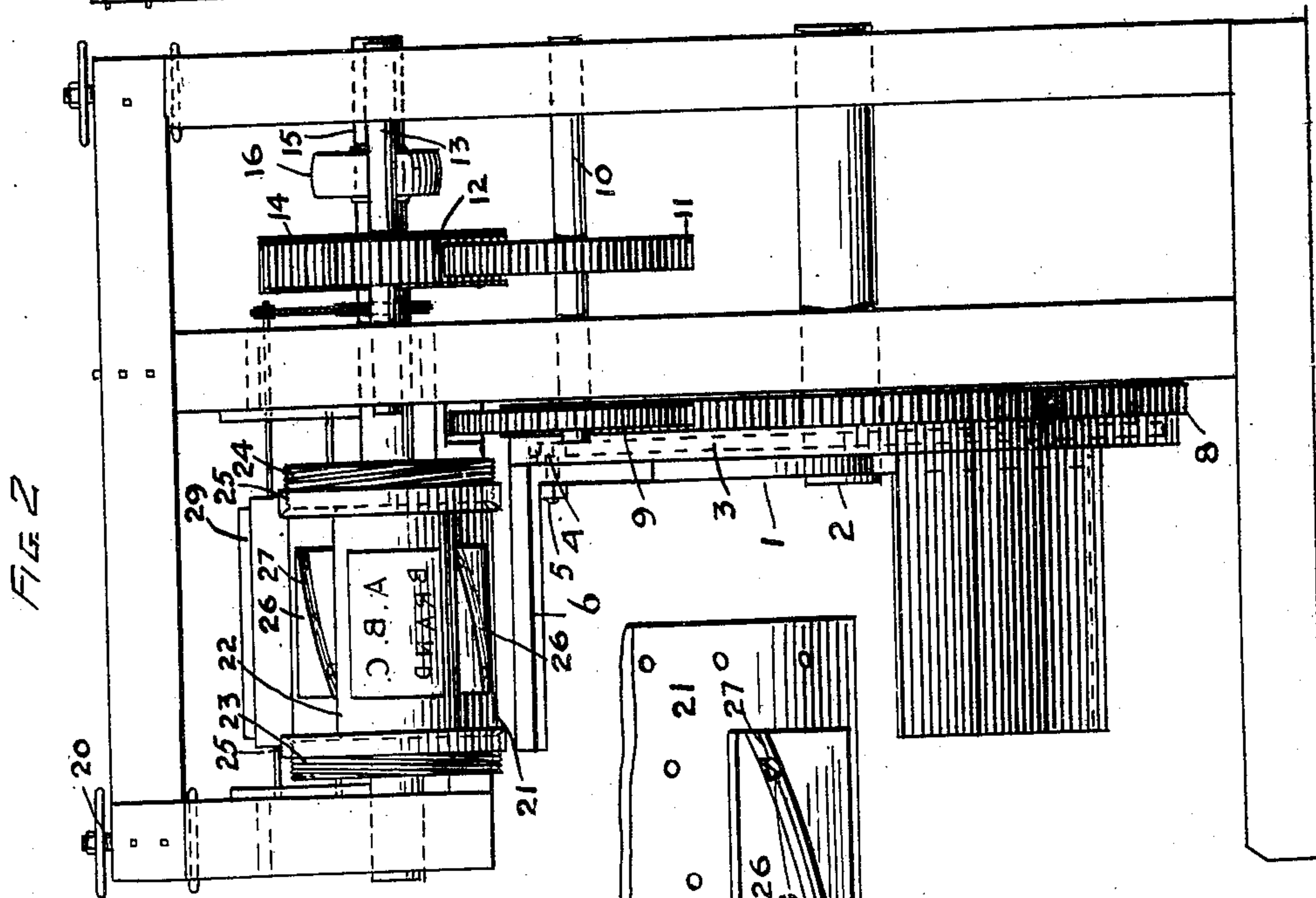
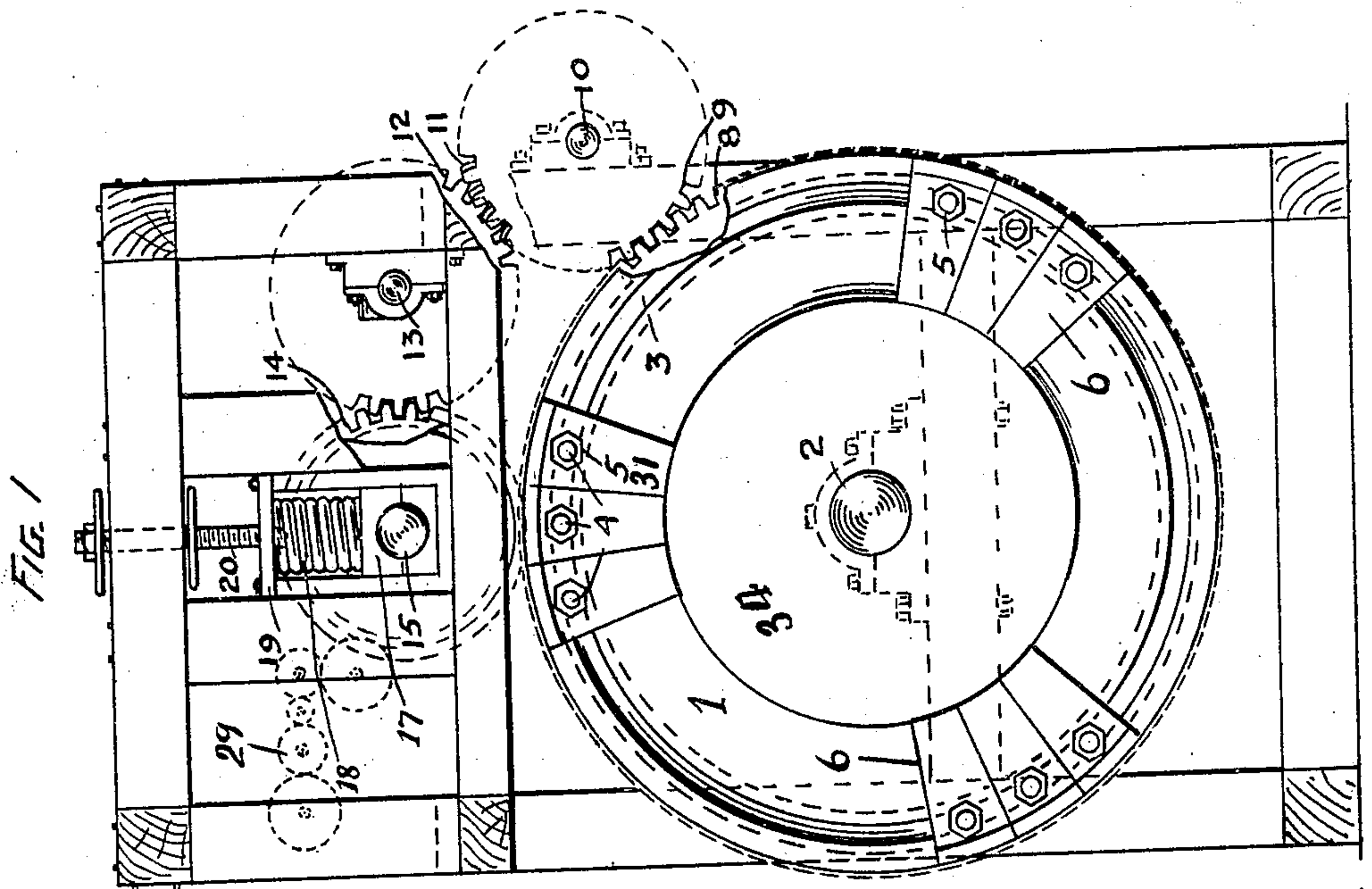


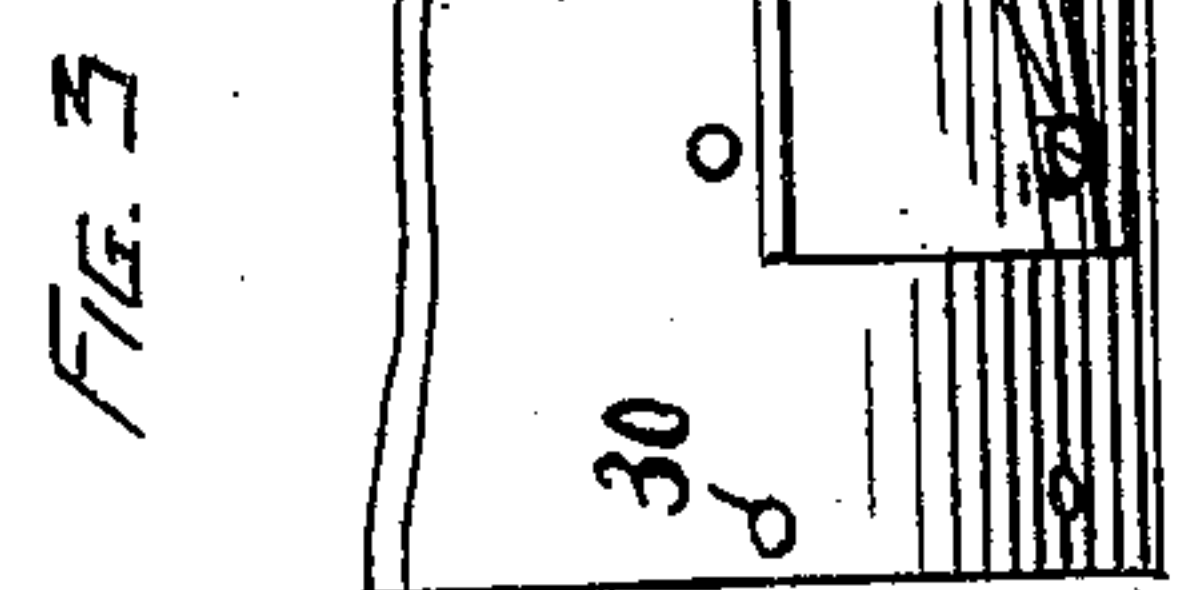
No. 862,174.

PATENTED AUG. 6, 1907.

J. C. LEARY.
BOX PRINTING MACHINE.
APPLICATION FILED NOV. 11, 1905.



WITNESSES:
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UNITED STATES PATENT OFFICE.

JOHN C. LEARY, OF SAN FRANCISCO, CALIFORNIA.

BOX-PRINTING MACHINE.

No. 862,174.

Specification of Letters Patent.

Patented Aug. 6, 1907.

Application filed November 11, 1905. Serial No. 286,834.

To all whom it may concern:

Be it known that I, JOHN C. LEARY, a citizen of the United States, residing at San Francisco, in the county of San Francisco and State of California, have invented certain new and useful Improvements in Box-Printing Machines, of which the following is a specification.

This invention relates to machines for imprinting matter on the sides and ends of wooden boxes after they are put together, but before the covers are put on it is also applicable to machines or devices for impressing or stamping matter such as trade marks, labels, cards and advertising matter directly upon the covers, and other parts of the boxes.

The object of the invention is to provide a machine of this character which will print or stamp on the wooden boxes rapidly and will economize in the amount of hand labor and attention on the part of the workman.

In the accompanying drawing, Figure 1 is a front elevation of the apparatus; Fig. 2 is a side view thereof; Fig. 3 is a broken front view of a detail thereof.

Referring to the drawing, 1 represents a rotating head or disk mounted upon a shaft 2, on the face of which disk is formed a circular, concentric, under-cut groove 3 adapted to receive and hold the heads of bolts 4 which pass through suitable holes in the ends 31 of the right angle brackets or supports 6, the lower face of said ends being concaved to fit snugly against the large circular hub 34 of the disk 1, and thus hold said brackets in the proper angular relation, while the brackets themselves are secured in any desired position by means of nuts 5 on the outer ends of said bolts. These brackets are assembled in groups of any suitable number, there being shown in the present instance three brackets to each group, and the supporting surfaces of the brackets are curved cylindrically, so that those of each group form a continuous curved surface, the function of which is to support the box or other object to be printed. It will readily be seen that by providing a suitable number of brackets, and by suitably arranging them, the number of supports or platens can be increased or diminished as may be desired. In the present instance there are shown three of such groups.

Upon the shaft 2 is secured, to revolve with the disk 1, a gear wheel 8 which meshes with a gear wheel 9 on a shaft 10 carrying a second gear wheel 11 which meshes with an intermediate gear wheel 12 on a shaft 13, which also meshes with a gear wheel 14 on a shaft 15, which has a pulley 16 thereon, by means of which the whole apparatus may be driven from any suitable source of power. The shaft 15 revolves in bearings 17 which are adjusted by springs 18 in boxes 19, the pressure of the springs being adjusted by the screws 20. Upon said shaft 15 is also carried a printing cylinder 21, and

the function of said springs is to press said cylinder down upon the box or other object to be printed which rests upon the support 6. The screws 20 permit this pressure to be adjusted as may be desired. Said cylinder carries, by means hereinafter described, a printing plate 22, the type of which is inked in the well known manner by a train 29 with distributing and inking rollers, driven by sprocket wheels and chain belts from the shaft 15. This part of the apparatus being of very common construction, need not be further described.

The printing plate 22 is adjustably secured upon the face of the printing cylinder 21 in the following manner: The ends of said cylinder 21 have formed thereon left and right screw threads 23, 24. Secured upon said screw threads are sleeves 25, the inner edges of which are beveled or under-cut as shown in dotted lines in Fig. 2, and when these caps are screwed toward the middle of the cylinder, said inner edges pass over the corresponding beveled ends of the printing plate 22, and firmly clamp the same against movement outwards either longitudinally, that is, parallel to the axis of the printing cylinder, or radially therefrom. To adjustably secure the printing plate against movement in either direction circumferentially, or around the surface of the printing cylinder, there are provided two supporting plates 26, which rest upon the surface of the printing cylinder, one on each side of the printing plate, and are secured thereon by means of screws 28, the threads of which are received in oblique grooves 27 formed in said supporting plates. Said screws are screwed in the screw holes 30 in the printing cylinder, and in order to adjust the position in which said supporting plates are held, said cylinder is provided with a plurality of oblique series of these screw holes. Said adjustment may be made not only by selecting the series of screw holes containing those in which the screws are screwed, but also by moving the plate or plates longitudinally along the printing cylinder, for by so doing there may be selected to receive the screws a pair of screw holes more or less distant from a given longitudinal line of the cylinder. In Fig. 2 the supporting plates are shown as substantially in the middle of the impression cylinder, but if the lower supporting plate were moved to the left and the upper to the right, and secured by means of the proper screw holes, it is evident that the distance between said plates would be increased, and they would be adapted to support a wider printing plate.

In operation, the workman stands in front of the machine, and places the end or side of the box that is to be printed upon the supporting surfaces of the brackets 6, extending horizontally from the vertical disk or wheel 1, as said brackets approach their uppermost position.

Said end or side then passes under the impression cylinder and is taken off the support at the other side as it descends.

I claim:—

5 1. In combination, a vertical revoluble wheel or disk, a plurality of horizontal supports adjustably secured upon the disk, each adapted to enter the interior of a box and support thereon the side or end to be printed, a printing cylinder which revolves in proximity to the path of each
10 support, and means for causing said disk and cylinder to revolve in unison, substantially as described.

15 2. In combination, a vertical revoluble wheel or disk having formed therein a circular concentric under-cut groove, bolt hanging heads in said grooves, brackets adjustably secured by means of said bolts, the outer surfaces of the horizontally extending portions of said brackets being curved cylindrically, whereby groups of brackets form supports having continuous cylindrical surfaces, a printing cylinder revoluble in proximity to the path of

each support, and means for causing said disk and cylinder 20 to revolve in unison, substantially as described.

3. In combination, a vertical revoluble wheel or disk having formed therein a circular concentric under-cut groove, and having an enlarged hub, bolt hanging heads in said groove, brackets adjustably secured by means of 25 said bolts, the inner end of each bracket being curved to rest against said hub, the outer surfaces of the horizontally extending portions of said brackets being curved cylindrically, whereby groups of brackets form supports having continuous cylindrical surfaces, a printing cylinder revoluble in proximity to the path of each support, and 30 means for causing said disk and cylinder to revolve in unison, substantially as described.

In witness whereof I have hereunto set my hand in the presence of two subscribing witnesses.

JOHN C. LEARY.

Witnesses:

W. I. CLARKE,

CHAS. T. STANLEY.