No. 722,160. PATENTED MAR. 3, 1903.

A. W. STEIGER.

RULING AND ERASING IMPLEMENT.

APPLICATION FILED JULY 18, 1902.

NO MODEL.

FIG. 1.

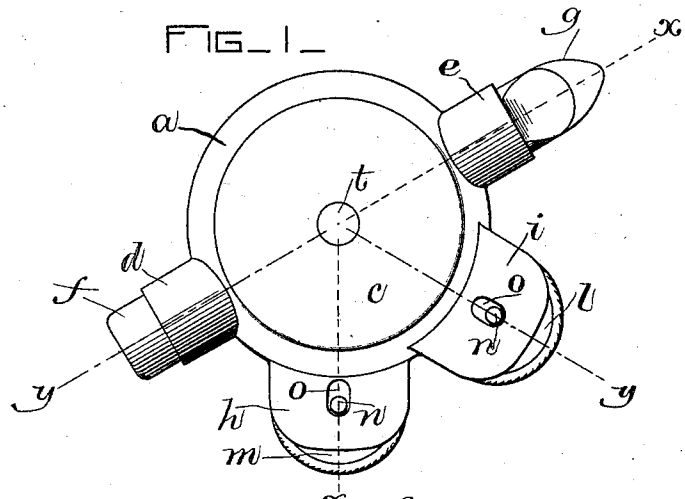


FIG. 3.

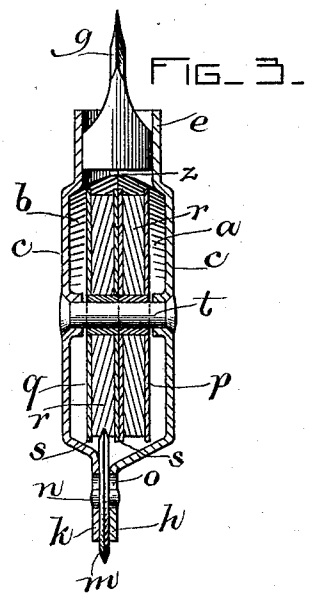


FIG. 5.

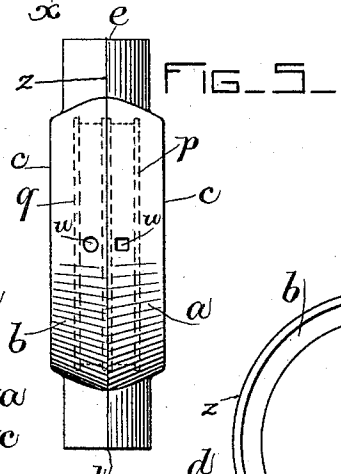


FIG. 4.

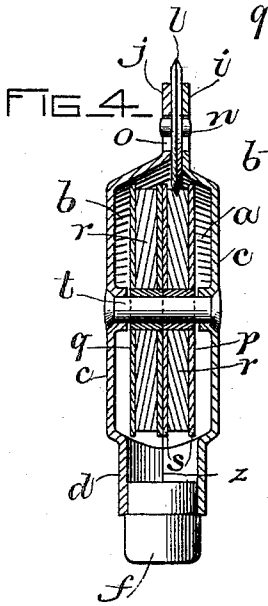
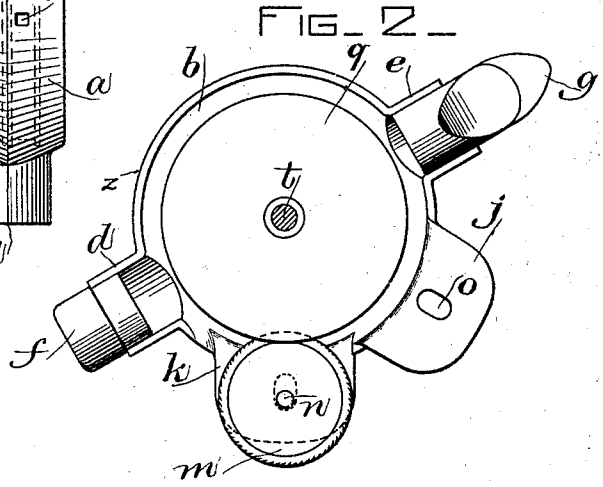


FIG. 2.



WITNESSES

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UNITED STATES PATENT OFFICE.

ANDREW W. STEIGER, OF BRIDGEPORT, CONNECTICUT, ASSIGNOR TO UNION TYPEWRITER COMPANY, OF JERSEY CITY, NEW JERSEY, A CORPORATION OF NEW JERSEY.

RULING AND ERASING IMPLEMENT.

SPECIFICATION forming part of Letters Patent No. 722,160, dated March 3, 1903.

Application filed July 18, 1902. Serial No. 116,052. (No model.)

To all whom it may concern:

Be it known that I, ANDREW W. STEIGER, a citizen of the United States, and a resident of Bridgeport, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Ruling and Erasing Implements, of which the following is a specification.

The present invention relates more particularly to marking or ruling implements; and the main object thereof is to provide a simple, cheap, and efficient device of the character specified.

To the above and other ends which will hereinafter appear my invention consists in the novel features of construction, arrangements of parts, and combinations of devices, all as will be hereinafter more fully described, and particularly pointed out in the appended claims.

In the accompanying drawings, wherein like reference characters designate corresponding parts in the various views, Figure 1 is a side elevation of one form of instrument or device embodying my invention. Fig. 2 is an inside view of one half or section of the case or handle of the instrument with certain of the devices shown in place therein. Fig. 3 is a transverse sectional view of the instrument, the section being taken on the line $x\,x$ of Fig. 1. Fig. 4 is a like view of the same, taken on the line $y\,y$ of Fig. 1; and Fig. 5 is an edge view of the case or handle.

The implement comprises devices for efficiently making or ruling lines, and it also comprises erasing devices, thus providing a convenient instrument useful to bookkeepers, type-writers, clerks, and others. One form of my invention is shown in the accompanying drawings, and the implement is drawn about twice the size I prefer to make it.

The casing, preferably made in two sections a and b, may be of any suitable contour and so as to constitute a handle for the instrument. The casing is preferably made of sheet metal, each section having a general circular contour with flattened sides c and semicylindrical socket portions d and e, that project outwardly from the edges thereof. One socket in the case formed by the half-socket portions in the two sections may receive a rubber eraser f and the other socket the cylindrical shank of a knife or knife eraser g, which is held friction-tight in its socket and may when desired be turned in the handle or socket to any angular position to facilitate the use of the knife as an eraser.

Projecting outwardly from the edge of each half-case are two ears, as h and i or j and k. The ears h and j are in substantial alinement with the meeting edges z of the two case-sections, and the ears i and k are offset or located nearer to the flattened sides c. The two sections a and b of the casing have their socket portions d and e and the ears h and k and i and j so disposed that when the sections are brought together the companion socket portions and ears are brought opposite to one another or in register. The ears i and j and h and k are spaced apart for the reception of ruling-rollers or marking-wheels l and m, and the offsetting of the ears, as hereinbefore described, maintains the wheels in different parallel planes for purposes which will hereinafter appear. The ears h and i and j and k are provided with radial slots or bearing-openings o, which receive trunnions or pivots n on the marking-wheels and so that said wheels may move radially in their bearings as well as rotate.

Rollers or bobbins p and q are mounted side by side to rotate within the casing or handle, and each roller or bobbin comprises a peripheral inking-pad r, of felt or other suitable material, which, however, does not extend to the peripheries of the side plates or flanges s thereof, and thus the ink of one pad is prevented from getting onto the other pad. One pad may be provided, say, with red ink and the other with blue ink.

The fact that the marking-wheels are in different parallel planes enables each of them to be arranged in the plane of one of the inking-rollers, so that the marking periphery of the wheel may enter between the flanges s of an inking-roller and bear upon its inking-pad and be supplied with ink therefrom.

The radially-slotted bearings enable the ruling wheels or rollers to bear upon and sink deeper into the surfaces of their inking-pads

as increased pressure is applied to the rollers, thus taking up more or less ink from the pads as pressure on the wheels is increased or diminished, so that a heavy or light line may be produced at will.

The sections *a* and *b* of the casing or handle are shown as secured together by a rivet *t*, which passes through the central bearings in the inking rollers or bobbins and constitutes a pivot therefor; but obviously any other suitable connecting means, as a screw, may be employed to secure the sections of the case or handle together.

To conveniently renew the ink of the pads or ink-reservoirs, holes *u* are provided in the casing, each hole being in the plane of its inking-roller, and the two holes are preferably of different shapes to provide an indicating means, and thus prevent an accidental mixing of the inks when replenishing the supply.

It will be understood that any suitable number of marking-wheels may be provided and that the different wheels and ink-pads are in a measure independent of each other, so that different-colored inks or inks having different characteristics, such as record and copying inks, may be applied to the different pads.

While ordinarily a single marking-wheel is employed at a time, it will be observed from an examination of Fig. 1 that the arrangement of the radially-disposed marking-wheels is such that, if desired, both wheels may be employed at the same time and double parallel lines produced, which is sometimes desirable where a double underscoring is to be provided.

In use the marking-wheels are run over the paper or article to be ruled, and thereby rotated. The rotation of a marking wheel or roller under pressure will cause it to contact with its coöperating inking-pad and to transmit rotation thereto, and thereby the edge or periphery of the marking-wheel is automatically inked and the ink transferred to the paper.

The ruling edge of each marking wheel or roller may be uninterrupted throughout its extent, so that a plain line may be ruled, or the edge may be serrated to make a line consisting of a series of dots or dashes, or one wheel may have a continuous edge and the other an interrupted edge for different kinds of ruling.

From the foregoing description it will be seen that I have provided a single simple, cheap, and efficient instrument embodying marking devices and different characters of erasing devices, which instrument may be used without liability of soiling the hands and which may be conveniently employed by operators of type-writing machines for underscoring, ruling, or producing ornamental work as the writing proceeds and without necessity of removing the work from the machine. The implement will enable an operator to perform this work with greater rapidity and in a neater manner than such work can be accomplished with the type-writing machine itself.

While I have shown and described one form or embodiment of my invention, it should be understood that various changes may be made without departing from the spirit thereof and that certain of the features may be employed without the others.

What I claim as new, and desire to secure by Letters Patent, is—

1. In a device of the character specified, the combination of an inclosing and protecting case or handle, an inking-roller inclosed and protected thereby, and a marking-roller mounted therein to bear upon and receive ink from the inking-roller and deliver it outside the case, substantially as set forth.

2. In a device of the character specified, the combination with an inclosing case or handle, of an inking-roller having protecting-flanges and a marking-roller mounted to bear upon the inking-surface and project outward through the protecting-case, all substantially as and for the purpose set forth.

3. In a device of the character specified, the combination with an inclosing and protecting handle or case, of a series of inking-rollers mounted therein and a series of marking-rollers, one for each inking-roller, mounted in the said handle, each marking-roller bearing only upon its appropriate inking-roller and carrying marking matter therefrom to a surface outside the protecting-case, all as and for the purpose set forth.

4. In a device of the character specified, the combination of a protecting case or handle, a plurality of independent marking-rollers mounted to revolve in said handle or casing and projecting therefrom at different points, a plurality of independent inking-rollers, one for each marking-roller, arranged within said handle or case, and means for enabling each of said inking-rollers to be independently supplied with ink from outside the case or handle, substantially as set forth.

5. A device of the character specified, comprising a two-part handle or casing, each part having bearings and socket portions formed therein, inking-rollers contained and adapted to rotate within said casing, a plurality of independent marking-wheels each of which is supported in the bearings formed in the casing and each of which coöperates with an associated inking-roller, and a knife eraser and a rubber eraser arranged within the sockets formed on the said casing.

6. In a device of the character specified, the combination of a handle or casing made of a plurality of parts, a connection which unites said parts, an interiorly-arranged inking-roller that is mounted to revolve on said connection, and a marking-roller that coöperates with said inking-roller.

7. In a device of the character specified, the combination of a handle or casing made of a

plurality of parts, a connection which unites said parts, a plurality of inking-rollers that are mounted to revolve side by side on said connection and a plurality of marking-rollers mounted in different parallel planes in the handle or casing and coöperating with said inking-rollers.

8. In a device of the character specified, the combination of a handle having a bobbin containing an ink-pad, and a marking-wheel provided with means for affording a limited radial movement thereof in a portion of the handle, substantially as described.

9. In a device of the character specified, the combination of a handle, a pad mounted between the projecting flanges of a rotatable bobbin, and a marking-wheel mounted in slots in ears projecting from the handle.

10. In a device of the character specified, the combination with reservoirs of different ink within a handle, of markers registering with each ink-reservoir, substantially as described.

11. In a device of the character specified, the combination of reservoirs of different inks mounted therein a two-part handle, and a rotary marker for each reservoir.

12. In a device of the character specified, a case having inclosed ink-reservoirs and having different-shaped inking-holes opposite the reservoirs.

13. In a device of the character specified, the combination of a handle or casing, a plurality of parallel marking-wheels mounted in said casing, and means inclosed within the casing for automatically inking said wheels.

14. In a device of the character specified, the combination of a handle or casing, a plurality of separate, independently-movable parallel marking-wheels mounted in said casing and capable either of separate or conjoint use and means inclosed within the casing for automatically inking said wheels when the device is in use.

15. In a device of the character specified, the combination of a two-part case, a transverse connection therefor, an inking-roller mounted on said connection within the case, slotted ears projecting from the latter, and a marking-wheel rotatably mounted between said ears, and having a bodily movement toward and from said inking-roller.

16. A ruling and erasing implement comprising two plates clamped together and formed with radiating ears and socket portions at their edges, erasers fitted and held within said socket portions, marking-rollers mounted to rotate in said ears, and independently-revoluble inking-rollers inclosed within said plates and adapted each to ink only one of said marking-rollers.

Signed at Bridgeport, in the county of Fairfield and State of Connecticut, this 16th day of July, A. D. 1902.

ANDREW W. STEIGER.

Witnesses:

WM. A. REDDEN,

FRANK J. HINCHEY.