

H. A. W. WOOD.

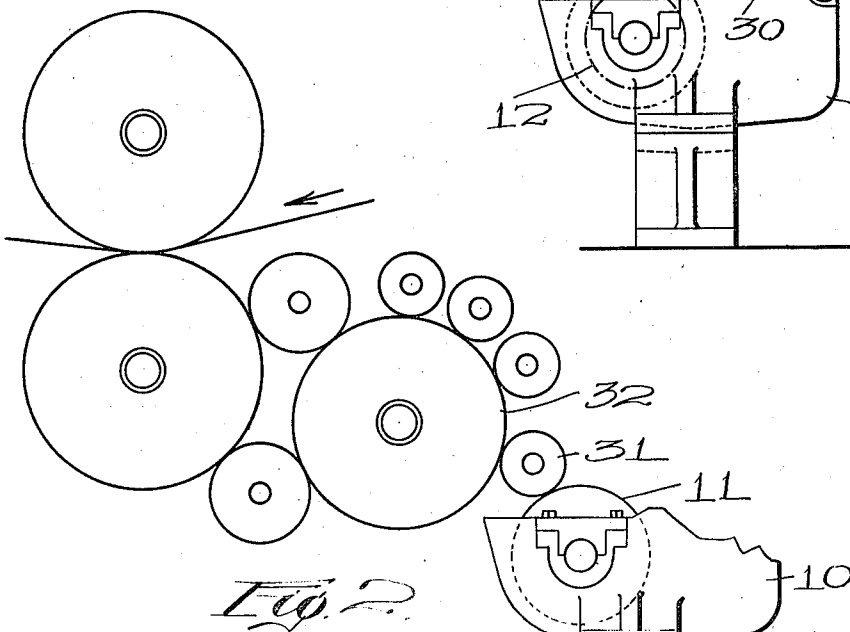
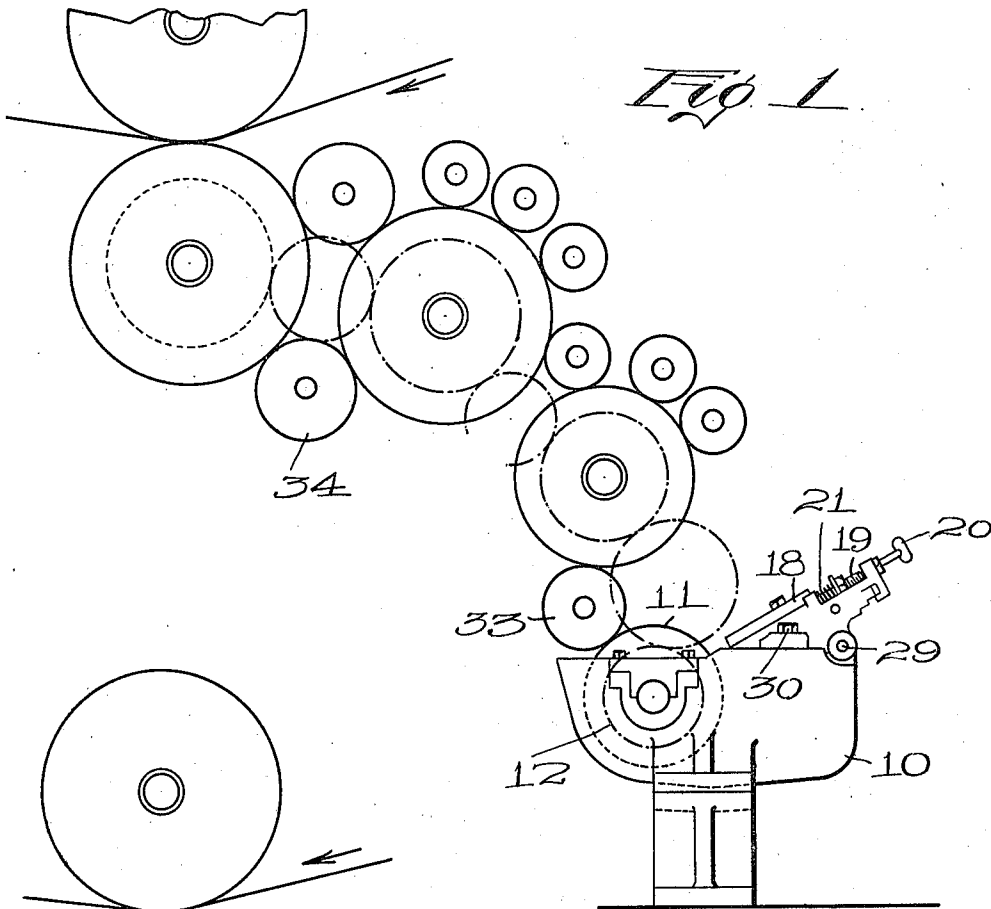
APPARATUS FOR INKING PRINTING PRESSES.

APPLICATION FILED APR. 20, 1910. RENEWED JAN. 28, 1918.

1,275,348.

Patented Aug. 13, 1918.

2 SHEETS—SHEET 1.



Witnesses:

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R. M. Allen.

Inventor
Henry A. Wise Wood
By Attorneys

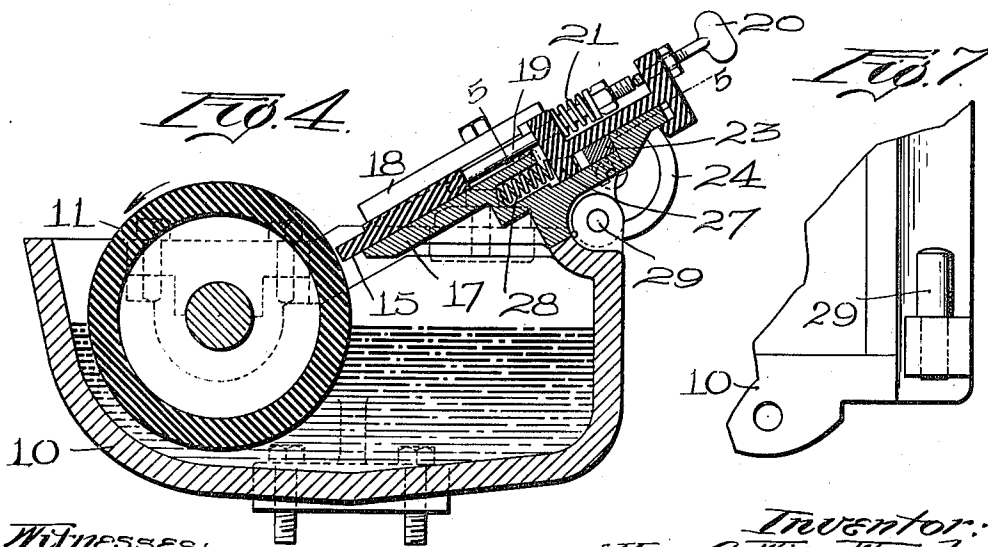
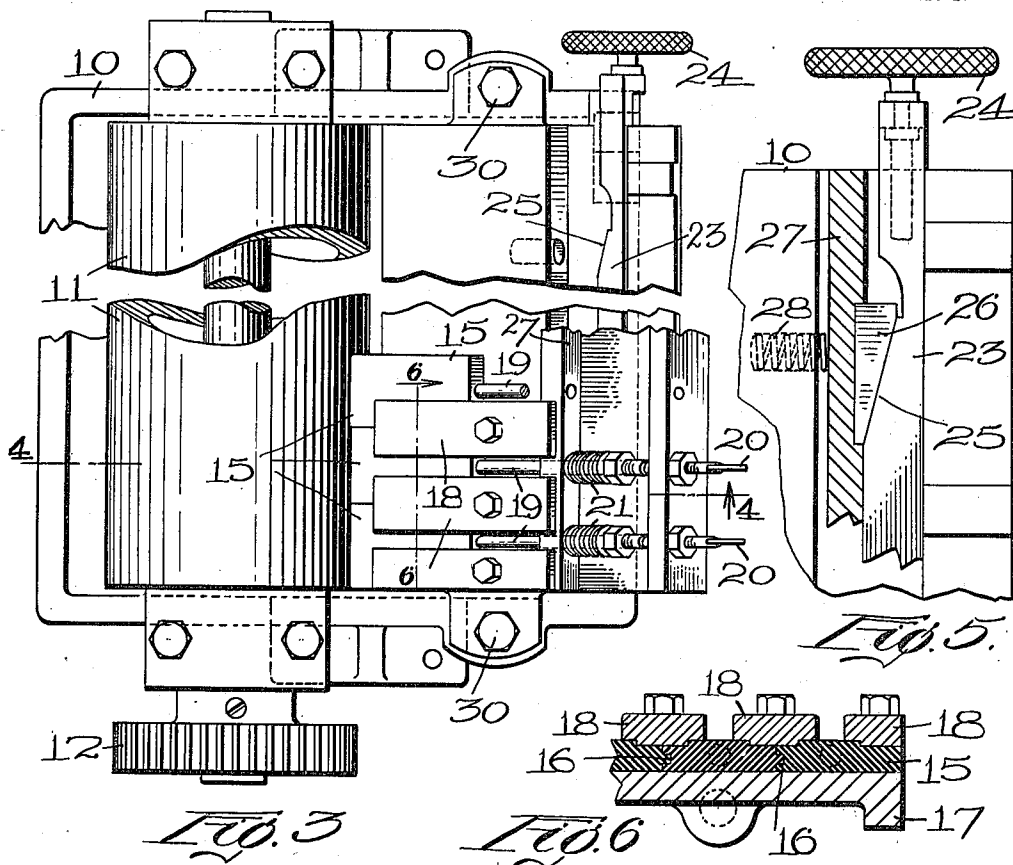
Southgate & Southgate.

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UNITED STATES PATENT OFFICE.

HENRY A. WISE WOOD, OF NEW YORK, N. Y., ASSIGNOR, BY MESNE ASSIGNMENTS, TO
WOOD NEWSPAPER MACHINERY CORPORATION, OF NEW YORK, N. Y., A CORPORATION OF VIRGINIA.

APPARATUS FOR INKING PRINTING-PRESSES.

1,275,348.

Specification of Letters Patent.

Patented Aug. 13, 1918.

Application filed April 20, 1910, Serial No. 556,526. Renewed January 28, 1918. Serial No. 214,254.

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 Apparatus for Inking Printing-Presses, of which the following is a specification.

This invention relates to an apparatus for inking printing presses.

The principal objects of the invention are to provide for applying ink to the printing press in such a way as to deliver the ink from the fountain in the form of a continuous film of the thickness required for application to the type, so that it will not be necessary to further spread the ink; also to provide for feeding the ink from the fountain in such a way that if the mechanism for distributing the ink is provided, much more delicate effects will be secured than heretofore. Further objects of the invention will appear hereinafter.

Reference is to be had to the accompanying drawings, in which—

Figure 1 is a side elevation of a well-known type of printing press showing how this invention can be applied thereto;

Fig. 2 is a similar view showing how the invention can be used without the usual ink distributing cylinders and rolls.

Fig. 3 is a plan of the ink fountain.

Fig. 4 is a sectional view of the same on the line 4—4 of Fig. 3.

Fig. 5 is a plan partly in section on the line 5—5 of Fig. 4.

Fig. 6 is a sectional view on the line 6—6 of Fig. 3, and

Fig. 7 is a fragmentary plan of the same showing a hinge.

It is the practice to interpose between the fountain and the distributing system of rollers in printing presses a transferring roller called the ductor. This ductor plies between the fountain roller and the ink distributing rollers, the former of which moves, continuously or intermittently as the case may be, at an extremely low rate of speed, and the latter of which must be run at the

velocity of the press. This, the invariable form of construction, renders the ductor roller a necessity and as this roller must contact at one time with a slow moving fountain roller and at another with a swiftly moving distributing roller and must repeat these alternative contacts many times a minute upon a fast running press, it will be obvious that such a roller, which is made of glue and molasses, must suffer rapid deterioration.

Furthermore, on newspaper presses, the printing cylinders of which make two hundred turns a minute, which correspond to the production of four hundred papers, it is not practicable to reciprocate the ductor oftener than once for every four revolutions of a printing cylinder, or for the printing of eight papers. This is a notorious defect, as an inking system should be supplied with ink once for each impression, as is done in the case of slow running machines, where the ductor roller can be used effectively without undue wear. It is obvious that if but a single supply of ink is delivered for the printing of eight papers, the first of the eight will receive more than the last and therefore uniformity cannot exist. This accounts for the fact that the daily newspapers which are run at high speeds are so badly printed.

By this invention I succeed not only in delivering continuously to the type an even, continuous, and delicately regulatable film of ink, which has neither beginning nor end, and place the newspaper press upon a plane of typographic excellence hitherto unknown, but by rendering unnecessary the use of a ductor roller and its mechanism I relieve that press of one of its most troublesome and undurable elements. And in dispensing with the ductor roller I eliminate the last reciprocating element or link in the chain of devices which makes up the rotary press, an element which, because of its reciprocating character, has not only limited the quality of the output of fast presses, but has absolutely prevented the fast press from becoming a very much faster machine,

The present invention also provides for avoiding the necessity of the successive reductions in thickness of the ink, as it is supplied from the fountain in a continuous film of substantially the proper thickness. This film is in the form of a substantially unbroken sheet or stream throughout the inking mechanism, and it is applied in that form to the type. For this purpose the roller is connected directly with the inking mechanism so that it may feed continuously thereto, and the intermittently operating ductor roller for transferring from the fountain to the inking mechanism can be dispensed with as has been stated. In addition to this, the roller is run at the surface speed of the press so that the film received from it will not be necessarily either thickened or thinned in its transfer to the press. The invention also involves the regulation of the thickness of the ink film or sheet as a whole, as it is delivered from the fountain and the variation of the thickness of the different parts thereof, so that the inking of each column can be regulated separately if desired.

With this invention the fountain may be set directly in contact with the type inking rollers themselves, or rather with the vibrator which is invariably used with said rollers. It can be used, however, with the usual distributing apparatus, and when so used it produces very much more delicate effects than those which can be obtained by the methods heretofore in use.

Referring to the drawings, I have shown the invention as applied to an ink fountain 10 having a fountain roller 11 driven by a gear 12 at the same surface speed as the plate cylinder of the press. In the fountain is a fountain blade 15 to regulate the supply of ink. This blade is in the usual position, but it is made in a number of sections, each being provided with a groove 16 at one edge and a tenon at the other, so that the several sections are longitudinally guided by each other. They are also guided between the fountain cover 17 and guides 18 located above the same. Each of these blade sections has secured therein a rod 19. These are provided with set screws 20 for adjusting them individually, so as to regulate the supply of ink at any desired place in the length of the fountain roll. They can be adjusted also by these screws to take up wear. Adjustable springs 21 are provided for yieldingly pressing them against the set screws to insure accurate adjustment. One of these blades generally is used for each column of printed matter.

The fountain blade as a whole is adjusted to regulate the thickness of the film of ink by moving a transverse wedge bar 23 by means of a hand screw 24 or the like. The wedge surfaces 25 on this bar engage wedge

blocks 26 on the plate 27 which supports the rods and set screws. The hand screw is tapped into the fountain cover as indicated. Springs 28 act against the plate to keep the wedges thereon in contact with the wedge bar and insure a nice adjustment. The fountain cover is shown as hinged at 29 so that it may be opened taking with it the hand screw, blade, etc. It is held in position by a screw 30 at each end.

When applied as shown in Fig. 2, a continuous film of ink is delivered from the fountain in an unbroken sheet of uniform thickness to the vibrator 31, from which it is delivered under the same conditions to the type inking rollers 32. The invention can be used with the usual distributing apparatus, however, as shown in Fig. 1. In this case the continuous film is delivered on the vibratory composition roll 33 in an unbroken sheet, and is taken from the roll 33 to the form rollers 34 in the usual way. Under these circumstances the ink starts as a continuous film of uniform correct thickness, instead of a series of separate masses of ink of indefinite thickness, therefore the subsequent distributing action of the rolls serves to reduce the ink to a very fine and uniform condition, and very delicate effects can be secured.

While I have shown and described two ways in which the invention can be carried out I am aware that many modifications can be made therein by any person skilled in the art without departing from the scope of my invention as expressed in the claims.

Therefore I do not wish to be limited to all the details of construction shown and described, but what I do claim is:—

1. In an ink fountain, in combination, a fountain roll, a blade therefor formed of separate parts mounted upon a plate, separate means for independently adjusting the separate parts of said blade toward said roll, a separate spring to force each part of said blade away from said roll, additional means to adjust the supporting plate toward the roll, and additional springs to resist said adjustment.

2. In a printing press, the combination with a printing cylinder, of a fountain having a roll, means for driving the roll at the same surface speed as the printing cylinder, means for forming a continuous film of ink upon the roll comprising a blade formed of a plurality of parts, means for adjusting each part toward the roll against a separate yielding resistance, and means for adjusting the blade as a whole toward the roll against an additional yielding resistance.

3. In a device of the character described, the combination of an ink fountain having a roll therein, a cover pivotally mounted on the fountain, a support adjustable along the

cover toward the roll, a blade carried by
said support and consisting of a plurality of
parts, and means carried by said support for
individually adjusting the several parts of
5 the blade.

In testimony whereof I have hereunto set

my hand in the presence of two subscribing
witnesses.

H. A. WISE WOOD.

Witnesses:

MABEL M. GLASSEY,
EDITH A. BUTLER.