No. 741,311. PATENTED OCT. 13, 1903.

C. R. CULLEY.

NUMBERING MACHINE.

APPLICATION FILED JAN. 30, 1903.

NO MODEL.

Fig. 1.

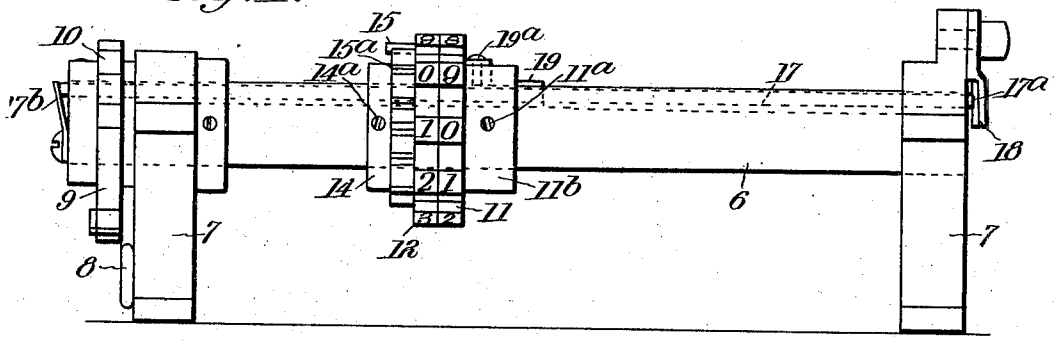


Fig. 2.

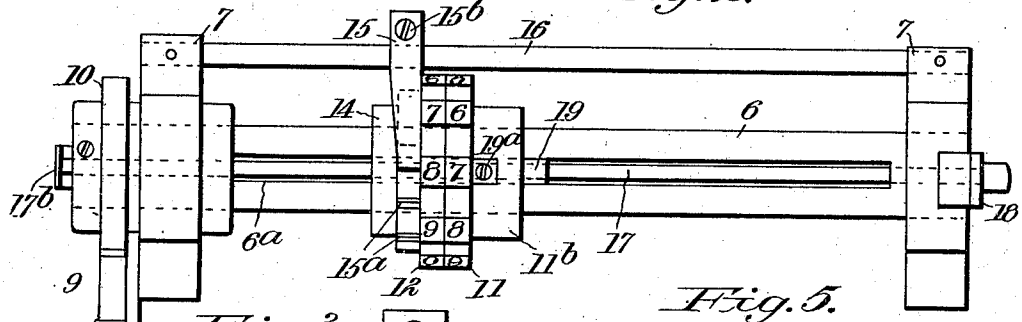


Fig. 5.

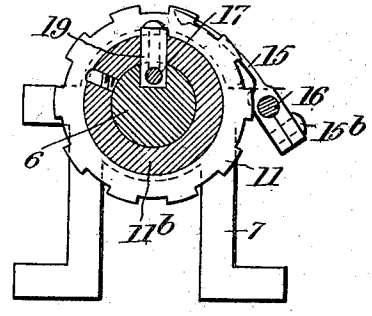


Fig. 3.

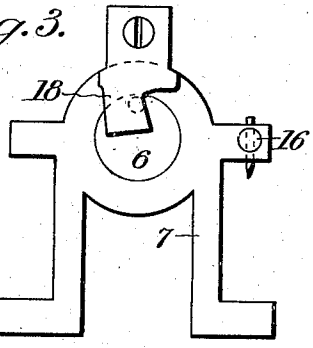


Fig. 4.

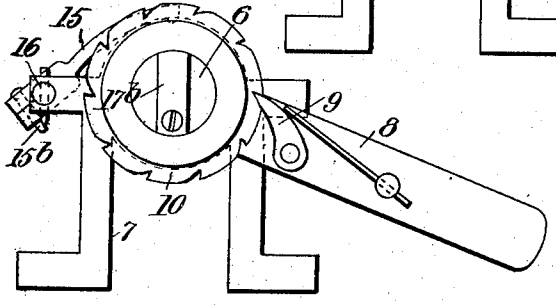
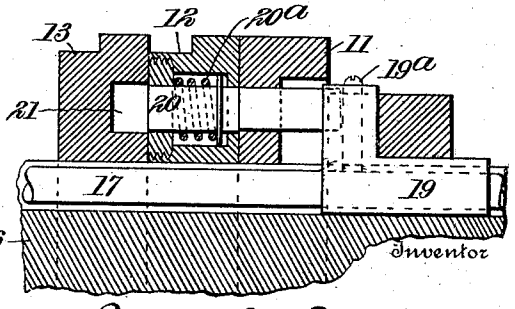


Fig. 6.



Witnesses

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No. 741,311. Patented October 13, 1903.

UNITED STATES PATENT OFFICE.

CARL R. CULLEY, OF NORWALK, OHIO, ASSIGNOR OF ONE-HALF TO WALTER H. PECK, OF NORWALK, OHIO.

NUMBERING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 741,311, dated October 13, 1903.

Application filed January 30, 1903. Serial No. 141,199. (No model.)

To all whom it may concern:

Be it known that I, CARL R. CULLEY, a citizen of the United States, residing at Norwalk, in the county of Huron and State of Ohio, have invented certain new and useful Improvements in Numbering-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, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

This invention relates particularly to a machine for consecutively numbering the pages or sheets delivered from a printing-machine; and the object of the invention is to construct a numbering-device having numbering wheels or rings which may be adjusted along a shaft to occupy a desired position relative to the matter to be numbered thereby.

A further object of the invention is to simplify and improve the device for properly actuating the various wheels to print consecutive numbers.

In the accompanying drawings, Figure 1 is a front elevation of the machine. Fig. 2 is a top plan view. Fig. 3 is an elevation of one end, and Fig. 4 is an elevation of the other. Fig. 5 is a cross-section. Fig. 6 is a fragmentary longitudinal section.

Referring specifically to the drawings, 6 indicates a shaft which rotates in suitable bearings afforded by the supports 7. This shaft carries the numbering-wheels and is illustrated as actuated intermittently by a lever 8, having a spring-pawl 9, engaging the ratchet 10 on the shaft. The lever may be moved by any suitable mechanism, preferably a connection with a moving part of the press, to operate the numbering device according to the delivery from the press. Instead of the intermittent motion the shaft may be constantly rotated, if desired, by suitable gearing, the provision of which would be a matter of mechanical skill.

In all the views except Fig. 6 two numbering-wheels are shown, which will number up to "99" or from "1" to "50" and back to "1," the units-wheel being indicated at 11 and the tens-wheel at 12.

In Fig. 6 the hundreds-wheel 13 is shown, and a construction is disclosed whereby additional wheels may be added indefinitely.

The units wheel or ring 11 is fast on the shaft. The remaining wheels are loose to revolve thereon, and longitudinal movement is prevented by a collar 14 set at adjustment by a set-screw 14^a. The units-wheel is made fast by a set-screw 11^a through a collar 11^b on the wheel. By loosening the set-screws the wheels may be moved along the shaft in either direction and located to the desired position according to the work. All the wheels except the units-wheel are notched, as at 15^a, for engagement by spring-pawls 15, carried by a rod 16, which extends parallel to the shaft between the supports. The pawls are sleeved over the rod and fastened by set-screws 15^b, and are movable along the rod according to the location of the numbering-wheels. The shaft has a longitudinal groove 6^a of sufficient length to accommodate any desired lateral adjustment of the numbering-wheels. A rod 17 extends along and within this groove and through the ends of the shaft, and the rod is slidable longitudinally a sufficient distance to couple the numbering-wheels in a manner to be described. It normally projects at one end a short distance beyond the shaft, as at 17^a, under the pressure of a spring 17^b against its other end. At each rotation of the shaft the projecting end of the rod contacts with the face of a cam 18, fixed to the support. The face of this cam is such that it forces the rod inwardly lengthwise of the shaft. The rod carries a dog 19, which is adjustable lengthwise thereon by set-screw 19^a, so that it may be positioned according to the location of the numbering-wheels. The tens-wheel has in the side thereof a series of holes corresponding to the numbers thereon. Normally the dog lies within the units-wheel; but at each rotation the engagement of the end of the rod 17 with the cam moves the rod lengthwise a sufficient distance to force the dog into one of the holes of the tens-wheel. This locks the wheels together until the rod passes the cam, when the dog is thrown out

of engagement by the pressure of the spring 17^b. The length of the cam-face is proportionately equal to the spaces between each figure of the numbering-wheels, as will be understood, so that the tens-wheel will be carried one space at each rotation.

Hundreds and additional wheels may be added in the manner shown in Fig. 6—that is, at its "0" space the tens-wheel carries a pin 20, extending therethrough. This pin is adapted to register with holes 21 in the hundreds-wheel. At the end of each rotation of the tens-wheel the dog 19 engages this pin and forces it into the corresponding hole of the hundreds-wheel, thereby locking all three wheels together and moving them accordingly. The pin 20 on the withdrawal of the dog is forced out of engagement by a spring 20^a.

What I claim as new, and desire to secure by Letters Patent, is—

1. In a numbering-machine, the combination with a longitudinally-grooved shaft, and numbering-wheels rotatable therewith, of a rod slidable in the groove, means to move the same when the shaft is rotated, and a dog carried by the rod and engaging a wheel intermittently, substantially as described.

2. In a numbering-machine, the combination with a shaft and numbering-wheels adjustable lengthwise thereon, of a longitudinally-movable dog rotating with the shaft and adjustable lengthwise thereof, engaging the tens-wheel periodically.

3. In a numbering-machine, the combination with a shaft grooved lengthwise, and numbering-wheels adjustable lengthwise thereon, of a rod slidable lengthwise in the groove and projecting beyond the end of the shaft, a dog carried by the rod and adjustable lengthwise thereon, and movable lengthwise therewith to couple the wheels to produce consecutive numbering, and a cam striking the projecting end of the rod periodically, substantially as described.

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

CARL R. CULLEY.

Witnesses:
EDGAR G. MARTIN,
WALTER H. PECK.