M. B. SARGENT & A. E. KARLBERG.

TYPE WRITING MACHINE.

APPLICATION FILED OCT. 9, 1914.

1,153,959. Patented Sept. 21, 1915.

FIG. 1.

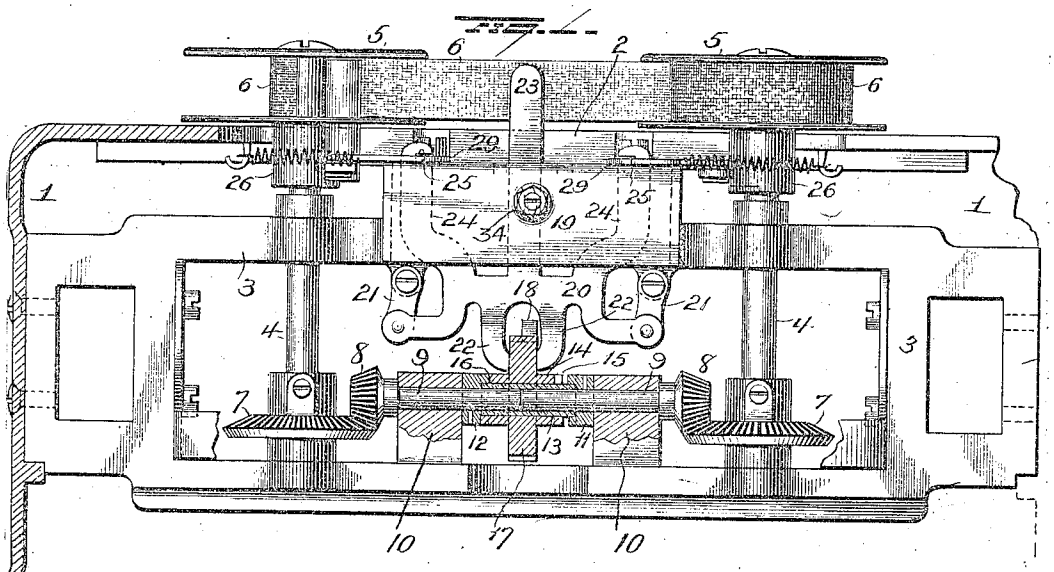


FIG. 2.

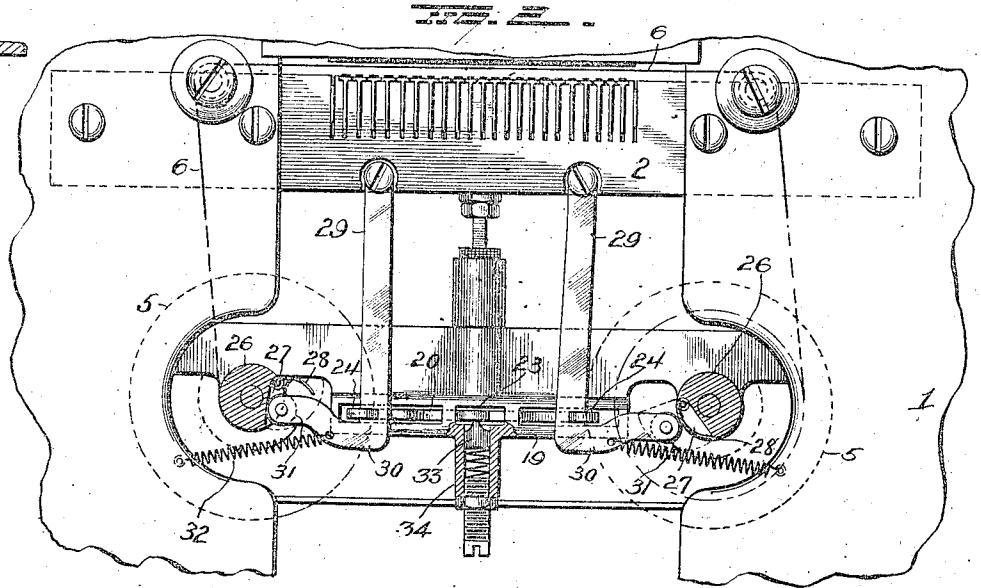
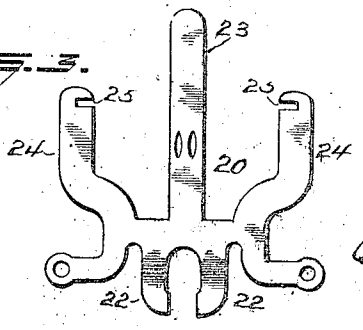


FIG. 3.



WITNESSES

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MARSHALL BIDWELL SARGENT AND ARVID EMANUEL KARLBERG, OF INDIANAPOLIS, INDIANA, ASSIGNORS TO THE STENOTYPE COMPANY, OF INDIANAPOLIS, INDIANA.

TYPE-WRITING MACHINE.

1,153,959. Specification of Letters Patent. Patented Sept. 21, 1915.

Application filed October 9, 1914. Serial No. 865,887.

To all whom it may concern:

Be it known that we, MARSHALL B. SARGENT and ARVID EMANUEL KARLBERG, citizens of the United States, and residents of Indianapolis, in the county of Marion and State of Indiana, have invented certain new and useful Improvements in Type-Writing Machines; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to ribbon mechanism for typewriting machines and more particularly to improvements upon that type of such mechanism shown and described in Letters Patent No. 1,105,081, granted to us on the 28th day of July 1914, the object of our present invention being to simplify and reduce the cost of manufacture of the mechanism and at the same time enhance its efficiency.

With this and other objects in view, the invention consists in certain novel features of construction and combinations of parts as hereinafter set forth and pointed out in the claim.

In the accompanying drawings; Figure 1 is a front elevation partly in section showing the application of our improvements; Fig. 2 is a plan view, and Fig. 3 is a separate view of the shifting or reversing device.

1 represents the main frame or casing of the machine, and 2 a notched bar secured therein and in which the type levers of the machine are mounted,—said type levers being actuated by key levers and the latter being caused to operate a universal bar for actuating the ribbon and paper feed devices, all as shown and described in our patent hereinbefore referred to.

A transverse frame 3 is secured within the main frame or casing 1 and is provided with bearings for vertical shafts 4, to which latter, ribbon reels 5 are secured and the inking ribbon 6 is caused to pass from one reel to the other and in front of the type by means of suitable guide devices.

Bevel pinions 7 are secured to the lower ends of the vertical shafts 4 and mesh with smaller bevel pinions 8 secured to short shafts 9, said short shafts being mounted in suitable bearings 10 on the transverse frame 3. The short shafts are provided with clutch members 11, 12 and on the inner end portions of said short shafts, a sleeve 13 is located and slidingly mounted on the latter is a rotatable sleeve 14 provided at its respective ends with clutch teeth or members 15, 16 to coöperate with the clutch members 11, 12. A ratchet wheel 17 is made rigid with the sleeve 14 and is actuated by a suitable dog 18 connected with the universal bar of the machine, as fully shown and described in our patent hereinbefore referred to.

A hollow, elongated block 19 is made rigid with the frame 3, and from this block, a shifting or reversing device or yoke 20 is suspended by means of pivoted links 21 so that it is capable of being oscillated. The yoke 20 is made with depending arms 22 which loosely embrace the ratchet wheel 17, and an operating arm 23 projecting upwardly from said yoke, passes through the hollow block and through a slot in the upper edge thereof, and projects above the same so as to be in position to be grasped by the operator which it is desired to oscillate the yoke to shift the ratchet wheel and clutch devices and thus manually reverse the ribbon feeding mechanism. The yoke 20 is also provided at respective sides of its center, with upwardly projecting arms 24. These arms pass upwardly through the hollow block and through slots in the upper edge thereof, terminating at their upper ends slightly above the upper edge of the block, where they are provided, in their inner edges with notches 25, for a purpose hereinafter described.

Each ribbon reel is provided with a hub 26 which depends below the reel as shown in Fig. 1. Each of these hubs is made with a recess 27, which is normally spanned by a spring-actuated hinged section 28,—the spring tending to open the hinged section when the ribbon shall have become exhausted from the reel, but when the ribbon is on the reel, the hinged section 28 will be held closed by the ribbon.

Two horizontally-disposed L-shaped control levers 29 are pivotally attached at their rear ends to the notched block 2 and project forwardly over the hollow block 19, said levers also passing freely through the notches 25 in the arms 24 of the yoke 20, in which notches said levers are guided in their movements. The short arms 30 of the control levers project laterally toward the hubs of the ribbon reels and are provided at their free

ends with small rollers 31 which normally ride on said hubs. Springs 32 are attached to the respective control levers and to the frame of the machine and these springs tend to press the control levers toward the ribbon reel hubs.

When the inking ribbon shall have become exhausted from one of the reels, the hinged section 28 of the hub of that reel, will be opened by the action of its spring and the adjacent spring-actuated controlling lever will be so moved (by its spring 32) as to cause its roller 31 to enter the recess 27 of the reel hub. Such lateral movement for the controlling lever will, by its engagement with one of the arms 24 of yoke 20, cause the yoke to be shifted laterally and motion will thus be imparted to the yoke to shift the ratchet wheel and clutch devices and shift the direction of operation of the ribbon reel mechanism, as previously explained.

During the normal operation of the machine, the manual operation of the shifting or reversing mechanism by manipulation of the operating arm 23, may be effected without interference with the automatically operable controlling levers, and the shifting yoke and the parts which it shifts will be retained in the position to which the same may be shifted, by a spring-pressed dog 33 mounted in a boss 34 on the block 19 and engaging in one or another of two notches in the operating arm 23.

Having fully described our invention what we claim as new and desire to secure by Letters-Patent, is:—

The combination with ribbon reels, gearing for actuating the same, and clutch devices coöperable with said gearing, of a fixed block, a shifting yoke for the clutch devices supported by said block, said yoke having arms projecting upwardly through said block and movable therein, said arms having notches near their upper ends, horizontal control levers pivoted at one end to a fixed support and projecting over said block and guided in the notches in the yoke arms, automatically operable controlling means for said control levers, and springs connected with said levers and a fixed support and tending to move said levers toward said automatically operable controlling means for actuating the shifting yoke.

In testimony whereof, we have signed this specification in the presence of two subscribing witnesses.

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Witnesses:
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