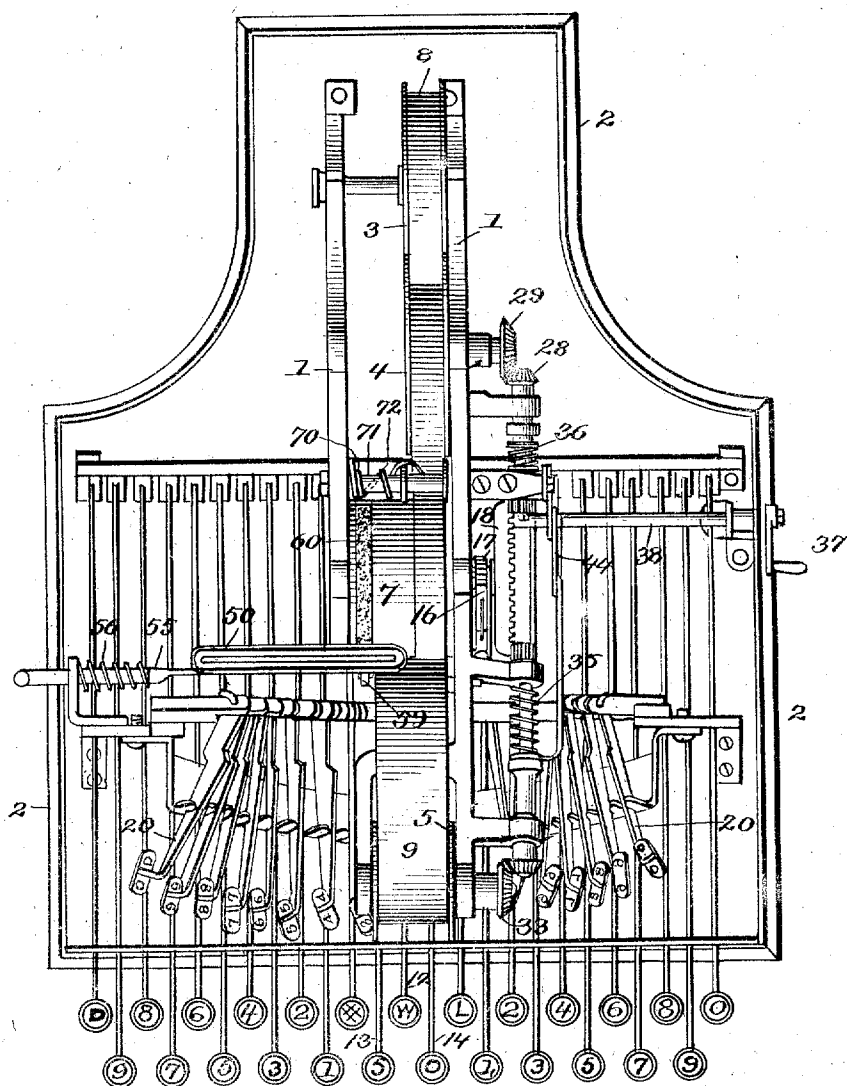


988,053.

2 SHEETS—SHEET 1.

Fig. 1.



Inventor:

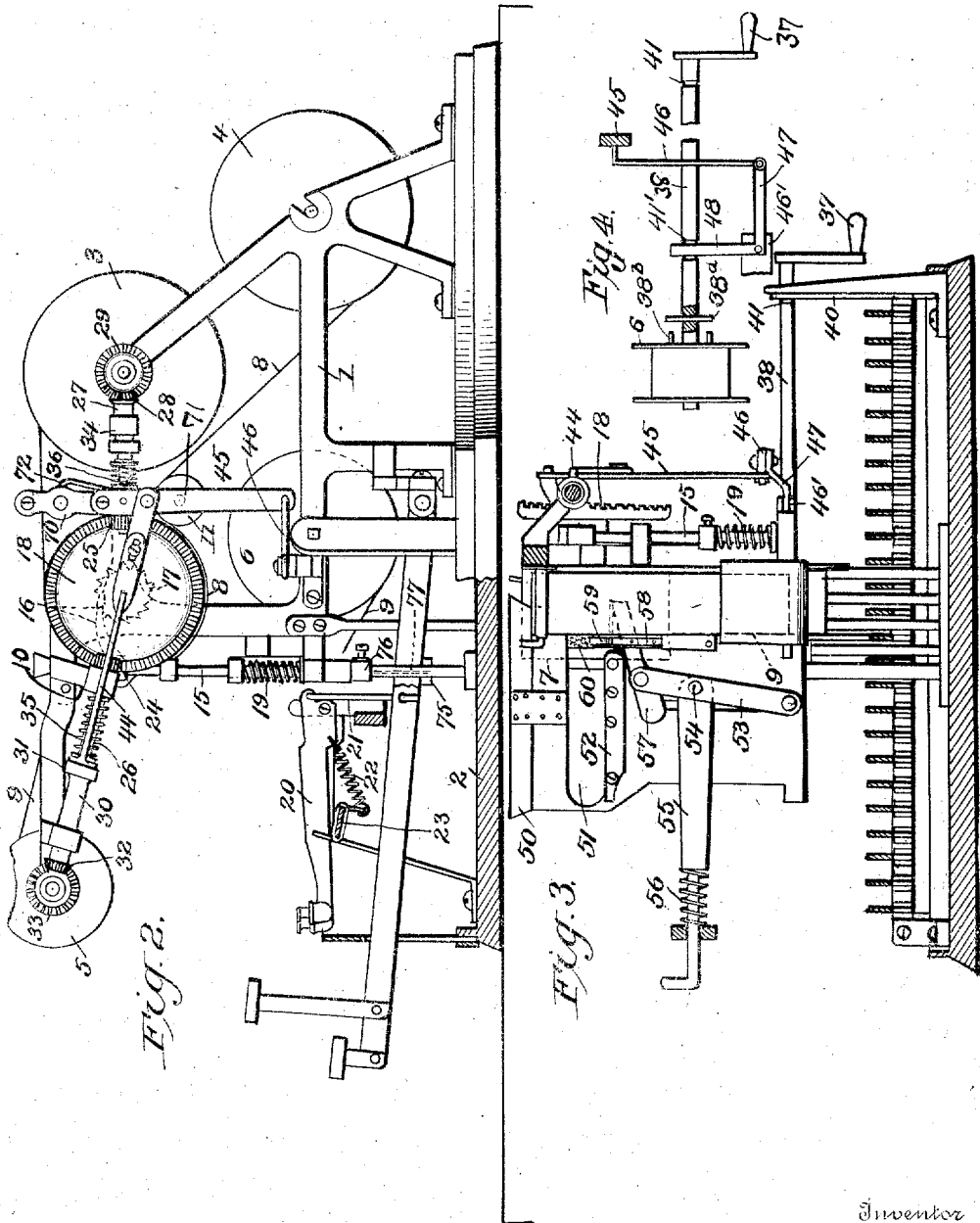
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Patented Mar. 28, 1911.

2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

FRANK R. WAINWRIGHT, OF JERSEY CITY, NEW JERSEY.

TYPE-WRITING MACHINE.

988,053.

Specification of Letters Patent. Patented Mar. 28, 1911.

Application filed August 28, 1909. Serial No. 515,056.

To all whom it may concern:

Be it known that I, FRANK R. WAINWRIGHT, citizen of the United States, residing at Jersey City, in the county of Hudson and State of New Jersey, have invented certain new and useful Improvements in Type-Writing Machines; and I do hereby 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.

This invention relates to typewriting machines of the class designed to print on checks or the like, certain figures representing the price of an article or articles of merchandise.

The object of the invention is to provide means for printing a check of the kind described and means for printing at the same time a permanent record of the amount of the sale.

A further object is to provide means for making the permanent record without the operation of mechanism other than that required to make the record of the amount of the transaction on the check.

A further object is to enable the operator to make certain characters on the permanent record which it is not desirable to place on the check.

Other objects include the provision of means for receiving the check, holding the latter in position, and freeing the same after printing, and means for advancing the paper record strip a given distance each time, regardless of the length of the strip carried by the feed roller or rollers.

With these objects in view, the invention consists in the novel construction herein-after described.

In the accompanying drawings, forming part of this application—Figure 1 is a top plan view of the device, Fig. 2 is a side elevation, Fig. 3 is a front elevation, with parts in section. Fig. 4 is a detail view showing a portion of the ribbon mechanism.

In carrying out my invention, I provide a framework 1, mounted on a base 2, and carrying paper rollers 3 and 4 and ink rollers 5 and 6, as well as the platen 7. The strip of paper 8 is fed from the lower roller, around the front portion of the platen, and is wound on roller 3, while the ink ribbon 9 moves between rollers 5 and 6 and is held in proper position with reference to the platen and the paper strip by means of guide roller

10. A guide roller 11, on the opposite side of the platen holds the paper strip in proper relation thereto and causes it to clear the ink roller 6.

The platen is operated only at given intervals, the spacing mechanism being idle during the operation of all of the key levers except those carrying keys designed to print the characters W, 5 and 0 in the center of the key board. The levers attached to these keys are marked respectively 12, 13 and 14. The spacing rod 15, which is operated after any of the three keys mentioned are struck, causes the pawl 16 to engage the teeth of ratchet wheel 17, located next to the inner surface of crown wheel 18 carried by the shaft of the platen 7. The spacing rod 15 is encircled by a spring 19 causing it to return to its normal position. The key levers are connected with the type bars 20 by means of links 21, springs 22 holding the type bars normally down and being connected with the stationary member 23.

The ink roller 5 and the paper roller 3 are controlled through the medium of crown wheel 18, the teeth of which engage pinions 24 and 25, carried respectively by shafts 26 and 27. Shaft 27 operates roller 3 by means of beveled gears 28 and 29, and shaft 26 communicates motion to shaft 30 through cone clutch 31, the said shaft 30 carrying beveled gear 32 meshing with gear 33 on the shaft of roller 5. Shaft 27 also comprises two sections connected by means of clutch 34. Springs 35 and 36 hold the clutch members normally in engagement, but the tension of the springs may be overcome by the tension of the paper strip and ink ribbon when the tension last mentioned is too great, owing to the difference in the size of the roll of paper or the rolled ribbon which necessarily varies from time to time. Excessive tension is obviated by the slipping of the clutch members.

The ribbon may be re-wound on roller 6 by the operation of crank 37 mounted on shaft 38. Roller 6 normally revolves loosely on this shaft, but when the latter is pressed inward, it is caused to engage the roller and rotate it. A flat spring 40, engaging an annular groove 41 in the shaft holds the latter in such position that the shaft and roller are permitted to rotate independently under ordinary circumstances.

In order to permit the ink ribbon to be wound on roller 6 in the manner described,

the members of clutch 31 are separated by the operation of rod 44 connected with lever 45, which latter is operated by arm 46 and a bell crank lever pivoted on bracket 46' and comprising members 47 and 48, one of which engages shaft 38. The endwise movement of shaft 38 swings lever 45. Shaft 38 carries a transverse pin 38^a which engages lugs 38^b on the roller 6 when said shaft is pressed inwardly thereby providing for the rotation of the roller with the shaft when re-winding the ribbon.

A chute 50 is provided for the insertion of the checks, this chute being provided with a slot 51 which leaves a portion of the surface of the check exposed, and along the lower edge of the slot a bar 52 is arranged, as shown in Fig. 3. A lever 53 is pivoted at 54, is operated by a rod 55, carrying a tension spring 56, and has pivoted to its upper end a bar 57 of varying thickness, which bar passes behind a resilient member 58 carrying a pressure roller 59 bearing against platen 7. Platen 7 is roughened on a portion of its surface, as at 60, and immediately beneath roller 59, so that there will be little danger of the check slipping from its proper position. By the operation of bar 55 the thicker portion of member 57 is brought between the resilient member and the platen, thus releasing roller 59 and permitting the check to be removed.

Twenty-three of the type bars carry twin type, but the type bars of keys W and L carry single type, for the reason hereafter stated. Beginning at the left the first five keys of the lower row and the second, third, fourth and fifth keys of the upper row represent dollars. Beginning at the right, the first five keys in the first row and the first seven keys in the second or lower row represent cents. The number sign (#) is used when the number to be printed represents cents only, and is designed to prevent any one from placing a false figure in the dollar position on the check. The W is used to print that character on the record strip after the waiter's number or the clerk's number has been printed. The character W does not appear on the check. The characters 5 and 0 are used for the final figures in the cents column, or as the units column. All of the prices on the hotel menu will involve the tenth or twentieth part of a dollar and will thus end with 5 or 0 as the last figure. The keys 5 and 0 (in the center) are connected with the spacing mechanism, and the tape and ink ribbon are advanced when these keys are pressed. The key W is connected in the same manner and for the same reason. A single type is operated by key L for printing that character on the tape only, following the prices of bar goods, such as liquors and cigars. The key D at the left stamps that character on both the tape and

the check to show that any amount printed in connection with the letter D is to be deducted from the amount of the check. Instead of the letter D, a minus sign may be used to indicate the matter to be deducted, and the letter C may be substituted for the # sign, if a separate key is needed to indicate sales of cigars.

Guide roller 11 is mounted in a frame comprising two vertical bars 70 mounted on a short transverse shaft 71 and held in the position shown by spring 72. Key levers 12, 13 and 14 each bear on bar 75 which connects with horizontal bar 76 by means of vertical rods 77 arranged between the key levers. Horizontal bar 76 connects with vertical spacing rod 15 and imparts motion thereto.

The operation of the device is as follows: The paper strip being in position to be wound on roller 3 from roller 4, and the ink ribbon being in position for winding from roller 6 to roller 5, a check is placed in chute 50 and drops down such chute until its upper portion appears opposite slot 51. The right hand end of the check is passed between roller 59 and the roughened surface 60 of the platen, roller 59 being caused to release its pressure on the platen, if necessary, by the operation of member 57, as previously described. In Fig. 1 the chute is shown as extending over the face of the platen a considerable distance and to a point near to the edge of the paper strip, in order that the duplicate type carried by the type bars may strike the check and strip simultaneously. The check being in position, the required keys representing dollars and cents are struck by the operator, and as this operation will necessitate the use of key lever 13 or key lever 14, in order to print the last figure of the item being recorded, such lever 13 or 14 will cause the operation of the spacing mechanism and will move the paper strip and check upwardly, thus giving room for printing the next item, if there be more than one. The roughened surface 60 will cause the check to move with the platen, and the pressure of roller 59 will hold the check after it is moved the required distance. If other items are to be printed, either in connection with the character D; or the character L, as above described, that operation is then carried out. The key lever 12 is operated to print the letter W on the check only, again operating the spacing mechanism, and the check is withdrawn from the top of the chute by hand. The movement of the platen causes the operation of paper roller 3 and ink roller 5 in the manner set forth in connection with the description of the mechanical construction.

What I claim as new and desire to secure by Letters Patent, is—

1. In a checking machine, a framework,

a platen mounted therein, means for causing a strip of paper to pass over said platen, means for holding a check or the like against the platen and alongside of the paper strip, 5 and means for simultaneously printing corresponding characters on the strip and on the check, such means last mentioned including a plurality of printing devices arranged to be operated independently, certain of 10 such devices carrying duplicate type and others carrying single type.

2. In a checking machine, a framework, a platen mounted therein, means for causing a strip of paper to pass over said platen, 15 means for supporting a check alongside of said strip, out of contact with the surface of the latter, means for simultaneously printing figures representing tens on the strip and on the check, and means for si- 20 multaneously printing figures representing hundreds on the strip and check without changing the position of such strip or check.

3. In a checking machine, a framework, a platen mounted therein, means for causing 25 a strip of paper to pass over the said platen, means for maintaining a substantially uniform tension on the paper strip, means for holding a check or the like against the platen and alongside of the paper strip, an inking 30 device, means for simultaneously printing corresponding characters on the strip and on the check, such means last mentioned including a plurality of printing devices arranged to be operated independently, cer- 35 tain of such devices carrying duplicate type and others carrying single type.

4. In a checking machine, a framework, a platen mounted therein, means for causing a strip of paper to pass over said platen, 40 means for holding a check or the like against the platen and alongside of the strip, out of contact with the surface of the latter, an inking device, means for operating the same and advancing the paper strip together, and 45 means for simultaneously printing corresponding characters on the strip and on the check.

5. In a checking machine, a framework, a platen mounted therein, a shaft for support- 50 ing the platen, a wheel carried by said shaft, means for causing a tape to pass over said platen, means for holding a check against the platen, out of contact with the surface of the strip, an inking device, said wheel ar- 55 ranged to operate the inking device and the tape moving means, a series of key levers, means for operating the wheel and inking device by the operation of certain of said levers, and means for simultaneously print- 60 ing characters on the tape and on the check.

6. In a checking machine, a framework, a platen mounted therein, means for causing a tape to pass over said platen, an inking 65 device, means including a crown wheel and associated mechanism for operating the ink-

ing device and the tape moving mechanism simultaneously at given intervals, means for reversing the movement of the inking device, means for holding a check against the platen, out of contact with the surface of 70 the strip, and means for simultaneously printing corresponding characters on the tape and on the check.

7. In a checking machine, a framework, a platen therein an inking device and a tape 75 moving device operating in conjunction therewith, a check supporting device, and printing mechanism arranged to print corresponding characters on the check and on the tape at one operation by means of du- 80 plicate type and to print other characters on the tape only.

8. In a checking machine, a framework, a platen therein, an inking device and a tape 85 moving device operating in conjunction therewith, a check supporting device, a check releasing device, and printing mechanism arranged to print corresponding characters on the check and on the tape at one operation by means of duplicate type, and to print 90 other characters on the tape only.

9. In a checking machine, a framework, a platen therein, an inking device and a tape 95 moving device operating in conjunction therewith, a check supporting device, a check releasing device, and printing mechanism including a plurality of pivotally mounted type carrying members arranged to print cor- 100 responding characters on the check and on the tape at one operation by means of duplicate type, and to print other characters on the tape only.

10. In a checking machine, a framework, a platen therein, an inking device and a tape 105 moving device operating in conjunction therewith, means for controlling the tape moving device and the inking device, such means including a plurality of clutches, a crown wheel, and mechanism associated therewith, a check supporting device, and 110 printing mechanism arranged to print corresponding characters on the check and on the tape at one operation by means of duplicate type, and to print other characters on the tape only. 115

11. In a checking machine, a framework, a platen mounted therein, means for causing a strip of paper to pass over the platen, means for supporting a check alongside of said strip, means for releasing the check, means 120 for simultaneously printing figures representing tens on the strip and on the check, means for simultaneously printing figures representing hundreds on the strip and check without changing the position of such strip 125 and check.

12. In a checking machine, a framework, a platen mounted therein, means for causing a strip of paper to pass over said platen, a chute for receiving a check, means for hold- 130

ing and means for releasing said check, means for simultaneously printing figures representing tens on the strip and on the check, and means for simultaneously printing figures representing hundreds on the strip and check without changing the position of such strip and check.

13. In a checking machine, a framework, a shaft mounted therein, a platen mounted on the shaft, means for actuating the shaft with a step by step movement, a crown wheel carried by the shaft, an inking device and a tape moving device, means arranged between the crown wheel and the devices last mentioned, such means including a plurality of slidable shafts and clutches connected therewith, means for supporting a check alongside of the tape, and means for simultaneously printing corresponding characters on the tape and on the check.

14. In a checking machine, a framework, a shaft mounted therein, a platen mounted on the shaft, means for actuating the shaft with a step by step movement, a crown wheel carried by the shaft, an inking device and a tape moving device, means arranged between the crown wheel and the devices last mentioned, such means including a plurality of slidable shafts and clutches connected therewith, a chute for receiving a check, a frame for holding the latter, means for releasing the check, and means for simultaneously

printing corresponding characters on the tape and on the check.

15. In a checking machine the combination of a rotatable member, and a platen carried thereby, means for driving such member with a step by step movement, a paper feeding device and an inking device driven directly from such rotatable member, printing mechanism associated with the aforesaid elements and means for maintaining a substantially uniform tension on the paper.

16. In a checking machine the combination of a rotatable member, means for driving such member, check moving and paper feeding mechanism driven directly from the rotatable member, and printing mechanism associated with the aforesaid elements.

17. In a checking machine the combination of a rotatable member, means for driving such member, check moving, paper feeding and inking mechanism driven directly from the rotatable member, and printing mechanism associated with the aforesaid elements.

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

FRANK R. WAINWRIGHT.

Witnesses:

HUGO MOCK,

ADOLPH L. MOCK.