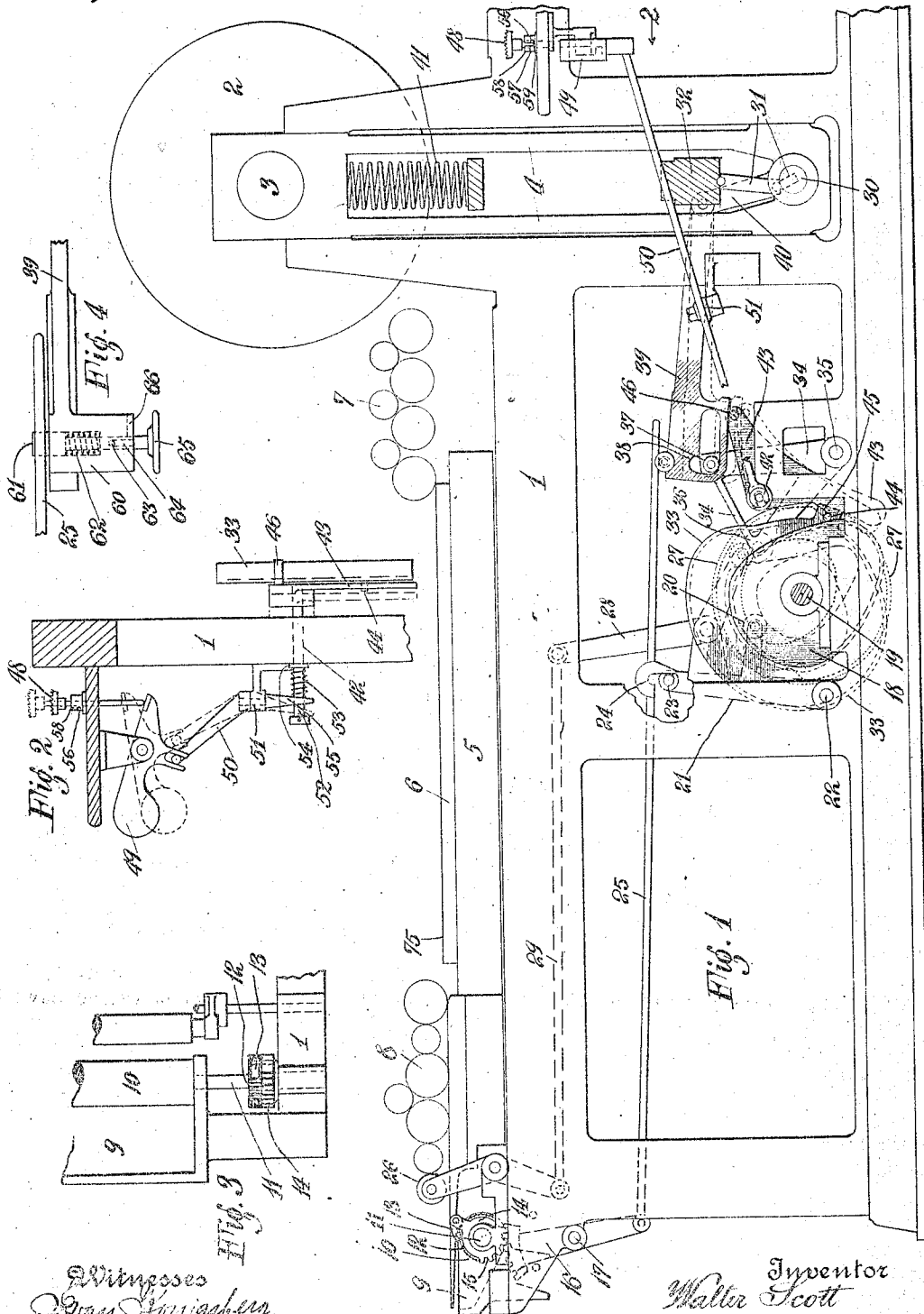


W. SCOTT, DEC'D.  
I. & D. J. SCOTT, EXECUTORS.  
PRINTING MACHINE.  
APPLICATION FILED JULY 11, 1905.

Patented Sept. 13, 1910.

970,125.



Witnesses  
Evan H. H. H. H.  
Anna H. H. H.

Inventor  
Walter Scott  
By his Attorneys  
Becker & Spaulding

# UNITED STATES PATENT OFFICE.

WALTER SCOTT, OF PLAINFIELD, NEW JERSEY; ISABELLA SCOTT AND DAVID JOHN SCOTT EXECUTORS OF SAID WALTER SCOTT, DECEASED.

## PRINTING-MACHINE.

970,125.

Specification of Letters Patent. Patented Sept. 13, 1910.

Application filed July 11, 1905. Serial No. 269,160.

*To all whom it may concern:*

Be it known that I, WALTER SCOTT, a citizen of the United States of America, and a resident of Plainfield, Union county, New Jersey, have invented certain new and useful Improvements in Printing-Machines, of which the following is a specification.

The present invention relates generally to printing machines, and has more particularly reference to tripping mechanism used in connection therewith.

In printing machines, whether rotary or flat bed, such as two or three revolution or other machines, it is customary to trip the impression automatically once to each cycle of the machine. This may be accomplished by moving the form carrying member out of contact with the impression member, but preferably, and as shown herein, it is accomplished by moving the impression cylinder out of contact with the form carrying member. Means are further provided for interrupting the operation of the automatic means so as to maintain the parts tripped. When this takes place and the supply of ink is not being used, the ink accumulates on the distributing rolls or other distributing surface, and on the form.

To overcome this objectionable condition is the object of the present invention.

One feature of the invention consists in interrupting the operation of the fountain roll when the interrupting means for the automatic tripping means are operated. Preferably, and as herein disclosed, this is effected by placing ink tripping means under the control of the automatic tripping means in a manner similar to that shown in application Serial No. 368,023 filed July 3, 1905.

When inking up the form before printing commences, it is desirable to maintain the impression tripped without stopping the supply of ink.

Another feature of the invention therefore resides in providing means whereby the impression can be maintained tripped without stopping the operation of the fountain roll.

Other features of construction will appear as the specification proceeds.

In the drawings, the invention has been embodied in a suitable form, but it is obvious that changes in construction may be

made without departing from the spirit of the invention.

In the said drawings: Figure 1 is a side elevation of a two revolution printing machine showing the invention applied to this structure. Fig. 2 is a view looking in the direction of the arrow 2 in Fig. 1 showing certain details and partly in section. Fig. 3 is a plan detail view of the fountain roll and adjacent elements. Fig. 4 is a plan detail view of the means for rendering the ink tripping mechanism inoperative.

Similar characters of reference indicate corresponding parts in the different views.

1 indicates a framework of any suitable construction for properly supporting the parts comprising the machine.

2 indicates the impression cylinder carried by the journal 3. This journal 3 is mounted in the sliding frames or standards 4, one at each side of the machine, but only one of which is seen.

The form carrying means in the present instance consist of the reciprocating bed 5 on which is mounted the plate or type or other means constituting the form 6.

7 and 8 indicate two groups of distributing rolls such as are usually employed in machines of this character forming a distributing surface, and adjacent to the group of distributing rolls is a fountain 9 in which is located the fountain roll 10. This fountain roll may be of any usual or suitable construction, and may either rotate continuously or intermittently, or may be operated in any other way found useful. In the present instance, however, it is given an intermittent progressive motion in one direction only by the following means.

Mounted on the fountain roll shaft 11 is a ratchet 12 with which engages the pawl 13 carried by the segment 14 which is provided with a number of teeth as 15 adapted to be engaged by the sector 16 pivoted on the framework at 17. This sector 16 is operated by means of the cam 18 mounted on the shaft 19 and with which cam engages the friction roll 20 of the lever 21 which is pivoted at 22. This lever 21 is provided with a friction roll 23 at its upper end adapted to engage in the notch 24 of the connection 25 which is attached at one end to the sector 16. This cam 18 makes one revolution in the present instance to each impression or

to each complete reciprocation of the bed, and as it rotates, the lever 21 is oscillated thereby moving the connection 25 back and forth, thus rocking the sector 16 and imparting the proper motion to the fountain roll. On each return stroke of the bed, the impression cylinder is moved up and out of the way of the form, while on the forward movement of the bed the impression cylinder is moved down so as to be in contact with the said form as it passes under the same.

The ink is transferred as is customary from the fountain roll to the distributing rolls or to the ink distributing table 75 on the reciprocating bed or to any other distributing surface desired by means of the ductor roll 26 which is operated in the usual manner from a cam as 27 conveniently mounted on the shaft 19 through the instrumentality of the levers 28 and 29.

Any suitable means may be utilized to trip and untrip the impression automatically once to each cycle of the machine. In the present instance, however, there is mounted on the standards 4 a shaft 30 connected by means of the toggle links 31 to a fixed bracket 32 on the framework. This shaft 30 is oscillated by means of the cam 33 conveniently mounted on the shaft 19 through the instrumentality of the rocker 34 pivoted at 35 and having a friction roll 36 engaging with the said cam 33. This rocker 34 further carries another friction roll 37 adapted to engage in the notch 38 of the lever or member 39 whose other end is connected by means of the link 40 to the shaft 30. As the cam 33 rotates the rocker 34 will push the lever 39 back and forth, thereby oscillating the shaft 30 and raising and lowering the impression cylinder at the proper periods. Suitable means as a spring 41 is used to balance the weight of the cylinder.

The means for interrupting the operation of the automatic means so as to maintain the parts tripped are preferably constructed as follows: Mounted on the stud 42 is a rocking and sliding cam 43 which is adapted to lift the lever 39 when it is desired to maintain the impression tripped. In order to properly effect this, there is mounted on the cam 33 or elsewhere, a projection 44 which is adapted to act on the cam surface 45 of the cam 43. As previously stated, this cam 43 both oscillates and slides and is provided with a pin or other member 46 upon which the free end of the lever 39 rests. This pin is of such length that it will always be in contact with the lever 39. But when it is not desired to trip the cylinder, the cam is moved sidewise so as to bring the cam surface 45 out of the plane of the passing projection 44. When this cam surface 45, however, is in the plane of 44, the pin 46 tends to

raise the lever 39 up so as to bring the roll 37 out of the notch 38 as shown in the drawing, whereby when the cam 33 moves the rocker 34, said roll 37 will move loosely in the slot 47 of the lever 39 without operating the latter. By this means the cylinder remains in its elevated position.

The means for controlling the action of the cam 43 as shown in the present instance are those commonly employed in the art and consist preferably of a foot treadle 48 adapted to act against the counterweight 49 when depressed, and through the connection 50 pivoted on the stud 51 the cam 43 is moved sidewise so as to bring its surface 45 into and out of engagement with the projection 44. Preferably the parts are so arranged that the foot treadle can be depressed at any time during the operation of the machine so that at the proper moment said cam will be shifted sidewise into the path of the projection 44. This is preferably effected by mounting on the pin 52 which is used to move the cam sidewise a spring 53 which presses against a collar 54 mounted on the said spindle 52 so that when this spring 53 is compressed by the action of the connection 50 whose two forked arms 55 bear against the said spring, power will be stored whereby when the projection 44 has passed the cam 43, the said cam will be moved sidewise into the plane of the said projection 44 so that when the latter comes around on the succeeding revolution it will encounter the cam surface 45 and tilt the cam 43. The foot treadle 48 is provided with a pin 56 which passes into the slot 57 of the sleeve 58 when the said foot treadle is depressed and by turning the said treadle around the said pin 56 will enter the small horizontal slot 59 whereby the parts will be retained in the tripped position.

The lever 39 is provided with a bushing 60 in which is located the projection 61 normally extending into the plane of the end of the connection 25 by reason of the spring 62. This projection is provided with a pin 63 traveling in the slot 64 and when withdrawn by means of the handle 65 and the pin is turned into the slot 66, the said projection will be moved within the said bushing so as not to contact with the end of the connection 25. Obviously, when the said projection protrudes into the plane of the connection 25 and the lever 39 is raised by the action of the cam 43, it will lift the said connection 25 up, thereby disengaging the roll 23 from the notch 24 so that as the lever 21 swings back and forth it will not transmit its motion to the said connection 25, whereby the fountain roll is kept in a state of rest. In that way no ink is transferred from the fountain roll to the distributing rolls while the mechanism is tripped.

It will therefore be understood from the

foregoing that the impression cylinder is moved periodically and automatically out of contact with the form and in addition to that it may be tripped so as to remain out of contact with the said form, thereby also tripping the connection which drives the fountain roll so that no undue accumulation of ink takes place on the distributing rolls and form. It is necessary, however, at times to operate the inking mechanism while the cylinder is tripped. This is especially true before the press is started and when it is desired to ink up the distributing rolls and the form before printing commences. For this reason it will be understood that when the projection 61 is withdrawn from under the connection 25, the ink tripping mechanism will be inoperative because when the lever 39 is raised up it will not lift the connection 25 out of operative engagement with the roll 23. In this way the cylinder can be tripped while the inking mechanism remains operative.

Of course it will be understood that this device can be applied to any kind of a press whether rotary or bed and cylinder in which the tripping mechanism is used for the impression cylinder. Of course it will also be understood that the words "tripping the impression cylinder" should be construed to include the equivalent of moving the form carrying means instead of the impression cylinder, as is done in some constructions.

What is claimed is:

1. In a printing machine, the combination of an impression cylinder, form carrying means, a fountain and fountain roll, a ductor roll and a distributing surface, automatic means for tripping and untripping the impression once to each cycle of the machine, a connection for operating the fountain roll, means for operating the said connection, means for interrupting the operation of the automatic means so as to maintain the impression tripped and for simultaneously therewith lifting the connection out of engagement with its operating means.

2. In a printing machine, the combination of an impression cylinder, form carrying means, a fountain and fountain roll, a ductor roll and a distributing surface, automatic means for tripping and untripping the impression once to each cycle of the ma-

chine, a connection for operating the fountain roll, means for operating the said connection, means for interrupting the operation of the automatic means so as to maintain the impression tripped and for simultaneously therewith lifting the connection out of engagement with its operating means, and means whereby the impression can be maintained tripped without lifting the connection out of operative engagement with its operating means.

3. In a printing machine, the combination of an impression cylinder, form carrying means, a fountain and fountain roll, a ductor roll and distributing surface, a connection for operating the fountain roll, means for operating the said connection, a member adapted to automatically trip and untrip the impression once to each cycle of the machine, a projection on said member normally protruding in the plane of the said connection, and means for lifting the member aforesaid thereby interrupting its normal operation and maintaining the impression tripped, thereby also lifting the connection out of operative engagement with its operating means by the projection.

4. In a printing machine, the combination of an impression cylinder, form carrying means, a fountain and fountain roll, a ductor roll and distributing surface, a connection for operating the fountain roll, means for operating the said connection, a member adapted to automatically trip and untrip the impression once to each cycle of the machine, a projection on said member normally protruding in the plane of the said connection, and means for lifting the member aforesaid thereby interrupting its normal operation and maintaining the impression tripped, thereby also lifting the connection out of operative engagement with its operating means by the projection, and means for withdrawing the said projection so that the member can be lifted to maintain the impression tripped without lifting the connection out of engagement with its operating means.

Signed at New York this 30th day of June 1905.

WALTER SCOTT.

Witnesses:

A. F. GEYER,  
AXEL V. BECKEN.