S. M. WEATHERLY AND H. J. STACH.

ROLLER ADJUSTMENT FOR PRINTING PRESSES.

APPLICATION FILED AUG. 30, 1917.

1,337,574.

Patented Apr. 20, 1920.

2 SHEETS—SHEET 1.

Fig. 1.

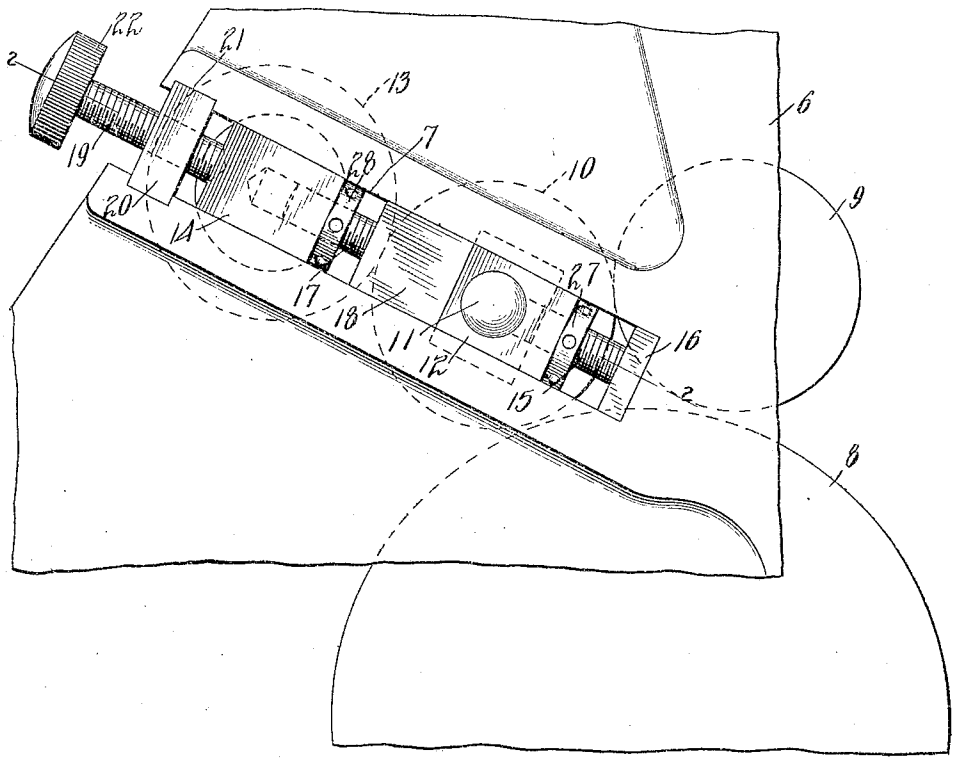
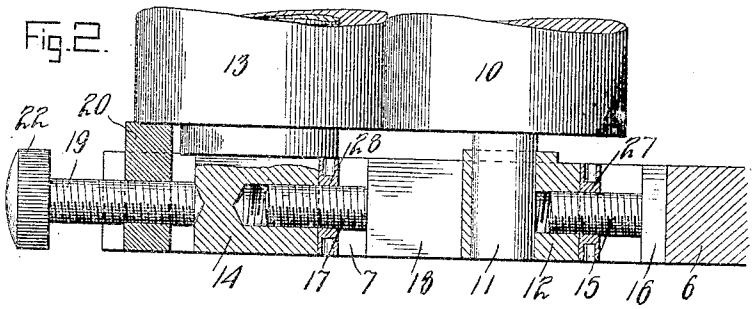


Fig. 2.



Inventors

Sidney M. Weatherly

and Howard J. Stach

By Bradford & Doolittle

Attorneys

S. M. WEATHERLY AND H. J. STACH.

ROLLER ADJUSTMENT FOR PRINTING PRESSES.

APPLICATION FILED AUG. 30, 1917.

1,337,574.

Patented Apr. 20, 1920.

2 SHEETS—SHEET 2.

Fig. 3.

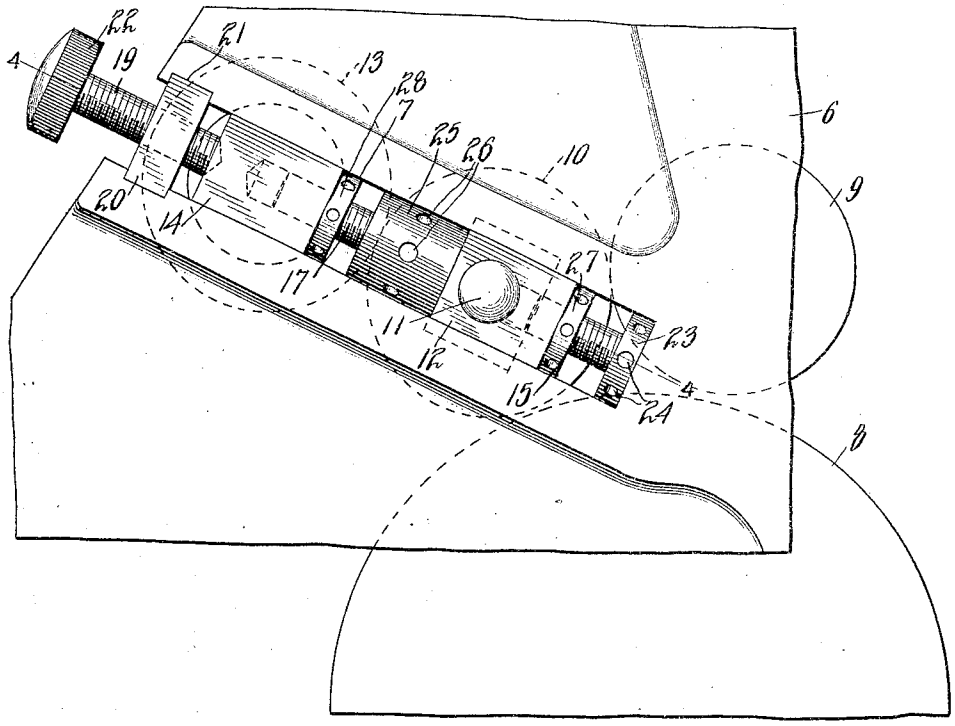
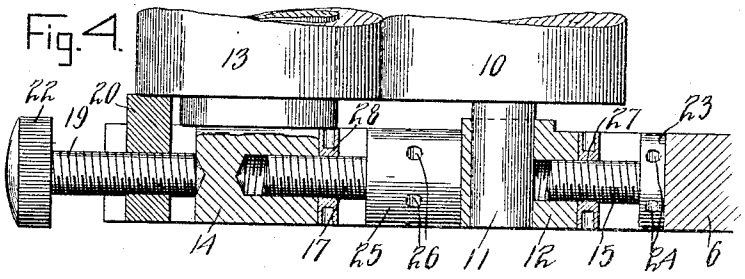


Fig. 4.



Inventors

Sidney M. Weatherly

and Howard J. Stach,

By Bradford & Doolittle

Attorneys

UNITED STATES PATENT OFFICE.

SIDNEY M. WEATHERLY AND HOWARD J. STACH, OF HARTFORD, CONNECTICUT; SAID STACH ASSIGNOR OF HIS ENTIRE RIGHT TO NATIONAL MACHINE COMPANY, OF HARTFORD, CONNECTICUT, A CORPORATION.

ROLLER ADJUSTMENT FOR PRINTING-PRESSES.

1,337,574. Specification of Letters Patent. Patented Apr. 20, 1920.

Application filed August 30, 1917. Serial No. 188,992.

To all whom it may concern:

Be it known that we, SIDNEY M. WEATHERLY, a citizen of the United States, residing at Hartford, Hartford county, and State of Connecticut, and HOWARD J. STACH, a citizen of the United States, residing at Hartford, Hartford county, and State of Connecticut, have invented and discovered certain new and useful Improvements in Roller Adjustments for Printing-Presses, of which the following is a specification.

Our said invention relates to journal bearing adjusting and locking devices and consists in the combinations and arrangements of elements hereinafter described and particularly set forth in the accompanying claims.

The invention has for its purpose to provide a journal bearing adjusting and locking means which is readily accessible for adjusting the separate parts without interfering with the adjustments to be maintained; and wherein the several elements may be set up or taken down in a quick and easy manner.

The invention is designed with special reference to printing presses, to enable the pressman to regulate the pressure of the composition distributer roller against the ink cylinders, and also to regulate the pressure of the steel vibrator roller on the composition roller, to the end of preventing the composition roller from heating up and melting from friction, and also to improve the distribution of the ink.

Heretofore the journals of the composition distributer roller and the steel vibrator roller were floatingly mounted in the slots of the roller carriage-way, and gravity carried the composition distributer roller against the ink cylinder with its full weight, and this, with the weight of the steel vibrator which rides on the composition roller, caused excessive friction and resulted in heating up the composition distributer roller, with the result that the same softened or melted and would run down. And it is to avoid these disadvantages that the arrangement disclosed herein is devised.

The invention is disclosed by way of illustration in the accompanying drawings, wherein—

Figure 1 is a side elevation showing the application of the device to a printing press.

Fig. 2 a sectional view, taken on the line 2—2 of Fig. 1.

Fig. 3 a side elevational view of a modified construction, partly broken away, and

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

Referring to the construction in further detail, and with like reference characters representing corresponding parts in the different views, 6 designates the frame of the press, constructed with the usual pair of guide-ways 7, and having a large ink cylinder 8 and a small ink cylinder 9 journaled in said frame, after the usual manner. A composition distributer roller 10 has the shaft 11 thereof journaled in the journal boxes 12 (one being shown) that are slidably mounted in the guide-ways 7; and a vibrator roller 13 has its shaft slabbed as at 14, and slidably mounted in said guide-ways as shown.

The pressure regulating and locking device, to which this invention pertains, has reference to the composition distributer roller and the vibrator roller, and the means therefor consists of similar devices carried by said rollers within each guide-way, and those on one side only will be described.

The journal box 12 carries a screw 15 threaded therein, and said screw has an angular head 16 adapted to fit closely within the guide-way 7 and against the frame at the lower end thereof, in such a manner as to prevent turning after being set. In mounting the composition roller in the frame, the screws 15 are first adjusted and the roller is then set into the slots or guide-ways, with the heads 16 of the screws resting upon the flat bottoms of the slots and the composition roller in contact with the ink cylinder for its full length. In order to get this contact between the roller 10 and the ink cylinder just right, the roller and journal boxes are lifted out and the screws 15 adjusted accordingly as it is desired to get more or less pressure as required. The roller is then placed in position in the manner stated, and this operation repeated until the exact contact needed is obtained.

The slabbed ends 14, of the vibrator roller, are likewise provided with a pair of screws 17 threaded therein; and said screws have relatively large heads 18, of square design in cross-section, for fitting within the guide-

ways 7, to be held against turning, as will be understood. Said vibrator roller is adapted to be mounted in the frame of the press, and against the distributer roller, and the proper adjustment made therefor, after the manner stated with reference to the distributer roller.

The journal boxes 12 of the distributer roller and slabbed ends 14 of the vibrator roller, are maintained at the proper tension and locked in set position in each guide-way by means of a screw 19 threaded in a block or plate 20 that fits snugly within notches 21 formed in the frame adjacent the entrance opening to the guide-way 7. The screw is provided with a knurled head 22 for regulating and firmly holding the entire adjusting mechanism, including the vibrator and composition rollers, after the manner stated.

The arrangement shown in Figs. 3 and 4 differs from the construction above described, in that the adjusting screw 15 of the distributer roller has a round head 23 provided with apertures 24 to receive a suitable instrument for turning the screw to obtain the desired adjustment of said roller without requiring the removal of the roller from the guide-ways. In like manner, the adjusting screw 17 of the vibrator roller has a cylindrical head 25 provided with openings 26 for the purpose of adjustment. In all other respects, the construction, arrangement and manner of adjusting and locking the parts shown in Figs. 3 and 4, are the same as that of arrangement shown in Figs. 1 and 2.

The adjusting screws 15 and 17 are respectively provided with round lock nuts 27 and 28 having apertures for adjustment, and said nuts bear against the journal boxes 12 and slabbed ends 14 for locking the screws 15 and 17 in their adjusted positions even if the vibrator and distributer rollers are removed from slots 7. Similar lock nuts 27 and 28 are provided for the adjusting screws 15 and 17 shown in Figs. 1 and 2 and operate therein after the manner just stated.

It is obvious that those skilled in the art may vary the details of construction and arrangement of parts without departing from the spirit of our invention, and we therefore do not wish to be limited to such details except as required by the claims.

Having thus fully described our said invention what we claim as new and desire to secure by Letters Patent, is:—

1. In a printing press, means for adjusting the distributer roller, the ink cylinder and the vibrator roller in definite relation to each other and securing them positively in such relation, comprising a frame having guide-ways, an ink cylinder journaled adjacent to the lower end of said guide-ways, journal members mounted to slide in each of said guide-ways, the distributer cylinder journaled in said journal members, adjusting screws interposed between said journal members and the frame, another set of journal members mounted in said guide-ways, a vibrator roller mounted to operate thereon, adjusting screws interposed between the first journal members and the second journal members at each end of the frame, and clamping screws mounted in supports on said frame and adapted to bear against said outer journal members, whereby said several parts may be adjusted to bring said ink cylinder, distributer roller and vibrator roller into definite position in relation to each other and lock them in such position, substantially as set forth.

2. In a journal bearing the combination of a frame having guide-ways, a pair of journal members mounted in said guide-ways, screws carried by said journal members for adjustably positioning the same, a second pair of journal members mounted in said guide-ways, screws carried by said second pair of journal members engaging with the first named pair of journal members for adjustably positioning said second journal members, said journal bearing adjusting means located wholly within said guide-ways, and devices engaging said second journal members for tensioning both pairs of journal members, substantially as set forth.

3. In a journal bearing the combination of a frame having guide-ways, a pair of journal members slidably mounted in the guide-ways, screws carried by said journal members abutting the ends of said guide-ways and adjustable within the guide-ways for positioning said journal members, a second pair of journal members mounted in said guide-ways, screws carried by said second pair of journal members engaging with the first named pair of journal members and adjustable within the guide-ways for positioning said second journal members, and screws adjustable on the frame and engaging said second journal members for tensioning both pairs of journal members, substantially as set forth.

4. The combination with a printing press having a frame with guide-ways, ink cylinders, a distributer roller, a vibrator roller and journal bearings for said rollers mounted in said guide-ways, of a pressure regulating and locking means for said rollers comprising screws carried by the journal bearings of the distributer roller abutting the ends of the guide-ways for adjustably positioning the distributer roller, screws carried by the journal bearings of the vibrator roller engaging with the journal bearings of the distributer roller for adjustably positioning said vibrator roller, and screws

adjustably mounted on the frame engaging with the journal bearings of said vibrator roller, substantially as set forth.

5. The combination with a printing press having a frame with guide-ways, a large ink cylinder, a small ink cylinder, a composition distributer roller, a vibrator roller, and journal bearings for said distributer roller and vibrator roller mounted in said guide-ways, of means for regulating the pressure of, and locking into place, the distributer and vibrator rollers comprising a pair of screws carried by the journal bearings of said distributer roller and abutting the ends of the guideways for positioning said distributer roller, a pair of screws carried by the journal bearings of the vibrator roller engaging the journal bearings of said distributer roller for adjustably positioning said vibrator roller, and a pair of screws adjustable on the frame engaging the journal bearings of the vibrator roller for tensioning and locking the journal bearings of both of said rollers, substantially as set forth.

6. The combination with a printing press having a frame with guide-ways, a large ink cylinder, a small ink cylinder, a composition distributer roller, a vibrator roller, and journal bearings for said distributer roller and vibrator roller mounted in said guide-ways, of means for regulating the pressure of, and locking into place, the distributer and vibrator rollers comprising a pair of screws carried by the journal bearings of said distributer roller and having heads abutting the ends of the guide-ways for positioning said distributer roller, lock nuts on said screws engaging with the journal bearings of the distributer roller, a pair of screws carried by the journal bearings of the vibrator roller engaging the journal bearings of said distributer roller for adjustably positioning said vibrator roller, lock nuts on said screws engaging with the journal bearings of the vibrator roller, said adjusting means located wholly within said guide-ways and a pair of screws adjustable on the frame engaging the journal bearings of the vibrator roller for tensioning and locking the journal bearings of both of said rollers, substantially as set forth.

In witness whereof, we have hereunto set our hands and seals at Hartford, Connecticut, this 15th day of June, A. D., nineteen hundred and seventeen.

SIDNEY M. WEATHERLY. [L. S.]
HOWARD J. STACH. [L. S.]

Witnesses:
WM. F. LOOMIS,
R. W. BARROWS.