C. F. ROBBINS.

TYPE ADJUSTING DEVICE FOR PRINTING MACHINES.

APPLICATION FILED JUNE 6, 1914.

1,131,959.

Patented Mar. 16, 1915.

Fig. 1.

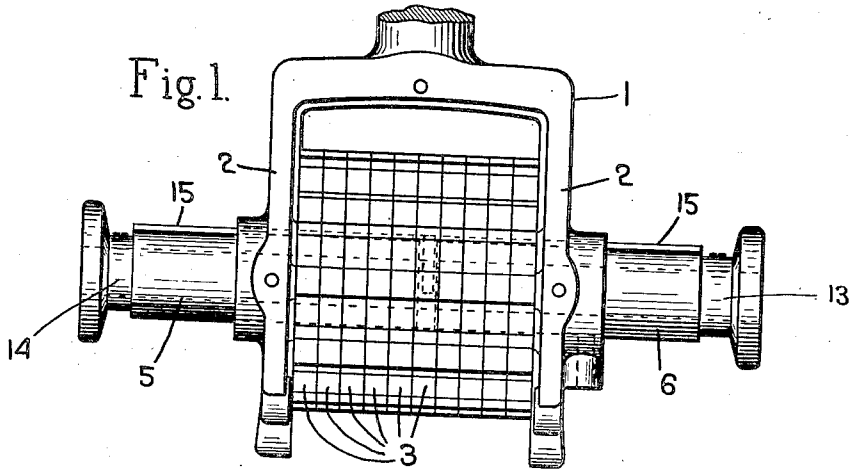


Fig. 2.

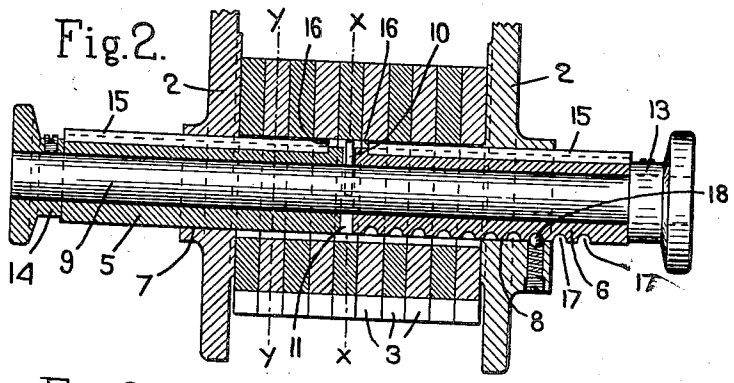


Fig. 3.

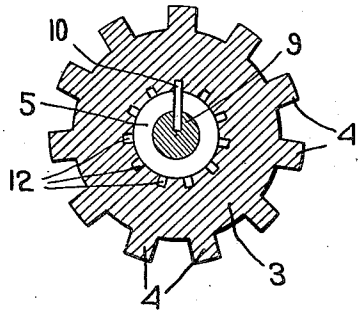
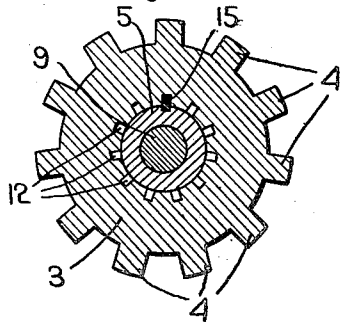


Fig. 4.



Witnesses.

J. Morrill Fuller

Williams & Gagen

Inventor.

Charles F. Robbins,

by Heard Smith & Tennant.

Atty's.

UNITED STATES PATENT OFFICE.

CHARLES F. ROBBINS, OF ABINGTON, MASSACHUSETTS, ASSIGNOR TO MARKEM MACHINE COMPANY, OF BOSTON, MASSACHUSETTS, A CORPORATION OF MASSACHUSETTS.

TYPE-ADJUSTING DEVICE FOR PRINTING-MACHINES.

1,131,959. Specification of Letters Patent. Patented Mar. 16, 1915.

Application filed June 6, 1914. Serial No. 843,561.

To all whom it may concern:

Be it known that I, CHARLES F. ROBBINS, a citizen of the United States, residing at Abington, county of Plymouth, State of Massachusetts, have invented an Improvement in Type-Adjusting Devices for Printing-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 printing or marking machines of that type embodying a plurality of independently-settable type disks, each carrying a series of type characters, and the object of the invention is to provide a novel means for independently setting or adjusting the various type disks, which means also has associated therewith devices by which all the other type disks except the one being set are locked against rotation.

The invention is capable of use with any numbering or marking machine having the plurality of type disks capable of being independently set or adjusted, and as an example of such a marking machine, I would refer to United States Patent No. 660,512, October 23, 1900, or No. 1,019,971, March 12, 1912. Both of these patents show devices embodying a numbering head mounted on a vibrating arm, which head carries a plurality of independently-settable type disks and which head is movable toward and from the platen on which the work to be printed is laid. These heads are frequently made with two side pieces between which the various type disks are retained in position and it is a numbering head of this type that I have herein illustrated. I wish to state, however, that my invention may be embodied in any numbering head for a printing or numbering machine which has a plurality of independently-adjustable type disks.

Referring to the drawings wherein I have illustrated a selected embodiment of my invention, Figure 1 is a plan view of a numbering head embodying my invention; Fig. 2 is a sectional view through Fig. 1; Fig. 3 is a section on the line x—x, Fig. 2; Fig. 4 is a section on the line y—y, Fig. 2.

The numbering head comprises a holder 1 herein shown as provided with two side pieces 2 between which the type disks 3 are received, each type disk having on its periphery a plurality of projections 4, each of which carries a type character. For adjusting these disks independently, and for locking them in their adjusted position I have provided a type wheel supporting member having provision for locking all of the type wheels except the one to be adjusted, and have associated with said member a type-wheel-adjusting device adapted to actuate the particular type wheel which is not locked by the locking means. The type-wheel-supporting means is capable of movement axially of the type wheels so as to bring the type wheel adjusting member into position to adjust any one of the type wheels.

In the illustrated embodiment of my invention the type-wheel-supporting member is in the form of a sleeve made in two sections 5 and 6 which are mounted in openings 7 and 8 formed in the two side pieces 2 of the printing head and are capable of adjustment longitudinally in said openings. The type wheels are mounted on said supporting member, each type wheel having a central aperture through which the supporting member extends. Extending longitudinally through the sleeve sections 5 and 6 is a type-wheel-adjusting member 9 which is capable of rotation in said sleeve sections. Said member has extending laterally therefrom a type-wheel-engaging pin 10 that occupies the space 11 between the meeting ends of the two sleeve sections 5 and 6, said pin being of a length to project slightly beyond the periphery of the sleeve sections. Each of the type wheels is provided with a plurality of notches 12, there being one notch for each of the type-bearing projections 4, and these notches are adapted to receive the pin 10 as the sleeve sections 5 and 6 are adjusted longitudinally. The sleeve sections 5 and 6 are held in their proper position relative to each other by means of heads 13 and 14 on the ends of the member 9, said heads also constituting handles by which the member 9 can be turned. It will be seen from this that by sliding the sleeve sections 5 longitudinally the type-adjusting pin 10 can be brought into a notch 12 of any one of the type disks 3, and when the pin is thus engaged in said notch the rotation of the member 9 will cause said type wheel to rotate, thus providing means whereby any type wheel can be adjusted to bring any type-

bearing character into printing position. My invention also includes means whereby all the other type wheels except the one being adjusted are locked from rotation, and I accomplish this herein by making the sleeve sections 5 and 6 incapable of rotation and providing means whereby said sleeve sections have an interlocking engagement with all of the type wheels except the particular type wheel which is to be set. While this may be accomplished in any suitable way, I have herein shown for this purpose each sleeve section 5 and 6 as being provided with a locking rib or spline 15 which extends through a groove in the side piece 2 and thus prevents the sleeve from rotating and which is also adapted to engage one of the notches 12 of the type disks sustained by said sleeve section. The distance between the two inner ends 16 of the splines 15 is slightly greater than the width of the type disks so that when the member 9 and the sleeves 5 and 6 are adjusted into position to bring the pin 10 into engagement with any particular type wheel said type wheel will be free from the splines 15 and thus free to rotate, but all the other type wheels will be engaged by either one or the other of the splines. With this construction, therefore, all the type wheels are positively locked except the particular one which is to be set or adjusted.

One advantage of my construction is that the type wheels can be set in any desired order, for the setting of a type wheel involves merely shifting the sleeves 5 and 6 longitudinally to bring the pin 10 into interlocking engagement with the desired type wheel and then rotating said member 9 to bring said type wheel into its properly adjusted position.

It is desirable to have some means to indicate when the pin 10 is in proper engagement with any of the type wheels so as to avoid the chance of its being so adjusted as to bring the pin 10 into a position where it will act on two adjacent type wheels at the same time. Any suitable means for this purpose may be employed. I have shown in Fig. 2 a construction wherein the sleeve 6 is provided with a plurality of recesses 17 spaced distances apart equal to that of the type wheels and a spring-pressed locking member in the form of a ball 18 is carried by one of the cheek pieces 2 and is adapted to enter the recesses 17. This construction permits the parts to be adjusted longitudinally by applying a little pressure to them, but the clicking of the ball 18 into the recesses 17 will give indication to the operator as to the position of the pin 10 and will assist him in locating said pin directly in the center of any desired type disk. Any other means for thus assisting in properly locating the setting pin 10 relative to any disk may be employed without departing from the invention.

Having described my invention, what I claim as new and desire to secure by Letters Patent is:—

1. In a numbering head for printing machines, the combination with a holder, of a type-disk-supporting member sustained thereby, a plurality of type disks supported on said member, means associated with said member for locking all of the type disks from rotary movement except one, a type-disk adjusting member extending axially through said supporting member and adapted to have interlocking engagement with said one type disk.

2. In a numbering head for printing machines, the combination with a holder, of a type-disk-supporting member sustained thereby, a plurality of type disks supported on said member, means associated with said member for locking all of the type disks from rotary movement except one, and a type-disk adjusting member extending axially through said supporting member and adapted to have interlocking engagement with said one type disk, said supporting member being adjustable axially of the type disks to bring the type-disk-adjusting member into operative engagement with any desired type disk.

3. In a numbering head for printing machines, the combination with a holder, of two non-rotary sleeves slidably mounted therein, a plurality of type disks sustained by said sleeves, each sleeve being provided with means to prevent from rotation all the type disks thereon except the one adjacent the meeting ends of the sleeves, and a type-disk-setting member having provision for engaging said type disk and rotating it.

4. In a device of the class described, the combination with a holder comprising two side pieces, of a plurality of type disks confined between said side pieces, a tubular supporting member slidably mounted in said side pieces and extending axially through the type disks, said member being made in two sections, a type-disk-adjusting member rotatably mounted in said supporting member and provided with a projection extending beyond the periphery of the supporting member between the sections thereof, said type disks having notches to be engaged by said pin, and splines carried by the supporting member sections and engaging the notches of all the type disks except the one engaged by the type-setting projection.

5. In a device of the class described, the combination with a holder, of two non-rotary sleeves slidably mounted therein, a plurality of type disks sustained by said sleeves, each sleeve being provided with means to prevent from rotation all the type

disks thereon except the one adjacent the meeting ends of the sleeves, and a type-disk-setting member extending axially through said sleeves and having provision for engaging and rotating said latter type disk.

6. In a device of the class described, the combination with a holder, of a tubular type-disk-supporting member slidably mounted in the holder, a plurality of type disks sustained thereby, a notched locking rib extending longitudinally of the supporting member and having interlocking engagement with certain of the type disks sustained thereby, a type-disk-setting member extending axially through the supporting member and having means to engage and rotate the type disk which is situated opposite said notch.

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

CHARLES F. ROBBINS.

Witnesses:

LOUIS C. SMITH,

THOMAS J. DRUMMOND.