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2,662,473

REMOVABLE LOGOTYPE STRUCTURE FOR CALCULATING MACHINES

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Fig. 1.

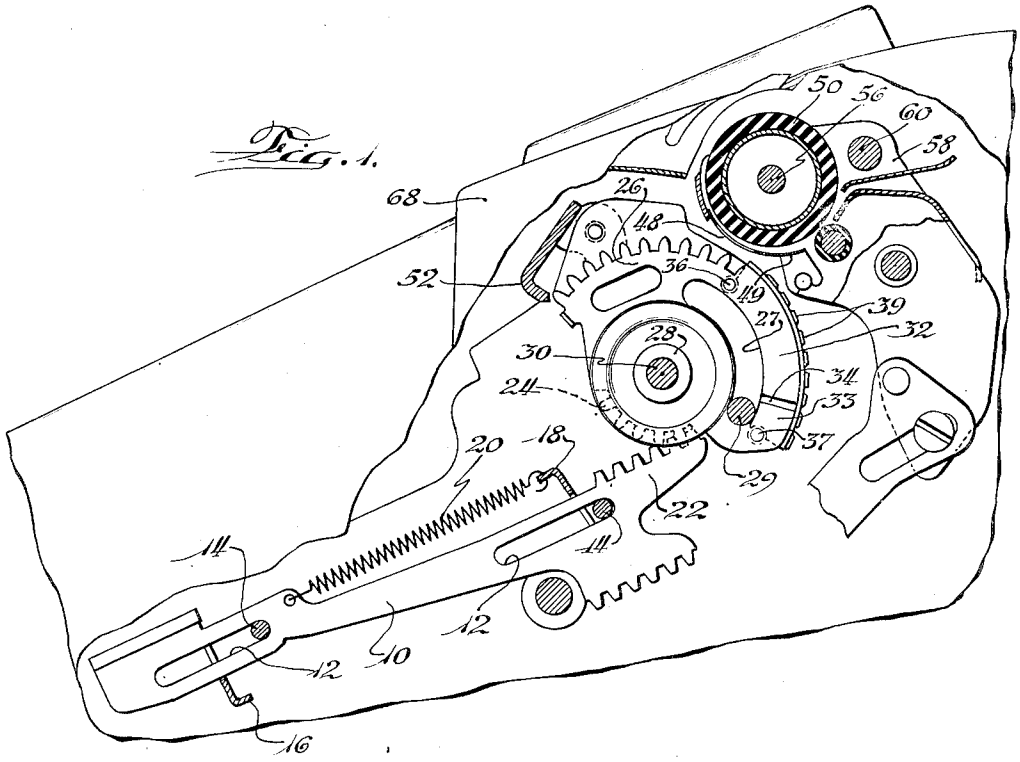
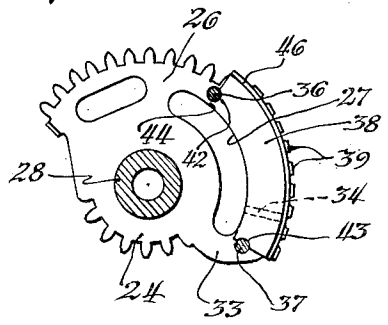


Fig. 4.



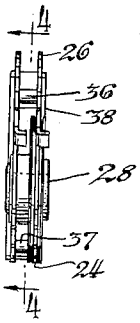


Fig. 3.

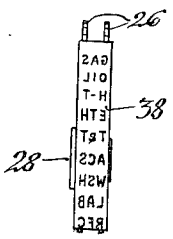


Fig. 2.

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REMOVABLE LOGOTYPE STRUCTURE FOR CALCULATING MACHINES

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Application September 26, 1951, Serial No. 247,492

3 Claims. (Cl. 101—378)

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My invention relates generally to removable logotypes and mechanisms by which they may be quickly and accurately positioned and readily removed for replacement.

In many types of calculating machines it is desirable to provide signal or identification indicating letters or words adjacent the amounts printed on the record tape. Since customers in different kinds of business will usually require logotypes bearing different type faces, it is highly desirable that they be capable of being readily inserted and removed without the use of tools, and that they be firmly held in the exact position relative to the parts by which they are carried.

It is thus an object of my invention to provide a removable logotype and a carrier therefor, each of which is simple in construction; the logotype being easily removed from the carrier, and being quickly and easily replaced thereon in the precise position required.

Other objects will appear from the following description, reference being had to the accompanying drawings, in which:

Fig. 1 is a vertical sectional view through a portion of a calculating machine, illustrating a part of the printing mechanism;

Fig. 2 is an elevational view of the logotype and its carrier;

Fig. 3 is a front elevational view of the logotype and its carrier; and

Fig. 4 is a vertical sectional view, taken on the line 4—4 of Fig. 3.

While the underlying principle of the invention may be employed in various types of calculating machines, the invention herein illustrated is applied to an adding machine which has a number of actuators 10 having elongated slots 12 embracing guide rods 14 in the customary manner, the actuators being spaced by combs 16 and 18 and urged to move rearwardly under the influence of tension springs 20, their rearward motion being limited, in the customary manner, by the stem of one of a plurality of selectively operated keys Each of the actuators 10 has a rack portion 22 meshing with a fragmentary pinion 24 forming part of a gear segment 26. These segments have arcuate slots 27 through which a restoring bail rod 29 extends.

In the form of the invention shown herein, two segments 26, which form the logotype carrier, are secured to a hub 28 in suitable spaced relation, the spacing being preferably the same as the spacing between the segments bearing the numeral type. The hubs 28 are freely rotatable

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on a shaft 30. The segment 26 has two arcuate arm-like parts 32 and 33 which extend toward each other, but the ends of which do not meet, leaving a small gap 34. The portions 32 of two similar segments 26 are secured together by a pin or rivet 36, while the arm-like parts 33 of the two segments are secured together by a pin or rivet 37.

As best shown in Fig. 4, a logotype 38 which is generally arcuate in shape and has type faces 39 formed thereon, has end surfaces which are generally radial with respect to the shaft 30, and are provided with transverse shallow grooves 42 and 43 for cooperation respectively with the pins 36 and 37. The arm-like parts 32 and 33 of the segments are sufficiently resilient that the logotype 38 may be inserted between the two segments 26 in the position shown in Fig. 4, by first inserting one end of the logotype between the two segments with its groove 43, for example, engaging pin 37 and then swinging the logotype into the position shown in Fig. 4 by forcing its edge 44 past the pin 36. When this has occurred, the logotype will snap into position wherein flanges 46 along its outer arcuate edge fit against the arcuate actuator edges of the arm-like parts 32 and 33.

The logotype 38 is preferably made of sintered powdered metal, but may be otherwise formed.

In using the logotype, the segments 26 upon which it is mounted are moved by the actuator 10, which is in mesh with one of the segments, to position one of the type faces 39 in the printing line beneath an opening 48 in a paper guide 49, the paper tape being fed between these guides and a platen 50 in any well known manner. As the type are positioned, a rectifier or alignment bar 52 is swung counterclockwise from the position in which it is shown, so as correctly to align the type by taking up the play in the mechanism by which they were initially positioned. Thereafter the platen, which is on a shaft 56 carried by a pair of arms 58, is pivoted about a rod 60 by any well known mechanism to force the platen, and hence the paper strip and the usual ribbon, against the type faces 38 to make the printing impression.

The casing for the machine includes a cover part 68 which is easily removable and by operating the controls necessary to secure maximum counterclockwise movement of the segments 26 which carry the logotype 38, the latter will be in position where it may be grasped. By applying an upwardly directed force to the forward end of the logotype, its edge 44 may be

snapped past the pin 36, and the logotype thus easily removed.

While I have shown and described a preferred embodiment of my invention, it will be apparent that variations and modifications thereof may be made without departing from the underlying principles of the invention. I therefore desire, by the following claims, to include within the scope of the invention all such variations and modifications by which substantially the results of my invention may be obtained through the use of substantially the same or equivalent means.

I claim:

1. In a printing mechanism for calculating machines and the like, the combination of a hub, a pair of gear segments secured to the hub in spaced relation, each of said segments having two arm-like parts extending arcuately toward one another to define with the main portion of the segment a partially complete arcuate slot, a pair of pins respectively secured to and extending between corresponding arm-like parts, and an arcuate logotype positioned between the segments and having generally radial end surfaces provided with transverse grooves for the reception of the pins, the arm-like parts being sufficiently resilient that the logotype may be inserted and removed by forcing the pins apart a sufficient distance to permit disengagement of the pins from the grooves in the ends of the logotype.

2. In a printing mechanism for calculating machines and the like, the combination of a hub, a pair of segments secured to the hub in spaced relation, each of said segments having an arm-like part of sufficiently small cross sectional area that it will yield resiliently when subjected to a force manually applied thereto, a pair of spaced pins respectively secured to and extending between the segments, one of said pins being secured between the arm-like parts of the segments, and an arcuate logotype positioned between the segments and having generally radial end surfaces provided with transverse grooves for the reception of the pins, the arm-like parts yielding resiliently when the logotype is inserted and removed by forcing the pins apart a sufficient distance to permit disengagement of the pins from the grooves in the ends of the logotype.

3. In a printing mechanism for calculating machines and the like, a logotype carrier comprising, in combination, a hub, a pair of segments secured to the hub in spaced relation, each of said segments having two resilient arm-like parts extending toward one another with a small gap between their ends, said arms having outer arcuate edges concentric with the axis of the hub, and a pin extending between each pair of corresponding arm-like parts and secured, respectively, thereto.

ERHARD M. LIPPERT.

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