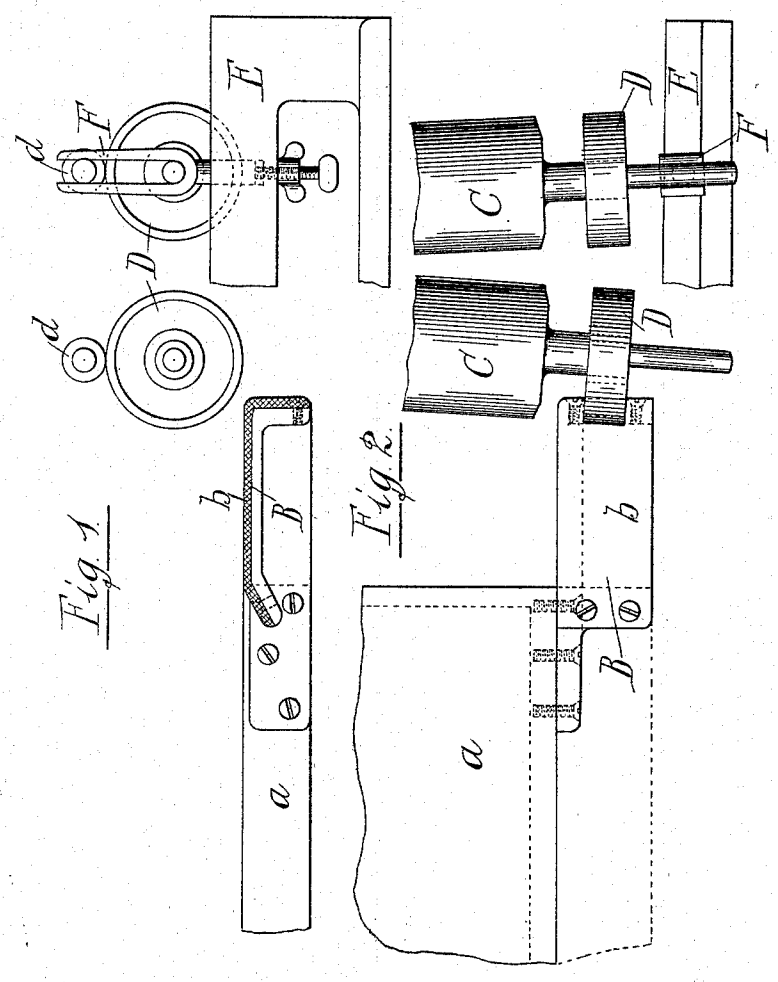
(No Model.)

R. MIEHLE.

INKING APPARATUS FOR PRINTING PRESSES.

No. 527,391. Patented Oct. 9, 1894.



Witnesses:-
Jno. W. Adams
Louis M. T. Whitehead.

Inventor:-
Robert Miehle
by:- Dayton, Poole & Brown,
his Attorneys.

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

UNITED STATES PATENT OFFICE.

ROBERT MIEHLE, OF CHICAGO, ILLINOIS, ASSIGNOR, BY MESNE ASSIGNMENTS, TO THE MIEHLE PRINTING PRESS AND MANUFACTURING COMPANY, OF ILLINOIS.

INKING APPARATUS FOR PRINTING-PRESSES.

SPECIFICATION forming part of Letters Patent No. 527,391, dated October 9, 1894.

Application filed June 11, 1890. Serial No. 355,110. (No model.)

To all whom it may concern:

Be it known that I, ROBERT MIEHLE, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Inking Apparatus for Printing-Presses, which is fully set forth in the following specification, reference being had to the accompanying drawings.

This invention relates to the inking apparatus of cylinder printing presses of that class having a reciprocating ink-table which is connected and moves with the type bed and ink-distributing rollers arranged angularly upon the machine frame and adapted to act upon the ink-table to distribute the ink thereon.

The object of my invention is to provide a simple means for imparting an initial rotary motion to the distributing rollers at a speed corresponding, or nearly so, with the speed of movement of the ink-table, thereby preventing the said distributing rollers being torn or injured at their ends which are first encountered by the ink-table, as is liable to occur in presses as heretofore made when the ink-table alone is relied upon as a means of starting the distributing rollers when the table reaches the same on its return movement after charging the from rollers with ink.

In the accompanying drawings, I have shown only a part of the ink-table and four distributing rollers with my invention applied thereto; other parts of the machine and inking apparatus it being thought unnecessary to show as these parts are of familiar construction.

As illustrated in said drawings: Figure 1 is a view in side elevation of a part of the ink-table and two distributing rollers. Fig. 2 is a top or plan view of the same.

As shown in said drawings, A designates the usual ink-table and C C the distributing rollers, arranged at an angle over the ink-table in the usual manner. Small auxiliary distributing rollers *d*, *d*, are shown as resting on top of the main distributing rollers. The said rollers C C operate to distribute the ink upon the ink-table after the latter has been supplied by means of a feed roller from the ink fountain to the ink table, which latter, as usual, forms part of or is bolted to the type bed and moves with the latter in its reciprocatory movement.

B is a horizontal frictional bearing surface formed upon or secured to the ink table adjacent to the outer end of the same, and D D are disks or collars mounted upon the ends of the distributing rollers C C and adapted to engage frictionally with the bearing surface B. In the particular construction shown, said bearing surface is formed on an arm or projection which is bolted to the side margin of the ink-table and extends outwardly beyond the same so as to sustain the said bearing surface in position to engage the friction disks or collars on the distributing rollers before the surface of the table comes in contact with the said rollers. The said bearing surface may be formed upon or attached to the table itself or may be a projection integral therewith, the particular construction of the parts in this respect being immaterial provided the said bearing surface is located in advance of the horizontal or working surface of the inking table so that said bearing surface will engage the rollers before the advance edge of the table comes in contact with the same.

In the operation of the device constructed as described, it is obvious that as the ink-table moves toward the distributing rollers C C, as seen in Fig. 1, the bearing surface B will strike the friction disk or collar D and impart an initial rotary motion to the rollers C C before the ink-table comes in contact with the same, thereby giving the surface of the rollers the same, or approximately the same, speed as the surface of the ink-table so that when the ink-table reaches and passes beneath the rollers the latter will ride freely over or upon the ink-table.

As heretore constructed the inking rollers have been rotated solely by contact of the ink-table therewith and inasmuch as the rollers are stationary when the ink-table strikes them and it requires some force to overcome their inertia and as the rollers themselves are made of composition of a soft and yielding character, they are likely to be torn or frayed at their ends where the table first strikes them. By the use of the frictional bearing

surface arranged in advance of the ink-table, the rollers are given a rotary movement so that their surfaces move at approximately the same speed as the ink-table so that practically no strain of a kind tending to tear the same will come upon the rollers.

In order to secure better frictional engagement between the disks or collars D D and the bearing surface B, the latter may be provided with a surface, as *b*, of leather or any other flexible or elastic material, or the said disks or collars D may be similarly covered with leather or elastic material, or may be entirely made from raw-hide or similar substance, and when necessary, both the bearing surface and the said disks or collars may be made of yielding or flexible material.

I am aware that it has been proposed heretofore to positively actuate the form and inking rollers of a printing press by means of a rack on the type bed engaging gears or pinions on the inking rollers. I am also aware that it has been proposed to regulate the pressure of the inking rollers against the form by means of bearing wheels on both ends of the inking rollers arranged to run upon adjustable bearing strips attached to the sides of the bed. The construction herein claimed differs from those above referred to in providing angular distributing rollers with disks or collars of the same, or approximately the same, diameter as the said distributing rollers and providing the inking table with bearing surfaces which extend past or beyond the inking table so as to start the distributing rollers in rotary motion before the inking table reaches the same.

It will be understood that after the distributing roller is fully in contact with the ink-table, any further action of the bearing surface is unnecessary inasmuch as motion will be then transmitted from the ink table to the distributing rollers without liability of injury to the latter and for this reason said bearing B preferably does not extend along the sides of the ink table but terminates adjacent to the forward end thereof said bearing surface being made only long enough to insure that the rollers have acquired the necessary speed of rotation before striking the ink table. Similarly, no special means is required for reversing the direction of movement of the distributing rollers when the ink table changes direction of movement at the extreme limit of its movement toward the distributing rollers, for the reason that the rollers, being in contact with the table throughout their entire length, there is no danger of tearing or mutilation of the composition at such time owing to the fact that the strain or pull upon the composition occurring at the time of reversal by reason of the inertia of the roller will be distributed throughout the entire length of the same and will not be so great at any one point as to cause injury.

I claim as my invention—

In a printing press, the combination with angularly arranged distributing rollers provided with frictional disks or collars, of a reciprocating ink-table provided with a frictional bearing surface located adjacent to the end of the table and extending beyond the same; said surface being adapted to engage said disks or collars on the distributing rollers in such manner as to give an initial rotary movement thereto before the ink-table strikes the same, substantially as described.

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

ROBERT MIEHLE.

Witnesses:
L. PETTERSON,
CHAS. B. SWETT.