No. 676,512. Patented June 18, 1901.

F. G. PRICE.

MAKING READY FORM FOR PRINTING PRESSES.

(No Model.) (Application filed Apr. 13, 1900.) 2 Sheets—Sheet 1.

Fig. 1.

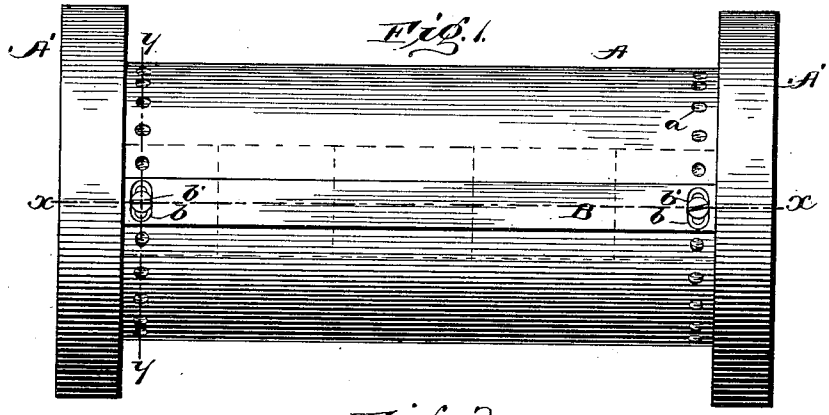


Fig. 2.

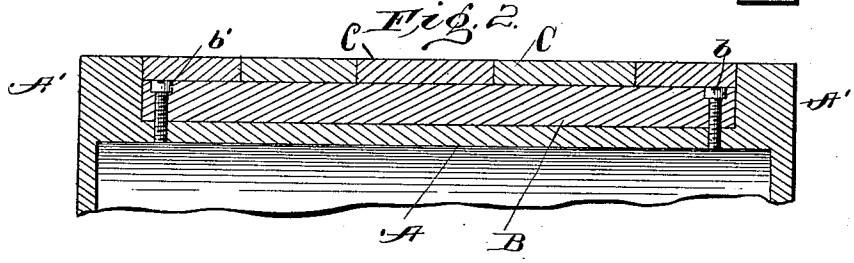


Fig. 3.

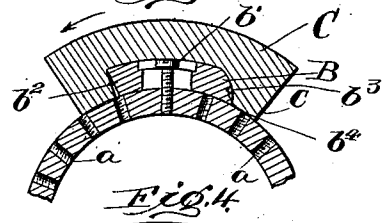


Fig. 4.



Witnesses:
J. M. Fowler Jr.
Allan W. Foose

Inventor:
Francis G. Price
by
J. F. Burke.
Atty.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

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Fig. 8.

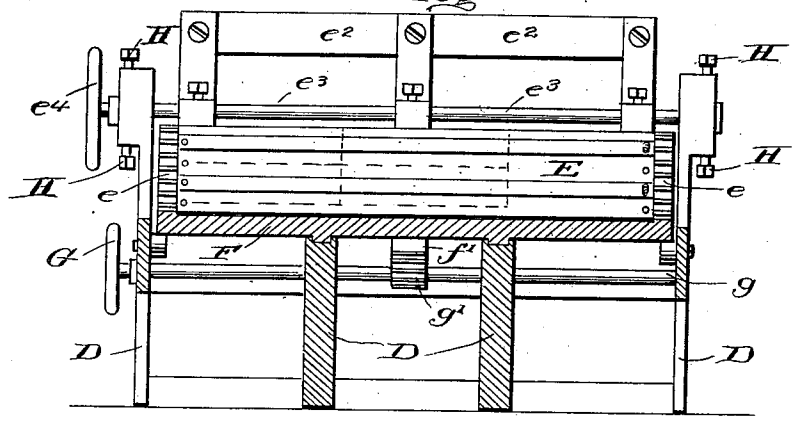


Fig. 9

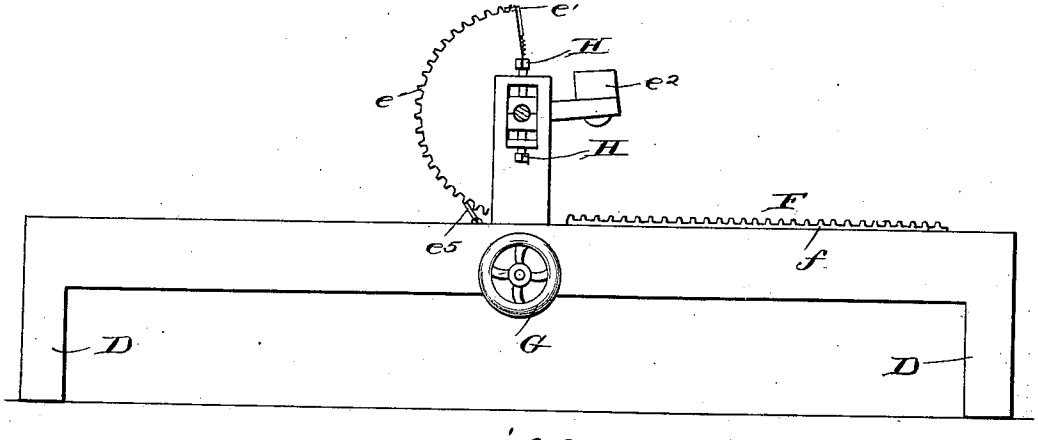


Fig. 5

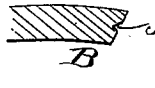
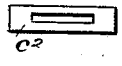


Fig. 6.



Fig. 7.



Witnesses
J. M. Fowler Jr.
Allan H. Foose.

Inventor
Francis G. Price
by
J. F. Beale
Atty.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

FRANCIS G. PRICE, OF BALTIMORE, MARYLAND, ASSIGNOR OF ONE-HALF TO LOUIS T. WEIS, OF SAME PLACE.

MAKING READY FORMS FOR PRINTING-PRESSES.

SPECIFICATION forming part of Letters Patent No. 676,512, dated June 18, 1901.

Application filed April 13, 1900. Serial No. 12,708. (No model.)

To all whom it may concern:

Be it known that I, FRANCIS G. PRICE, a citizen of the United States, residing at Baltimore, in the State of Maryland, have invented certain new and useful Improvements in Apparatus for Making Ready Forms for Printing-Presses; 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.

Making ready for illustrated work, cut-work, or in multicolor printing involves considerable time, infinite care, and skill, and as this work is done upon the printing-press it throws out of use for the time being the press.

Now the object of my invention is to provide in duplicate sets make-ready apparatus, either of which sets shall be adapted for attachment to the printing-press impression-cylinder or to a like cylinder of a dummy press or press not in use, and thereby afford means outside the press upon which to make ready, which means can be readily transferred to said impression-cylinder.

In the accompanying drawings, forming a part of this specification, Figure 1 is a front elevation of an impression-cylinder detached from the printing-press, showing an adjustable rib attached thereto, and in dotted lines packing-plates mounted on said rib. Fig. 2 is a longitudinal section taken on the line $x\ x$ of Fig. 1. Fig. 3 is a transverse section taken on the line $y\ y$ of Fig. 1, showing a packing-plate attached to rib. Fig. 4 is a side elevation in section of a packing-plate detached. Figs. 5, 6, and 7 are detail views of means for fastening the packing-plates to the ribs. Fig. 8 is an end view of the dummy press, and Fig. 9 is a side elevation of the same.

Referring more particularly to the drawings, A denotes the impression-cylinder of a printing-press, having its bearing portion A arranged about three-quarters of an inch below the cylinder-bearers A′ A′.

a denotes screw-threaded holes in the cylinder, arranged circumferentially near each end thereof.

B denotes ribs extending horizontally from side to side of the cylinder between the cylinder-bearers, provided with slots b, through which pass screws b', their heads being countersunk in said slots. The screws register with the threaded holes a and serve to clamp the ribs down upon the surface of the cylinder, the slots allowing a circumferential adjustment of the ribs equal to the distance between the screw-holes. The ribs are cut or beveled under upon their upper sides, while their lower sides b^3 may be slightly arc-shaped. b^4 denotes a V-shaped recess in the lower sides of the rib.

C denotes the packing-plates, having channels upon their under sides with beveled and arc-shaped walls, which register with the sides of the ribs B, over which they fit, as shown in Fig. 3. The undercut given the upper side of the ribs and the corresponding shape in the walls of the plates is designed to give the plates a better hold. I do not confine myself, however, to this method of connecting the plates to the ribs, as other methods may be used and a different shape be given the under sides of the plates to facilitate the attachment, removal, and lateral adjustment of the same upon the ribs. In order to give the packing-plates a better hold upon the ribs and prevent their displacement, spring-latches c may be used, one upon each side of the plate. Said latches engage with a V-shaped recess b^4, (shown in Fig. 5,) though any suitable form of latch may be used.

In Fig. 6 is shown a form of spring-latch placed in a recess in the lower side edges of the packing-plates, having a knob c' for releasing the same, and Fig. 7 shows a slotted retaining-plate c^2 for holding the latch in the recess, said slot allowing access to the knob c' for releasing the latch. The packing is placed upon the face of the plate C, and any ordinary means may be used for clamping the packing to the same.

In Figs. 8 and 9 I show a form of dummy press mounted upon a suitable frame D, in which E denotes the dummy cylinder, the bearing portion of which is made to correspond with the bearing portion of the impression-cylinder of the printing-press. E′ denotes the adjustable ribs, which correspond with the ribs B on said impression-cylinder and are provided with like means for attach-

ment to and adjustment on the dummy cylinder. The packing-plates are shown in dotted lines in Fig. 8 and correspond with the packing-plates shown in Figs. 1, 2, 3, and 4, having like means, as shown in Figs. 5, 6, and 7, for detachably connecting and adjusting the same on the ribs E′ or on the ribs B when they are transferred thereto. *e e* denote toothed segments at each end of the dummy cylinder, *e′* denotes grippers, and e^2 a counterbalance to the bearing portion of said cylinder. e^3 denotes the cylinder-shaft, and e^4 a hand-wheel secured thereto for throwing the toothed segments *e* in and out of gear with the reciprocating bed and also for turning the cylinder back out of gear, as shown in Fig. 9, in which position it is held by a pawl e^5, while the packing is attached to the packing-plates. F denotes a reciprocating bed having rack-bars *f* upon each side, which mesh with the toothed segments *e e*, and a rack-bar *f′* upon its under side. G denotes a hand-wheel attached to a shaft *g*, having a spur *g′*, which meshes with the rack-bar *f′*. The form is placed on the reciprocating bed and inked by an ordinary hand-roller. To take an impression, the hand-wheel G is turned, thus operating the bed and cylinder. In order to regulate the pressure of the cylinder upon the form, I employ adjusting-screws H H at each end of the shaft e^3. It will be seen that the ribs on the dummy cylinder and the ribs on the impression-cylinder are adjustable circumferentially to any part of their respective cylinders and that the packing-plates may be adjusted laterally upon the ribs. This method of connecting the ribs and packing-plates allows of an accurate adjustment and interchange of packing-plates between the impression-cylinder and cylinder in the make-ready or dummy press. When the make-ready is perfected, the packing-plates are transferred from the dummy cylinder to the impression-cylinder of the printing-press. In making such transfer the packing-plates are placed in positions corresponding to the positions they occupied on the dummy cylinder, and for this purpose the usual gages or registering devices known to the art may be employed to insure accurate register.

The ribs and plates may be made of steel, brass, or other material of such thickness as to insure strength and durability, regard being had to the limited vertical space between the bearing portion of the cylinders and the cylinder-bearers. The dummy or make-ready press may be either a duplicate of the printing-press or of such parts of the same as embrace the cylinder and any ordinary means for making an impression.

The cylinder of the dummy press and impression-cylinder of the printing-press being equipped with like ribs and packing-plates, the operator makes ready upon the dummy press, each packing-plate being packed separately and impressions taken until the make-ready is perfect. The position of the packing-plates on the make-ready cylinder being noted, the plates are transferred to corresponding positions on the impression-cylinder.

I have shown my invention as applied to a bed-and-cylinder press; but it is evident it is equally valuable as applied to the cylinders of a rotary printing-press.

Having shown and described my invention, what I claim, and desire to secure by Letters Patent, is—

1. Apparatus for making ready independently of the print-press, consisting of a dummy press having cylinders corresponding to those of the printing-press, duplicate sets of ribs adjustably attached to said cylinders, and a duplicate set of packing-plates detachably connected to said ribs and adjustable thereon.

2. In apparatus for making ready independently of the print-press, the combination with the cylinders of the dummy press and the cylinders of the printing-press, of a series of duplicate ribs running lengthwise of and adjustable circumferentially of said cylinders, and a duplicate series of packing-plates adapted to be detachably connected to and adjusted lengthwise of said ribs.

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

FRANCIS G. PRICE.

Witnesses:
A. A. REESE,
HENRIETTA WHITEHILL.