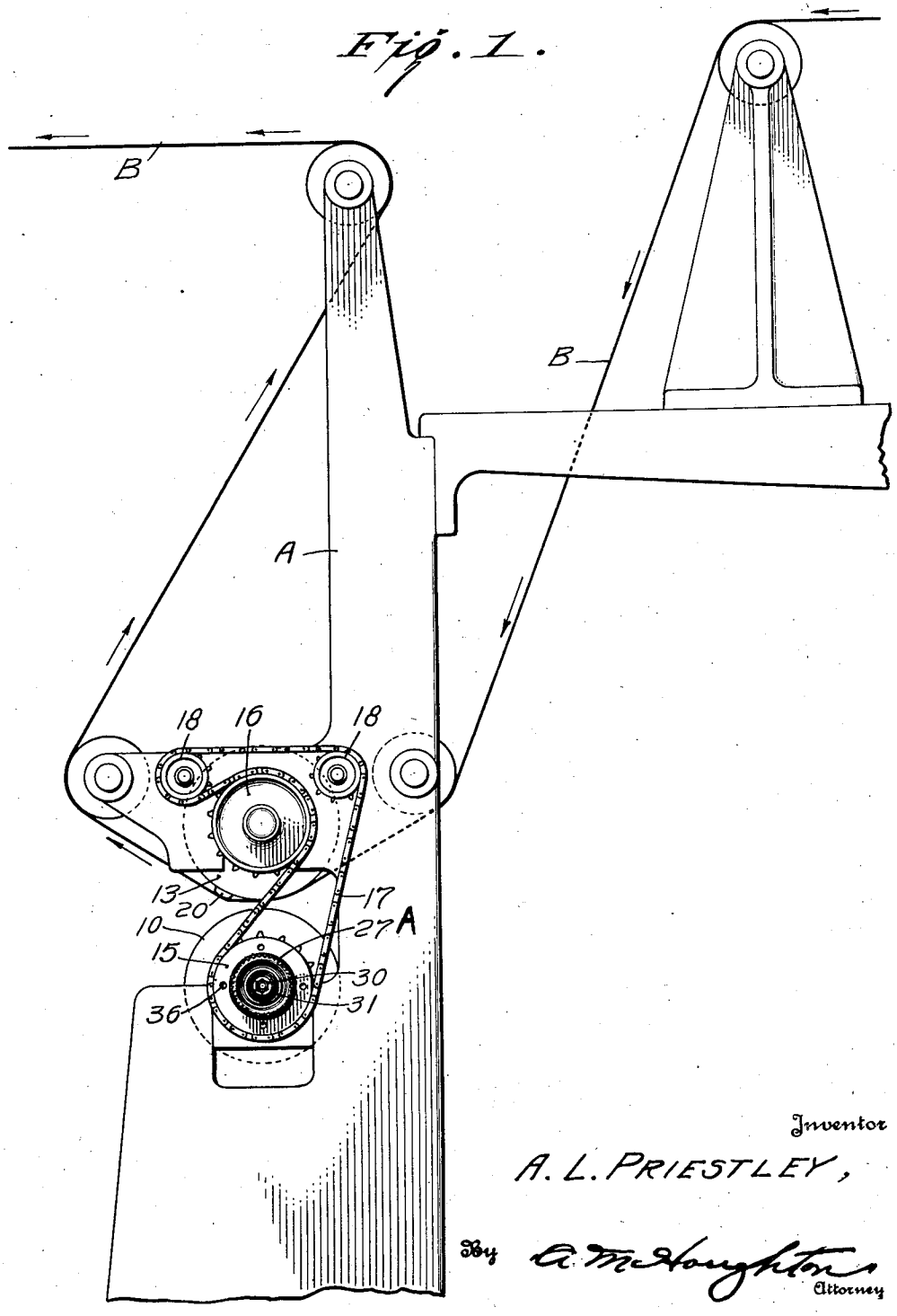
Sept. 27, 1927. 1,643,608

A. L. PRIESTLEY

SELECTIVE PRINTING MACHINE

Filed Sept. 22, 1925 2 Sheets-Sheet 1

Fig. 1.



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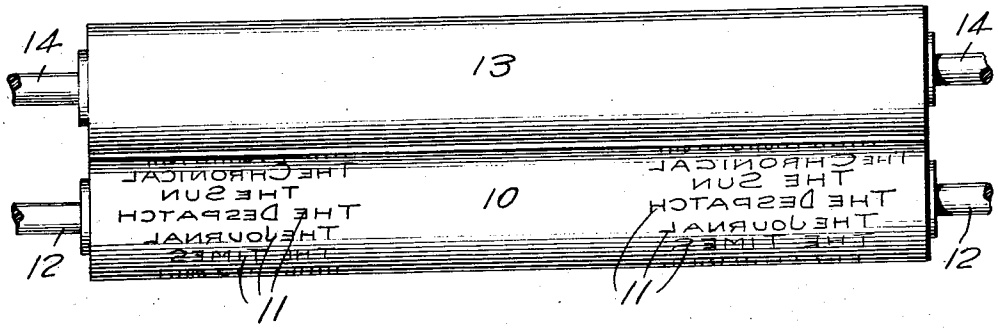
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Fig. 2.



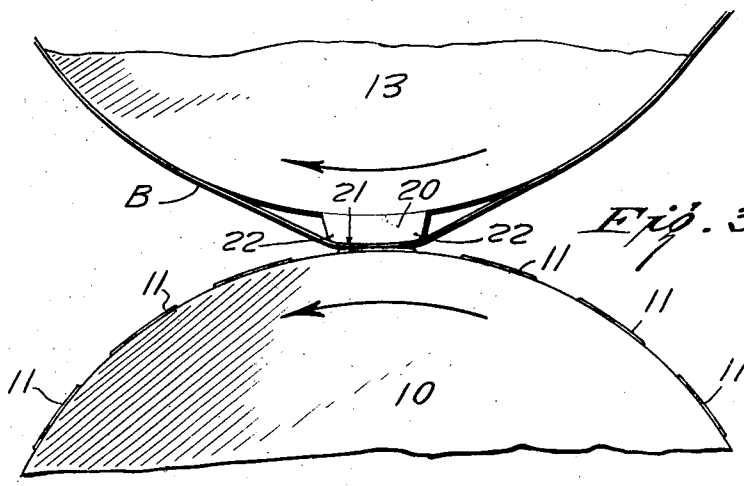


Fig. 3.

Fig. 4.

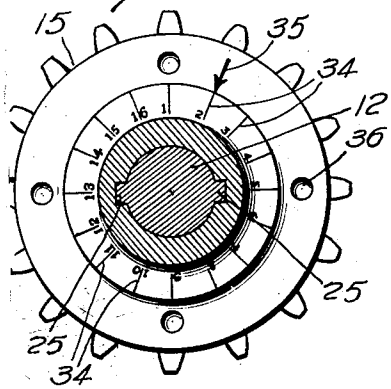
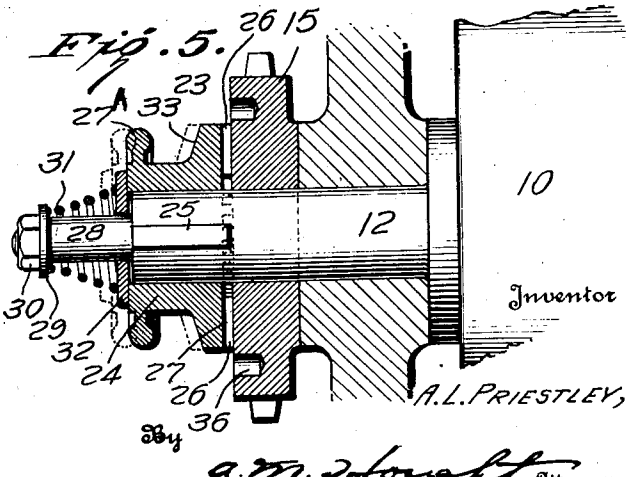


Fig. 5.



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Patented Sept. 27, 1927. 1,643,608

UNITED STATES PATENT OFFICE.

ABRAHAM L. PRIESTLEY, OF NEW YORK, N. Y.

SELECTIVE PRINTING MACHINE.

Application filed September 22, 1925. Serial No. 57,921.

This invention relates to selective printing machines; and it comprises a pair of rolls and means for rotating the same in unison, one of the rolls being provided with a plurality of printing surfaces and the other roll being provided with corresponding pressure means to engage any one of the said printing surfaces, together, advantageously, with means for setting one roll with respect to the other; all as more fully hereinafter set forth and as claimed.

In the newspaper and magazine business it is the custom to issue certain features more or less regularly, and these features are sometimes syndicated. As an illustration, most Sunday newspapers carry a gravure section but this section may be supplied to many different newspapers by one syndicate. Therefore in making up this section it is printed without the name of any particular newspaper or magazine or publisher and then a certain number is run through the presses in order to print the name of the particular publisher to which that number is to be sent. This procedure requires the separate setting up of the type or interchanging of printing rolls when the names are etched on the rolls, with consequent loss of time and with resultant expense.

An object of the present invention is the provision of means whereby a number of gravure sections for example may be printed with one heading and then another number may be printed with another heading all by means of the same printing rolls so arranged and constructed as to necessitate no substitution or no special setting up of the type.

Further objects of the present invention will appear.

In the accompanying drawing, showing one form of a specific embodiment of my invention, and in the several views of which similar reference numerals designate corresponding parts,

Figure 1 is a diagrammatic illustration in side elevation of the front end of a printing press embodying my invention;

Figure 2 is a front elevation of the etched cylinder and the pressure roll in their operative relation;

Figure 3 is a partial end view thereof showing the paper in position as when being printed;

Figure 4 is an end view of my improved locking means; and

Figure 5 is a central longitudinal sectional view thereof.

In the drawings, 10 indicates a cylinder having a plurality of advantageously uniformly spaced, etched headings indicated at 11. These headings are indicated as being etched upon the cylinder, but this is illustrative. Any printing surface will suffice. For simplicity of illustration I have shown these headings as raised portions in Fig. 3 in order that the operation may be more readily understood. The roll or cylinder 10 is mounted upon shafts 12 which are journaled in suitable bearings in the printing machine A.

Rotatably mounted above the cylinder 10 is pressure roll 13, which is provided with shafts 14 journaled in bearings located in the printing machine. Either one of the rolls may carry the printing surface and either one may constitute the pressure roll. But I have shown the upper roll as the pressure roll.

The etched cylinder 10 and the pressure roll 13 should be rotated in unison and in opposite directions. For this purpose the shafts 12 and 14 of the respective rolls carry sprocket wheels 15 and 16 driven by sprocket chain 17 as illustrated in Fig. 1. Idler sprockets 18 are suitably mounted above the sprocket wheel 16 for spacing the oppositely moving portions of the chain and for taking up wear and for adjustment purposes.

Securely mounted upon the outer surface of the pressure roll 13 and extending longitudinally therewith is a pressure strip 20, whose outer surface 21 is provided with a curvature rotating from the center of the pressure roll 13. Advantageously the width of the face 21 is slightly greater than the width of the etched portions 11 in the cylinder 10, for the purpose of insuring an even contact or impression upon the paper B to be supplied with a particular heading. The outer ends of the strip 20 are rounded as indicated at 22 in order that the paper will not be torn during the printing operation.

In Figs. 4 and 5 is illustrated mechanism for locating and locking the various headings in printing arrangement. The selective clutch mechanism indicated generally at 23 is mounted upon the shaft 12 and is adapted for locking with respect to the sprocket wheel 15 which is loosely mounted upon the

shaft 12. The clutch member 24 which is slidably mounted upon the outer end of the shaft 12 is adapted to be rotated by means of the oppositely disposed keys 25. The outer face of the sprocket wheel 15 is provided with a plurality of teeth 26 corresponding in number to the number of headings carried by the printing roll 10, and these teeth engage mating grooves 27 formed on the inner or contacting face of the clutch member 24. A knurled hand-gripping portion 27A is formed on the outer end of the clutch member 24 for operation of the clutch.

Formed upon the outer end of the shaft 12 is a reduced portion 28 around which is located the coiled spring 31. The outer end of the shaft 12 is provided with a threaded reduced end for receiving the washer 29 and nut 30. The washer bears against one end of the coiled spring and the other end of the coiled spring bears against the washer or disk 32 slidably mounted upon the reduced portion 28 of the shaft and bears against the outer face of the clutch member 24.

For the purpose of readily operating the clutch I have provided upon the face portion 33 a plurality of graduations 34 with suitable indicia corresponding to the headings by positioning marks through the clutch mechanism so the particular heading may be selected and positioned to come in contact with the strip carried by the pressure roll.

When it is desired to change the position of the etched cylinder 10 with respect to the longitudinal pressure strip 20 carried by the other roll, the clutch member 24 is withdrawn from the sprocket wheel 15 against the tension of the coiled spring 31, as indicated by the dotted lines in Fig. 5, and is rotated in the desired direction until the pointer or index 35 is in line with the particular graduation 34 corresponding to the heading to be printed. The clutch member is then released permitting the coacting clutch teeth to engage and lock. In event it becomes necessary to rotate the pressure roll 13 as for instance for the purpose of setting it with respect to the cylinder 10 because of slippage or for other reasons, I have provided sprocket wheel 15 with a plurality of depressions and recesses 36 in the outer face for the purpose of receiving a spanner wrench or the like. The operation of the printing machine is obvious from the foregoing. Assuming that a certain number of gravure sections are to be sent to the publisher of a newspaper entitled "The Dispatch", the lower cylinder carrying the different headings is positioned so that the etched portion or the type "The Dispatch" comes under the pressure strip. This number of sections are printed in the usual way, the upper roll 13 being rotated at such a rate with respect to and corresponding in size to the roll 10 as to present the strip plate 20 to the particular heading "The Dispatch" upon each revolution. When the required number of sections have been printed with "The Dispatch" the lower roll is then positioned so that another heading is presented to the strip plate 20 and the printing is proceeded with as before. For illustration I have referred to gravure sections of newspapers and the invention is particularly useful in connection with the printing of them, but it may be used for other and similar purposes.

When type, electro type or plates are desired or required, the cylinder may be substituted by a mandrel of the same circumference carrying plates attached or inserted. The printing may be done in the same manner as with the etched cylinder.

What I claim is:—

1. A printing machine comprising, a rotatable cylinder having a plurality of printing surfaces, a roll adapted to be rotated with said cylinder, means carried by the roll for uniformly bearing against the paper upon a predetermined printing surface only at predetermined periods, and means for selectively changing the position of the cylinder with respect to the roll.

2. A printing machine comprising, a rotatable cylinder having a plurality of printing surfaces, a roll adapted to be rotated with said cylinder, means carried by the roll for uniformly bearing against the paper upon a predetermined printing surface, and means comprising a slidably mounted clutch for selectively changing the position of the cylinder with respect to the roll.

3. A printing machine comprising, a rotatable cylinder having a plurality of printing surfaces, a roll adapted to be rotated with said cylinder, means carried by the roll for uniformly bearing against the paper upon a predetermined printing surface, means for selectively changing the position of the cylinder with respect to the roll, said last named means comprising a sprocket wheel loosely mounted with respect to the cylinder and having locking means, and a slidably mounted clutch adapted to be engaged thereby.

4. In a printing machine, a device for printing headings comprising a rotatably mounted cylinder having a plurality of printing surfaces, a pressure roll and a longitudinally extending strip carried by said pressure roll for applying uniform pressure on the paper against one of said printing surfaces and means for locking said cylinder and pressure roll in various predetermined positions.

5. In a printing machine, a device for printing headings comprising a rotatably mounted cylinder having a plurality of

printing surfaces, a pressure roll and a longitudinally extending strip carried by said pressure roll for applying uniform pressure on the paper against one of said printing surfaces, means for rotating said pressure roll and cylinder in unison and means for locking said cylinder and pressure roll in various predetermined positions.

6. In a printing machine, a device for printing headings comprising a rotatably mounted cylinder having a plurality of printing surfaces, a pressure roll and a longitudinally extending strip carried by said pressure roll for applying uniform pressure on the paper against one of said printing surfaces, means for rotating said pressure roll and cylinder in unison and means for locking said cylinder and pressure roll in various predetermined positions.

7. A machine for printing selective headings comprising, a rotatably mounted cylinder having a plurality of printing surfaces, a centrally located shaft secured thereto, a pressure roll, a longitudinally extending and raised strip carried by the pressure roll and of substantially greater width than the printing surfaces, and means carried by said cylinder shaft for predeterminedly setting the printing surfaces with respect to the longitudinally extending strip.

8. A machine for printing selected headings comprising, a cylinder provided with a plurality of printing surfaces and having a shaft, a pressure roll having a shaft secured thereto, means carried by the pressure roll for applying uniform pressure on the paper against one of the said printing surfaces, a sprocket wheel loosely mounted upon said cylinder shaft and provided with a toothed surface, a slidably mounted clutch member adapted to be engaged by said teeth, yieldable means for normally retaining said clutch member in its locked position with respect to the sprocket wheel, and a sprocket chain for driving the pressure roll and said cylinder in unison.

9. A machine for printing selected headings comprising a cylinder provided with a plurality of printing surfaces and having a shaft, a pressure roll having a shaft secured thereto, means carried by the pressure roll for applying uniform pressure on the paper against one of said printing surfaces, driving means loosely mounted on the cylinder shaft and provided with a toothed surface, a slidably mounted clutch member adapted to be engaged by said teeth, yieldable means for normally retaining said clutch member in its locked position with respect to said driving means, and driving means on said pressure roll shaft coacting with said first-named driving means for rotating said cylinder and pressure roll together.

In testimony whereof, I have hereunto affixed my signature.

ABRAHAM L. PRIESTLEY.