(No Model.)

L. T. WEISS.

DOTTING PEN.

No. 301,310. Patented July 1, 1884.

Fig. 1.

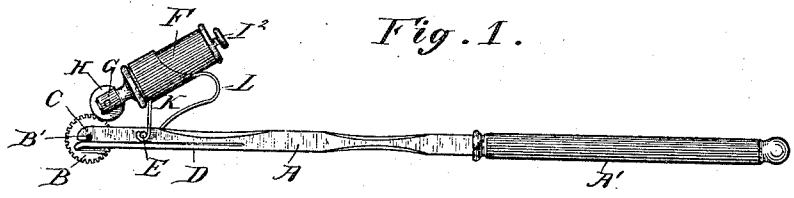


Fig. 2.

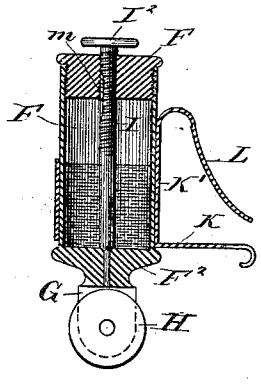
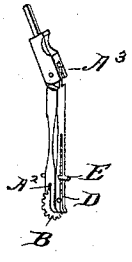


Fig. 3.



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UNITED STATES PATENT OFFICE.

LOUIS T. WEISS, OF BROOKLYN, ASSIGNOR OF ONE-HALF TO CHARLES KRUSE, OF NEW YORK, N. Y.

DOTTING-PEN.

SPECIFICATION forming part of Letters Patent No. 301,310, dated July 1, 1884.

Application filed November 12, 1883. (No model.)

To all whom it may concern:

Be it known that I, LOUIS T. WEISS, of Brooklyn, in the county of Kings and State of New York, have invented a new and useful Improvement in Dotting-Pens; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

My invention relates to an improved dotting-pen, and belongs to that class of pens wherein the ink is laid or distributed upon the periphery of a toothed or notched wheel, which by rolling upon the paper or other surface operated upon forms thereon a dotted or broken line.

It consists in the novel method, as hereinafter described, of mounting at one extremity of a handle, suitable in size and shape to be grasped in the fingers, a toothed or notched wheel, so that it may be readily detached or replaced, and in mounting upon one side of the said handle a reservoir to hold the ink and distribute it gradually upon the periphery of the toothed wheel by means of an interposed roller of rubber or other suitable material.

In the accompanying drawings, Figure 1 is a side view of my improved dotting-pen complete; Fig. 2, a longitudinal section through the reservoir; and Fig. 3, a perspective view of my improvement as applied to a circular pen, the reservoir being removed.

The bar A, terminating in a suitable handle, A′, at one end, has its opposite end slotted to form a recess, A^2, to embrace a toothed dotting-wheel, B. The inner side of the bar, at its lower end, is notched transversely at a right angle to the recess A, to receive and constitute a bearing, C, for the arbor or spindle B′ of the wheel B. The outer end of a spring, D, attached longitudinally to the under side of the bar A, or which may be formed in one therewith, extending parallel thereto, is brought to bear against the bearing-notch C, and is also slotted to embrace the wheel. The spring thus serves to retain the arbor of the wheel B in its bearings in the end of the bar, and yet permits its ready withdrawal and removal when required, and its end is preferably rounded or bent away from the bar A, (see Fig. 1,) to facilitate the introduction of the arbor of the wheel to its bearings. Through the body of the bar, and parallel to the axis of the wheel when in position, a pin, E, is fixed to project on either side of the bar and form a support for the reservoir F. The reservoir F consists of a short cylindrical vessel closed at the top by a screw-cap, F′, and at the bottom by a cap, F^2, centrally perforated to form a discharge-conduit or feed-tube from the reservoir. The cap F^2 is fitted with ears or lugs G, adapted to project therefrom on either side of the central feed-aperture therein, to receive between them a feed roller or wheel, H, whose arbor is pivoted in said lugs, so that the wheel shall rotate in line with the feed-aperture in the same plane as the dotting-wheel B. The feed-wheel H is made of rubber, compressed felt, or other suitable material, and is so proportioned as that its periphery will be in contact with the mouth of the feed-aperture in the reservoir to cover the central perforation therein, and at the same time in contact with the periphery of the dotting-wheel B. The outer cap, F′, is centrally perforated and threaded to receive a threaded rod, I, which is made to extend downward through the reservoir to close down upon the central opening in the bottom of the reservoir and form a valve therefor. The lower end of the rod below the valve-seat is reduced in diameter, and prolonged in the form of a needle to project into the discharge-conduit of the reservoir, and by its movement, as the valve is opened or closed, prevent the ink from drying or clogging therein. The upper end of the valve-rod I is provided with a milled head, I^2, to facilitate screwing it up or down to open or close the valve, and its threaded portion is flattened or scored out longitudinally at *m* (see Fig. 2) for a portion of its length, to provide an air-vent into the reservoir when its discharge-aperture is opened. The lower end of the reservoir is attached or coupled to the bar A by means of a forked or slotted arm, K, projecting from the bottom of the reservoir, and hooked at its outer end to engage the projecting ends of the pin E; and the upper end of the reservoir is forced out from the bar to bring and hold the feed-wheel H in contact

with the dotting-wheel B, and the reservoir is stayed in position upon the bar A by means of a spring, L, attached at one end to the reservoir at about the middle of its length, and curved to bring its outer end to bear upon the bar A above the pin E.

Instead of attaching the coupling hooks or arm K directly to the reservoir, they may be attached to a tubular socket plate or sleeve, K′, adapted to receive and closely embrace the reservoir, as illustrated in the drawings.

The bar A, instead of terminating in the rounded handle A′, may be hinged or jointed in the customary manner to adapt it to fit the socket in the short arm of the ordinary form of circular pen, as is illustrated in Fig. 3 of the drawings.

The wheel B may be so notched as to make a succession of dashes to form a broken line, or it may be made to form dots, or both dashes and dots alternately; and a number of wheels may be provided with each instrument, all notched differently to produce a variety of broken and dotted lines, the wheels being readily interchangeable in the handle by reason of the retaining-spring D.

In using my improved dotting-pen the wheel B is placed in its bearings and the reservoir, properly supplied with ink, attached to the handle by its hooked arm K, so that the spring L will cause the rubber wheel H to rest and bear upon the wheel B. If now the screw-rod I be screwed up to withdraw its lower valve end from the aperture in the bottom of the reservoir and provide an air-vent through the slot *m* in its thread, the ink will flow down and be fed upon the rubber wheel H, and as the wheel B is rolled upon a smooth surface it will, by its frictional contact with the rubber roller H, cause the latter to rotate and draw continuously a fresh supply of ink from the opening in the reservoir and distribute it upon the periphery of the wheel B, to be imprinted thereby upon the paper or other surface operated upon in a dotted or broken line, as desired.

I claim as my invention—

1. The combination, in a dotting-pen, with a detachable dotting-wheel, B, and a detachable ink-reservoir, F, of an interposed inking-wheel, H, substantially in the manner and for the purpose herein set forth.

2. The combination, in a dotting-pen, with a detachable dotting-wheel, B, and a detachable ink-reservoir, F, and an interposed inking-wheel, H, rotating in bearings attached to the reservoir, of a spring, L, adapted to produce an automatic pressure of the inking-wheel upon the dotting-wheel, substantially in the manner and for the purpose herein set forth.

3. The combination, with the arbor of a detachable dotting-wheel, B, having its bearings in a transverse groove in the arm A of a dotting-pen, of the longitudinal spring attached to said arm to cover and close the journal-bearings, and thereby retain the wheel in place, substantially in the manner and for the purpose herein set forth.

4. The combination, with the pen-bar A, dotting-wheel B, reservoir F, and inking-wheel H, of coupling-hooks K, attached to the reservoir to engage pins E upon the bar, and a spring, L, interposed between the reservoir and bar, substantially in the manner and for the purpose herein set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

LOUIS T. WEISS.

Witnesses:
G. H. SPENCER,
A. W. STEIGER.