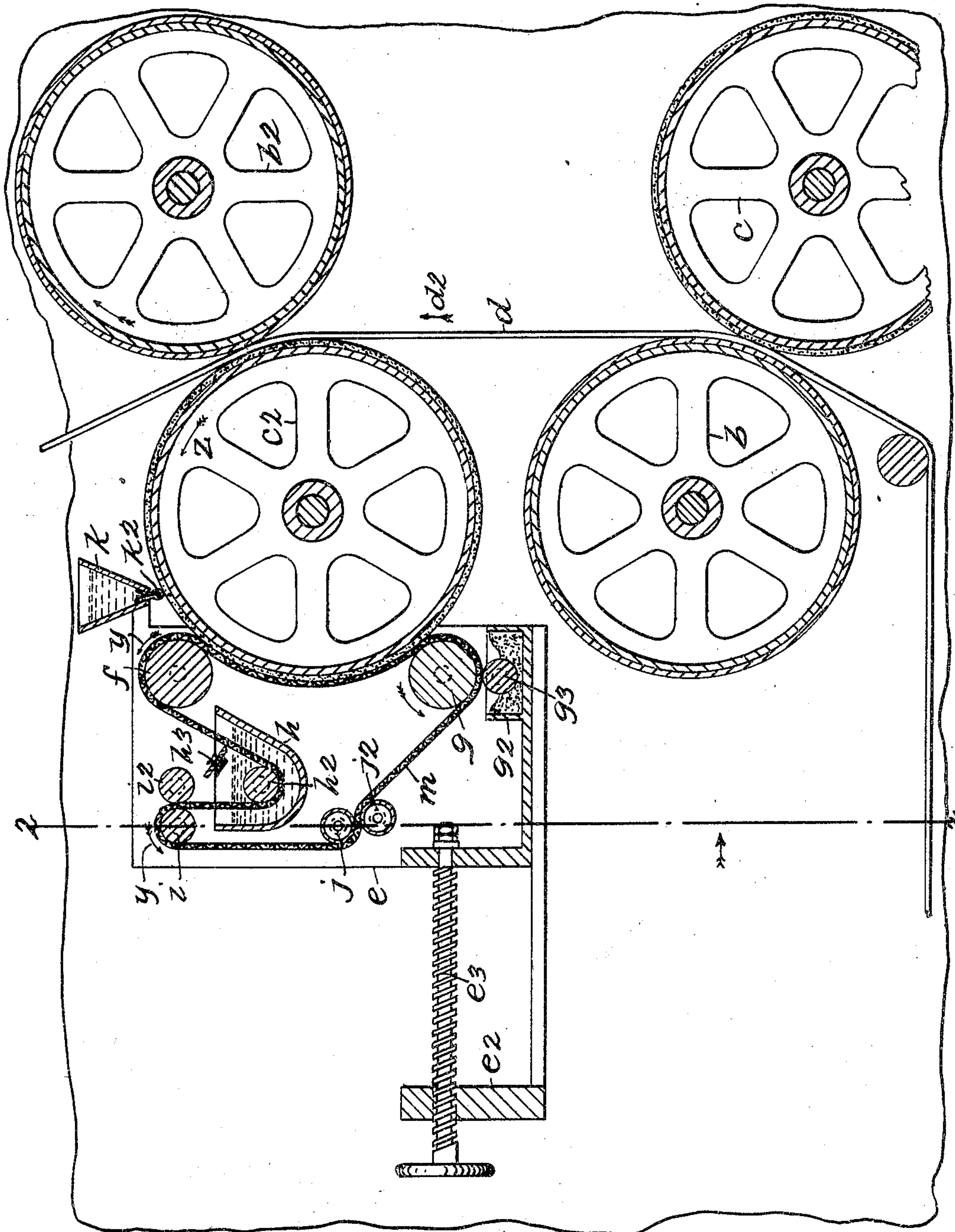


No. 794,487.

PATENTED JULY 11, 1905.

L. A. BROD.  
PRINTING PRESS.  
APPLICATION FILED APR. 28, 1903.

2 SHEETS--SHEET 1.



**WITNESSES**

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PHOTO-LITHOGRAPHED BY SACKETT & WILHELMS LITHO. & PTG CO. NEW YORK

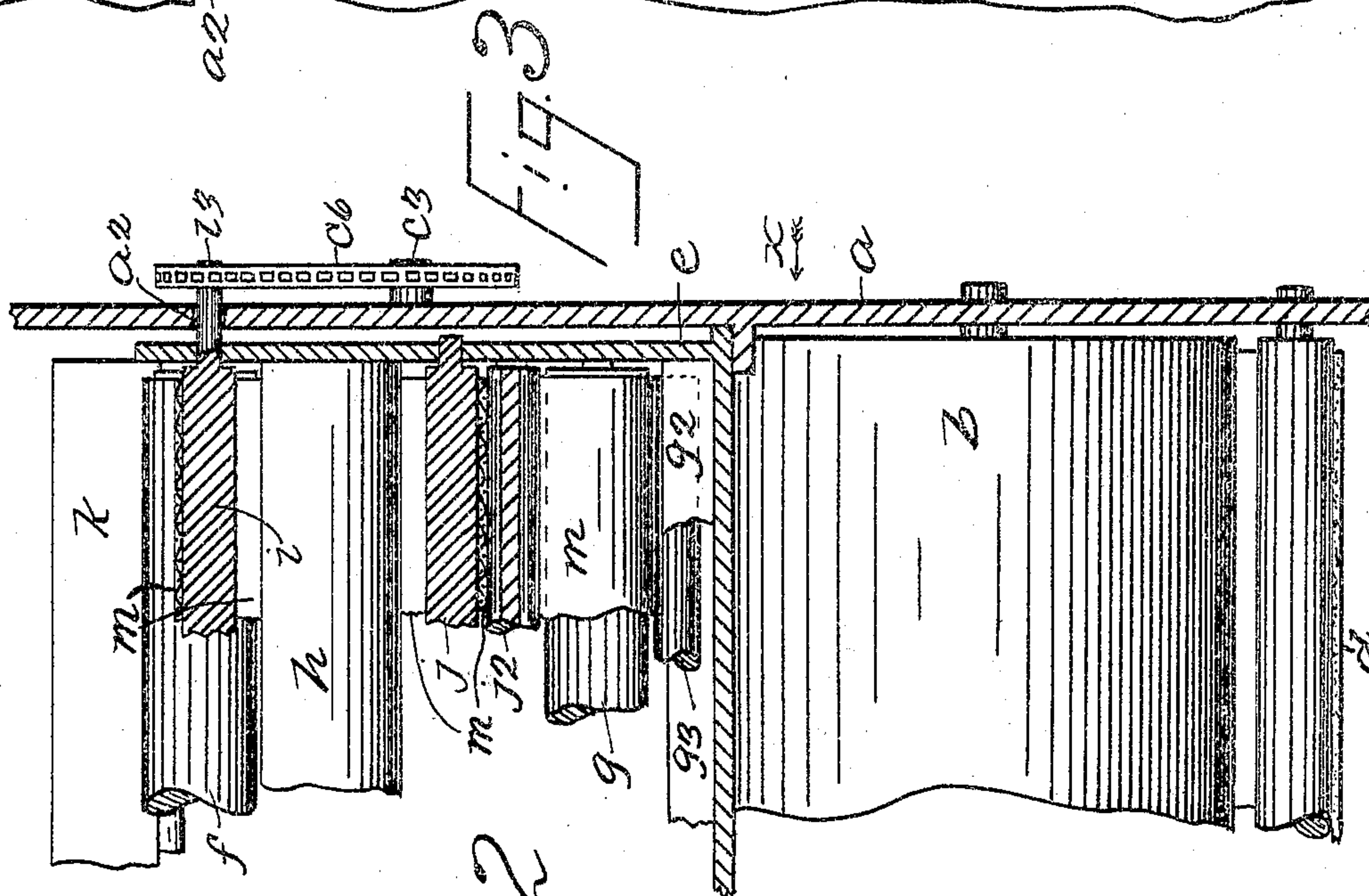
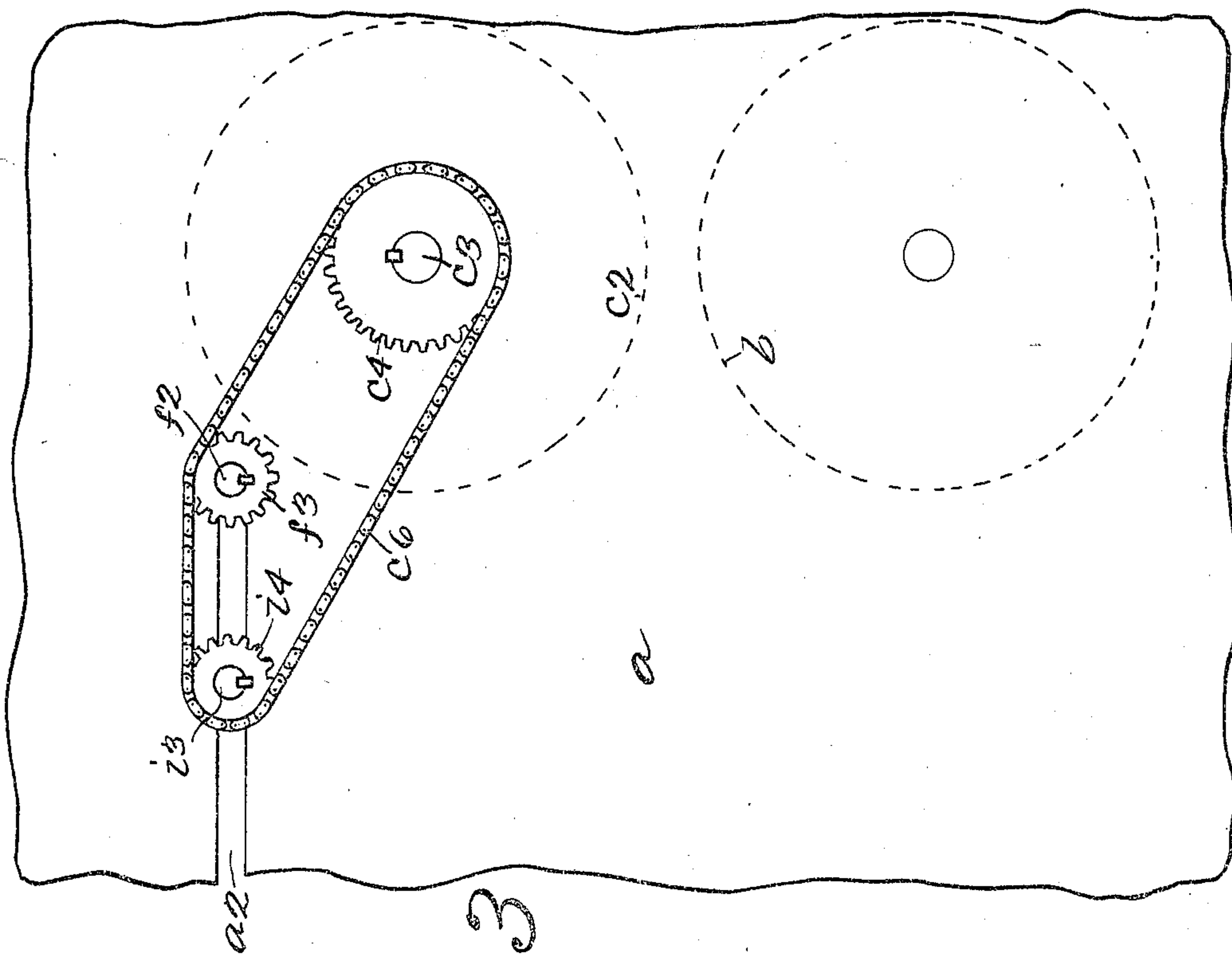
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2 SHEETS—SHEET 2.



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# UNITED STATES PATENT OFFICE.

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## PRINTING-PRESS.

SPECIFICATION forming part of Letters Patent No. 794,487, dated July 11, 1905.

Application filed April 28, 1903. Serial No. 154,623.

*To all whom it may concern:*

Be it known that I, LOUIS A. BROD, a citizen of the United States, residing in the borough of Brooklyn, county of Kings, city of New York, State of New York, have invented certain new and useful Improvements in Printing-Presses, of which the following is a specification, such as will enable those skilled in the art to which it appertains to make and use the same.

The object of this invention is to provide an antiset-off or antismut attachment for printing-presses in which it is desired to print both sides of the paper at the same time and to dispense with the use of the usual offset sheet now employed; and with this and other objects in view the invention consists in a printing-press constructed as hereinafter described and claimed.

The invention is fully disclosed in the following specification, of which the accompanying drawings form a part, in which the separate parts of my improvement are designated by suitable reference characters in each of the views, and in which—

Figure 1 is a transverse vertical section of a printing-press provided with my improvement; Fig. 2, a section on the line 2 2 of Fig. 1, and Fig. 3 an outside view looking in the direction of the arrow  $x$  of Fig. 2.

In the drawings forming part of this specification I have shown at  $a$  one of the sides of the frame of a printing-press, and in the form of construction shown two impression-cylinders  $b$  and  $b^2$  are employed and two platen-cylinders  $c$  and  $c^2$ , which correspond therewith, and in practice the paper  $d$  to be printed is passed between these cylinders in the direction of the arrow  $d^2$ . In passing between the impression-cylinder  $b$  and platen-cylinder  $c^2$  one side of the sheet  $d$  is printed, and it is customary in practice to employ what is called a "set-off" sheet which is fed between the platen-cylinder  $c^2$  and the paper  $d$ , so as to prevent smutting or smearing of the printed surface of the paper  $d$ . In my improvement, however, I provide an antiset-off or antismutting device which comprises a supplemental frame  $e$ , mounted in the main frame of the machine and movable toward and from the

platen-cylinder  $c^2$ , and connected with this supplemental frame  $e$  and passing through a stationary support  $e^2$  is a screw  $e^3$ , and by turning said screw the supplemental frame  $e$  may be moved toward and from the platen-cylinder  $c^2$  according to the direction in which the screw is turned. In the upper part of the supplemental frame  $e$ , adjacent to the platen-cylinder  $c^2$ , is a roller  $f$ , and a similar roller  $g$  is mounted in the lower portion of said supplemental frame, and below the roller  $g$  is a powder-box  $g^2$ , in which is placed a small powder-roller  $g^3$ .

Rearwardly of and below the roller  $f$  is a transverse box  $h$ , in which is placed benzin or any suitable solution designed for the purpose hereinafter described, and passing through this box is a roller  $h^2$ . In the upper portion of the box  $h$  is a scraper  $h^3$ , and above said box and over the rear portion thereof are placed two rollers  $i$  and  $i^2$ , and below the box  $h$  are two other rollers  $j$  and  $j^2$ .

Secured to the supplemental frame  $e$  at the top front portion thereof is a suitable receptacle  $k$ , designed to receive benzin or other suitable cleansing liquid, and in the bottom of the receptacle  $k$  is a feeder  $k^2$  of cloth, wicking, or any other suitable material.

The shafts of the rollers  $i$  and  $f$  in the supplemental frame pass through a slot  $a^2$  in the side of the main frame of the press, and these shafts are indicated at  $i^3$  and  $f^2$  in Fig. 3 and are provided, respectively, with gear-wheels  $i^4$  and  $f^3$ , and when the supplemental frame  $e$  is in position for use, as shown in Fig. 1, these rollers are geared in connection with the shaft  $c^3$  of the platen-cylinders  $c^2$  by means of a gear-wheel  $c^4$ , secured to said shaft, and a drive-chain  $c^5$ .

It will be understood that the arrangement of the impression-cylinders  $b$  and  $b^2$  and the platen-cylinders  $c$  and  $c^2$  as herein shown and described is only for the purpose of illustration, and in practice these cylinders may be arranged in any desired manner and will be geared in connection and driven in the usual or any preferred manner, and my invention is not limited in any way to the location and arrangement of these cylinders.

In the operation of the press the cylinders



$c$ ,  $b$ ,  $c^2$ , and  $b^2$  are driven so as to feed the paper between the same in the direction of the arrow  $d^2$ , and in this operation that side of the paper  $d$  adjacent to the impression-cylinder  $b$  is printed, and in order to prevent the surface of the platen-cylinder  $c^2$  from smutting or blurring this printed surface the said surface of the platen-cylinder  $c^2$  must be kept clean, and it is for this purpose that the supplemental frame  $e$  and its contained parts are provided. In practice an endless blanket-belt or similar device  $m$  is passed around the rollers  $f$  and  $g$  and down through the box  $h$  beneath the roller  $h^2$  and up between the rollers  $i$  and  $i^2$  and between the rollers  $j$  and  $j^2$ , and as the parts of the machine are operated this belt is moved in the direction of the arrow  $y$ , while the cylinder  $c^2$  is moved in the direction of the arrow  $z$ . In this operation of the parts the liquid cleansing material in the receptacle  $k$  is fed onto the surface of the cylinder  $c^2$ , and the blanket-belt  $m$  is continually moved in the direction of the arrow or arrows  $y$  and in a direction opposite to that of the cylinder  $c^2$ , and the blanket-belt  $m$  bears on a large portion of the surface of said cylinder and completely removes therefrom all ink that may have adhered thereto from the paper  $d$ . In this operation the ink or other material is removed from the blanket-belt  $m$  by passing the latter through the receptacle  $h$  and through or between the rollers  $i$ ,  $i^2$ , and  $j$  and  $j^2$  and the rollers  $g$  and  $g^3$ , and in this operation the roller  $g^3$  applies a fine powder to said blanket-belt, and the latter is thoroughly dry when it comes in contact with the surface of the cylinder  $c^2$ .

By means of this construction it will be seen that all ink or other printing liquid adhering to the cylinder  $c^2$  is removed therefrom before the said cylinder revolves through a complete circle and that portion of said cylinder which comes in contact with the printed side of the paper  $d$  is always kept clean.

By means of this construction I avoid the use of what is known as "set-off" paper or supplemental sheets of paper which are passed between the cylinder  $c^2$  and the cylinder  $b^2$ , and this is a great saving in expense, as well as time.

My invention is not limited to the exact details of the supplemental and movable frame

nor to the exact means herein shown and described for moving the blanket-belt  $m$  over a part of the surface of the cylinder  $c^2$  nor to the means herein shown and described for cleaning the blanket-belt  $m$ , and many changes in and modifications of these features of my improvement may be made without departing from the spirit of my invention or sacrificing its advantages.

It will be understood that when it is desired to move the supplemental frame  $e$  away from the cylinder  $c^2$  the belt  $c^6$  must be disconnected and other gearing may be employed for the purpose of running or moving the blanket-belt  $m$ .

The blanket-belt  $m$  may be composed of any desired material, but is preferably composed of a suitable textile material.

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

1. In a printing-press, the herein-described means for removing from the surface of a platen-cylinder ink which adheres thereto, consisting of a supplemental frame movable toward and from said cylinder, rollers mounted therein, and a blanket-belt mounted on said rollers and adapted to bear on the surface of said cylinder, and movable in a direction opposite to that of said cylinder, said supplemental frame being also provided with means for cleaning and drying said belt, substantially as shown and described.

2. In a printing-press, the herein-described means for removing from the surface of a platen-cylinder ink which adheres thereto, consisting of a supplemental frame movable toward and from said cylinder, rollers mounted therein and a blanket-belt mounted on said roller and adapted to bear on the surface of said cylinder, and movable in a direction opposite to that of said cylinder, said supplemental frame being also provided with means for cleaning and drying said belt, and with means for feeding onto the surface of said cylinder a cleansing liquid, substantially as shown and described.

LOUIS A. BROD.

Witnesses:

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C. H. ARTHUR.