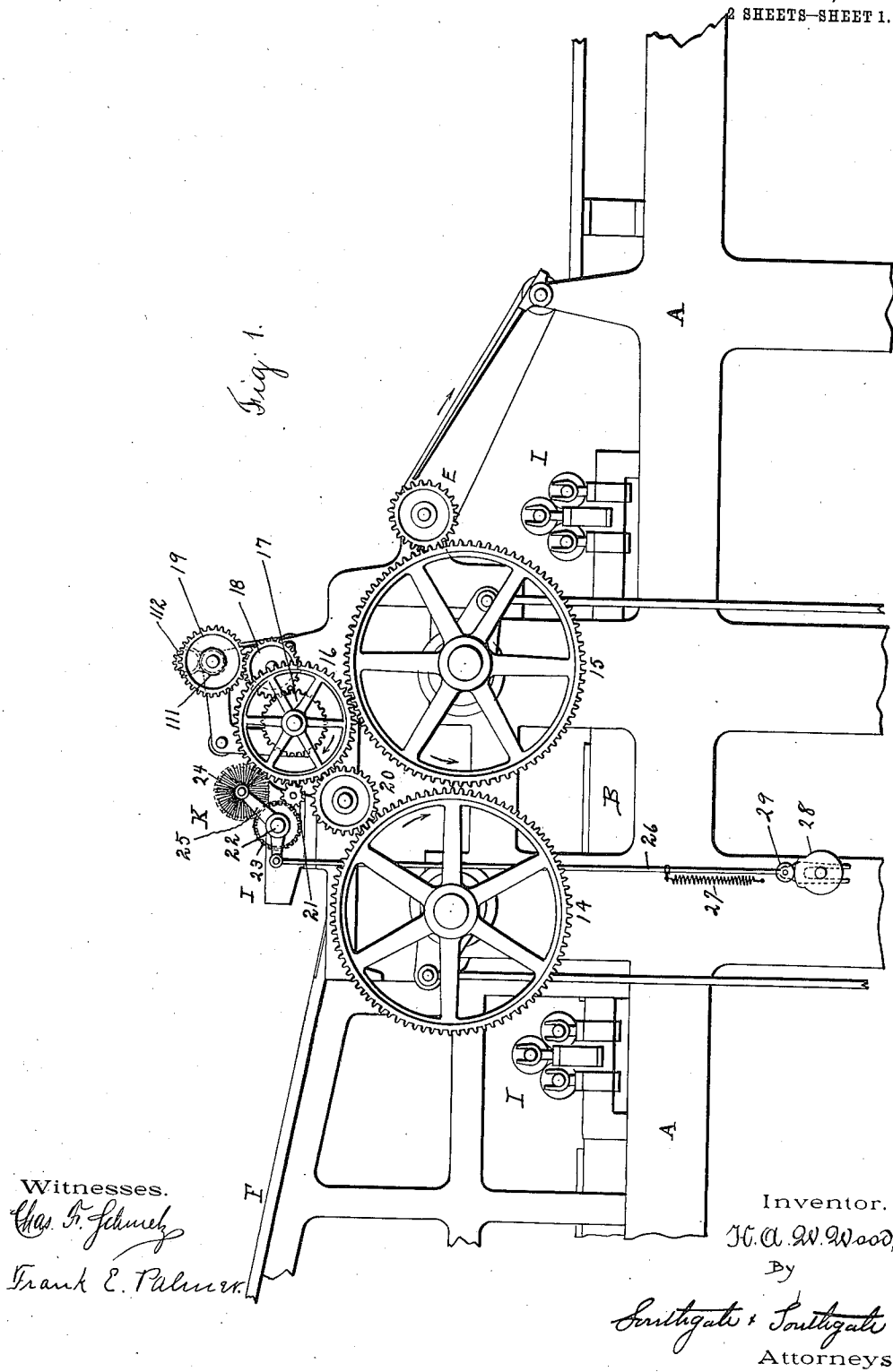


APPLICATION FILED MAY 21, 1896. RENEWED JAN. 6, 1906.

Patented Nov. 15, 1910.

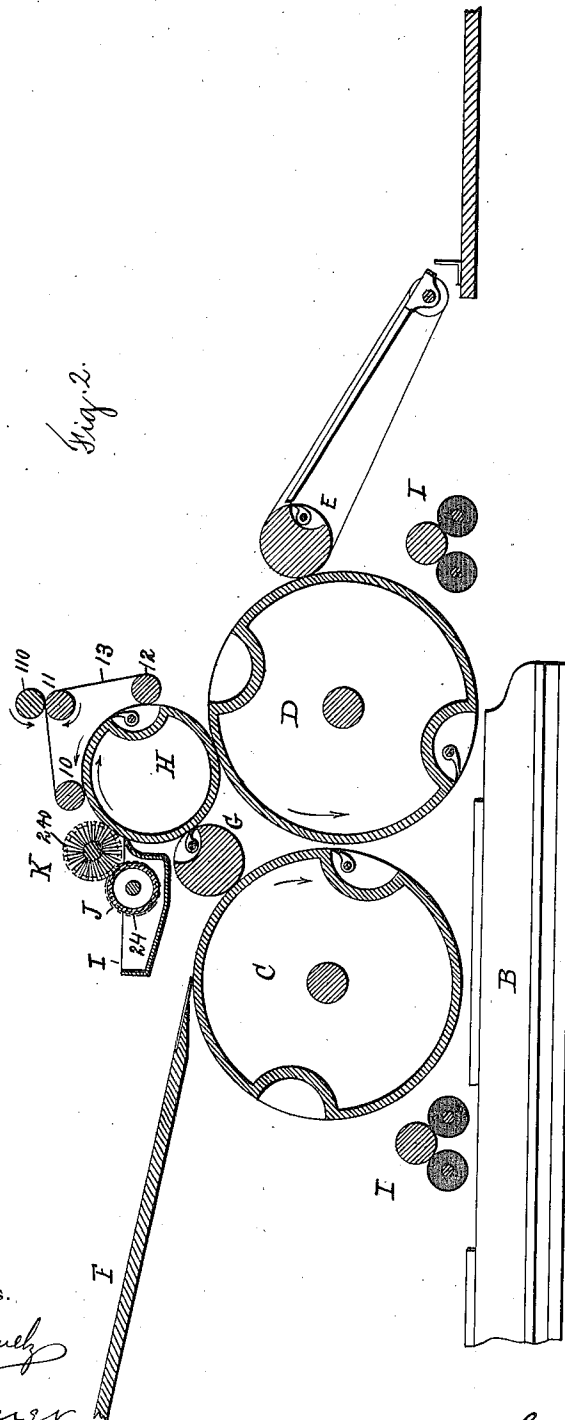
2 SHEETS—SHEET 1.



H. A. W. WOOD.
 OFFSET PREVENTING DEVICE.
 APPLICATION FILED MAY 21, 1896. RENEWED JAN. 6, 1906.

976,022.

Patented Nov. 15, 1910.
 2 SHEETS—SHEET 2.



Witnesses.
Chas. F. Schuch
J. E. Palmer

Inventor.
 H. A. W. Wood,
 By
Southgate & Southgate
 Attorneys.

UNITED STATES PATENT OFFICE.

HENRY A. WISE WOOD, OF NEW YORK, N. Y., ASSIGNOR TO CAMPBELL PRINTING PRESS AND MANUFACTURING COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

OFFSET-PREVENTING DEVICE.

976,022.

Specification of Letters Patent.

Patented Nov. 15, 1910.

Application filed May 21, 1896, Serial No. 592,476. Renewed January 6, 1906. Serial No. 294,922.

To all whom it may concern:

Be it known that I, HENRY A. WISE WOOD, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented a new and useful Improvement in Offset-Preventing Devices, of which the following is a specification.

The aim of this invention is to prevent offset from the surface of the second impression cylinder of the ordinary sheet-perfecting double-cylinder printing press. In a press of this character, the side of the sheets printed by the first impression cylinder necessarily comes in contact with the second impression cylinder, when the second side of the sheets is printed. Ink from the freshly printed first side of the sheets will, therefore, be set off, as it is called, on the surface of the second impression cylinder, and the ink thus set off will be offset on the succeeding sheet or sheets. This will blur the first printed side of the sheets, and will prevent nice work. This is the principal evil in a press of this character. To remedy this evil, I provide a press of this character with means for depositing a set off preventing medium directly on the first printed side of the sheets, before the second side is printed.

The specific arrangement that I preferably employ is to provide a guiding or directing mechanism for guiding or leading sheets from the first impression cylinder to the second impression cylinder, and this guiding mechanism preferably consists of two transfer cylinders. When the sheets are on the second transfer cylinder, I deposit the set-off preventing medium on the same. The set-off preventing medium that I preferably employ is powdered talc. To deposit the talc on the first printed side of the sheets, I preferably use a rotary brush, which takes the powdered talc from a reservoir or reservoir-roller, and which brush is moved forward into operative position with the second transfer cylinder only when a sheet is in position thereon. Running in contact with the second transfer cylinder I arrange a slowly moving cloth or wiping-apron, which is arranged to run slowly in opposition to the movement of the sheets, and to wipe the surplus set-off medium off of the sheets, and throw the same back into the reservoir. By this arrangement, I treat

the first printed side of the sheets, and do not have to disturb or operate on the surface of the second impression cylinder.

A number of offset preventing devices are now used, which are arranged in connection with the second impression cylinder. These devices are objectionable because being arranged at this point, they necessarily disturb the impression surface, and thereby prevent nice printing. My device is distinguished from this in that the set-off preventing medium is applied directly to the first printed side of the sheets, thus removing all offset preventing mechanism from the second impression cylinder.

In the accompanying two sheets of drawings, I have shown the best way now known to me for carrying out my invention.

Referring to said drawings, Figure 1 is a side elevation of one form of the ordinary double-cylinder, sheet-perfecting press with my improvement applied thereto, and Fig. 2 is a sectional elevation thereof.

Referring to said drawings and in detail, A represents the usual framing, B the usual reciprocating bed, C the first impression cylinder, D the second impression cylinder, E the front fly delivery mechanism, F the feed-board, and I, I the form-inking rollers of one form of the ordinary double cylinder sheet perfecting printing press. Between the two impression cylinders C and D, I arrange two transfer cylinders G and H, provided with grippers, and so arranged that the sheets will be taken from the first impression cylinder by the first transfer cylinder G, given by the first transfer cylinder G to the second transfer cylinder H, and by the second transfer cylinder H to the second impression cylinder D. It will be noted that when the sheets are on the second transfer cylinder H, the first printed side thereof will be outermost.

I represents a suitable reservoir in which I place the set-off preventing medium, the medium I preferably employ, as before stated being powdered talc, although there are numerous other substances which may be advantageously used. Arranged in the reservoir I is a roller J, and coöperating with this roller J is a rotary brush K which is arranged to move about the center of the roller J to engage the surface of the second transfer cylinder H, when a sheet is in position thereon.

110

13 designates a slowly moving cloth or wiping apron bearing on the surface of the second transfer cylinder H, and which is preferably driven at a slow speed in opposition to the movement of the second transfer cylinder. The operation of this apron will remove the surplus talc from the sheets, and throw the same back on to the brush K or into the reservoir I, so that very little, if any, of the transfer medium will ever reach the surface of the second impression cylinder D. This apron 13 is led around suitable guide-rollers 10, 11 and 12, as shown.

Various forms of gearing may be arranged to operate these parts, one form that may be used being shown in the drawings, consisting of gears 14 and 15 arranged on the ends of the impression cylinders C and D. Meshing with the gear 15 is a gear 16, which is arranged on the end of the transfer cylinder H. A suitable gear 20 is arranged on the end of the transfer cylinder G, and may be geared to either or both the gears 14 and 16. Mounted on the axle of the cylinder H is a small gear 17, which meshes with an intermediate 18, which intermediate 18 meshes with a gear 19 secured on the end of the roller 11. Engaging the roller 11 is a roller 110, which is geared to the roller 11 by means of gears 111 and 112, as indicated in dotted lines in Fig. 1. The apron 13 is adjusted to bear rather lightly and loosely on the second transfer cylinder H. By this means, the apron 13 will be turned loosely in opposition to the movement of the second transfer cylinder H.

The rotary brush K is mounted in suitable arms 25, which arms 25 are journaled on the shaft 22 of the roller J. These arms 25 are operated by suitable yokes 26 which carry rollers 29, which engage cams 28, suitable springs 27 being provided to keep the rollers in contact with the cams. The cams 28 are geared so as to make one revolution for each forward and backward movement of the bed, and by properly setting the cams, the rotary brush K will only be moved into operative position when a sheet is in proper position on the second transfer cylinder.

The roller J may be driven by means of intermediate 21 and gear 23, and a gear 24 is preferably mounted on the shaft of the rotary brush K, and meshes with a gear 240 secured on the shaft 22 of the roller J, as indicated in dotted lines, so that the brush K will be positively rotated in the proper direction. The brush K is preferably driven so that the periphery thereof will turn with the periphery of the second transfer cylinder H, and at such speed that there will be no slip between the brush and the sheet on the transfer cylinder. I do not intend, however, to limit myself to rotating the brush in any particular way or at any particular speed. By this means, the first printed side

of the sheets will be dried, and the surplus ink removed before the same reaches the second impression cylinder, whereby set-off on the second impression cylinder will be prevented, and whereby the impression surface of the second impression cylinder will not be disturbed.

The device herein shown illustrates one way my invention may be applied to one form of a double-cylinder sheet-perfecting press, but of course my invention may be otherwise worked out and developed, and applied to other forms of presses of this character.

Having thus fully described my invention, what I claim and desire to secure by Letters-Patent is:—

1. The combination in a sheet perfecting printing press of two impression cylinders, a reciprocating bed cooperating therewith, a transfer mechanism for conveying the sheets from one impression cylinder to the other, and means for depositing a set-off preventing medium on the first printed side of the sheets, while the same are being transferred consisting of a receptacle and an applying surface and means for moving the applying surface into operative position when a sheet is in place on the transfer mechanism.

2. The combination in a sheet perfecting printing press of two impression cylinders, a reciprocating bed cooperating therewith, means for transferring sheets from one impression cylinder to the other, an applying surface for depositing a set-off preventing medium on the sheets while they are being transferred, means for moving the applying surface into and out of operative position and a wiping mechanism for removing the offset preventing material.

3. The combination in a sheet perfecting printing press of two impression cylinders, a reciprocating bed cooperating therewith, a transfer mechanism for transferring sheets from one impression cylinder to the other impression cylinder, a receptacle containing a roller, a rotary brush coacting with said roller and arranged to move about the center thereof, means for operating the brush to bring the same into operative position to deposit set-off preventing material on the first printed side of the sheets while they are being conveyed and a wiping mechanism for removing the set-off preventing material.

4. The combination in a sheet perfecting printing press of two impression cylinders, a reciprocating bed cooperating therewith, two transfer cylinders for guiding or leading the sheets from one impression cylinder to the other, and means for depositing a set-off preventing medium on the first printed side of the sheets while the same are on the second transfer cylinder, consisting of a reservoir, an applying surface, and mechanism for

moving the applying surface into operative position when a sheet is in position on the second transfer cylinder.

- 5 5. The combination in a sheet-perfecting printing press of two impression cylinders, a reciprocating bed cooperating therewith, two transfer cylinders, a rotary brush for depositing a set-off preventing medium on the sheets while they are on the second of said transfer cylinders, means for moving the brush into and out of operative position, and a wiping mechanism consisting of an apron engaging said second transfer cylinder and moving in opposition thereto.
- 10 6. The combination in a sheet-perfecting printing press of two impression cylinders, a reciprocating bed cooperating therewith,
- 15

two transfer cylinders, a suitable receptacle containing a roller, a rotary brush coating with said roller and arranged to move about the center thereof, and means for operating said brush so that the same will be brought into operative position to deposit a set-off preventing medium on the first printed side of the sheets while they are on the surface of the second transfer cylinder.

In testimony whereof I have hereunto set my hand, in the presence of two subscribing witnesses.

H. A. WISE WOOD.

Witnesses:

HENRY W. COZZENS, Jr.,
LOUIS W. SOUTHGATE.