

Mar. 27, 1923.

C. KESSES.
TYPE PRINTING MACHINE.
FILED FEB. 6, 1922.

1,449,680.

2 SHEETS—SHEET 1.

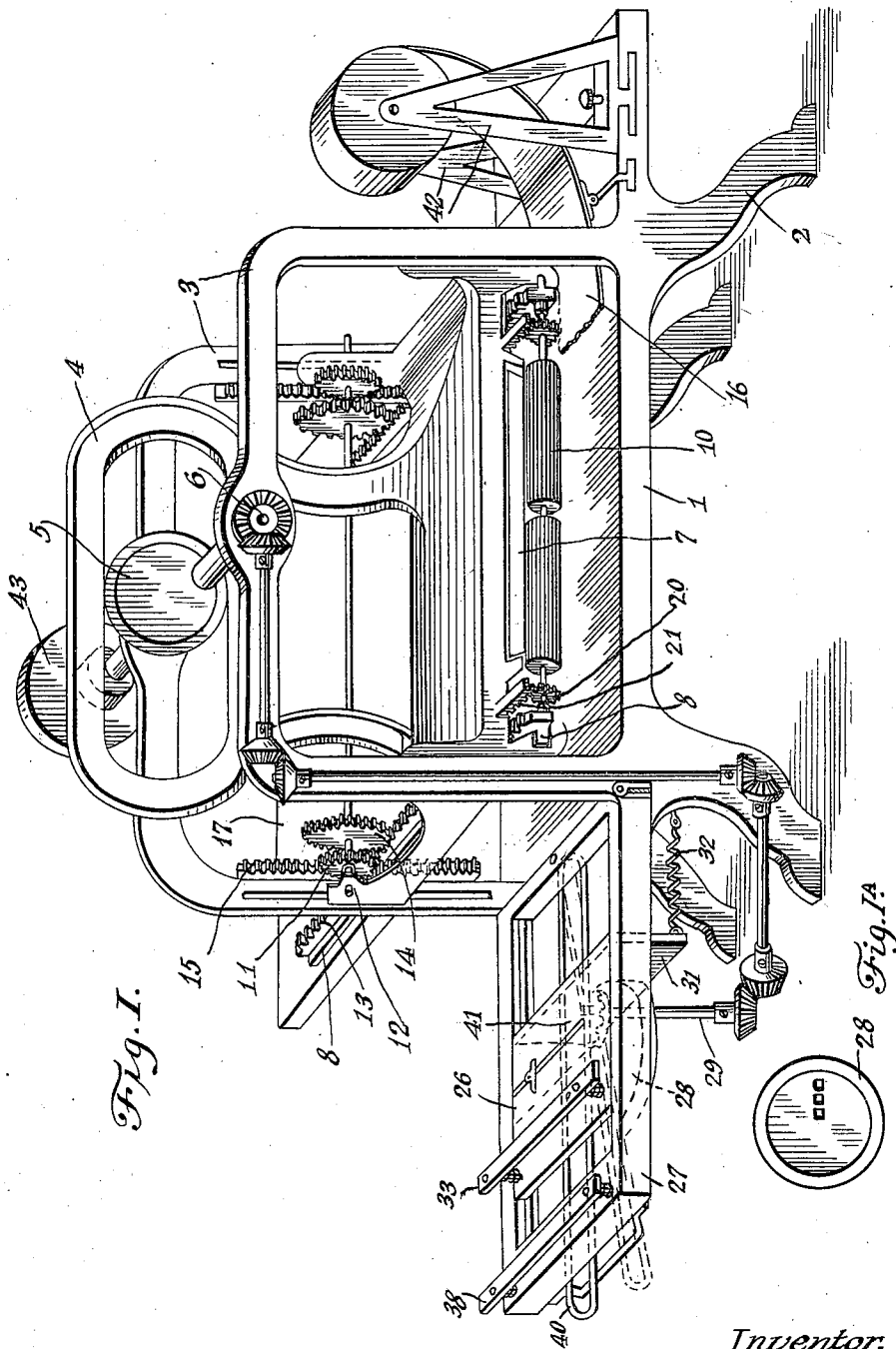


Fig. 1.

Fig. 1A

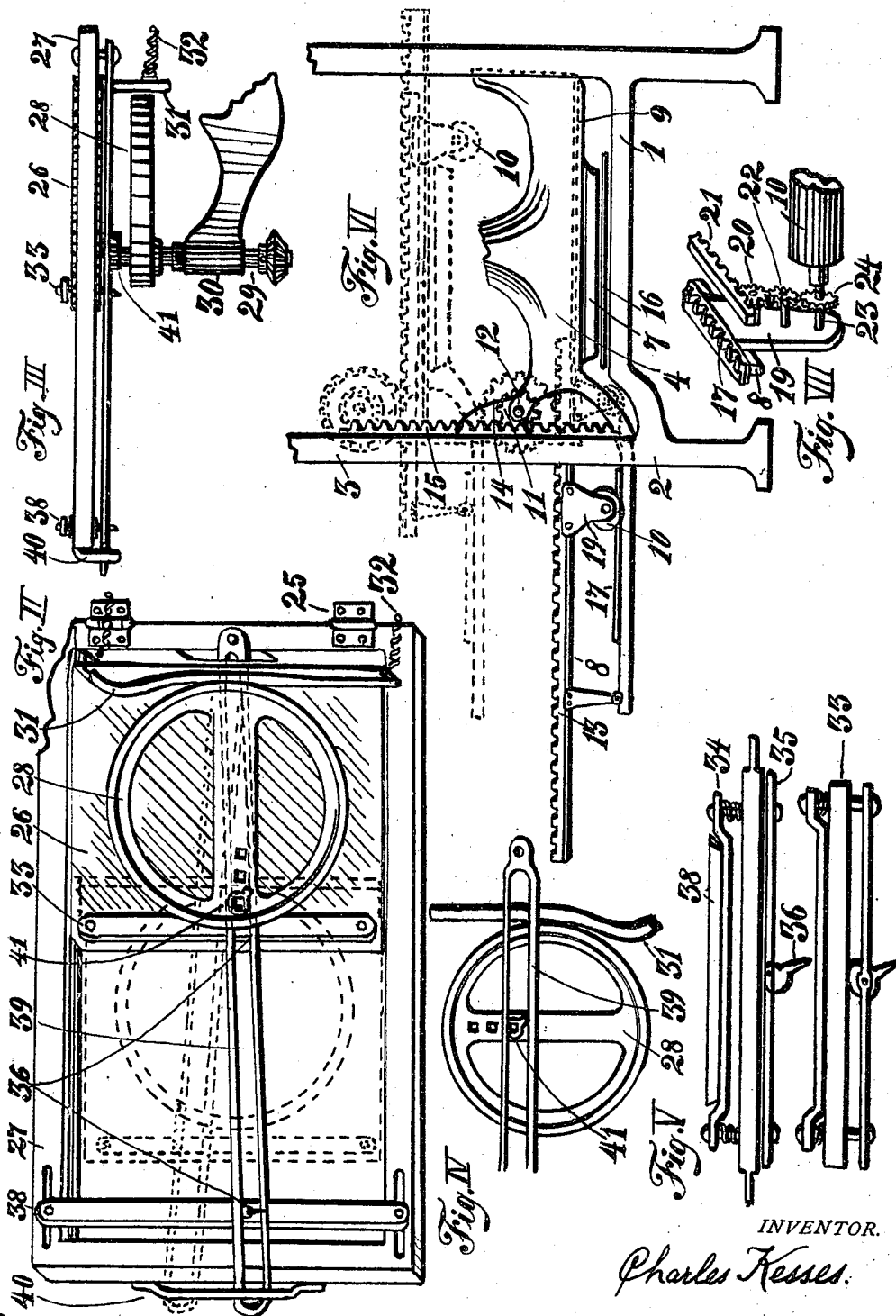
Inventor.
Charles Kesses.

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2 SHEETS—SHEET 2.



INVENTOR.

Charles Kesses.

UNITED STATES PATENT OFFICE.

CHARLES KESSES, OF NEW YORK, N. Y.

TYPE-PRINTING MACHINE.

Application filed February 6, 1922. Serial No. 534,407.

To all whom it may concern:

Be it known that I, CHARLES KESSES, citizen of the United States, and resident of New York city, in the county and the State of New York, have invented certain new and useful Improvements in Type-Printing Machines, of which the following is a specification.

The intermittent feeding mechanism is the same as in my Patent No. 1,417,832, filed Oct. 27, 1920, for a photographic printing machine and the arrangement of the inking rollers and inktables for printing in one or more colors are the same as in my Patent No. 1,271,913, filed July 3, 1917, for a type printing machine and the objects of this invention are:

First, to intermittently print successive impressions with a flat typebed on a roll paper or on a strip of sheet material.

Second, the feeding mechanism can be adjusted for advancing intermittently different lengths of the strip.

Third, adjustable means for feeding sheet material of different widths.

Fourth, to reciprocate the inking-roller over the typebed in a straight line and in a direction transverse to the movement of the strip during the reciprocating movement of the typebed carrier and during the feeding period thereof, to produce a plain and inexpensive machine which is a useful instrument in every printing establishment.

I attain these objects by the mechanism illustrated in the accompanying drawings in which—

Fig. I is a perspective view of the entire machine.

Fig. I^A is a side view of the cam member for operating the feeding mechanism.

Fig. II, is a view of the intermittent feeding mechanism as seen from below, showing a carrier moved by a cam and a lever for operating the gripping means moved by a second cam.

Fig. III, is a side view of said feeding mechanism.

Fig. IV, is a separate view of said cams and said lever in a different position.

Fig. V, is a separate view of a combined cutter and receiving gripper and of an advancing gripper, each one is operated by a

lever cam, one gripper is shown in an open and the other in a closed position.

Fig. VI, is a view of the machine as seen from the left side, without the feeding mechanism, showing an ink table, a typebed and an inking roller in two positions.

Fig. VII, is a view of the mechanism for rotating the inking roller at a given speed.

Similar numbers refer to similar parts throughout the several views.

A printing platform 1 is secured to standards 2, a front and a rear support 3 are secured to said platform. A carrier 4 is movably arranged in suitable guide rails which are secured to said supports. A cam 5 to reciprocate said carrier is secured to a shaft 6, which is journaled in said supports. A typebed 7 is secured to the underside of said carrier with screws. A carrier 8, a side view of which is shown in Fig. VI is slidably arranged in guide rails 9 which are secured to the carrier 4. An inking roller 10 is removably secured to said carrier.

For moving the inking roller, gearwheels 14 are secured to an idle shaft 12 which is journaled in the carrier 4, said gearwheels are meshed to railgears 13 which are secured to the carrier 8. Gearwheels 11 are secured to said idle shaft 12 and meshed to railgears 15 which are secured to the rear support 3. By the movement of the carrier 4 the carrier 8 is forced through said gear-rails and said gearwheels to move the inking roller in a plane form and in a direction transverse to the movement of the strip of paper 16, from the ink table 17 over the typebed 7.

Means to rotate the inking roller 10 at the correct speed are shown in a view Fig. VII. Brackets 19 are secured to the carrier 8, an idle gearwheel 20 is secured with a shaft to said bracket and is meshed to a railgear 21 which is secured to the underside of the carrier 4. A second idle gearwheel 22 is meshed to said idle gearwheel 20 and is secured with its shaft to said bracket. A shaft 23 is set in duplex bearings in said bracket 19. A gearwheel 24 for rotating the inking roller, is secured to said shaft and is meshed to the idlegear 20. The gearwheel 24 and the idlegear 20 must have the same diameter as the inking roller 10 to rotate said

roller at the correct speed against the type required.

An intermittent feeding mechanism is secured to the platform 1 with hinges 25, a separate view of said mechanism as seen from below is shown in Fig. II and a side view in Fig. III. A carrier 26 is movably arranged in guiderails in a frame 27. A cam 28 for moving said carrier is removably secured to a shaft 29 which is journaled in a bracket 30 which is secured to the standards 2. A board 31 is secured in an upright position to the carrier 26. Springs 32 secured to said board and the platform 1 for pressing said board against the cam 28. A gripper 33 for advancing the paper 16, a view of said gripper shown in Fig. V is secured to the carrier 26. An upper rail 34 is secured to a lower rail 35 with bolts. Springs around said bolts for lifting said upper rail above said carrier. A cam lever 36 secured to the lower rail for operating the gripper. A second gripper 38 with a cutter for receiving the paper is movably secured to the frame 27 to grip and to cut the printed impressions by each operation of said gripper. Said gripper is arranged similar to the advancing gripper 33 with the exception of the cam-levers which is secured in the opposite direction in said gripper to grip the paper when the other gripper releases. The grippers are operated by a lever 39 which is secured with a bolt to the frame 27, its lower end is movably arranged in a bracket 40. The cam 28 is set with bearings in an outside rim to reduce the friction. A few fixed positions in said cam are provided for the shaft 29. By resetting said cam to a different position, longer or shorter movements are given to the carrier 26. A cam 41 is secured to the shaft 29 and is operatively arranged in the lever 39 to move said lever, thereby moving the cam levers in the grippers, to pull the upper rail in the advancing gripper by the turning of said cam, to press on the paper when the carrier 26 moves to the receiving gripper and to exchange the operation of the cam levers, to grip the paper in the receiving gripper and to release said paper in the advancing gripper by the returning of said carrier 26.

Suitable adjustable guide-rails are arranged in the carrier 26 and the platform 1 to hold any width of a strip of paper or a strip of sheet material in good position. A supply roll of paper is secured to the hanger 42, said hanger is adjustably arranged in guide rails.

A chain of bevel gears and shafts connecting the main shaft 6 to the shaft 29 for operating the feeding mechanism.

For printing in different colors use the ink roller 10 divided in parts, as shown, columns of type of the same width to corre-

spond to said parts must be inserted in the typebed, one beside the other in a direction to the length of the web, regulate the cam 28 to advance the web for the width of one of those parts and print as usual. Said color printing is specified in my Patent No. 1,271,913 for a type printing machine.

It is more practical to construct a machine with a large typebed in a reversed position, with the paper on the top of the type and the mainshaft and the carrier 4 below said typebed.

Now I show the cooperation of the several parts throughout a complete circle of movements involved in the different operations of the machine for the printing of one impression. It will be seen that the type bed remains parallel to a given plane throughout the printing operation and the range of the intermittent advancing of the web may be regulated as desired by the cam 28. When the power is applied to the wheel 43 the carrier 4 is moved upwards by the cam 5, thereby forcing the carrier 8 which operates the ink roller 10 through the gear-wheels 11 and 14 and the railgears 13 and 15 to move said inking-roller from the ink table 17 over the type bed 7. At the same time the cam 41 moves the lever 39 thereby operating the cam levers 36, to grip the paper in the advancing gripper and to release said paper in the receiving gripper, the cam 28 moves the carrier 26 and advances said paper to the receiving gripper. The carrier 4 moves downwardly to press the type against said paper, thereby forcing the inking roller to its first position, the cam 41 moves the lever 39 thereby operating the cam levers to exchange the operation in each gripper, to release the paper in the advancing gripper and to grip same in the receiving gripper and the cam 28 moves the carrier 26 to its first position to be ready for the next operation.

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

1. In a printing machine the combination of a carrier for a typebed, of a carrier for the inking roller arranged in said first named carrier and means provided to reciprocate said inking roller over the typebed by the reciprocating movement of said first named carrier, of a feeding mechanism for feeding a strip of sheet material, said feeding mechanism includes a carrier connected to the driving mechanism for intermittently reciprocating, a gripping device on said carrier to grip the paper when the carrier moves from the typebed and a stationary gripping device to grip the paper when the carrier moves towards the typebed, as specified.

2. A device as in claim 1, in which the means for operating the gripping device includes a cam which has different fixed posi-

tions for the operating shaft of said mechanism for adjusting the reciprocating means of said gripping device for the advancing of different lengths of said sheet material, as set forth.

3. A device as in claim 1 in which the gripping device includes, a cam lever operatively connected to each gripper, a lever for operating said cam levers, and a cam to reciprocate said second named lever.

4. In a printing machine, the combination of an intermittent feeding mechanism for feeding a strip of sheet material, of a carrier for a typebed, of a stationary support for said carrier, of a carrier for the

inking roller movably arranged in said first named carrier, of gearwheels arranged on said first named carrier to engage railgears which are secured to said stationary support and to said second named carrier, to force by the movement of said first named carrier said inking roller from the ink table over the type during the feeding period, as described.

Signed at New York city, in the county of New York and State of New York, this 4th day of February A. D. 1922.

CHARLES KESSES.

Signed in the presence of—

JULIUS GOLDWATER.