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CHECK PRINTING AND PHOTOGRAPHING MACHINE

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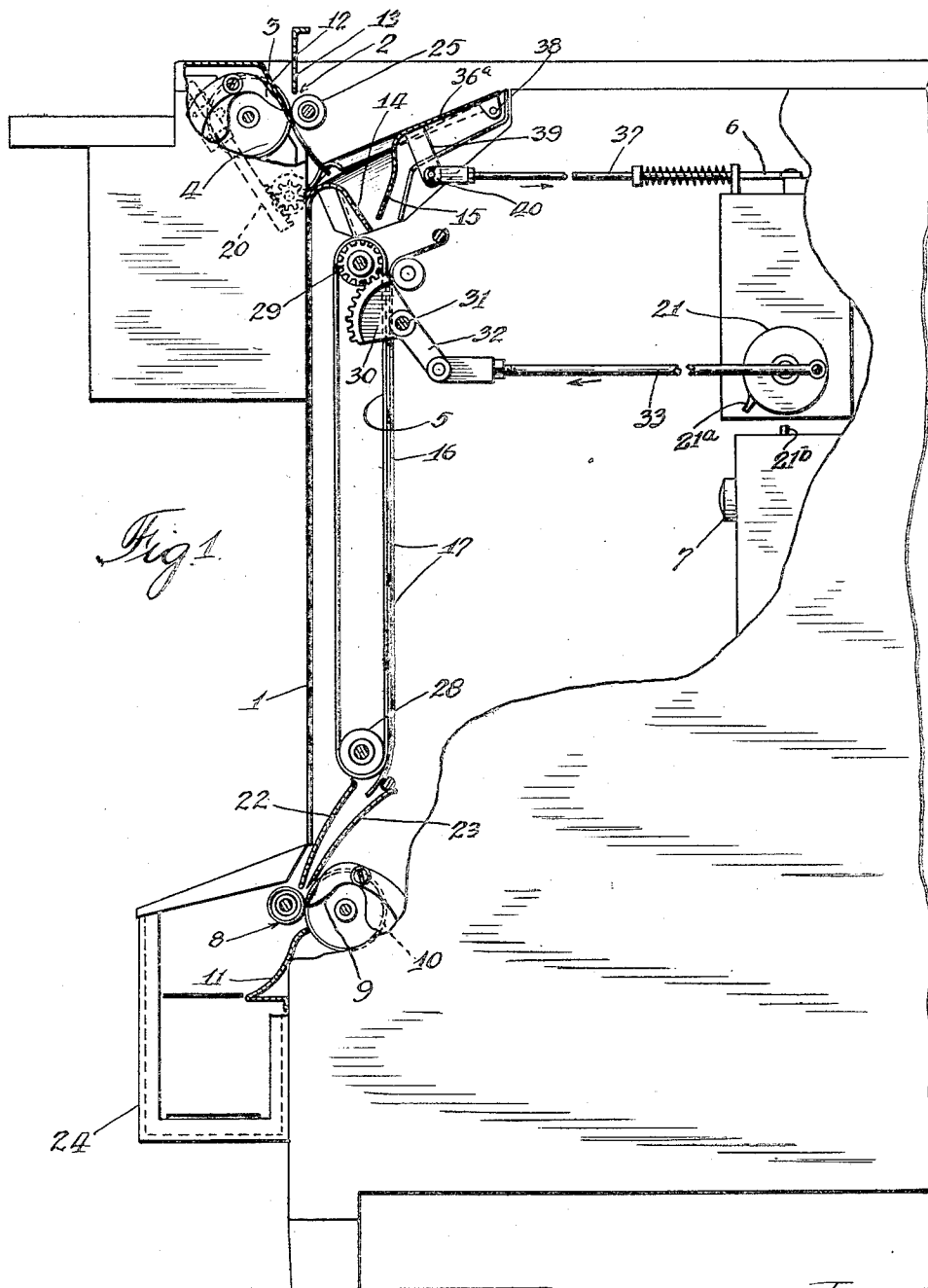


Fig. 1

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CHECK PRINTING AND PHOTOGRAPHING MACHINE

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Our invention relates to a check printing and photographing machine.

One of the objects of our invention is to provide a machine to which checks may be fed one by one which will automatically endorse the check, cause a photograph of the face of the check to be taken on a roll of film, print the number on the face of the check, and stack the checks after they have been endorsed, photographed and numbered.

Further objects will appear from the description and claims.

In the drawings in which an embodiment of our invention is shown,

Figure 1 is a side elevational view of the machine, parts being broken away;

Fig. 2 is a section on a larger scale than Fig. 1, showing the control for the step-by-step conveyor feed; and

Fig. 3 is a sectional view on an enlarged scale, showing a one-way clutch for the conveyor feed.

Referring to the drawings in detail, the construction shown comprises a supporting framework and housing 1, a check-controlled printing couple 2 at the upper left hand portion of the housing, as shown in Fig. 1, for printing the endorsement on the back of the check, a trip 3 controlled by the passage of the check which when operated causes a single rotation of the type cylinder 4 to endorse the check, an intermittently-movable step-by-step conveyor 5 to which the checks are delivered from the printing couple 2, clutch means 6 whereby for each revolution of the type cylinder 4 the conveyor 5 is caused to advance a step to bring the checks successively in front of the camera 7 to be photographed, a second printing couple 8 for printing a number on the front side of the check, to which second printing couple the checks are delivered from the step-by-step conveyor 5, a second check-controlled trip 9 which when operated causes a single rotation of the second type cylinder 10, and a stacker member 11 to which the checks are delivered from the second printing couple 8.

Before describing in further detail the

various parts of the machine, we will briefly outline the operation.

The machine may be used in conjunction with an adding machine so that when the operator of the adding machine is listing the checks she simply drops each check after it is listed into the space between the two guide plates 12 and 13 which direct the edge of the check between the feed rollers of the printing couple which feed rollers seize the check and carry it downwardly. As the check is carried downwardly, its edge engages the tip of the trip finger 3 which operates a one-revolution clutch of any suitable type which causes a single revolution of the type cylinder 4 to place a suitable endorsement on the back of the check. The check passes from the printing couple 2 and is directed by the guides 14 and 15 so that its lower edge arrives at the junction of the intermittently-operated endless conveyor web 5 with the flexible guide wires 16 which hold the checks 17 against the conveyor web. Immediately thereafter a cam lug 18 on the printing cylinder engages a cam lug 19 on the rack bar 20 which, through the clutch construction 6, causes a single revolution of the crank disc 21 to cause a single step movement of the conveyor belt 5. This single-step movement of the conveyor belt advances the check downwardly between the guide wires 16 and the adjacent run of the conveyor belt 5. As succeeding checks are fed to the printing couple, they are successively seized by the conveyor belt so that a series of checks are fed downwardly in front of the camera.

Suitable means are provided for causing the exposure to be made at the proper-timed instant to cause photographs of the checks to be made on a strip of film. This may take the form of a projection 21a on the disc 21 which periodically engages an exposure lever 21b on the camera, the construction being so timed that the exposure takes place while the conveyor 5 is stationary. The checks are finally delivered from the step-by-step conveyor one at a time between the guide plates 22 and 23 at the lower end of the conveyor. These guide plates direct the

checks one at a time to the second printing couple 8 at the lower left hand portion of the housing 1. This printing couple is designed so as to print any desired indicia on the front side of the check, such as a number or the notation "no protest" or any desired notation. As the checks are fed one by one to this printing couple, the feed rollers of the printing couple seize the lower edge of the check and draw it between the rollers of the printing couple. As the check is thus drawn along, its lower edge engages the tip of the trip finger 9 which, by means of a suitable one-revolution clutch, causes a single revolution of the type cylinder 10 to place the desired indicia on the front of the check.

After the check has passed through the printing couple, it engages a stacker member 11, which stacks the check face down in the receptacle 24, thus stacking the checks in the same order as they were before being fed into the machine.

Referring further to the details of construction, the printing couple 2 comprises the impression cylinder 4 carrying the type plate 1 and the platen roller 25 against which the type plate 26 presses the check in the printing operation. The check-controlled trip 3 may be of any usual or suitable type, which will be effective in causing a single rotation of the type cylinder 4 when the check is drawn against the tip of the finger of the trip. The step-by-step conveyor 5 is mounted on upper and lower rollers 27 and 28, the upper roller having a one-way clutch connection with the drive gear 29 which is rotated first in one direction and then in the other by means of the segment gear 30. This one-way clutch connection may be of any suitable type, such as shown in Fig. 3, comprising a pair of spring-pressed balls 31' mounted in wedging pockets in a reduced portion of the roller 27, the construction being such that when the gear 29 is rotated in the direction of the arrow A, it will cause rotation of the roller 27 but such that when the gear is rotated in the opposite direction it will not cause rotation of the roller, the ball simply compressing the spring slightly so as not to exert a binding action between the gear and roller. The segment gear 30 is rockably mounted at 31 and has an actuating arm 32 secured by a connecting rod 33 to the crank disc 21. It will be recalled that this crank disc 21 is caused to make a complete revolution immediately after the check has passed through the printing couple, thus rocking the segment gear 30 back and forth and causing rotation of the drive roller in the direction of the arrow A, thus imparting a step feed to the conveyor 5.

The clutch mechanism 6 may be of any usual or suitable type which will cause a

single rotation of the crank disc 21 every time the cam member 18 actuates the rack 20. The transmission from the rack 20 to the clutch-controlling mechanism 6 comprises a pinion 34 meshing with the rack 20, a cam 35 rotatable with the pinion, and a finger 36 extending from the rock plate 36a engaged and depressed by the cam 35 to operate the connecting rod 37 extending to the clutch 6. This rock plate is pivotally mounted at 38 and has a downwardly-extending lug 39 to which the connecting rod 37 is pivotally secured at 40. This rock plate has the guide member 15 formed as an integral part thereof. Thus it will be seen that immediately after the check has passed through the printing couple and been delivered between the guide members 14 and 15 to the junction of the conveyor 5 with the guide wires 16, the conveyor 5 will be given a step movement which will seize the check and feed it downwardly one step toward photographing position.

Further modifications will be apparent to those skilled in the art and we desire, therefore, to be limited only by the prior art and the scope of the appended claims.

Having thus described our invention what we claim and desire to secure by Letters Patent is:

1. A check printing and photographing machine comprising a cylindrical impression member rotatable about a horizontal axis, a check-controlled trip which when operated causes a single rotation of the impression cylinder to cause printing on one side of the check, an intermittently movable step-by-step conveyor to which the checks are delivered from the impression cylinder, means whereby for each revolution of the impression cylinder the conveyor is caused to advance a step to bring the checks successively into position to be photographed, a second cylindrical impression member to cause printing on the other side of the check to which second cylinder the checks are delivered from the conveyor, a second check-controlled trip which when operated causes a single rotation of the second impression member, and a stacker to which the checks are delivered from the second impression cylinder for stacking the checks in the order in which they were delivered to the machine with the last printed face down.

2. A check printing and photographing machine comprising a cylindrical impression member rotatable about a horizontal axis, an intermittently movable step-by-step conveyor to which the checks are delivered from the impression cylinder, means whereby for each revolution of the impression cylinder the conveyor is caused to advance a step to bring the checks successively into position to be photographed, a second cylindrical impression member to cause print-

ing on the other side of the check to which second cylinder the checks are delivered from the conveyor, a check-controlled trip which when operated causes a single rotation of the second impression member, and a stacker to which the checks are delivered from the second impression cylinder for stacking the checks in the order in which they were delivered to the machine with the last printed face down.

3. A check printing and photographing machine comprising a cylindrical impression member rotatable about a horizontal axis, an intermittently movable step-by-step conveyor to which the checks are delivered from the impression cylinder, means whereby for each revolution of the impression cylinder the conveyor is caused to advance a step to bring the checks successively into position to be photographed, a second cylindrical impression member to cause printing on the other side of the check to which second cylinder the checks are delivered from the conveyor, and a check-controlled trip which when operated causes a single rotation of the impression member.

4. A check printing and photographing machine comprising an intermittently movable step-by-step conveyor to which the checks are delivered, a camera for photographing checks successively as the conveyor moves, means for causing an exposure to be made at the proper instant to cause a photograph of the check to be made on the strip of film, a cylindrical impression member to cause printing on one side of the check to which cylinder the checks are delivered from the conveyor, and a check-controlled trip which when operated causes a single rotation of the impression member.

5. A check printing and photographing machine comprising an intermittently movable step-by-step conveyor to which the checks are delivered, a camera for photo-

graphing checks successively as the conveyor moves, means for causing an exposure to be made at the proper instant to cause a photograph of the check to be made on the strip of film, a cylindrical impression member to cause printing on one side of the check to which cylinder the checks are delivered from the conveyor, a check-controlled trip which when operated causes a single rotation of the impression member, and a stacker to which the checks are delivered from the impression cylinder for stacking the checks in the order in which they were delivered to the machine.

6. A check printing and photographing machine comprising a cylindrical impression member rotatable about a horizontal axis, a check controlled trip which when operated causes a single rotation of the impression cylinder to cause printing on one side of the check, an intermittently movable step-by-step conveyor to which the checks are delivered from the impression cylinder, and means whereby for each revolution of the impression cylinder the conveyor is caused to advance a step to bring the checks successively into position to be photographed.

7. A check printing and photographing machine comprising an intermittently movable step-by-step conveyor to which the checks are delivered, a camera for successively photographing checks carried by the conveyor, means for causing an exposure to be made at the proper instant to cause a photograph of the check to be made on the strip of film, a cylindrical impression member to cause printing on one side of the check to which cylinder the checks are delivered from the conveyor, and means whereby when the check is delivered to the cylinder, the cylinder will be given a single revolution.

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