July 5, 1927. 1,634,726

L. REISCHL

CHILD'S TYPEWRITING MACHINE

Filed May 19, 1926 2 Sheets-Sheet 1

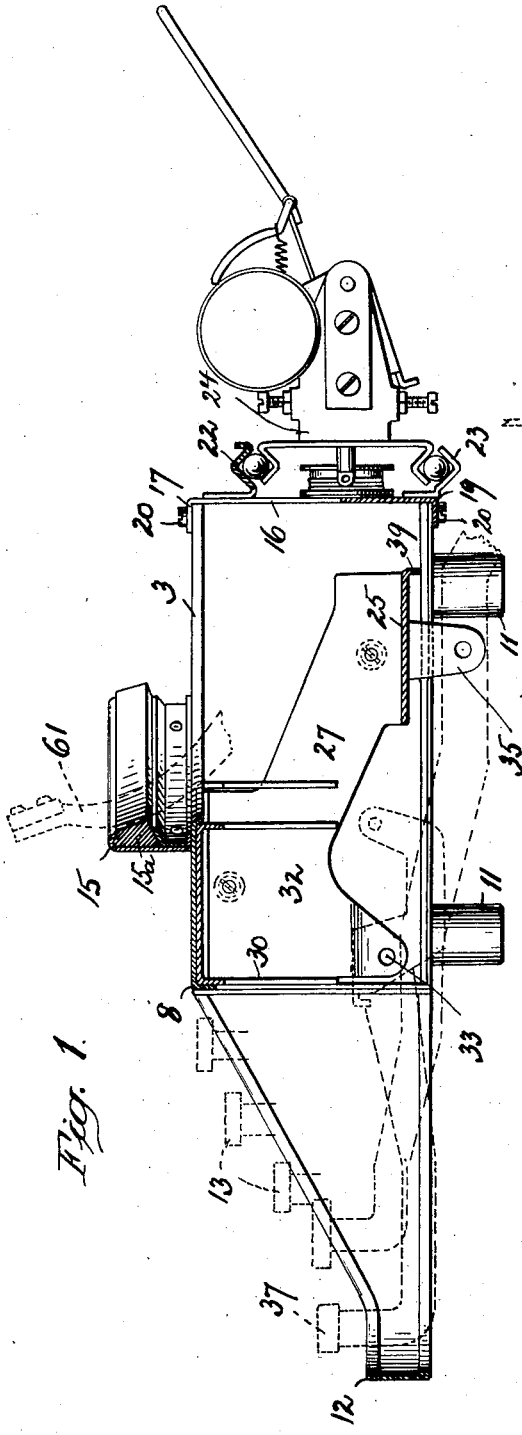

Fig. 1.

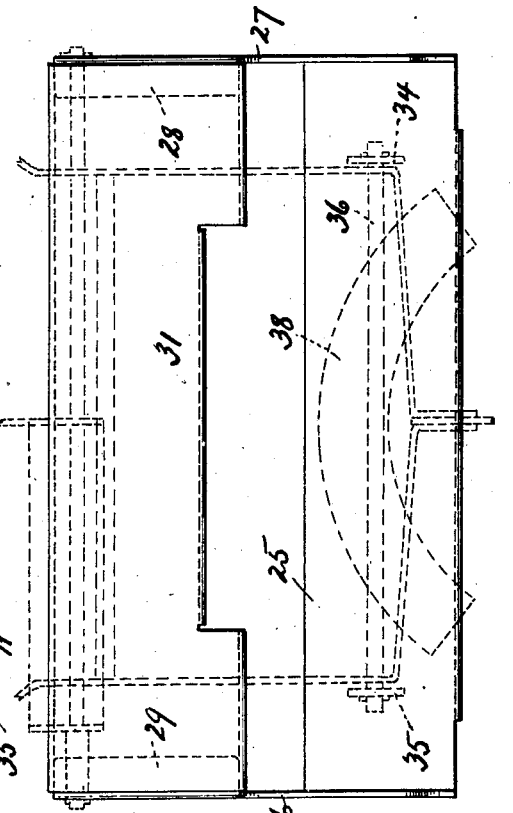

Fig. 2.

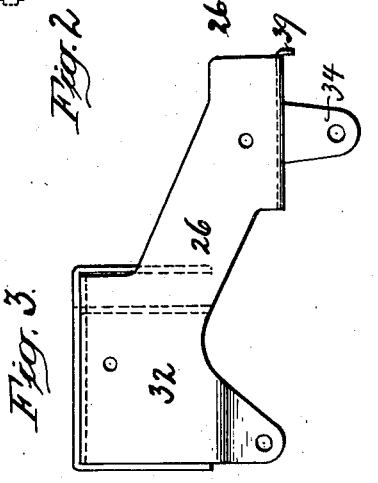

Fig. 3.

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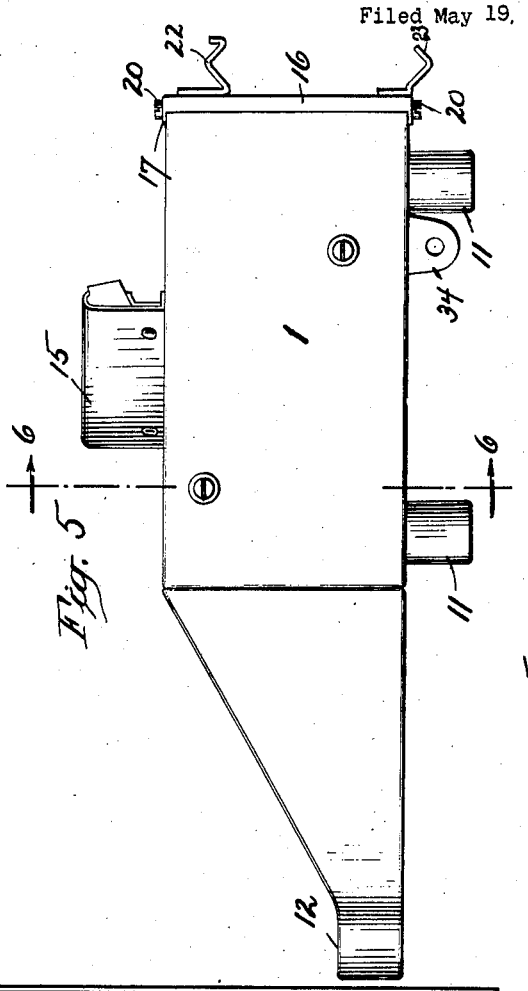

Fig. 5

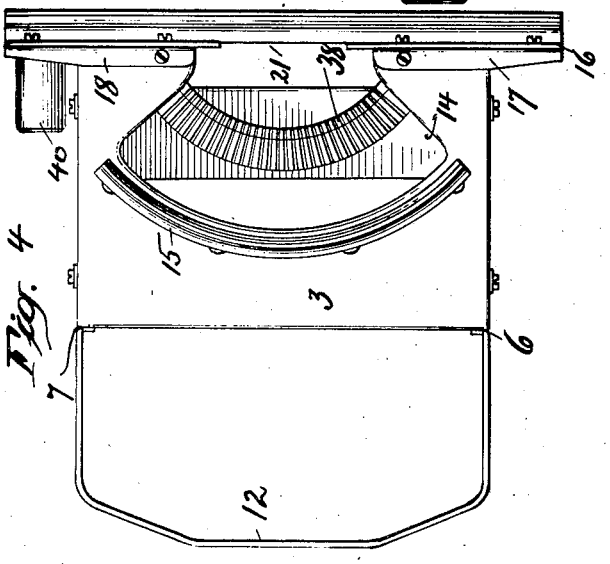

Fig. 4

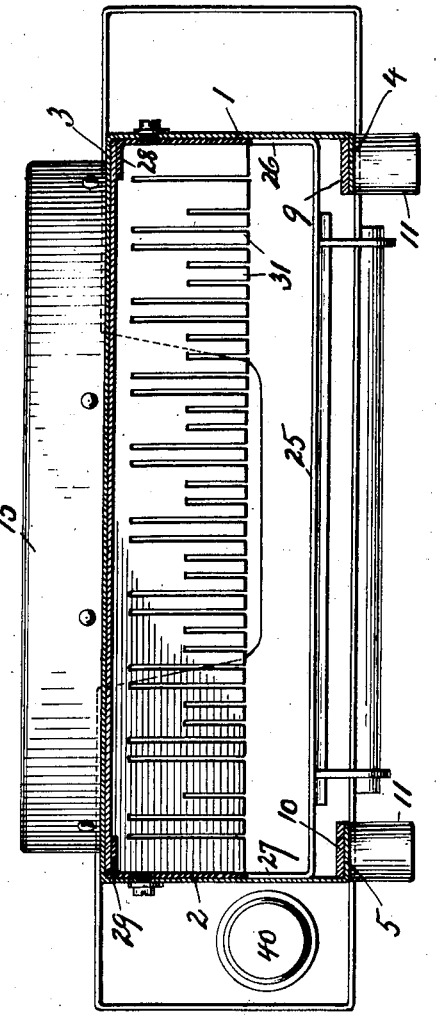

Fig. 6

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UNITED STATES PATENT OFFICE.

LUDWIG REISCHL, OF NUREMBERG, GERMANY, ASSIGNOR TO BING WERKE, OF NUREMBERG, GERMANY.

CHILD'S TYPEWRITING MACHINE.

Application filed May 19, 1926, Serial No. 110,052, and in Germany June 2, 1925.

My invention relates to children's typewriting machines having a standard keyboard, type-carrying levers, a movable carriage and a paper-roller supported in said carriage. The object of the present invention is to simplify the construction of such machines so as to reduce the manufacturing cost, to facilitate the assembling of the various parts and to increase production. This I accomplish, by providing a single supporting frame for all the parts and mechanisms of the machine, except the paper carriage, which frame is of U-shape and made of a single piece of strong but light sheet-metal. This supporting frame with all the parts and mechanisms mounted thereon is then placed in, and secured to, a casing also made of sheet-metal, the rear wall of which casing carries guide-rails for the movable paper carriage.

In the appended drawing in which I have shown one embodiment of my invention for the purpose of illustration, Fig. 1 is a side elevation of a machine embodying my invention, partly shown in section to disclose the supporting frame, Fig. 2 is a top plan view of the supporting frame, Fig. 3 a side view thereof, Fig. 4 a top plan view of the outer casing, Fig. 5 a side elevation thereof and Fig. 6 a vertical section along line 6—6 in Fig. 5.

As seen in the drawing, the outer casing, which receives the supporting frame and which is made of one piece of sheet metal, comprises the longitudinal side-walls 1, 2, and a top wall 3, which together form an inverted U-shaped body. Along their lower edges, the side-walls are bent inwards forming flanges 4, 5 respectively, and in a similar manner, the forward edges both of the two side-walls and of the top wall 3 are bent over forming flanges 6, 7 and 8 respectively, which flanges impart to the casing great rigidity. To still further increase the rigidity of the casing, flat strips of iron, 9 and 10 respectively, are placed on top of the flanges 4 and 5, to which strips the feet 11 are secured by screws, or otherwise. The side walls 1 and 2 are forwardly extended, as shown at 12 in Figs. 1, 4 and 5 to form a fence around the keyboard, the keys of which are indicated at 13 in Fig. 1. The fence is a bent piece of sheet-metal, which is welded to the flanges 6 and 7 of the side-walls, 1, 2.

The top wall 3 has a sector-shaped recess 14 (Fig. 4) along the edge of which is provided an arcuate member 15 of sheet metal enclosing a pad 15^a forming a rest for the type-carrying levers when in inoperative position, one of which levers is shown in outline at 61 in Fig. 1.

At the rear end of the casing, there is fastened to the top wall 3 and the side-walls 1, 2 a transverse rear wall 16, provided along its upper and lower edges with narrow flanges 17, 18, 19, etc., through which flanges pass screws 20, whereby the said rear wall is secured in position. The latter, which in its central upper portion has a recess 21 (Fig. 6) to provide space for the carriage moving device, has secured to its outside surface the guide-rails 22, 23 for the paper-roll carriage 24 shown in Fig. 1.

The keys, the shift-keys, type-carrying levers and the spacing device are all supported on the supporting frame which will now be described. This supporting frame comprises a flat transverse bar 25 extending across the entire width of the machine and two upwardly inclined side-members 26, 27 which at their free ends are each formed with an inwardly projecting horizontal flange 28 and 29 respectively screwed, or otherwise secured to the horizontal flanges 28, 29 is a slotted member 31 which acts as a guide for the key-levers and at the same time lends greater rigidity to the supporting frame, 25, 26, 27. The side-members 26, 27 of the latter are enlarged at their free ends to form triangular-shaped portions 32 in the lower ends of which is journalled the axle 33 of the spacing key (not shown).

On the under side of the transverse bar 25 are provided two perforated lugs 34, 35 forming the bearings for the axle 36 of the shift keys, one of which is indicated at 37 in Fig. 1. On the upper side of the transverse

bar 25 is mounted the arcuate member 38 for the type-carrying levers. For the purpose of imparting greater rigidity to the transverse bar 25, its rear edge is formed into a depending flange 39 (Figs. 1 and 3).

At 40 in Figs. 4 and 6 is indicated the spring mechanism operating to move the paper-roll carriage upon the depression of the spacing bar.

From the above it will be seen that the keys, including the shift keys, the type-carrying levers, spacing-bar and carriage-moving device are all supported on a common frame, which upon all the various parts being assembled thereon is placed into the sheet-metal casing from the rear thereof, being secured thereto by screws, whereupon the transverse rear wall 16 above referred to is fastened in place. The assembling and mounting of the parts is thus greatly simplified which for the purposes of mass production is of supreme importance.

While I have described my invention with reference to the drawings, I do not, of course, limit myself to the details of the construction as shown in said drawings, and I claim as my invention:

1. In a child's typewriting machine, the combination of a one-piece sheet-metal casing substantially U-shaped in cross-section and comprising a recessed top-wall and side-walls, a transverse rear wall adapted to be secured to said top wall and said side walls and a separate one-piece U-shaped sheet-metal supporting frame adapted to be received within said casing and supporting the entire mechanism and keys of the machine.

2. In a child's typewriting machine, the combination of a one-piece casing made of a sheet metal body substantially U-shaped in vertical cross-section and comprising a recessed top-wall, side-walls and a transverse rear wall detachably secured to said top-wall and said side-walls, and a separate one-piece U-shaped supporting frame of sheet-metal adapted to be received within said casing and supporting the entire mechanism and keys of the machine.

3. In a child's typewriting machine, the combination of a one-piece sheet-metal casing substantially U-shaped in cross-section and comprising a recessed top-wall and side-walls, said top-wall and side-walls having re-inforcing flanges along their edges, a transverse rear wall adapted to be detachably secured to said top-wall and said side-walls and carrying the guide-rails for the paper-roller carriage, and a separate one-piece sheet-metal supporting frame adapted to be received within said casing and supporting all the mechanisms and keys of the machine.

4. In a child's typewriting machine, the combination of a one-piece sheet-metal casing substantially U-shaped in cross section and comprising a recessed top-wall and side-walls, said top-wall and side-walls having re-inforcing flanges formed along their edges, a type-carrying lever rest secured to said top-wall along the edge of the recess therein, a transverse rear wall adapted to be detachably secured to said top-wall and said side-walls and carrying the guide-rails for the paper-roller carriage, and a U-shaped sheet metal supporting frame adapted to be received within said casing and supporting all the mechanisms and keys of the machine.

5. In a child's typewriting machine, the combination with the casing, of a sheet-metal supporting frame substantially U-shaped in vertical cross-section and adapted to be received within said casing and comprising a transverse member and two side-members extending forwardly from said transverse member, and an arcuate member, secured to said transverse member and adapted to form a bearing for the type-carrying levers of the machine.

6. In a child's typewriting machine, the combination with the casing, of a metal supporting frame substantially U-shaped in vertical cross-section and adapted to be received within said casing and comprising a transverse member and two side-members extending forwardly from said transverse-member, all said members having re-inforcing flanges formed along their edges, an arcuate member secured to said transverse-member and forming a bearing for the type-carrying levers of the machine, and a U-shaped slotted member carried by said side-members and forming a guide for the key-levers of the machine.

7. In a child's typewriting machine, the combination with the casing, of a sheet-metal supporting frame substantially U-shaped in vertical cross-section and adapted to be received within said casing and comprising a horizontal transverse-member extending laterally within said casing and two side-members positioned at right angles to said transverse-member, all said members being provided with re-inforcing flanges, an arcuate member mounted on said transverse member and forming a bearing for the type-carrying levers of the machine, a U-shaped sheet-metal guide-member carried by said side-members and provided with slots for the key-levers of the machine, and a shaft mounted in said side-members and supporting the spacing key of the machine, the shift-keys being supported by said transverse member.

8. In a child's typewriting machine, in combination with a casing substantially U-shaped in vertical cross-section, a one-piece open sheet metal frame adapted to be housed in said casing and comprising a transverse

member, and two upwardly inclined forwardly extending side members, said frame being adapted to support all the mechanisms and keys of the machine.

9. In a child's typewriting machine, in combination with a casing substantially U-shaped in vertical cross-section, and a one-piece open sheet metal frame composed of a flat transverse member and two upwardly inclined forwardly extending flat side members having enlarged triangular portions, said frame being adapted to support all the mechanisms and keys.

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