.; each insignia being in duplicate and adapted to simultaneously impinge against a suitable ribbon in order that a duplicate or double record may be made in the manner presently described and the pairs alternating around the wheel, there being six pairs of each, in all. On the second wheel (reference numeral 5) are arranged in pairs similar to the insignias on wheel 4, numerals from 1 to 12, and on the three remaining wheels 6 to 8, duplicate numerals from 1 to 0. The space between each insignia and numeral of the pairs on each of the wheels is so selected that a perfect transverse alinement may be had as indicated in Fig. 1. Each of the duplicate type members is raised at its outer longitudinal edge so as to bring the two printing surfaces of each duplicate type member in plane with each other in order that when the ticket is struck against the type members, a perfect duplicate impression may be received by the ticket. On the side of each wheel is a flange 4^f, 5^f, 6^f, 7^f and 8^f having peripheral pockets 4^p, 5^p, 6^p, 7^p and 8^p therein in which the heads of arms 4′—5′—6′—7′ and 8′ loosely mounted on a cross rod 9 in frame 2 are yieldingly held by springs 4″—5″—6″—7″— and 8″ so that after each wheel has been forwarded by the mechanism which will presently be described it will be yieldingly held in the position indicated.

On rod 9 and axle 3 is mounted a bracket 10 which projects upwardly between wheels 5 bearing the hour numerals and wheel 6 which is the first of the wheels bearing day

numerals, and is provided with a pair of studs 11, which are even with the type forms on the wheels and form dashes on the policy slip between the hour numerals and the day numerals. On the sides of the wheels opposite the pocket flanges are integral flanges 4^a, 5^a, 6^a, 7^a, 8^a, each having in its periphery a set of ratchet teeth. Revolubly mounted on axle 3, on each side of the type wheels, is an arm of a yoke 12. Mounted in the sides of yoke 12 is a rod 13, and axially mounted on rod 13 is a bracket 14 having fingers 4^b—5^b—6^b—7^b— and 8^b of graduating length and extending in line with the ratchet flanges on the several type wheels. On rod 13 is wound a spring 15 which yieldingly retains bracket 14 in the direction of the type wheels. Pivoted on a pin 16 on one of the sides of yoke 12 is a lever arm 17 which is connected in a suitable manner with the clockwork so as to be lowered and raised at the completion of each hour. The lever 17 in turn lowers and raises the yoke 12 carrying the bracket 14. As bracket 14 is lowered, its second tooth 5^b is pressed into a notch in the periphery of flange 5^a, and as the bracket is raised, wheel 5 is carried around until a succeeding pair of numerals is in position beneath the policy slip previously referred to.

With each action of bracket 14 wheel 5 is moved forward one space until the wheel having started with the duplicate numerals 1 on top, the duplicate numerals 12 have reached the stamping position; when bracket 14 drops down to carry the duplicate numerals 1 to the top again, finger 5^b drops into a notch 5^y, which is deep enough to permit the first finger 4^b on bracket 14 which is shorter than finger 5^b, and normally out of contact with its flange to drop into a shallow notch 4^x on flange 4^a so that both wheels 5 and 4 are carried around and the type wheels instead of presenting a face reading 12 a. m., will present the face 1 p. m. The second wheel 5 is again operated at the end of each hour until the face of the two wheels mentioned read 12 p. m. when the finger 5^b drops again into notch 5^y and finger 4^b drops into the notch 4^y which is deep enough to permit the finger 6^b, which is shorter than fingers 4^b and 5^b, and normally out of contact with its flange, to drop into a notch 6^x in flange 6 so that the next operation will move the three wheels forward to record a new day; the third wheel bearing duplicate numerals from 1 to 0 and the three wheels before the last action mentioned, reading 1—12 p. m., the numeral 1 representing the day of the year and the other, the hour was twelve o'clock p. m.; after the movement of the wheels they would read 2—1 a. m., the numeral 2 representing the second day of the year, and the others that it was 1 o'clock a. m. After wheel 6 has been forwarded until the figure 9 is uppermost, at the next operation of bracket 14 finger 6^b drops into a notch 6^y in flange 6^a which is sufficiently deep to allow the finger 7^b, which is shorter than finger 6^b, 5^b and 4^b, to drop into a notch 7^x in the fourth wheel 7, which latter bears a set of duplicate numerals from 1 to 0, and forms the tens column in the day numerals. When the bracket 14 is then raised, the four wheels mentioned are brought forward and show a face reading 10—1 a. m., meaning that it is 1 a. m. on the tenth day of the year. At each complete revolution of wheel 6, wheel 7 is advanced one space until the numerals 99—12 p. m. are at the top when, the bracket being lowered, finger 7^b drops into a notch 7^y which is of sufficient depth to permit the finger 8^b, which is the shortest finger on the bracket, to drop into a notch 8^x in flange 8^a, when, upon bracket 14 being raised the entire set of five wheels will be forwarded and the record face of the type will read 100—1 a. m., meaning that it is one a. m. of the one hundredth day of the year. After each complete revolution of the wheel 7, wheel 8 will be forwarded one space, in the manner described, until the year has ended, when it is necessary to open the machine and turn the parts back to their starting point by hand.

Claim.

In a device of the character described, a plurality of revoluble type wheels arranged side by side and provided with type members on their peripheries; the type members of each wheel being arranged in peripheral duplicates and the two members of each duplicate being adapted to print simultaneously.

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

ROBERT A. POLLOCK.

Witnesses:

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A. M. PARR.