

Nov. 26, 1935.

G. C. COIL ET AL

2,021,985

DUPLICATE RECEIPT REGISTER

Filed Jan. 29, 1932

2 Sheets-Sheet 1

Fig. 1.

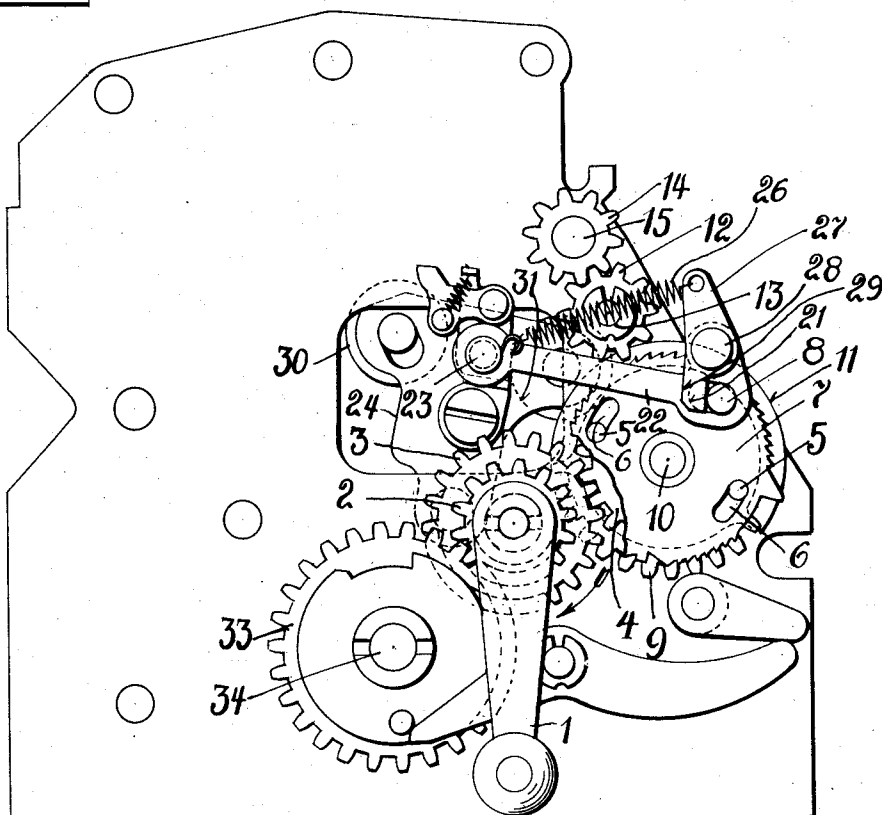
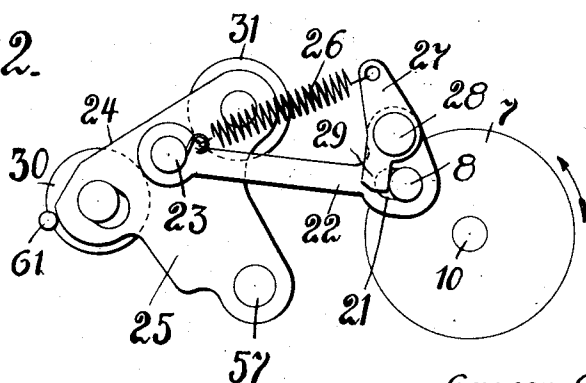


Fig. 2.



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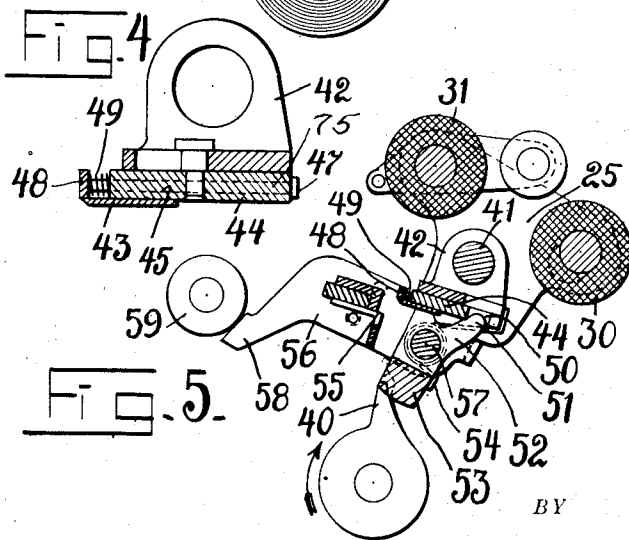
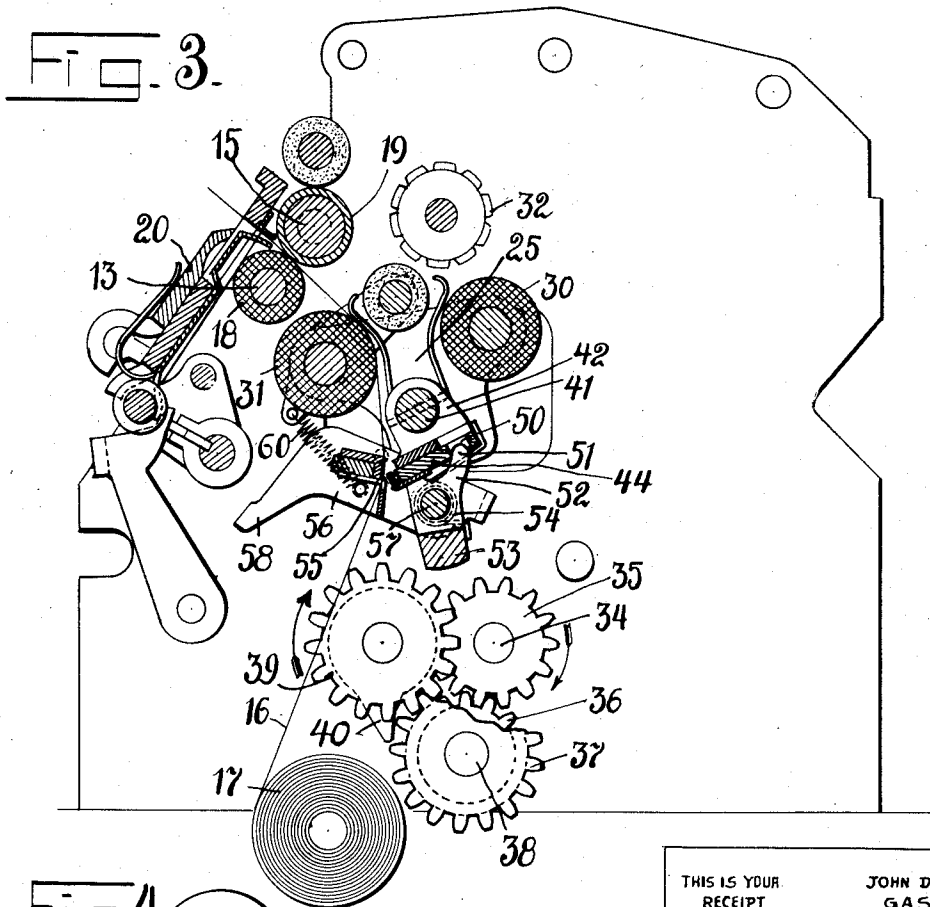
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## DUPLICATE RECEIPT REGISTER

Filed Jan. 29, 1932

2 Sheets-Sheet 2



THIS IS YOUR RECEIPT CALL AGAIN	JOHN DOE GAS STATION	NO. 140
SALESM. $\frac{1}{4}$ G $\frac{1}{2}$ G	AMOUNT \$1.55	NO 4401
THIS IS YOUR RECEIPT CALL AGAIN	JOHN DOE GAS STATION	NO. 140
SALESM. $\frac{1}{4}$ G $\frac{1}{2}$ G	AMOUNT \$1.55	NO 4401

Fig. 6.

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## UNITED STATES PATENT OFFICE

2,021,985

## DUPLICATE RECEIPT REGISTER

Grover C. Coil and William G. Orth, Dayton, Ohio, assignors, by mesne assignments, to Central United National Bank, Cleveland, Ohio, as trustee

Application January 29, 1932, Serial No. 589,556

8 Claims. (Cl. 235—31)

This application is a continuation in part of the application of Thomas O'Conner and William G. Orth, Serial No. 423,701, filed January 27, 1930. In the said application means were shown whereby a duplicate receipt was issued having a perforation. It provided means for feeding the ticket strip which would receive the printed matter and which would form the receipts at the same time that the perforating means was being actuated and the perforating means, therefore, tended to tear the ticket slightly. The object of this invention is to provide a mechanism which will accomplish all of the advantages shown in the said application, Serial No. 423,701, and in addition thereto will provide means whereby the ticket strip will be held stationary at the time that the perforating means is being actuated.

To accomplish the above results and others which will appear in the detailed specifications which follows, it is necessary to operate a part of the machine twice while the remainder of the machine is being operated only once.

Referring to the drawings:

Fig. 1 is a side elevational view of one of the inside side walls of the machine on which certain of the operating parts are mounted.

Fig. 2 is a side elevational view of a part of the operating mechanism shown in Fig. 1.

Fig. 3 is a view of the reverse side of the side plate shown in Fig. 1 showing certain of the interior mechanism of the machine, some of which parts are partly in cross section.

Fig. 4 is a detailed view, partly in cross section, of a part of the perforating mechanism and the stripper means therefor.

Fig. 5 is an elevational view, partly in cross section, of a part of the printing and perforating mechanism, but showing certain of the parts in a partly operated position, and

Fig. 6 is a plan view of duplicate receipts issued by the said machine.

The crank handle 1 is operatively connected to a gear 2 secured to a gear 3 which meshes with and drives a gear 4 provided with pins 5 which extend through slots 6 in a disk 7 which carries a pin 8. The disk 7 is operatively connected with a Geneva gear 9 mounted on a shaft 10 provided with an arcuate surface 11 for a portion of its circumference. The gear 9 and arcuate surface 11 forms a Geneva gear which actuates a Geneva pinion 12 secured to a shaft 13, which Geneva pinion drives a pinion 14 secured to a shaft 15. By the above construction, when the handle 1 is rotated in the direction of

the arrow shown in Fig. 1 the shafts 13 and 15 will be held stationary as long as the arcuate surface 11 engages the teeth of the Geneva pinion 12 and thereafter the Geneva pinion 12 and pinion 15 will be rotated to feed the paper strip 16 which is unwound from a supply roll 17. The shafts 13 and 15 are provided with feed rollers 18 and 19 respectively and the paper strip 16 passes between the said feed rollers and through a knife mechanism 20 which forms no part of this application and need not be described herein.

The pin 8 is received within a slot 21 in a pitman 22, which pitman at its other end receives a wrist pin 23 carried by a side plate 24 of an oscillating printing carrier 25. A spring 26 extends from the pin 23 to the upper end of an arm 27 rotatably mounted on a pin 28 carried by the pitman 22. The arm 27 is provided with a downwardly extending arm 29, which by means of the spring 26 is held against the pin 8 so as to hold the pin 8 normally at the extreme right-hand end of the slot 21. The oscillating printing carrier 25 is provided with platens 30 and 31. The platen 30 is used only in connection with a record which forms no part of this invention but which is shown in the said application 423,701. The platen 31 is the platen which will be brought against printing type 32 and which will press the record strip 16 which is trained over the said platen 31 against the said printing wheels and 30 impress on the receipt the variable data shown in the bottom line of each one of the receipts shown in Fig. 6. The feed roller 19 is provided with an electroplate which prints the fixed data as shown on the upper part of each one of the receipts.

The gear 2 meshes with and drives a gear 33 which has twice as many teeth as the gear 2, which gear is secured to a shaft 34 so that the feed shaft 34 makes one revolution to two revolutions of the crank handle whereas the disk 7 makes one revolution to each revolution of the crank handle 1. The crank handle 1 should be given two complete rotations for each operation of the machine. On the first rotation thereof the top receipt shown in Fig. 6 will be printed and on the second revolution the bottom receipt will be printed. The gear 33 which, as above stated, makes only one-half as many revolutions as the crank handle 1 is the gear that drives the perforating mechanism which makes the perforation shown between the two receipts shown in Fig. 6. This gear 33 when rotated drives the shaft 34 in an anti-clockwise direction as viewed in Fig. 1, or in a clockwise direction as viewed in Fig. 3. A

gear 35 is secured to the shaft 34 and meshes with and drives a gear 36 secured to a gear 37 mounted on a shaft 38. The gear 37 meshes with and drives a gear 39 to which is secured a cam 40.

The oscillating printing carrier 25 is provided with a pin 41 on which is mounted a plate 42 which has secured thereto a block 44 on which is mounted a perforator 43. The block 44 is provided with holes 45 through which extends rods 46 having heads 47 and a stripper 48. A spring 49 tends to move the stripper 48 to the left as viewed in Fig. 4 and to strip the paper from the perforator 43. The block 44 is also provided with a recess 50 which receives a finger 51 of a lever 52 having a downwardly extending arm 53 which lies in the path of movement of the cam 40. A spring 54 tends to rotate the lever 52 in a clockwise direction as shown in Fig. 5 so as to hold the perforator 43 in its retracted position as viewed in Fig. 5.

A perforator 55 is mounted on an arm 56 pivoted on a shaft 57 which is likewise the pivot for the oscillating printing carrier 25. This arm has a projecting portion 58 which engages a stationary plate 59 when the perforating is being done. Normally the arm 56 travels with the oscillating printing carrier for it is connected thereto by means of a spring 60.

In operation, when the crank handle 1 is rotated in a clockwise direction as viewed in Fig. 1, the oscillating printing carrier is moved to the left as viewed in said figure or to the right as viewed in Fig. 3 so as to bring the paper strip 16 into contact with the printing type 32. Immediately thereafter the arcuate surface 11 of the Geneva gear 9 has passed beyond the Geneva pinion 12 with the result that the said gear now rotates the pinions 12 and 14 and said rollers 18 and 19 feeding the paper outwardly. At the time when the oscillating printing carrier 25 has almost reached the end of its movement to the left as viewed in Figs. 1 and 2, it strikes against a stationary pin 61 which pin stops the movement of the oscillating printing carrier but it does not stop the rotation of the disk 7 or crank handle 1 for the pin 8 can travel against the tension of the spring 26 toward the left-hand end of the slot 21. At this time, however, the feed rollers 18 and 19 are not being rotated. An inspection of Fig. 3 will show that if the feed rollers 18 and 19 are not rotating and the oscillating printing carrier is held stationary, there would be no movement of the paper in spite of the fact that the crank handle 1 might continue its rotation. At this time the cam 40 has been rotated from the position shown in Fig. 3 to that shown in Fig. 5 where it engages the arm 53 and rocks the lever 52 anti-clockwise which rocks the plate 42 clockwise. It is also at this time that the arm 56 engages the stationary plate 59 which holds this arm 56 stationary. As the plate 42 is rotated in its clockwise direction the perforator 43 engages the perforator 55 and perforates the paper. At this time the paper is stationary. Immediately thereafter the cam 40 passes beyond the arm 53 and the spring 54 rotates the finger 51 so as to retract the perforator 43 from the perforator 55 while the stripper 48 strips the paper from the perforator 43. The perforating has, therefore, been done while the paper strip 16 is stationary. The second or lower receipt is then issued while the cam 40 is being rotated from the position shown in Fig. 4 to its home position shown in Fig. 3, which would be on the second rotation of the crank handle 1, which would operate the

oscillating printing carrier a second time and print the second receipt. The two receipts are then cut off from the remainder of the ticket strip by the knife mechanism 20, but as before stated, this knife mechanism forms no part of the present application and is, therefore, not described in detail.

We realize that many changes may be made in the specific form of this invention shown and described by way of illustration in this application and we, therefore, reserve the right to make such changes in the specific form of the invention as shown herein as we may find to be desirable. We, therefore, claim the invention broadly except as we may limit ourselves by the appended claims.

Having now described our invention, we claim:

1. In a receipt issuing machine, type, printing means whereby a strip of paper is moved twice into printing contact with said type, means whereby the paper is fed forwardly after each impression, perforating means to perforate the strip after the first impression is made and before the second impression is made, and means to hold said printing means stationary when the perforating means is being actuated.

2. In a receipt issuing machine, type, an oscillating printing means whereby a strip of paper is moved into printing contact with said type, perforating means, means to actuate the perforating means while the oscillating printing means is holding the paper against said type, and means to hold the strip of paper stationary while the perforating means is being actuated.

3. In a receipt issuing machine, type, an oscillating printing means whereby a strip of paper is moved laterally into printing contact with said type, perforating means, means to actuate the perforating means while the oscillating printing means is holding the paper against said type, and means to hold the strip of paper stationary while the perforating means is being actuated.

4. In a receipt issuing machine, type, feeding means whereby one end of a strip of paper is for a part of an operation of the machine held against movement, an oscillating printing carrier to move an intermediate part of said strip into printing contact with said type while said feeding means is holding said strip, means to hold said carrier stationary after said carrier has caused the printed impression to be made, and means to perforate said strip while the carrier is stationary.

5. In a receipt issuing machine, type, feeding means whereby one end of a strip of paper is for a part of an operation of the machine held against movement, an oscillating printing carrier to move an intermediate part of said strip into printing contact with said type while said feeding means is holding said strip, a stop to limit the movement of said carrier, and means to perforate said strip while the carrier is thus stopped.

6. In a machine, a printing carrier, means to oscillate said carrier, said means including a pitman and a rotating means, a spring controlled pin and slot connection between said pitman and rotating means, a stop to limit the movement of said carrier in one direction, said spring yielding when said carrier engages said stop.

7. In a machine, an oscillating printing carrier, driving means therefor including a pitman, rotating means, a pin carried by said rotating means and projecting through a slot in said pitman, means whereby said pitman is normally

held so that one end of the slot will engage said pin, means to cause said last-named means to yield when said carrier is stopped in one of its positions, and means to stop said carrier in said position.

8. In a machine, type, an oscillating printing means whereby a strip of paper is moved into printing position relative to said type, a perforating means, a cam whereby said perforating

means is actuated while the oscillating printing means is holding said paper against said type, a common driving means for said cam and printing means, and means to hold said strip of paper stationary while said cam is actuating said perforating means.

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