

May 15, 1934.

D. J. SCOTT

1,958,902

PRINTING CYLINDER APPLIANCE

Filed Oct. 31, 1932

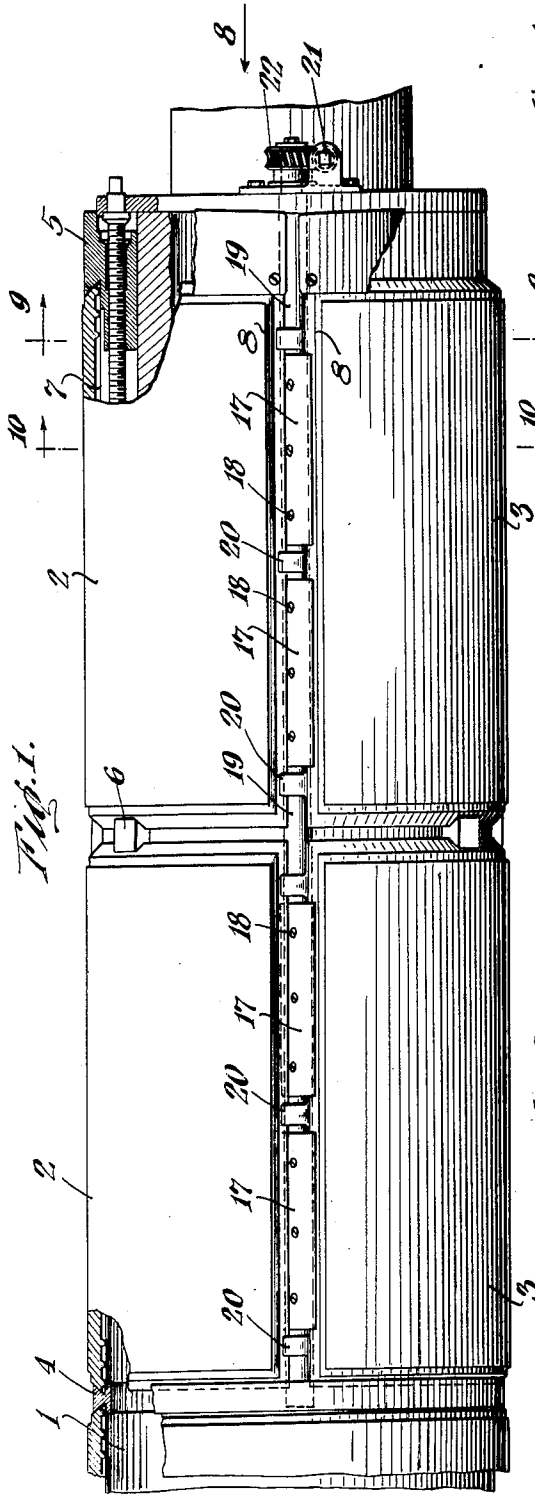


Fig. 1.

Fig. 4.

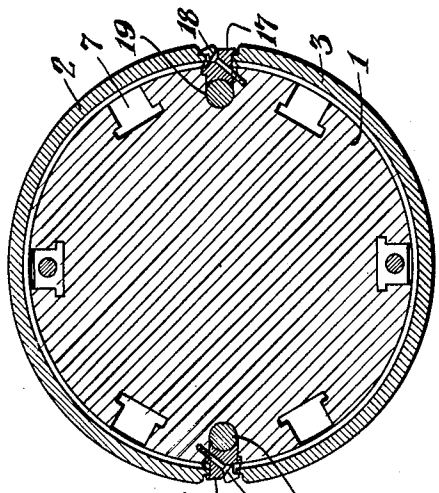


Fig. 5.

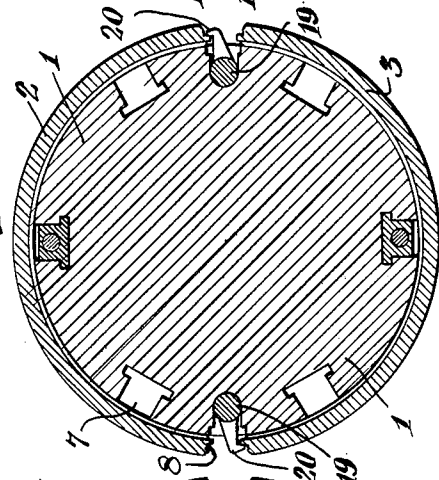
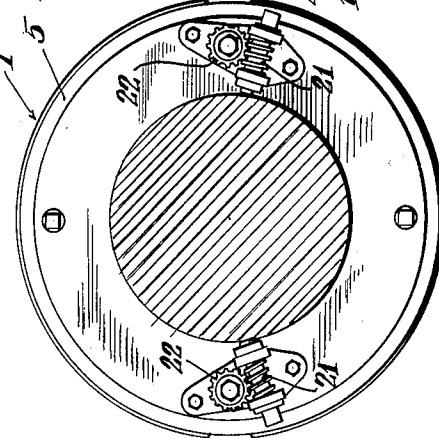


Fig. 6.



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1,958,902

PRINTING CYLINDER APPLIANCE

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Application October 31, 1932, Serial No. 640,436

2 Claims. (Cl. 101—378)

This invention relates to printing cylinder appliances and has more particular reference to plate clamping means.

Printing plates for cylinders of newspaper printing machines are now fastened to the cylinder by means of clamps slidable in longitudinal grooves of the cylinder and engaging the curved ends of the plates, the straight ends of the plate being generally left free.

Due to the high speed of the printing cylinders it has been found that there is a tendency on the part of the straight ends of the plates to be moved outwardly by centrifugal force, and the main object and feature of this invention is to provide means whereby this tendency may be checked, and to do this without interfering with the construction of plate clamps now employed in connection with the curved ends of the plate.

In the accompanying drawing the invention is disclosed in several concrete and preferred forms in which:

Fig. 1 is a view, partly in side elevation and partly in section, of a little more than one half of a printing cylinder embodying the invention;

Fig. 2 is a view looking in the direction of arrow 8 of Fig. 1, with the shaft of the cylinder in section;

Fig. 3 is a transverse sectional view substantially on the plane of line 9—9 of Fig. 1; and

Fig. 4 is a transverse sectional view substantially on the plane of line 10—10 of Fig. 1.

1 indicates a printing or plate-carrying cylinder such as is employed in newspaper printing machines, and provided, as usual, with a plurality of segmental printing plates 2 and 3 one circumferentially behind the other in spaced relation at both ends. As shown, there is a plurality of rows of such plates, generally four in number and, in the form shown, the two rows at the right-hand end of the cylinder are intended to be staggered circumferentially with respect to two rows at the left-hand end (in Fig. 1) of the cylinder in a manner well understood in the art. The usual means or clamps to engage the taper on the curved ends of the plates are employed, here taking the form of a center clamp or clamps 4, end clamps as 5 and intermediate clamps 6. The cylinder is provided with longitudinal grooves as 7 to permit of adjustment of the intermediate and end clamps. These clamps all engage the printing plate below the printing surface thereof.

In addition to the taper surfaces on the curved ends of the plates, there are here provided projecting lips on the straight ends of the plates

below their printing surface, and there are means carried by the cylinder intermediate the plates and below their printing surface to overlap the lips on the straight ends of adjacent plates.

The lips on the straight ends of the plates are indicated at 8. Stationary confining members to engage one of the straight ends of a plate, in the form of bars or strips are pinned to the cylinder as at 18 intermediate the plates. Beneath the bars is a rockshaft 19 carrying clamping dogs or members 20 that extend up between the bars and which clamp the other end of a plate. Thus it will be seen that there are stationary and pivotally supported members at both ends of the plates, that these members alternate and engage different plates. Rockshaft 19 is actuated from the end of the cylinder by means of worm 21 and worm wheel 22. Thus all the pivotally supported members that are located at one end of the plates are simultaneously actuated.

I claim:

1. In a printing machine: a printing cylinder, a plurality of segmental printing plates carried by the cylinder one circumferentially behind another in spaced relation at both straight ends, stationary plate confining members on the cylinder located intermediate the plates at both straight ends, and pivotally supported plate clamping members on the cylinder also located intermediate the plates at both straight ends, the stationary and pivotally supported members at both straight ends of the plates alternating and engaging different plates.

2. In a printing machine: a printing cylinder, a plurality of segmental printing plates carried by the cylinder one circumferentially behind another in spaced relation at both straight ends, stationary plate confining members on the cylinder located intermediate the plates at both straight ends, pivotally supported plate clamping members on the cylinder also located intermediate the plates at both straight ends, the stationary and pivotally supported members at both straight ends of the plates alternating and engaging different plates, and means to simultaneously actuate all the pivotally supported members that are located at one end of the plates.

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