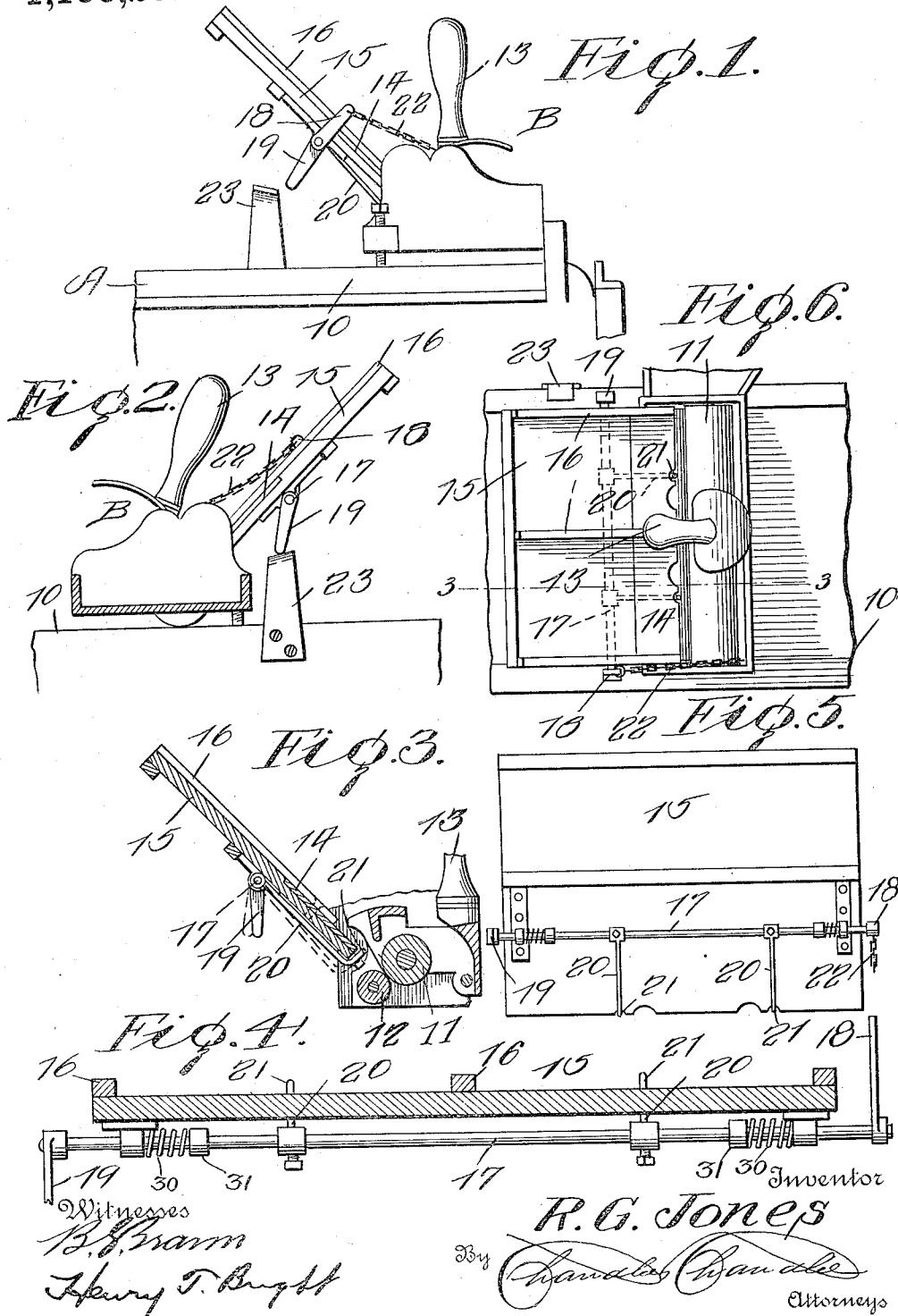


R. G. JONES.
FEEDING DEVICE FOR DUPLICATING MACHINES.
APPLICATION FILED MAR. 15, 1913.

Patented Aug. 22, 1916.

1,195,231.



UNITED STATES PATENT OFFICE.

RUSSELL G. JONES, OF CHICAGO, ILLINOIS.

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Specification of Letters Patent.

Patented Aug. 22, 1916.

Application filed March 15, 1913. Serial No. 754,403.

To all whom it may concern:

Be it known that I, RUSSELL G. JONES, a citizen of the United States, residing at Chicago, in the county of Cook, State of Illinois, have invented certain new and useful Improvements in Feeding Devices for Duplicating-Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to feeding devices for duplicating machines.

The object of the invention resides in the provision of a feeding device which may be readily associated with a duplicating copying machine and when so associated will serve to automatically deliver the sheet of paper to the impression roll in such manner as to assure the proper alinement of the sheet with respect to the imprint thereon.

A further object of the invention resides in the provision of a device of the character described which will be simple in construction, efficient in use and which may be manufactured and applied to an ordinary duplicating machine at very small cost.

With the above and other objects in view the invention consists in the details of construction and in the arrangement and combination of parts to be hereinafter more fully described and particularly pointed out in the appended claim.

In describing the invention in detail reference will be had to the accompanying drawings wherein like characters of reference denote corresponding parts in the several views, and in which—

Figure 1 is a side elevation of a fragment of a duplicating machine showing the feeding device applied thereto and the parts in the position they would occupy just before the carriage partakes of its active or printing movement; Fig. 2, a view similar to Fig. 1 looking at the opposite side of the machine with the parts in the position they would occupy during an intermediate portion of the printing movement of the carriage when the parts of the feeding device have just been operated to receive fresh supply of paper; Fig. 3, a section on the line 3—3 of Fig. 6; Fig. 4, a transverse section through the feeding device; Fig. 5, a rear view of the feeding device detached, and Fig. 6, a plan view of a fragment of a du-

plicating machine showing the carriage and the feeding device associated therewith.

Referring to the drawings A indicates generally a duplicating machine which includes a body 10 adapted to support the usual gelatin sheet from which the impression is made upon the desired paper. Supported upon the body 10 for movement across the upper side thereof and across the gelatin sheet carried by the body is the usual carriage B, which is supported upon the body in a manner identical with that described and shown in U. S. Patent No. 1,019,312, granted to J. J. Flanigan, March 5, 1912. This carriage includes a fixed guide roller 12 and an impression roller 11, which latter is adapted to be brought into engagement with the gelatin sheet by manipulating a handle 13 all in the well known manner. The carriage B further includes an incline plate 14 to which the feeding device proper is adapted to be attached. This feeding device is shown as comprising a plate 15 provided on its front side with longitudinal spaced ribs 16 between which the paper to be fed to the machine is adapted to be supplied. Journaled on the rear side of the plate 15 is a transverse shaft 17 which carries at one end a lateral arm 18 and at its other end a lateral arm 19. Fixed to the shaft 17 at spaced points thereon are arms 20 the free ends of which are bent laterally as at 21 so as to engage under the lower edges of both the plate 14 and the plate 15 in one position of the shaft 17. When the laterally bent ends 21 are engaged under the lower edges of the plate 14 and plate 15 they project slightly beyond the upper side of the plate 15 so as to form a support for paper disposed upon said plate 15. The free end of the arm 18 has secured thereto one end of a chain 22 and the other end of this chain is secured to the support which carries the impression roller. Mounted upon the body 10 in line with the arm 19 is a setting finger 23 which is adapted to engage the arm 19 during the rearward movement of the carriage B so as to rock the shaft 17 and set the arms 20 in position whereby the lateral bent end 21 thereof will support the paper supplied to the upper side of the plate 15.

In the use of the device the carriage B is first moved from the front to the rear of the machine. During this movement of the

carriage the arm 19 will engage the finger 23 and set the arms 20 so that the ends 21 thereof will support paper supplied to the upper side of the plate 15. The necessary paper 5 is then supplied to the upper side of the plate 15 and the carriage moved forwardly. At the termination of the forward movement of the carriage the handle 13 is swung to raise the impression roller and this movement of the handle will operate through 10 chain 22 to rock the shaft 17 so as to move the lateral bent ends of the arms 20 and release the paper disposed upon the plate 15. The paper will then fall by gravity to a position between the guide roller 12 and the 15 impression roller 11. The carriage B is then moved to the rear and during this movement the paper will be fed between the rollers 11 and 12 and forced into engagement with the 20 gelatin sheet by the former roller all in the well known manner. As the carriage is moved rearwardly the arm 19 will again cooperate with the finger 23 and set the free ends of the arms 20 so as to support a new 25 supply of paper applied to the upper side of the plate 15. This operation is repeated during the continued use of the machine.

The shaft 17 is encircled at each end by 30 springs 30 which bear against respective journals of the shaft and against respective collars 31 mounted on the shaft. These springs serve to prevent the shaft from rotating too freely whereby the shaft will re-

main in the position it was left by a rotating force until acted upon by another rotating force. 35

What I claim is:—

In a copying machine, the combination of a body, a carriage mounted on the body for movement across the duplicating surface of 40 the machine, a guide roller mounted on the carriage, an impression roller mounted on the carriage for bodily swinging movement toward and away from the guide roller, a paper feed board supported upon the carriage in position to deliver sheets between 45 the impression and guide rollers, movable means adapted in one position to secure the sheets upon the board against movement under the influence of gravity and to release 50 said sheets to said influence in another position, means operated at the termination of the movement of the carriage in one direction to dispose the first named means in releasing position, and means operated during 55 the movement of the carriage in the opposite direction to dispose the first named means in holding position with respect to the sheets upon the board.

In testimony whereof, I affix my signature, in the presence of two witnesses. 60

RUSSELL G. JONES.

Witnesses:

GERTRUDE HEISE,
ANNA E. BELL.

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