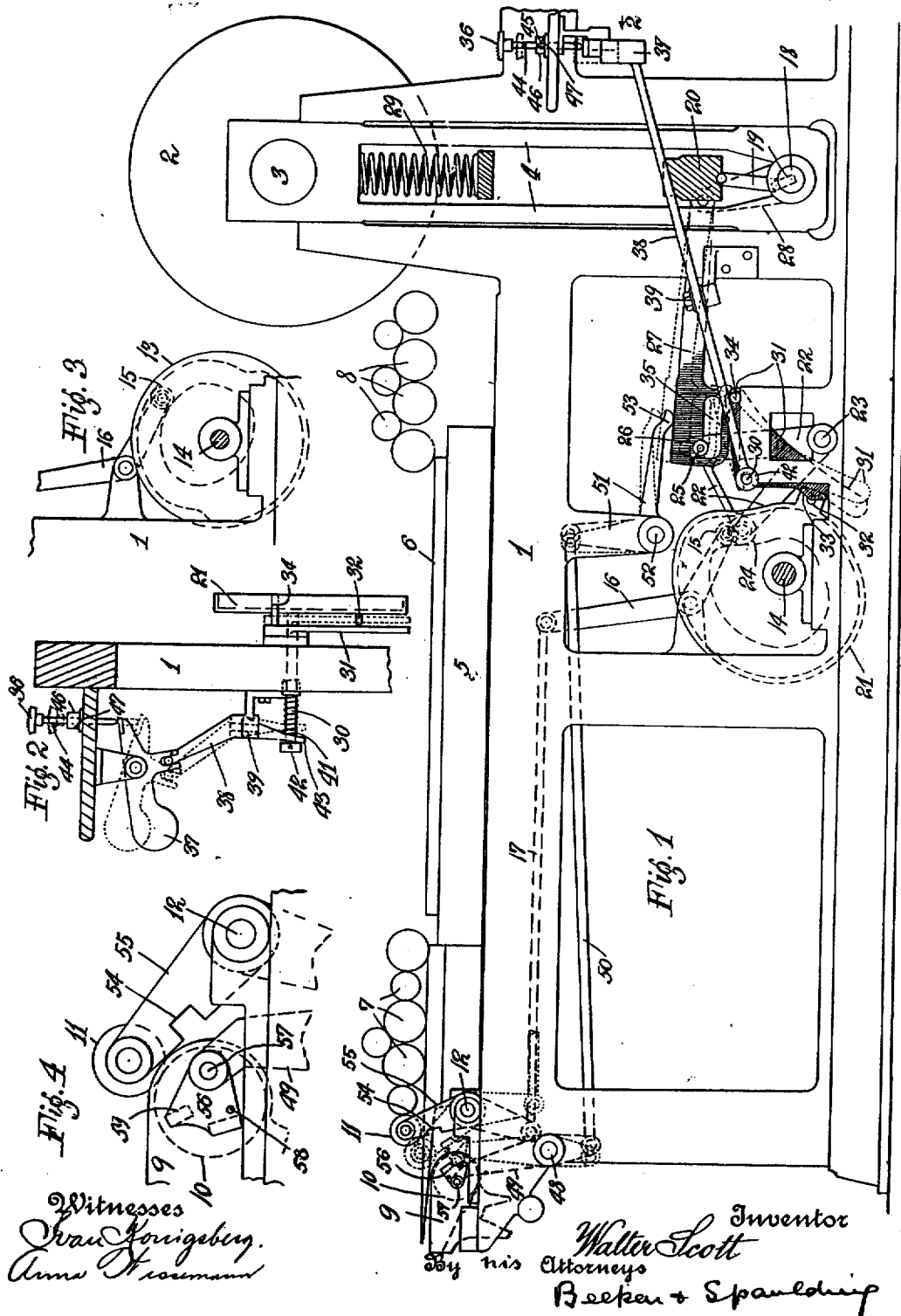


W. SCOTT, DEC'D.
I. & D. J. SCOTT, EXECUTORS.
PRINTING MACHINE.
APPLICATION FILED JULY 3, 1906.

1,007,610.

Patented Oct. 31, 1911.



UNITED STATES PATENT OFFICE.

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

PRINTING-MACHINE.

1,007,610.

Specification of Letters Patent.

Patented Oct. 31, 1911.

Application filed July 3, 1905. Serial No. 268,023.

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 cylinder, 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.

This invention consists of an interrupting means for the inking apparatus under the control of the automatic means for tripping and untripping the impression, the parts being so arranged that during the normal operation of the tripping means the ink tripping means remain inoperative, and are actuated only by the automatic tripping and untripping means when the normal operation of the latter is interrupted by the interrupting means.

This invention may of course take many forms but in the present instance the ductor roll is prevented from transferring ink to the distributing surface. When inking up the form, however, before printing commences, it is desirable to maintain the im-

pression tripped without stopping the supply of ink.

The invention further consists in means whereby the operation of the automatic tripping and untripping means can be interrupted by the interrupting means without stopping the supply of ink.

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, partly in section and with parts broken away, showing a printing machine of the character indicated with the ink tripping means applied. Fig. 2 is a view looking in the direction of the arrow 2 of Fig. 1, showing certain details of the mechanism. Fig. 3 is a detail view of the cam for operating the ductor roll. Fig. 4 is a detail view of means for rendering the ink tripping mechanism inoperative.

Although various means may be employed for effecting the tripping of the inking mechanism, the specific construction here disclosed shows means for preventing the ductor roll from transferring ink from the fountain roll to the distributing rolls.

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 sliding frames or standards 4, one on 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 7 is a fountain 9 in which is located a 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.

The ink is transferred, as is customary, from the fountain roll to the distributing rolls by means of the ductor roll 11 pivoted at 12 and operated in the usual manner from the cam 13 mounted on the shaft 14 and making one revolution to each impression or to each complete reciprocation of the bed. The motion of this cam is transferred to the ductor roll by means of the friction roll 15 carried by the lever 16 connected with the lower end of the ductor roll by means of the rod 17. On each return stroke of the bed the standards 4 are 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.

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 18 connected by means of the toggle links 19 to a fixed bracket 20 on the framework. This shaft 18 is oscillated by means of the cam 21 conveniently mounted on the shaft 14 through the instrumentality of the rocker 22 pivoted at 23 and having a friction roll 24 engaging with the said cam 21. This rocker 22 further carries another friction roll 25 adapted to engage in the notch 26 of the lever 27 whose other end is connected by means of the link 28 to the shaft 18. As the cam 21 rotates, the rocker 22 will push the lever 27 back and forth thereby oscillating the shaft 18 and raising and lowering the impression cylinder at the proper periods. Suitable means as a spring 29 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 30 is a rocking and sliding cam 31 which is adapted to lift the lever 27 when it is desired to maintain the cylinder in its tripped position. In order to properly effect this, there is mounted on the cam 21 or elsewhere, a projection 32 which is adapted to act on the cam surface 33 of the cam 31. As previously stated, this cam 31 both oscillates and slides and is provided with a pin or other member 34 upon which the free end of the lever 27 rests. This pin is of such length that it will always be in contact with the lever 27. But when it is not desired to maintain the cylinder in its tripped position, the cam is moved sidewise so as to

bring the cam surface 33 out of the plane of the passing projection 32. When this cam surface 33, however, is in the plane of 32, the pin 34 tends to raise the lever 27 up so as to bring the roll 25 out of the notch 26 as shown in the drawing, whereby when the cam 21 moves the rocker 22, said roll 25 will move loosely in the slot 35 of the lever 27 without operating the latter. By this means the cylinder remains in its elevated position.

The means for controlling the action of the cam 31 as shown in the present instance, are those commonly employed in the art and consist preferably of a foot treadle 36 adapted to act against the counterweight 37 when depressed, and through the connection 38 pivoted on the stud 39 the cam 31 is moved sidewise so as to bring its surface 33 into and out of engagement with the projection 32. 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 32. This is preferably effected by mounting on the pin 30 which is used to move the cam sidewise a spring 41 which presses against a collar 42 mounted on the said spindle 30 so that when this spring 41 is compressed by the action of the connection 38 whose two forked arms 43 bear against the said spring, power will be stored whereby when the projection 32 has passed the cam 31, the said cam will be moved sidewise into the plane of the said projection 32 so that when the latter comes around on the succeeding revolution it will encounter the cam surface 33 and tilt the cam 31. The foot pedal 36 is provided with a pin 44 which passes into the slot 45 of the sleeve 46 when the said foot treadle is depressed and by turning the said pedal around the said pin 44 will enter the small horizontal slot 47 whereby the parts will be retained in the tripped position.

Mounted on the pivot 48 is a stop 49 operated by means of the connection 50 and the bell crank 51 which is pivoted at 52 and whose free end 53 rests upon the upper side of the lever 27. Obviously when the said lever 27 is raised by the action of the cam 31 it will move the bell crank into the position shown in fine dotted lines, thereby moving the stop 49 into the position also shown in fine dotted lines and against a portion 54 of the standards 55 of the ductor roll, thereby preventing the said ductor roll from coming in contact with the said fountain roll and 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 cyl-

inder 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 inking mechanism. 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 when it is desired to ink up the distributing rolls and the form before printing commences. For that reason it is preferred to construct the stop 49 with a dog 56 pivoted at 57 to the said stop and capable of being swung out of the way around its pivot so that when in the position shown in Fig. 4 the ink tripping mechanism will be inoperative and thereby allowing the ductor roll to supply ink from the fountain to the distributing roll. When, however, it is desired to trip the inking mechanism, the said dog 56 is moved into the position shown in Fig. 1, thereby preventing the ductor roll from coming in contact with the fountain roll. A suitable handle as the pin 58 may be placed on the dog 56 so as to readily swing it back and forth as may be desired. This dog is further provided with a projection 59 which is adapted to rest upon a portion of the stop 49 as shown in the drawings so as to limit its movement and keep it in the proper position to prevent the ductor roll from moving back and forth.

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 to trip the impression.

What is claimed is:

1. In a printing machine, the combination with the members of a multirevolution printing couple, and an inking apparatus, of automatic means for normally tripping and untripping the impression once to each cycle of the machine, independent means for operating the inking apparatus, normally inoperative means for interrupting the operation of the automatic tripping and untripping means, and means for stopping the operation of the inking apparatus, normally inactive to the tripping and untripping means but adapted to be actuated by said tripping and untripping means when the latter have been acted upon by the interrupting means, to interrupt the operation of the inking apparatus.

2. In a printing machine, the combination with the members of a multirevolution printing couple, and an inking apparatus, of automatic means for normally tripping and untripping the impression once to each cycle of the machine, independent means for operating the inking apparatus, normally inoperative means for interrupting the opera-

tion of the automatic tripping and untripping means, means for stopping the operation of the inking apparatus normally inactive to the tripping and untripping means but adapted to be actuated by said tripping and untripping means when the latter have been acted upon by the interrupting means, to interrupt the operation of the inking apparatus, and means whereby the impression may be maintained tripped without stopping the supply of ink.

3. In a printing machine, the combination with the members of a multirevolution printing couple, and an inking apparatus, of normally operative means for automatically tripping and untripping the impression once to each cycle of the machine and independently of the operation of the inking apparatus, normally inoperative interrupting means for the inking apparatus normally uninfluenced by the automatic tripping and untripping means, and normally inoperative interrupting means adapted, when actuated, to interrupt the normal operation of the automatic tripping and untripping means, and to cause the latter to render operative the interrupting means for the inking apparatus.

4. In a printing machine, the combination with the members of a multirevolution printing couple, of a cam and a connection for automatically tripping and untripping the impression once to each cycle of the machine, an inking apparatus including a ductor roll, a cam and a connection for operating said ductor roll, interrupting means for lifting the connection of the automatic tripping and untripping means so as to maintain the impression tripped, and means for interrupting the action of the ductor roll normally inoperative but adapted to be actuated when the connection for operating the automatic tripping and untripping means is lifted.

5. In a printing machine, the combination with the members of a multirevolution printing couple, and an inking apparatus including a ductor roll, of normally operative means for automatically tripping and untripping the impression once to each cycle of the machine and independently of the operation of the inking apparatus, normally inoperative means for interrupting the operation of the automatic tripping and untripping means, and means for interrupting the operation of the ductor roll normally inoperative but rendered operative by the actuation of the normally inoperative interrupting means for the automatic tripping and untripping means.

6. In a printing machine, the combination with the members of a multirevolution printing couple, and an inking apparatus including a ductor roll, of normally operative

means for automatically tripping and un-
tripping the impression once to each cycle
of the machine and independently of the
operation of the inking apparatus, normally
5 inoperative interrupting means for the ink-
ing apparatus, normally uninfluenced by the
automatic tripping and untripping means,
and normally inoperative interrupting
means adapted, when actuated, to interrupt
10 the normal operation of the automatic trip-

ping and untripping means, and to cause the
latter to render operative the interrupting
means for the ductor roll.

Signed at New York this 21st day of June
1905.

WALTER SCOTT.

Witnesses:

GEO. A. HOFFMAN,
AXEL V. BEEKEN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."
