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PRINTING HEAD FOR MARKING MACHINES.
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Fig. 1.

Fig. 2.

Fig. 3.

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To all whom it may concern:

Be it known that I, CHARLES F. ROBBINS, a citizen of the United States, residing at Keene, county of Cheshire, State of New Hampshire, have invented an Improvement in Printing-Heads for Marking-Machines, of which the following description, in connection with the accompanying drawing, is a specification, like characters on the drawing representing like parts.

This invention relates to marking machines of that type which involve a platen on which the work is supported and a printing head movable toward and from the platen and comprising a plurality of independently adjustable type disks, each having thereon a plurality of type characters. The invention relates particularly to novel means for supporting the type disks in the printing head and for adjusting them individually.

In order to give an understanding of my invention, I have illustrated in the drawings a selected embodiment thereof which will now be described, after which the novel features will be pointed out in the appended claims.

In the drawings, Figure 1 is a sectional view taken on the line 1—1, Fig. 2, and showing the printing head in side view; Fig. 2 is a front view of Fig. 1 with parts broken out to better show the construction; Fig. 3 is a section on the line 3—3, Fig. 2.

Inasmuch as the invention relates simply to the printing head, I have not shown herein any other features of the marking machine.

The printing head comprises a frame or holder 1 in which the type disks 2 are rotatably mounted. This frame or holder is shown as provided with the two side or cheek pieces 3 which are connected by the bridge portion 4 and the bridge portion is constructed to be secured to some portion of the printing machine, such, for instance, as a vibrating arm indicated in dotted lines at 5.

Each type disk 2 is provided on its periphery with a plurality of type-bearing projections 6, as usual in marking machines of this type, and these type disks are rotatably mounted upon the type-disk-supporting member 7 in the form of a shell or sleeve which extends from one cheek piece 3 to the other and is supported thereby, each type disk having a central aperture through which the supporting sleeve 7 extends.

In my present invention each individual type disk is set or adjusted by a type-setting wheel situated inside of the type disks and adapted to engage interior teeth formed on said type disks. This type-setting wheel is adjusting transversely of the head and may be brought into operative engagement with any desired type wheel.

The type-setting wheel is indicated at 8 and it is mounted on a shaft 9 which extends into the support 7 from one end thereof, but is situated eccentrically thereof, as shown best in Figs. 2 and 3. The sleeve-like support 7 is formed with an opening 10 which extends from one end to the other thereof and the shaft 9 is so supported that the type-setting wheel 8 operates in said opening. This type-setting wheel is adapted to mesh with teeth 11 formed on the interior of the type wheels and it operates in the opening 10, as shown in Fig. 3. The shaft 9 is supported in bearings 12 that are carried by the cheek pieces 3, said shaft being capable of sliding in the bearings transversely of the head and also capable of rotation therein.

As a matter of convenience I have shown the shaft 9 as formed in two sections which meet within the printing head. Each of which has a type-setting wheel 8 at its inner end. In order to hold the shaft sections in alignment, one of them is provided with an axial extension 13 which fits into an axial recess in the other section. Each shaft section is provided at its outer end with a hand-wheel 14 by which it may be turned. By using two shaft sections, each having a type-setting wheel 8 thereon, it is possible to set two adjacent type wheels at once.

The device herein shown is provided with means for locking all the type disks from rotative movement except the ones with which the setting wheels 8 are in mesh. This locking means is in the form of a locking member 15 which is connected to the shaft sections 9 so as to move transversely of the head therewith, said member 15 being situated to fit and slide in the spaces 16 between adjacent projections 6 of the type wheels. The locking member 15 has at its ends arms 17 through which the shaft sections 9 extend and said shaft sections have collars 18 fast thereon situated either side of the arms 17, said collars 18, arms 17 and locking member 15 serving to hold the shaft 9.
sections 9 in proper position relative to each other. The locking member 15 and shaft sections 9 thus constitute a structure which is capable of movement transversely of the printing head as a unit. The locking member 15 is provided intermediate of its ends with a recess 19 of a width sufficient to receive two of the type disks 2. This recess 19 is positioned in line with the setting wheels 8 so that the type disks with which the setting wheels 8 are in engagement are always free to be rotated. The other type wheels, however, are locked from rotation by the locking member 15. Since the locking member 15 and shaft sections 9 can be adjusted transversely of the printing head it is possible to bring one of the setting wheels 8 into engagement with any selected one of the type disks, and when this is done, said type disk is free to be rotated and may be adjusted by simply turning the shaft section to which the setting wheel is secured. All the other type wheels will be locked from rotation by the member 15.

The advantage of having the two hand-wheels 14 is that the operator can take one of the hand-wheels 14 in each hand and thus easily move the setting wheels into position to set the particular type disk desired.

It will be noted that in this construction the setting of the type wheel is accomplished from the interior thereof and by this means it is possible to set each type wheel accurately. The locking of the type wheel, however, is accomplished by the locking member acting on the exterior of the wheel and the wheels can, therefore, be maintained in perfect alinement.

I claim:

1. In a printing head, the combination with two side members, of a type disk-supporting member carried by said side members, a plurality of type disks rotatably mounted on said supporting member and supported thereby, selective type disk-setting means acting on the interior of the type disks for setting any disk independently, and type disk-locking means associated with the setting means and acting on the exterior of the disks to lock all those except the one with which the setting means has operative connection.

2. In a printing head, the combination with two side members, of a hollow type-disk-supporting member carried thereby, a plurality of separate type-disks rotatably mounted on said supporting member, a type-disk-setting wheel situated within said supporting member and constructed to be brought into operative engagement with any type wheel, and a locking member associated with the setting wheel and engaging the exterior of the type wheels to lock all those type wheels from movement except the one with which the setting wheel has engagement.

3. In a printing head, the combination with two side members, of a hollow type-disk-supporting member carried thereby, said supporting member having an opening in one side, a plurality of type-disks rotatably mounted on said supporting member and each provided with interior teeth, a type-disk-setting shaft situated eccentrically of said supporting member and adjustable longitudinally thereof, and a setting gear on said shaft and operating in the opening of the supporting member, said gear being adapted to be brought into mesh with the teeth of the various type disks by longitudinal movement of the shaft.

4. In a printing head, the combination with two side members, of a hollow type-disk-supporting member carried by the side members, a plurality of type disks rotatably mounted on said supporting member and each provided with interior teeth, said supporting member having an opening in one side, a longitudinally-adjustable shaft extending through the supporting member and situated eccentrically thereof, a toothed type-setting wheel fast on said shaft and adapted to be brought into mesh with any one of the type disks by a longitudinal adjustment of the shaft, and a locking member movable longitudinally with said shaft and constructed to engage the exterior of the type disks and lock all of them except the one with which the setting wheel has engagement.

In testimony whereof, I have signed my name to this specification.

CHARLES F. ROBBINS.