

UNITED STATES PATENT OFFICE.

ROBERT C. NEWTON, OF NEEDHAM, MASSACHUSETTS.

INKING APPLIANCE.

987,814.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, ROBERT C. NEWTON, of Needham, in the county of Norfolk and State of Massachusetts, a citizen of the United States, have invented a new and useful Improvement in Inking Appliances, of which the following is a specification.

In printing telegraphic apparatus and other like machines where there is a tape on which the record is to be printed and a printing roller which must be kept properly inked to make the record, there have been various problems encountered in connection with the attempt to secure the application of the right amount of ink to the printing wheel with no danger of an oversupply. Attempts have been made to secure the desired result by the application to an ink reservoir of a valve of the needle type which being screwed down so as to nearly close the aperture through which the ink flows, is expected to allow only the right amount of ink to pass. This has not been entirely successful for unless an air hole is provided the ink will not flow freely and the air hole allows a constant leakage of ink. When in the use of such a device the printing wheel is at rest perhaps for some considerable period of the day the ink is constantly leaking and causes an oversupply of ink on the printing roll and the blotting of the paper when the roller next attempts to print. A brush has been used for the purpose which brush has been put into the outlet of an ink reservoir and engages the printing roller. Here again the brush which may be of felt or the like becomes saturated unless there is a sufficient drain from it consequent upon the continued use of the printing wheel. Another means for inking the printing wheel is a felt roller which rides on the wheel. This, however, is usually kept thoroughly inked by means of a brush with which the ink is daubed upon the roller by hand and this requires constant care on the part of the attendant.

My invention is intended to provide a means for inking a printing wheel which is adjustable so that the right amount of ink may be distributed and which also may be closed when it is desired to remove the device for refilling.

My invention will be understood by reference to the drawings in which—

Figure 1 is a side elevation of my inking device upon a somewhat enlarged scale, Fig. 2 being a vertical section taken at right an-

gles to Fig. 1, and Fig. 3 is a detail of the lower end of my inker to indicate its adjustment.

In the drawings I have shown merely a portion of a registering device of the general character above referred to, A being a frame mounted upon a base B.

C is a paper tape of the usual character upon which the registry is to be made and which is supplied from a suitable reel as is customary in such devices.

D, D¹ are a pair of feed rolls (a portion only of the roll D¹ being shown), between which the strip of paper C runs and by which it is drawn off the reel, d, d, being guides under which it is drawn.

E is the printing roll mounted on a shaft e and operated by any suitable means. Below it is a platen roll E¹ which is free to turn as occasion may require. The tape of paper runs between these two rolls also and there is given to the platen roll E¹ a vertical movement from time to time to impress the paper tape C against the printing roll E.

My inking device is pivotally attached to the frame A by means of an arm, a, a¹ being its pivotal attachment, as shown a screw. My inker comprises a hollow cylinder F the lower end of which is flat on its exterior. The chamber formed within the cylinder F is provided with a sloping or conical floor f at the apex of which is a small opening f¹. The cylinder F is provided with a screw top F¹ having an air hole f² sufficient in size to supply the slight amount of air necessary to compensate for the draft on the ink contained in the cylinder F and so prevent a vacuum. Down through the center of this cover F¹ is a threaded opening within which screws a needle valve or plug G which is threaded on its exterior at its upper end to fit into the opening in the cover F¹, its lower end g being pointed so as to fit into and close the hole f¹ at the lower end of the chamber F when desired. The top F¹ screws onto the top of the cylinder F and is adapted to be removed when it is necessary to fill the chamber within the cylinder.

The lower end of the cylinder carries a collar H which is threaded on its interior so that its upper end may screw upon the threaded lower end of the cylinder F. The threads in the collar H extend throughout its length and into the lower end of the collar H is screwed a plug J made of felt or other like substance which will absorb the

ink as it flows from the ink chamber and will offer a resistance to the free passage of the ink from the chamber in the cylinder F and yet will allow sufficient ink to pass therethrough after the plug has become thoroughly saturated, to ink the printing roller.

As shown in Fig. 2, it will be noted that there is a slight space between the lower end of the cylinder F and the top of the plug J. As shown in Fig. 3, it will be noted that the collar H is screwed up tight so as to close the opening f^1 by means of the plug J. In Fig. 2 there is a free opening for the ink to pass out into the space j between the top of the plug and the bottom of the cylinder and the space becomes a saturating reservoir for the plug; hence the plug will ink the printing roller freely as may be required at certain times in the day. During the times when the apparatus is not so frequently in use so that the printing roller requires less ink the collar H is screwed up tight carrying the plug J with it into the position shown in Fig. 2 where it closes the opening f^1 , thus preventing any waste of ink and also preventing the too free inking of the printing roller and the consequent blotting of the tape when the printing operation again begins. This plug therefore serves the double purpose of an inking pad and also of a plug to check the flow of ink.

The arm a allows the cylinder perfect freedom of movement so that the device will always rest on the printing roller whatever may be the position of the plug J.

The embodiment of my invention shown in the drawings is simple, but I do not mean to confine myself entirely to it as my invention may be otherwise embodied, variations in the shape and general construction of its various parts being possible without departing from the spirit of the invention which relates to the adjustment of the ink flow by the location of the pad by which the print-

ing roller is inked. The apparatus is intended to be used with the ordinary ink used in such devices, the air hole furnishing sufficient air inlet to allow the ink to flow out as needed.

What I claim as my invention is:—

1. An inker comprising an ink reservoir having an outlet through which ink can flow, and a pad, and means for moving said pad away from said outlet to form a space to receive and hold ink to saturate said pad and toward said outlet to restrict such saturation, as set forth.

2. An inker comprising an ink reservoir having an outlet through which ink can flow, a pad and means for connecting said pad to said reservoir adapted to inclose a chamber one wall of which is formed by said pad and into which said outlet opens to supply said ink thereto, said means being movable to close said pad against said outlet.

3. An inker for printing rollers comprising a cylinder containing an ink reservoir, an outlet at the bottom thereof, means for closing said outlet and a pad located to receive ink from said outlet and movable toward and from said outlet whereby it may serve to control the passing of ink from said outlet.

4. An inker for printing rollers comprising an ink reservoir, an outlet at one end thereof, a collar surrounding said outlet, a pad located in said collar, said collar and said pad being adjustable toward and from said outlet.

5. An inker for printing rollers comprising an ink reservoir, an outlet therefrom, a pad to receive ink from said reservoir movable with relation to said outlet whereby the flow of ink will be checked therefrom, and a closing valve located to close said outlet.

ROBERT C. NEWTON.

Witnesses:

GEORGE O. G. COALE,
M. D. NEWMAN.