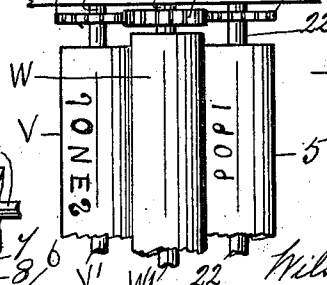
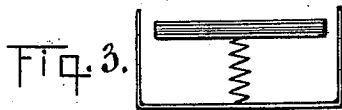
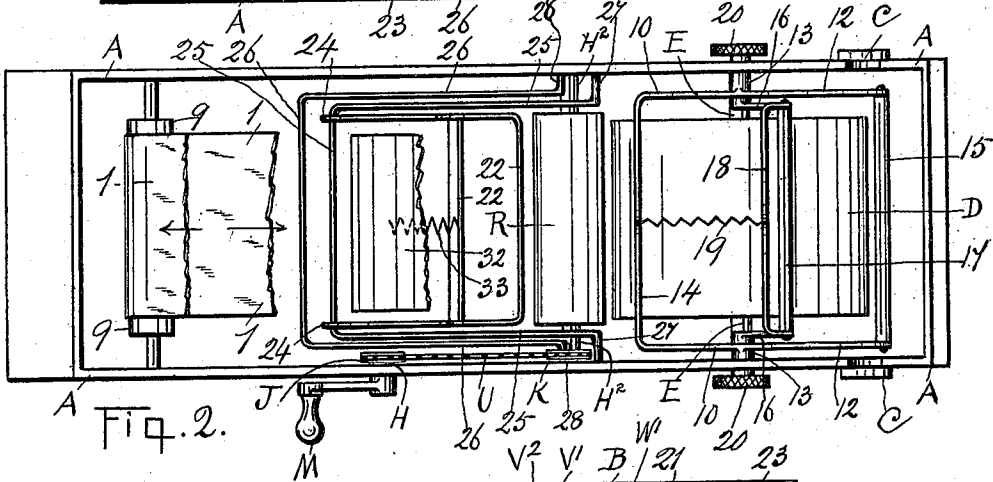
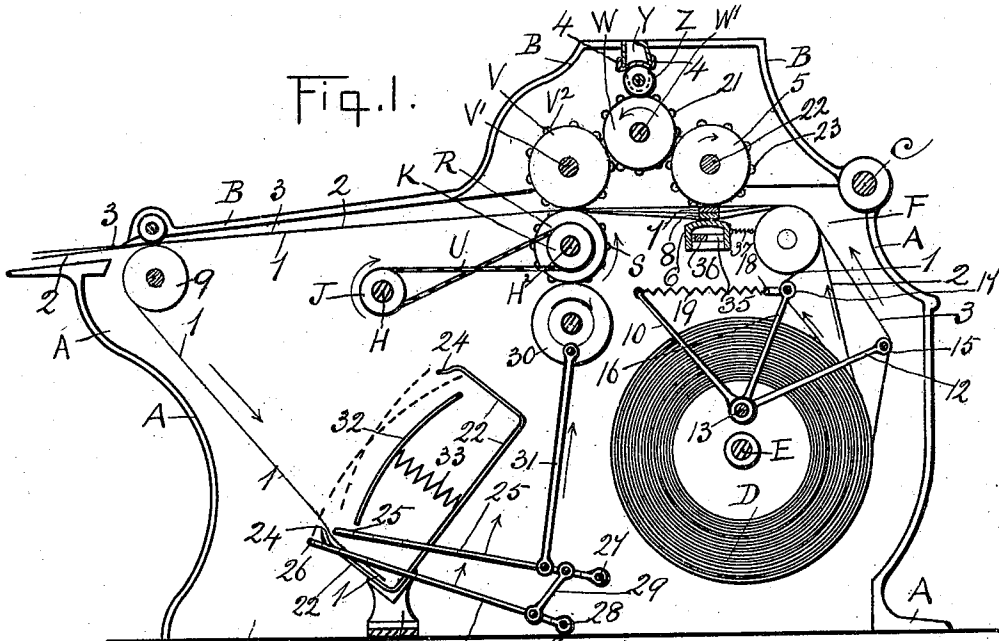


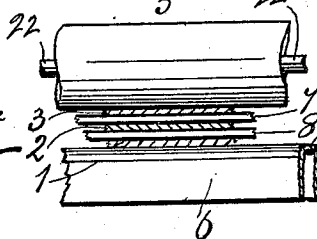
W. BARR.
 AUTOMATIC CHECK PRINTING AND RECORDING MACHINE.
 APPLICATION FILED AUG. 13, 1909.

983,802.

Patented Feb. 7, 1911.



Witnesses.
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WILSON BARR, OF HAMILTON, ONTARIO, CANADA.

AUTOMATIC CHECK PRINTING AND RECORDING MACHINE.

983,802.

Specification of Letters Patent.

Patented Feb. 7, 1911.

Application filed August 13, 1909. Serial No. 512,736.

To all whom it may concern:

Be it known that I, WILSON BARR, a subject of the King of Great Britain, and resident of Hamilton, in the county of Wentworth, in the Province of Ontario, Canada, have invented new and useful Improvements in Automatic Check Printing and Recording Machines, of which the following is a specification.

My invention relates to improvements in automatic check printing and recording machines in which a triplicate ribbon paper roll is journaled in a frame, the ribbons unrolled together from said roll and brought to position to be operated upon, and afterward the outer and middle ribbons severed from the body of their respective ribbons and the inner ribbon folded, for record.

The objects of my invention are first, to provide a machine adapted to automatically print and record counter or office checks from a triplicate paper ribbon roll and to retain a record of the checks, second, the object of my invention is to provide a machine to print on two or three ribbons of paper unwound from a single roll, a counter or office check on the top ribbon, to number and date all of the ribbons simultaneously, to carry the ribbons forward to a writing table on which are means of impressing any entries in writing made on the printed check, to carry the upper ribbon or ribbons forward to be severed, and to retain the under ribbon in the machine for reference.

I attain this object by the mechanism illustrated in the accompanying drawing in which:—

Figure 1 is a side elevation of the machine, one side of which is removed, to show the interior mechanism. Fig. 2 is a plan of the same, the hinged cover together with its mechanism, and the ribbons of the machine being removed, to show the interior. Fig. 3 is a sectional end elevation of the detached folded ribbon receptacle. Fig. 4 is a plan of the opposite side of the frame cover, broken, and showing especially the numbering roller, the printing roller and the intermediate inking roller, together with the spur driving wheels on the shafts of said rollers. Fig. 5 is an enlarged sectional end elevation of the triplicate ribbons, apart, the transverse ribbons between the same, also showing the sta-

tionary table and the numeral roller, all broken.

Similar letters refer to similar parts throughout the several views.

In the drawings the frame of the machine is indicated by A, and B is the cover hinged to said frame at C, said frame A may be of suitable contour and design.

D is a transverse roll of three paper ribbons joining one to the other, and is journaled in the rear part of the machine, on a journal E, concentric with said roll. Immediately the three ribbons are drawn from the roll D, they are separated by tension mechanism, hereinafter described; and for reference; the inner ribbon is indicated by 1, the middle ribbon by 2, and the outer ribbon by 3.

F is a transverse idle roller journaled in the frame, above the ribbon roll D, and the ribbons referred to pass together over said roller F.

Forward of the ribbon roll D, is a crank journal H in one side of the frame, provided with a crank M on the outer side and a sprocket wheel J on the inner side of the frame.

To the rear of the crank journal H is a transverse shaft H² journaled in the frame, and on which is secured a platen roller R.

K is a sprocket wheel secured on the shaft H² and is provided by the crank journal sprocket J by means of a cross belt U on said sprockets, and in an opposite direction to the sprocket J.

The platen roller shaft H² has a gear wheel S secured thereto, and the printing roller shaft V¹, has a gear wheel V² secured thereto, and is revolved in the opposite direction by the meshing of the wheel S. The directions in which the wheels and the rollers revolve are indicated by arrows.

W is an inking roller journaled in the cover B, and in contiguity with the printing roller V, said inking roller is revolved by friction with said printing roller.

Z is a transverse auxiliary inking roller journaled in the transverse ink trough Y, and is contiguous to the periphery of the inking roller W, to supply ink to the same.

On the outer sides and in the ink trough Y, and in contact with the roller Z, is a fabric 4, secured to the trough, and the roller Z is constantly in contact with said fabric,

thereby transmitting ink to the roller W, which then transmits ink to the printing roller V.

The spur wheel V^2 , on the printing roller journal V^1 , gears into a similar wheel 21 which runs loosely on the journal W^1 , of the inking roller W. On the journal 22 of the numeral roller 5, is secured a similar wheel 23, which is revolved in an opposite direction to the inking roller W, by the loosely connected gear wheel 21 on the inking roller journal.

The transverse number and date, or numeral roller 5, is journaled in the cover B, and is revolved by means of the gear wheels on the journals of the printing roller, the inking roller and the numeral roller respectively.

6 is a transverse table in the frame A, and shown in section in Fig. 1, of the drawing, and is for the purpose of supporting the transverse impression ribbons 7 and 8, together with the horizontal ribbons 1, 2 and 3. The table 6, has horizontal slots 35 in the ends thereof, to slide on oblong pins 36 of the frame, the spiral springs 37 connect the ends of the table with the frame, and allow the table to move slightly forward when the roller 5 is printing, and returns with the table to normal position after said roller has printed on the ribbon 3. The transverse ribbons 7 and 8, are taut and move with the table and also return with the table to normal position, after printing by their own inherent resiliency.

The ribbons 1, 2 and 3 pass together over the idler roller F, in the frame, the ribbon 3 between the numeral roller and the transverse ribbon 7, the ribbon 2 between the transverse ribbons 7 and 8, and the ribbon 1, between the transverse ribbon 8 and the transverse table 6. The ribbons 1, 2 and 3 receive simultaneous instantaneous impressions from the numeral roller 5, for instance, numbers and dates.

At the forward upper end of the frame is an idler guide transverse roller 9, journaled in the frame, to guide the inner ribbon 1 into a folding bracket, hereinafter mentioned.

Above the journal E of the rear ribbon roll D, are outer side arms 10 and 12, rigid with each other and journaled in the frame A, by means of their journals 13. The forward end parts of the arms 10 are connected together by their transverse bar 14, and the rear part of the arms 12 are connected together by a transverse roller 15, which acts as a tension roller to the ribbon 3, to take up any possible slackness of the ribbons.

The inner side arms 16 operate on the same center journal 13, and are connected together by a transverse bar 18. On the rear side of the bar 18, is a transverse roller 17, journaled in the ends of the arms 16.

The arms 10 and 12 operate together and

are always the same distance apart, the arms 16 operate together and more or less independently of the arms 10 and 12. The transverse bar 14 of the arms 10, and the transverse bar 18 of the arms 16, are connected by means of a spiral pull spring 19 to assist in taking up the tendency to slackness of the inner ribbon 1, when leaving the roll D, and to afford resiliency of action to said ribbon, and also to afford indirect resiliency of action to the arms 12 and their roller 15, on the outer ribbon 3, when leaving the roll D. The arms 10 and 12 together with semi-independent arms 16 are positioned and controlled by side hand screws 20, on the outer sides of the frames A, and which are adapted to allow the adjustment of said arms, and consequently more or less tension of their rollers 18 and 15, on, or against the ribbons 1 and 3, respectively.

The sprocket wheels with their chain referred to, throughout the specification may be substituted by a system of gear wheels as equivalents, to answer the purpose set forth.

22 is a stationary ribbon basket in the front part of the frame and is shown supported by a bracket 23, the basket may be made of light wire, and is set at a suitable angle in order that the two inwardly curved ends 24 shall be adapted to receive the ribbon and retain the same from the guide roller 9, by means of the two distinct similar operating frames 25 and 26 respectively. The frame 25 is pivoted at 27 to the frame A, and the frame 26 is similarly pivoted at 28, both said frames are similar, but are pivoted one in rear of the other. The frames 25 and 26 are connected together by means of a strap 29 which is pivotally connected to said frames in proximity to their pivotal bases. The ribbon 1 is operated by the arms 25 and 26, and is between said arms in order that the ribbon may be folded thereby.

30 is a friction roller, or wheel, journaled in the frame A and in contact with the platen roller and is revolved by said platen roller. The friction roller and the frame 25 are connected together by means of a connecting rod 31, loosely connected thereto, and is adapted to raise and lower said frames together, each frame forming a separate and different radius and arc.

When the end portion of the ribbon 1 from the roller 9 is placed inside of the curved ends 24 of the basket and above the transverse bar 25, the ribbon is then passed from the curved end to the opposite curved end by means of the frames 25 and 26, thereby folding the ribbon which rests on a light convex plate 32. The plate 32 is controlled by the folded ribbon on its upper side and by a pressure spring 33, on its underside, said spring is connected to the bottom of the basket and to the bottom of the plate, and presses against said plate. The two arcs of

a circle in which the transverse frames 25 and 26 travel are indicated by broken lines in Fig. 1 of the drawing.

The ribbon is so placed in the basket that the printed side is alternately up and down.

5 The operation of the machine is as follows: Upon turning the crank handle M, the printing roller V is revolved in the same direction by the platen roller shaft H², together with the platen roller R, by means of the cross belt U and the gear wheels S and V², thereby drawing the ribbons 1, 2 and 3 from the ribbon roll D. At this time the ribbons are numbered and dated by the numeral roller 5, and immediately afterward the top ribbon 3 is printed upon by the printing roller V, by pressure of said roller thereon. The transverse ribbons 7 and 8 are stretched taut, and are made of a material adapted to be impressed and to impress upon the adjoining ribbons. The top ribbon 3, is directly printed upon by contact of the ribbon 5 therewith. The lower ribbons receive impressions one from the other in the order as shown, namely, ribbon 3 to 7, ribbon 7 to 2, ribbon 2 to 8, and ribbon 8 to 1, which is supported on the table 6. After printing, the three ribbons then pass along together in a forward direction, and the under ribbon 1 passes over the idler roller 9, and thence into the receiving basket 42, for record. The ribbons 2 and 3 are then torn off from their body parts at the end of the cover, after traveling beyond the cover a predetermined distance, and are duplicates, one of which is retained by the proprietor and the other given to the customer. The ribbon 1 in the basket is retained there for possible future reference.

40 What I claim as my invention and desire to secure by Letters Patent, is:—

1. In a machine of the class described, a frame, a roll comprising triplicate ribbons journaled therein, a hinged cover on the frame, a dating and numbering roller journaled in the cover, a printing roller journaled in the cover and a platen roller journaled in the frame below said printing roller, a crank journaled in the frame, means connecting said crank and the journals of said printing roller and said platen to revolve the same in opposite directions to draw said ribbons together under the numbering roller and between said printing and platen rollers, and beyond, substantially as set forth.

2. In a machine of the class described, a frame, a roll comprising triplicate ribbons journaled therein, a hinged cover on the frame, a printing roller journaled in the cover, a platen roller journaled in the frame; a crank journaled in the frame, means connecting the crank and the journal of the printing roller, and means connecting said crank with the journal of the platen roller,

to revolve said rollers in opposite directions, by turning said crank, to draw the three ribbons simultaneously from said ribbon roll, and between said rollers and beyond, substantially as set forth.

3. In a machine of the class described, a frame, a roll comprising ribbons journaled therein, a hinged cover on the frame, a printing roller journaled in the cover, and a platen roller journaled in the frame contiguous to the printing roller, a crank journaled in the frame, means connecting said crank and the journals of the printing and platen rollers to revolve the same in opposite directions by said crank, and to simultaneously draw said triplicate ribbons between said printing and platen rollers and beyond, and rollers loosely connected to the frame and in proximity to the ribbon roll, adapted to adjustment to the outer and to the inner ribbons of the triplicate, to afford resilient tension to said ribbons, substantially as set forth.

4. In a machine of the class described, a frame, a hinged cover thereon, a triplicate ribbon roll journaled in the frame, a printing roller journaled in the cover, a transverse table in the frame, a numbering and dating roller journaled in the cover immediately above said table, an idler roller journaled in the frame, said triplicate ribbons passing over said idler roller, and between the numbering roller and the table, transverse ribbons between the triplicate ribbons immediately over the table, and the triplicate ribbons adapted to travel between the printing and the platen rollers, and beyond.

5. In a machine of the class described, a frame, a triplicate ribbon roll journaled therein, a journaled numbering and dating roller, a journaled printing roller, a journaled intermediate inking roller contacting with and adapted to ink said numbering and printing rollers, a journaled platen roller in proximity with the printing roller, the triplicate ribbons adapted to pass simultaneously under the numbering roller, transverse ribbons between said triplicate ribbons, a table below the numeral roller to support said ribbons, the triplicate ribbons adapted to travel between the printing and the platen rollers and beyond.

6. In a machine of the class described, a frame, a shaft adapted to have mounted thereon a roll of triplicate ribbons, and journaled in the frame, adjustable arms connected with the frame in proximity to the said ribbon roll, rollers between said arms adapted to engage the inner and outer ribbons of the triplicate ribbon roll to provide tension for said ribbons, a numbering and dating roller journaled in the frame, a printing roller and a platen roller journaled in the frame, triplicate ribbons from said roll adapted to pass under said numbering and

dating roller, and between said printing and platen rollers, to receive impression therefrom.

7. In a machine of the class described, 5
a frame, a shaft adapted to have mounted thereon a roll of triplicate ribbons, and journaled in the frame, and means pivotally connected to the frame for tensioning the inner and outer ribbons of the triplicate ribbon, 10
a printing roller and a platen roller journaled in the frame, and in proximity one with the other and adapted to revolve in opposite directions, triplicate ribbons from said ribbon roll adapted to pass between said 15
rollers the outer of said ribbons to receive impression from the printing roller, substantially as set forth.

8. In a machine of the class described, a frame, a triplicate ribbon roll journaled 20
therein, a printing roller and a platen roller journaled in the frame, a numbering roller journaled in the frame, a table below the numbering roller, transverse ribbons between the triplicate ribbons and over the table, and 25
the triplicate ribbons afterward adapted to pass between the printing roller and the platen roller, and beyond, substantially as set forth.

9. In a machine of the class described, 30
a frame, a ribbon roll journaled therein, a printing roller and a platen roller, contiguous with one another, ribbons from the roll passing between the rollers, means in the frame to revolve said rollers in opposite 35
directions to bring the ribbons from the roll and receive printing impressions, adjustable arms journaled in the frame, rollers between said arms adapted to engage the inner and outer ribbons to tension said ribbons when 40
drawn from the roll by said printing and platen rollers, substantially as set forth.

10. In a machine of the class described, a frame, a triplicate ribbon roll journaled therein, a hinged cover on the frame, a 45
printing roller and feed roller journaled in the cover, a platen roller and feed roller journaled in the frame, said printing roller and feed roller adapted to rotate in contact

with said platen roller and feed roller when the cover shall be brought to a closed position on the frame, means for rotating the printing, platen and feed rollers, whereby the three ribbons of the triplicate roll are brought forward together through and between the printing and platen rollers and 55
through and between the feed rollers, a ribbon receptacle in the frame, the inner one of said ribbons initially fastened in the receptacle, means adapted in succession to engage and carry said ribbon to either end of the receptacle alternately and causing the ribbon to be folded in the receptacle, said ribbon to be placed between the inwardly curved end of the receptacle and the movable plate and to be held there by pressure of 65
the spring upwardly against said plate, thereby placing the ribbon in said receptacle in folded form, and means to operate the said pivotal frames, substantially as set forth. 70

11. In a machine of the class described, a frame, having a hinged cover, a stationary receptacle therein, the ends of said receptacle inwardly turned at the top, a movable plate within said receptacle, a spring underneath said plate and adapted to force said plate upwardly against the inwardly turned ends of the receptacle, frames having different pivotal connections in the frame of the machine, to make different arcs, a roll 80
of triplicate ribbons journaled in the frame, the inner one of said ribbons initially fastened in the receptacle, said pivotal frames adapted in succession to engage and carry said ribbon to either end of the receptacle 85
alternately and causing a folded end of said ribbon to be placed between the inwardly curved end of the receptacle and the movable plate and to be held there by pressure of the spring upwardly against said plate, 90
thereby placing the ribbon in said receptacle in folded form, substantially as set forth.

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Witnesses:

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