W. W. HILL.

INKING ROLLERS.

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979,300.

Patented Dec. 20, 1910.

Fig. 4.

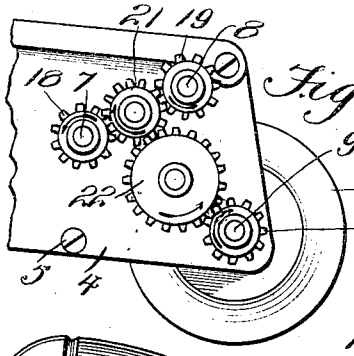


Fig. 1.

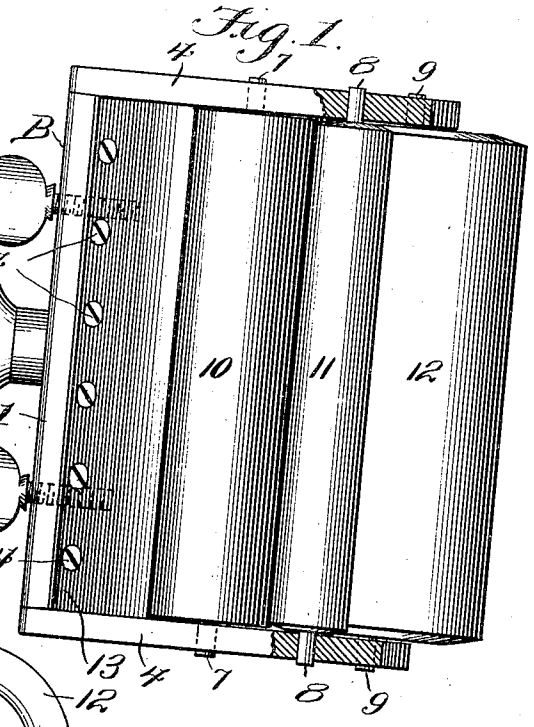
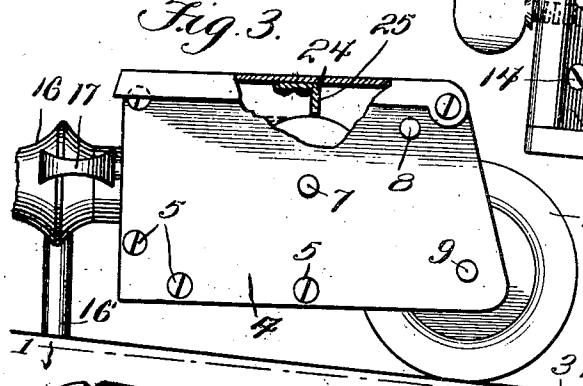


Fig. 3.



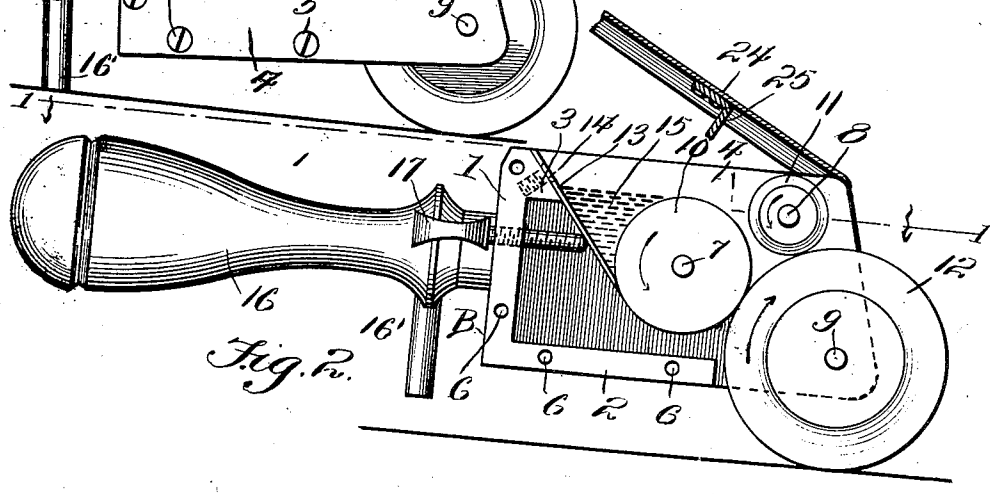


Fig. 2.

Witnesses

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INKING-ROLLERS.

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To all whom it may concern:

Be it known that I, WILLIAM W. HILL, a citizen of the United States of America, residing at Sharpsburg, in the county of Bath and State of Kentucky, have invented new and useful Improvements in Inking-Rollers, of which the following is a specification.

This invention relates to inking rollers for applying ink to type for the making of proofs, and it has for its object to provide a simple and efficient distributing roller which shall be equipped with an ink-containing reservoir or font, thus producing what may be termed a self-inking roller.

With these and other ends in view which will readily appear as the nature of the invention is better understood, the same consists in the improved construction and novel arrangement and combination of parts which will be hereinafter fully described and particularly pointed out in the claims.

In the accompanying drawing has been illustrated a simple and preferred form of the invention, it being, however, understood that no limitation is necessarily made to the precise structural details therein exhibited, but that changes, alterations and modifications within the scope of the invention may be resorted to when desired.

In the drawing,—Figure 1 is a top plan view of a device constructed in accordance with the invention, the cover having been removed and the frame being shown partly in section. Fig. 2 is a side elevation partly in section, showing the cover partly raised and the inner side wall of the casing being removed. Fig. 3 is a side elevation with the cover closed. Fig. 4 is a detail side elevation illustrating a modified form of the invention.

Corresponding parts in the several figures are denoted by like characters of reference.

The frame of the improved device includes a body member B of L-shaped cross section comprising a back wall 1 and a bottom member 2, said back wall being provided adjacent to its upper edge with a ledge 3 having an inclined face, as clearly seen in Fig. 2. Side walls 4—4 are securely connected with the body member B by fastening members such as screws 5 engaging screw holes 6 in the ends of the body member, the heads of the screws being preferably countersunk in the side walls. The latter afford bearings for shafts 7, 8 and 9 carrying, respectively, the fountain roller 10, the distributing roller 11 and the main or inking roller 12, the latter protruding beyond the walls of the casing, as clearly seen in the drawings.

The ink reservoir or fountain is formed between the roller 7, together with the side walls 4 and a resilient plate 13 which is firmly secured by screws or fastening members 14 upon the inclined face of the ledge 3 in such a manner that the lower edge of said resilient plate will bear against the roller 7, thus confining the ink 15 contained in the fountain or reservoir, but permitting a limited portion of said ink to adhere to the roller and to escape from the fountain when the roller is rotated in the direction of the arrow in Fig. 2. The fountain roller 7 may be rotated by frictional contact with the inking roller 12, and the distributing roller 8 may likewise be rotated by frictional contact with the inking roller.

It is obvious that when the device is in active use and the inking roller is passed over the type, ink will be deposited upon the inking roller by the fountain roller, and such ink will be evenly distributed upon the inking roller by the distributing roller, so as to be evenly applied to the type by the inking roller.

A handle 16 having a rest or support 16′ is securely attached to the rear wall of the body member B, and the latter is provided with tension screws 17 engaging the resilient plate 13 for the purpose of regulating the escape of the ink from the fountain.

In Fig. 4 has been illustrated a slight modification under which the fountain roller and the distributing roller are positively driven at a speed varying from that of the inking roller with which they are in contact. The shafts 7, 8 and 9 are equipped with pinions 18, 19 and 20, and an idler 21 is interposed between the pinions 18 and 19 meshing with both of said pinions and also with a second idler 22, the latter meshing with the idler 21 and with the pinion 20 upon the shaft of the main inking roller. It is obvious that when the latter is rotated, motion will be transmitted to the shafts carrying the rollers 10 and 11, both of which will be rotated at a speed varying from that of the main inking roller owing to the greater diameter of the latter, thus causing both the fountain roller and the distributing roller to wipe over the surface of the inking roller. It is thought

that by this construction a more thorough distribution of the ink will be effected.

A suitable lid 24 is hingedly connected with the casing. Secured upon the underside of said lid is a flange 25 which when the lid is closed is adapted to engage the surface of the fountain roller 10 and to act in the capacity of a scraper. The purpose of this scraper is when the device is used with a back stroke to keep the ink from being carried in excessive quantities to the inking roller. Ordinarily, as is well known, the ink is distributed with a forward stroke of the device, but when inadvertently or designedly the inking roller is kept in contact with the type upon the back stroke, the flange or scraper 25 will prevent waste and too copious application of ink.

Having thus described the invention, what is claimed as new, is:—

1. In a device of the character described, a frame member of L-shaped cross section having a ledge with an inclined face, side walls secured upon said frame member, shafts supported for rotation in the side walls and carrying, respectively, a fountain roller, a distributing roller and an inking roller, a resilient plate secured upon the inclined ledge in engagement with the fountain roller and combining with the latter and with the side walls of the casing to form an ink fountain, and a lid hingedly connected with the casing and having a flange adapted to engage the inking roller.

2. In a device of the character described, a casing comprising a body member of L-shaped cross section and side walls connected therewith, a resilient plate connected with the back wall of the L-shaped body member, a roller supported for rotation in the casing and combining with the side walls and with the resilient plate to constitute an ink receptacle, means for forcing the free edge of the resilient plate in the direction of the roller, a lid hingedly connected with the casing, and a flange secured upon the underside of the lid and adapted to contact with the inking roller to scrape the latter when reversely rotated.

3. In a device of the character described, a casing including a body of L-shaped cross section and side walls upon the same, shafts supported for rotation in the side walls and carrying respectively a fountain roller, a distributing roller and an inking roller, said fountain roller and distributing roller being in contact with the face of the inking roller, a resilient plate secured upon the back wall of the casing, means for forcing the free edge of said plate in the direction of the fountain roller, and means for transmitting motion from the inking roller to the fountain roller and the distributing roller.

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

WILLIAM W. HILL.

Witnesses:

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HARRY E. MATHERS.