

(No Model.)

W. C. WENDTÉ.
PRINTING PRESS.

No. 530,812.

Patented Dec. 11, 1894.

Fig. 1.

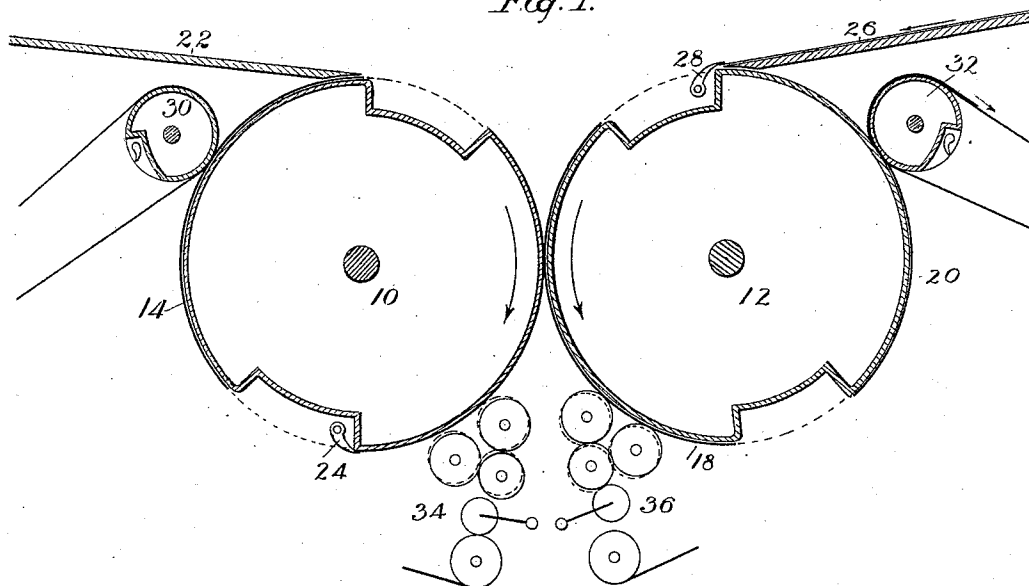
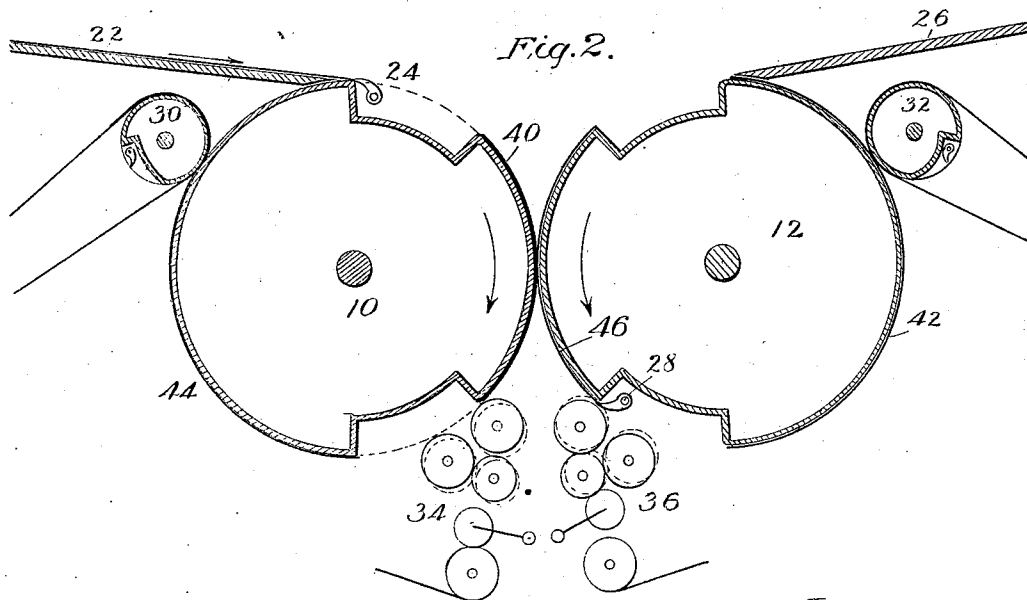


Fig. 2.



Witnesses:

Am. Long
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WILLIAM C. WENDTÉ, OF BOSTON, MASSACHUSETTS.

PRINTING-PRESS.

SPECIFICATION forming part of Letters Patent No. 530,812, dated December 11, 1894.

Application filed January 25, 1894. Serial No. 497,976. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM C. WENDTÉ, a citizen of the United States, and a resident of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in Printing-Presses, (designated Case E,) of which the following is a specification.

This invention has for its object the construction of a printing press adapted for curved forms, small in bulk and convenient in use.

In the drawings forming part of this specification, Figure 1 shows, diagrammatically, my press in cross section. Fig. 2, is also a cross section showing modified forms.

This press consists essentially of two cylinders of equal size marked 10 and 12. These are geared together so that they maintain toward each other a constant angular relation. On the cylinder 10 a form 14 is attached. This may be a curved electro-type properly backed, or one or more stereotypes, or it may be an etched sheet of zinc bent upon a form-support to the proper curve and held down at the ends in any one of the usual ways. In Fig. 1, the form covers less than half the periphery of the cylinder 10 to which it is attached, and on the opposite side of said cylinder an impression-surface 16, also carrying less than half the periphery is provided, which is used in a way to be presently described. On the second cylinder marked 12, the surfaces are arranged in a manner exactly like that just specified, 18 being the form, and 20 the impression-surface. In both these cylinders the means by which the forms are held in place are not shown, nor the reel-rods for straining the packing on the impression-surfaces, as all these contrivances are in constant use and are well understood, but the forms are indicated by heavy black lines and the impression-surface packing by light lines.

When, from the feed-board 22, a sheet is fed to the grippers 24 on the first cylinder 10, it lies on the impression-surface 16, and as it passes the form 18, on the second cylinder 12 it is printed. From the feed-board 26, a sheet is in like manner fed to the grippers 28 on the second cylinder, and that is printed by the form 14, against the impression-surface

20. Both sheets after printing are carried forward and delivered with the help of the delivery cylinders 30 and 32, as is commonly done in many presses of different construction. At 34 and 36, the inking apparatus for each form is indicated. The ink in these fountains may of course be black or any desired color. The delivery need not be as by the cylinders 30 and 32 as shown, but may be by tapes from the upper surface of each cylinder in the well known way, if an under-feed is employed, or the sheets may be removed in any other manner.

It will be seen that in this press each cylinder is a form and an impression-cylinder also; and that it is therefore an economical machine, because, disregarding the gaps, an impression from one cylinder or the other is always being printed, in alternating sequence, so long as the press is in motion.

In Fig. 1, the two forms 14 and 18, in my press are of equal size, and the two impression-surfaces are also identical to correspond; but this, though usually the more useful arrangement is not an essential condition as will be seen from an examination of Fig. 2. In this case the forms 40 and 42, differ in size, the first being larger and the other smaller than those in Fig. 1. It is necessary therefore, for successful printing, that the small form come into operative contact with a small impression-surface 44, and the larger with 46. As a consequence, a large and a small impression will result from each revolution of a cylinder, the printing taking place in alternating sequence; first from one form, then from the other.

I have thus described the nature of my invention and the manner in which it may be put into practice; but I do not confine myself to the identical arrangement shown being well aware that it admits of modification in various ways without affecting the principle on which it is based.

It will be understood that in the press I have invented the form-rollers after inking a form must rise out of the way so as to clear the sheet that follows on the impression-surface. The necessary rise and fall may be accomplished in several ways that are common and well understood.

In this specification, though for the sake of

convenience the terms "first" and "second" are applied to the cylinders forming the most important parts of the machine, still it should be borne in mind that both cylinders are of equal value, nor can one be said to precede the other in time or otherwise.

The press I have invented has been referred to in this specification as intended and adapted for relief printing; but it is obvious that the same is well fitted for planographic printing also. When suitable zinc or analogous printing surfaces are strained over the form-supports, and damping apparatus supplied (for which the facilities are very good) this press without further change will take its place with the best lithographic machines.

What I claim is—

1. In a printing press, a cylinder carrying both a form and an impression-surface, the latter provided with grippers; in combina-

tion with another cylinder furnished in like manner, and with two feed-boards, or equivalent means for feeding sheets; substantially as described.

2. In a press for printing sheets, two revolving cylinders of equal size geared together, each provided with a form- and an impression-surface of equal size separated from each other by gaps and angularly adjusted to follow each other in alternating sequence; in combination with a set of grippers for each cylinder placed functionally in one of its gaps; with sheet-feeding and delivery apparatus to and from each of said grippers; and with inking apparatus provided with form-rollers adapted to drop on the forms as they pass the same; substantially as described.

WILLIAM C. WENDTÉ.

Witnesses:

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