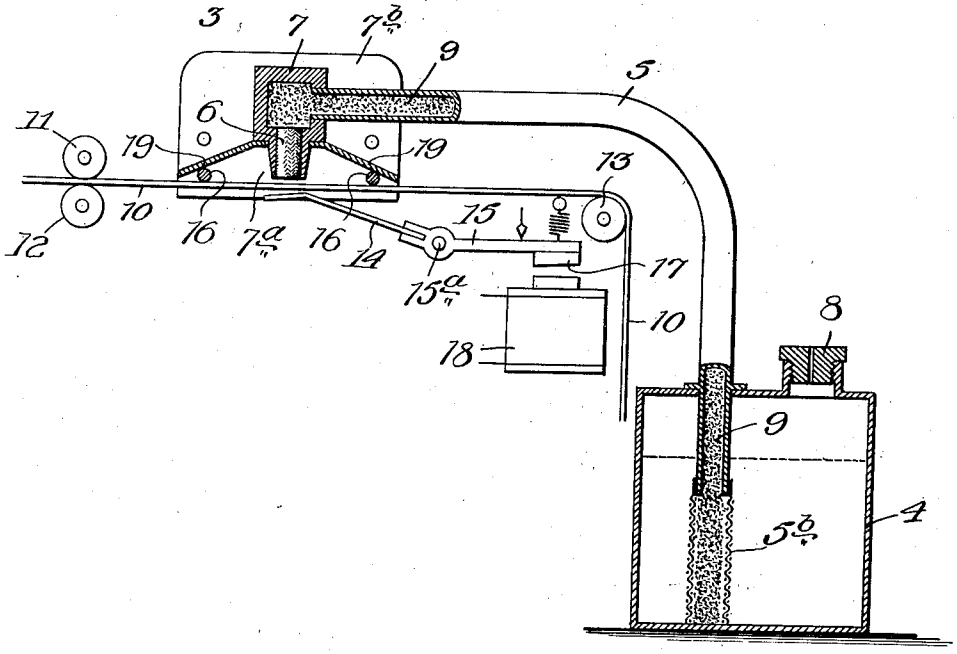
J. F. MEHREN.

INK FED MARKING DEVICE.

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1,296,305.

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JACOB F. MEHREN, OF CHICAGO, ILLINOIS.

INK-FED MARKING DEVICE.

1,296,305. Specification of Letters Patent. Patented Mar. 4, 1919.

Application filed July 16, 1918. Serial No. 245,239.

To all whom it may concern:

Be it known that I, JACOB F. MEHREN, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Ink-Fed Marking Devices, of which the following is a specification.

My invention relates to an improvement in the class of devices for marking with ink, by impressing, stamping, or writing, either automatically or manually, in which the ink is fed automatically to the marker, pen, pencil, or the like, from a reservoir.

The primary object of my invention is to provide for so feeding the ink that the supply thereof to its applying medium shall be continuous and sufficient without being excessive, thereby to avoid waste, smearing and blotting, and unsightly results, generally.

The accompanying drawing is a view in elevation, partly broken and sectional, illustrating the application of my invention to a signal-recording instrument known as a Morse register.

The essential elements of my improved device are a marker 3 having a head containing a chamber with a marking implement depending from the chamber, a reservoir 4 for the supply of marking fluid, occupying a position at a level lower than that occupied by the marker, and a duct 5 bent into generally rectangular shape with its downwardly extending section dipping into the reservoir and its upper section terminating in the chambered head, the duct containing a capillary filling to adapt it to feed continuously and in sufficient but not excessive quantity the fluid from the lower level of the reservoir to the marker at the higher level. The marker comprises a marking implement in the form of a cylindrical piece of felt 6 of suitable firmness, confined in a hollow head or holder 7, which may be fixed through a back-plate 7^b to any suitable support and is preferably formed of metal and provided with a lower tubular stem-portion 7^a, or nipple, containing the piece 6. The duct 5 extends at the end of the horizontal section into the head 7 and dips at its vertical section into the reservoir, which is provided with a venting screw-stopper 8 and in which the lower perforated or screen-formed end 5^b of the tube dips, or is immersed as shown. The tube and head 7 are filled with means operating to induce feeding ink through it from the lower-level reservoir to the higher level of the marker by capillary attraction, the means I prefer to employ being a granular substance 9, such as sand, though a wick or other suitable medium may be used. The head 7 is supported in position to extend over a strip 10, ordinarily a paper tape, movable by a conveyer-wheel 11, when rotated by the mechanism (not shown) of the aforesaid Morse instrument, across the marker-point 6, the wheel 11 coöperating with an idler 12 on which and another idler at 13 the tape is supported and guided. A flat spring-finger 14 extends from a lever 15, fulcrumed at 15^a, to bear against the under side of the tape between a pair of pins 16 projecting from the plate 7^b and serving to hold the tape normally out of contact with the marking-piece 6. The lever 15, which is spring-raised, carries an iron armature 17 to be actuated by an electromagnet 18.

Under the capillary action in the duct 5, ink is fed through it from the reservoir 4 into the head-chamber, through the substance 9 in which it is fed to the marker continuously and uniformly in sufficient quantity to adequately moisten the felt-piece 6 and without such excess as would cause the moving tape, in being impressed by the action of the electromagnet, to be blurred, blotted or smeared, or cause ink to drip from the felt-piece or be wasted.

A hood, shown at 19, fits at its slotted center over the stem-portion 7^a or nipple on the marker-head and against the shoulder between them, and extends at its ends, for support, over the pins 16. This hood is provided to tend to shield the exposed end of the felt piece from the air, and thus to prevent hardening of the ink and incrustation therewith of such exposed end, which would obstruct the flow of ink to the point of use. The perforations in the duct-end 5^b are too small to become clogged with the sand 9.

I realize that considerable variation is possible in the details of construction thus specifically shown and described, and I do not intend by illustrating specific or preferred embodiments of my invention to be limited thereto; my intention being in the following claims to claim protection upon all there may be of novelty in my invention as broadly as the state of the art will permit.

I claim:

1. An ink-fed marking device comprising a duct having a lower downwardly-extending section and a higher section extending at an angle to said lower section, a marker having a chamber-containing head, in which said higher section terminates, and a marking implement extending outwardly from said chamber, an ink-reservoir supported at a level below that of the marker and into which said lower duct-section dips, and means in the duct for feeding ink therethrough from the reservoir into said chamber by capillary attraction.

2. An ink-fed marking device comprising a duct having a lower downwardly-extending section and a higher section extending at an angle to said lower section, a marker having a chamber-containing head, in which said higher section terminates, and a marking implement extending outwardly from said chamber, an ink-reservoir supported at a level below that of the marker and into which said lower duct-section dips, and a capillary substance filling said duct and chamber.

3. An ink-fed marking device comprising a duct having an upper horizontal section and a lower vertical section provided with a screen on its lower end, a marker having a chamber-containing head in which said horizontal section terminates, and a marking implement extending outwardly from said chamber, an ink-reservoir supported at a level below that of the marker and into which the screened end of the duct extends, and a capillary substance filling said duct and chamber.

4. An ink-fed marking device comprising a duct provided on one end with a marker, an ink-reservoir containing the opposite end of the duct and supported at a level below that of the marker, and a granular filling in the duct for conveying ink from the reservoir to the marker by capillary attraction.

5. In combination with a recording instrument provided with means for moving a recording-strip across a marking implement, a marker having a chamber-containing head and a marking implement extending from said chamber and provided with means for securing said head in position to extend said implement toward the path of travel of said strip, an ink-reservoir supported at a level below that of the marker, a duct having a lower downwardly extending section dipping into said reservoir and a higher section extending at an angle to said lower section, and means in the duct for feeding ink therethrough from the reservoir into said chamber by capillary attraction.

6. In combination with a recording instrument provided with means for moving a recording-strip across a marking implement, a marker having a chamber-containing head and a marking implement extending from said chamber and provided with means for securing said head in position to extend said implement toward the path of travel of said strip, an ink-reservoir supported at a level below that of the marker, a duct formed of a vertical section dipping into said reservoir and a horizontal section terminating in said head, and a filling of capillary substance in said duct and chamber.

JACOB F. MEHREN.