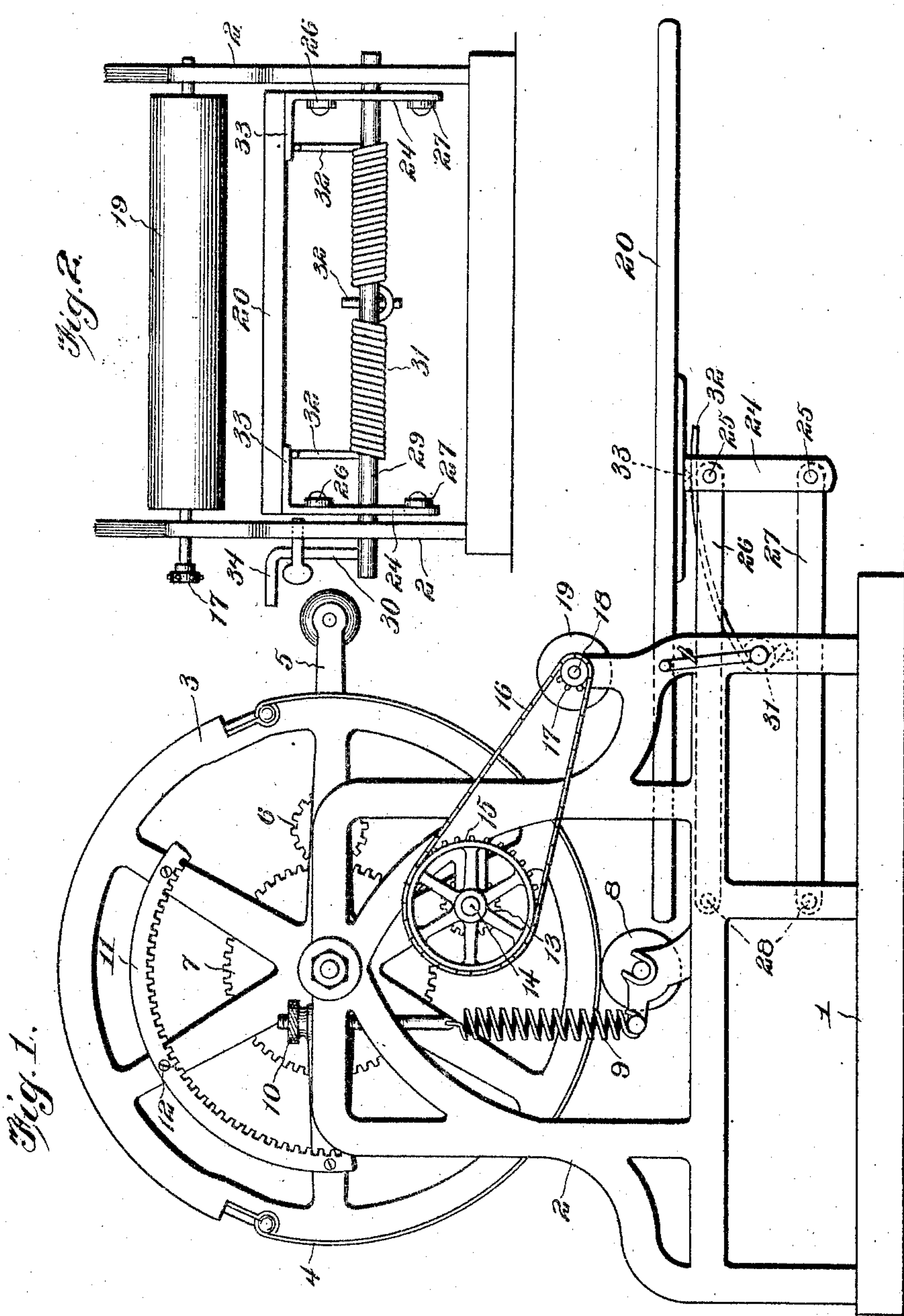


C. A. GLOVER & J. C. HUNTER.
 ROTARY DUPLICATING MACHINE.
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Witnesses
Louis S. Heinrichs.
P. M. Smith.

Inventors
Claude A. Glover
James C. Hunter

By *Victor J. Evans*
 Attorney

UNITED STATES PATENT OFFICE.

CLAUDE A. GLOVER, OF NASHVILLE, TENNESSEE, AND JAMES C. HUNTER, OF ATLANTA, GEORGIA.

ROTARY DUPLICATING-MACHINE.

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To all whom it may concern:

Be it known that we, CLAUDE A. GLOVER, a citizen of the United States, residing at Nashville, in the county of Davidson and State of Tennessee, and JAMES C. HUNTER, a citizen of the United States, residing at Atlanta, in the county of Fulton and State of Georgia, have invented new and useful Improvements in Rotary Duplicating-Machines, of which the following is a specification.

This invention relates to attachments for rotary duplicating machines, the object of the invention being to provide simple and effective feeding mechanism adapted to be applied to the ordinary duplicating machine now in use by means of which the sheets are successively fed from the top of the pile resting on the paper table to the copying drum which carries the stencil sheet, whereby the machine, as a whole is rendered self-feeding.

With the above general object in view, the invention consists in the novel construction, combination and arrangement of parts as herein fully described, illustrated and claimed.

In the accompanying drawings, Figure 1 is a side elevation of a rotary duplicating machine showing the feeder applied thereto. Fig. 2 is an end view showing the paper table and feed roll.

In the drawing we have shown the ordinary rotary duplicating machine comprising a base 1, frame 2, drum 3 and stencil sheet 4 carried by the drum, said drum being actuated by means of a crank handle 5 which actuates a pinion 6 which meshes with a gear wheel 7 carried by the drum whereby rotary motion is imparted to said drum.

8 designates the pressure roller which operates just beneath and against the drum, 9 the tension spring for the pressure roller and 10 the means for adjusting the tension of said spring, all of the parts above described being of the usual form and arrangement.

In carrying out the present invention, we provide a toothed segment 11 which is fastened at several points 12 to the side of the drum 3, said segment, during the rotation of the drum meshing with a pinion 13 fast on a shaft 14 mounted in a suitable bearing on the machine frame and also having fast thereon a sprocket wheel 15. From the sprocket wheel 15 a chain 16 runs around another sprocket wheel 17 on the shaft 18 of an intermittent paper feed roller 19 which is mount-

ed in suitable bearings in the machine frame above the paper table.

The paper table shown at 20 has its inner edge arranged in close proximity to the pressure roller 8 and such end is supported adjacent to said roller in any suitable way. The outer or opposite edge of the table is yieldingly supported and urged upward by means of one or more springs arranged as shown in the drawings said springs being of suitable strength to gradually move the table upward as the pile of paper thereon decreases in height, thereby keeping the uppermost sheet of paper in contact with the paper feed roller 19 which may either be of rubber or analogous material adapted to obtain the necessary frictional hold on the paper to move the same inward to the meeting point between the drum and pressure roller 8.

It will be observed that the paper feed roller 19 is located directly over the paper table and at a point intermediate the inner and outer edges of the table and that it is driven intermittently at the proper intervals, once in each rotation of the drum, by means of the toothed segment 11 which operates a sufficient length of time on the pinion 13 to cause the connections between said pinion 13 and the feed roller 19 to operate to move the uppermost sheet of the pile of paper on the table into engagement with the pressure roller and drum after which the movement of the paper feed roller ceases and the drum, in connection with the pressure roller, takes up a sheet printing the same and moving it forward to the point of discharge, the feed roller 19 at such time being idle and rotating freely to permit such sheet to be drawn out of contact therewith and off of the top of the pile of paper.

The table 20 is provided at or near its opposite end with pendent legs 24 having pivotally connected thereto at the points 25 a pair of parallel supporting levers 26 and 27 which are pivotally connected at their opposite ends as shown at 28 to the machine frame.

29 designates a shaft extending across the machine frame and journaled therein, said shaft being provided at one end with a crank arm 30. Wound around said shaft is a coiled spring 31, the central portion of which is connected to the shaft by means of a pin 32 or its equivalent. The opposite ends of the spring are bent to form table-elevating

arms 32 which operate beneath and press upward against the table, it being preferred to provide V-shaped shoulders 33 on the bottom of the table against which the spring arms 32 bear. The V-shaped shoulders 33 may be formed integrally with the pendent legs 24 as shown in Fig. 2.

34 designates a pin which is removably fitted in a hole in the machine frame and arranged in the path of the crank arm 30. By turning the crank arm 30, the spring 31 may be wound to any tension to give the necessary power thereto to raise the table according to the amount and weight of paper placed thereon.

As the uppermost sheet of paper is drawn from the pile by the feed roll 19, the spring 31 acts immediately to correspondingly elevate the table so that the following sheets will be successively acted upon by said feed roll. It will be apparent that the parallel levers 26 and 27 by reason of their pivotal connection with the machine frame and the table will maintain the horizontality of the table under all conditions of the latter.

Having thus described the invention, what is claimed as new, is:—

1. In a rotary duplicating machine, the combination with a stencil-carrying drum; of a paper supporting table; a paper feed roller arranged above the table; means controlled by the drum, operating intermittently to revolve the paper feed roller and cause the latter to advance the uppermost sheet toward the drum, and means for yieldingly

supporting and urging the table upward, comprising parallel levers interposed between the machine frame and table, a shaft, and a spring encircling said shaft and having one end connected thereto and the free end thereof operating in an upward direction against the table.

2. In a rotary duplicating machine, the combination with a stencil carrying drum; of a paper supporting table; a paper feed roller arranged above the table; means controlled by the drum, operating intermittently to revolve the paper feed roller and cause the latter to advance the uppermost sheet toward the drum, and means for yieldingly supporting and urging the table upward, comprising parallel levers interposed between the machine frame and table, a shaft, a spring encircling said shaft and having one end connected thereto and the free end operating in an upward direction against the table, and means for turning and holding said shaft to regulate the tension of said spring.

In testimony whereof we affix our signatures in presence of two witnesses.

CLAUDE A. GLOVER.
JAMES C. HUNTER.

Witnesses for Claude A. Glover:
C. N. CURREY,
E. A. GLOVER.

Witnesses for James C. Hunter:
H. E. BURDETTE,
H. M. MAHONE, Jr.