No. 747,545. PATENTED DEC. 22, 1903.

C. GABRIELSON.

TYPE WRITING MACHINE.

APPLICATION FILED SEPT. 14, 1903.

NO MODEL. 2 SHEETS—SHEET 1.

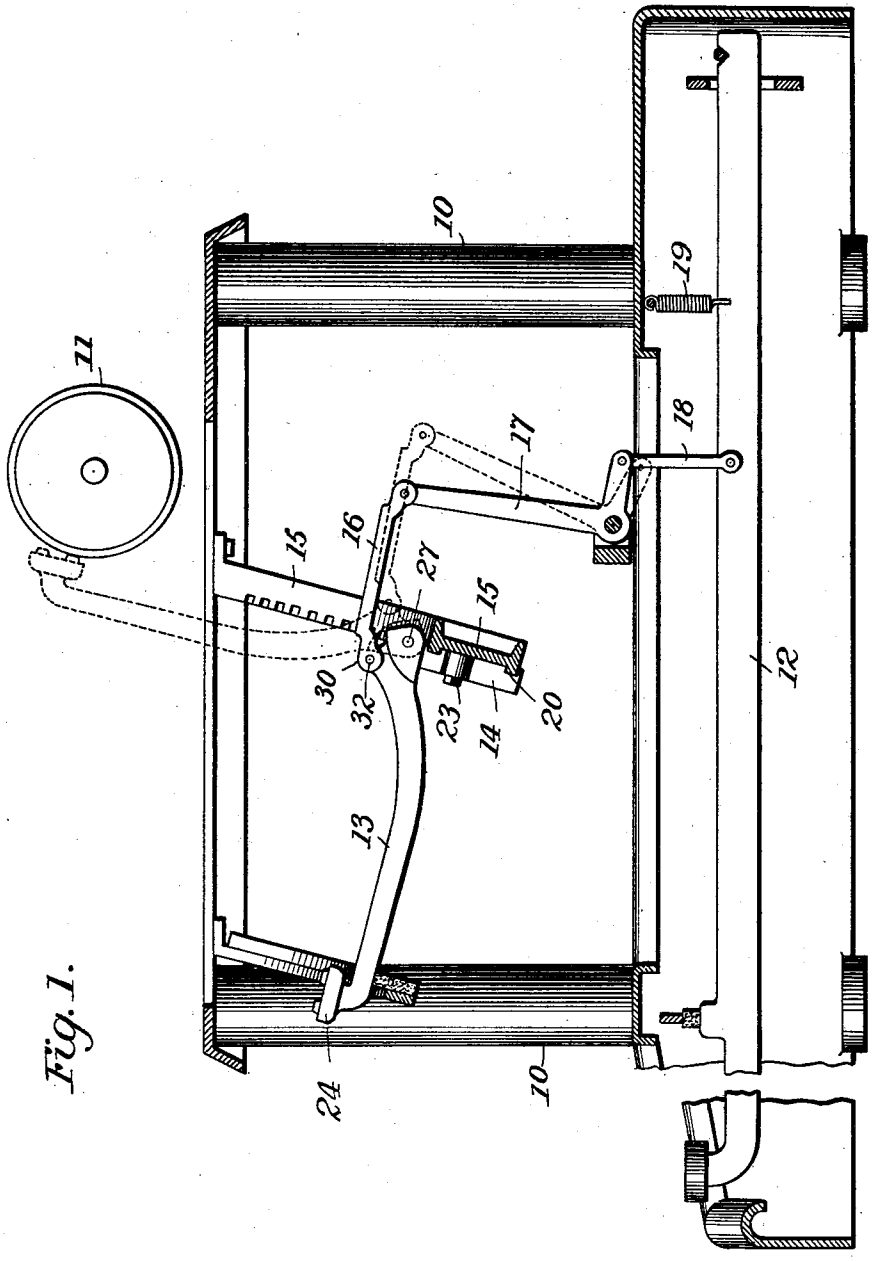

Fig. 1.

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NO MODEL. 2 SHEETS—SHEET 2.

Fig. 2.

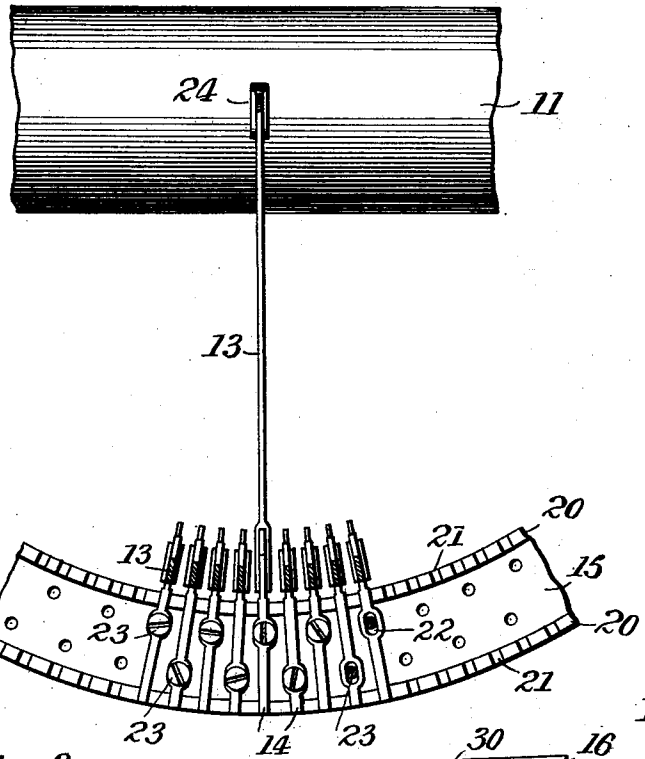


Fig. 3.

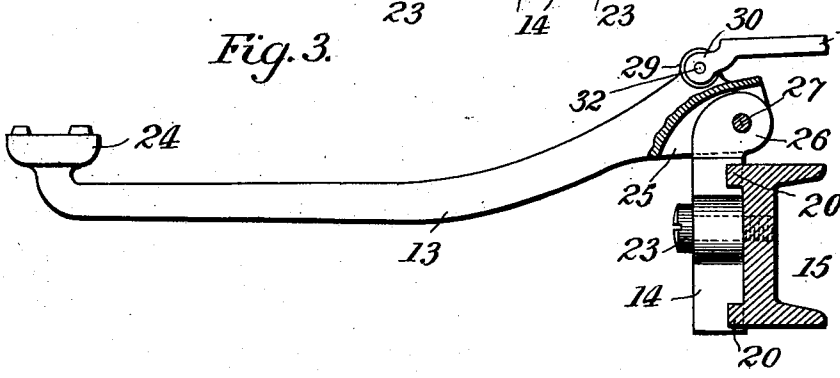
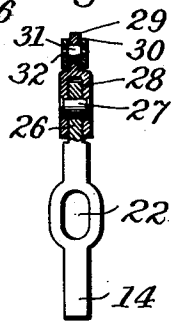


Fig. 4.



Witnesses

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No. 747,545. Patented December 22, 1903.

UNITED STATES PATENT OFFICE.

CARL GABRIELSON, OF SYRACUSE, NEW YORK, ASSIGNOR TO L. C. SMITH AND BROS. TYPEWRITER COMPANY, OF SYRACUSE, NEW YORK, A CORPORATION OF NEW YORK.

TYPE-WRITING MACHINE.

SPECIFICATION forming part of Letters Patent No. 747,545, dated December 22, 1903.

Application filed September 14, 1903. Serial No. 173,141. (No model.)

To all whom it may concern:

Be it known that I, CARL GABRIELSON, a citizen of the United States, residing at Syracuse, in the county of Onondaga and State of New York, have invented certain new and useful Improvements in Type-Writing Machines, of which the following is a specification.

This invention comprises improvements in type-writer type-bars and their mountings and connections.

The invention relates particularly to front-strike type-writers in which the type-bars are pivoted on a segment arranged below the plane of the platen. In machines of this class heretofore constructed considerable difficulty has been experienced arising from dirt falling from the platen on and into the type-bar joints, often causing the type-bars to stick or to work hard. These type-bar joints are usually located below and slightly in front of the front face of the platen, on which erasures are made, and the rubbings from the paper in making corrections fall directly on them.

The present invention comprises means whereby the type-bar joints are housed or protected to prevent dirt getting into them, and this protection is obtained without in any way interfering with the action of the type-bars.

The invention will be described in connection with the accompanying drawings, in which—

Figure 1 is a central vertical section through a type-writing machine, showing so much of the mechanism as is necessary to illustrate the present invention. Fig. 2 is a front view of parts of the platen and type-bar segment. Fig. 3 is a side view of the preferred form of type-bar and type-bar hanger, and Fig. 4 is a section on the line 4 4 of Fig. 3.

Referring to the drawings, 10 indicates the frame of a type-writing machine, 11 the platen, and 12 the key-levers. These parts may be of any suitable construction, as they do not enter into the present invention. The type-bars 13 are pivotally mounted upon hangers 14, which are adjustably secured to a segment 15. The type-bars are connected with the key-levers by links 16, sublevers 17, and links 18. Springs 19 hold all of the parts in normal position, as shown in full lines in Fig. 1.

The segment 15 is provided with flanges 20, in which are cut slots or notches 21 to receive the hangers 14. The segment is circular in form, and the slots or notches are radial to a common point, which is usually located just below the printing-point at the platen. Each hanger 14 consists of a short bar adapted to fit the notches 21 and provided with an elongated eye 22, through which a screw 23 passes to clamp the hanger to the segment. The eyes of the hangers are staggered, as shown in Fig. 3, the eyes of alternate hangers being near their upper ends, while the eyes of the intermediate hangers are at their lower ends. This arrangement permits of a closer assemblage of the hangers than would be possible if the eyes were uniformly located on them. The elongated eyes permit of individual adjustment of the hangers radial of the segment, which greatly facilitates the adjustment and alinement of the type-bars.

The type-bar illustrated in Figs. 1 to 4, inclusive, has the usual type-head 24 at its free end and is provided at its pivotal end with two opposite walls 25, having inner parallel bearing-surfaces to coöperate with the bearing 26 of the type-bar hanger. The bearing 26 has opposite parallel bearing-surfaces, and it is suitably curved in outline to permit the type-bar to swing freely. The walls 25 of the type-bar have a connecting portion above the bearing, and the walls, together with said portion, form a substantially U-shaped housing over the bearing or joint, which prevents rubbings from the platen and other falling dirt or dust from getting into the type-bar joint. The type-bar and hanger are connected by any suitable pivot, such as the pivot-pin 27. (Shown in Figs. 3 and 4.) The particular type-bar illustrated in the drawings is a solid bar, having the slot or opening between the walls 25 milled or otherwise formed therein. It will be evident, however, a bar constructed according to the present invention may be formed of folded sheet metal or in other well-known ways.

To prevent "cramping" of the joints between the type-bars 13 and the links 16, the

universal joint (illustrated in Figs. 3 and 4) is preferably used. The type-bar is provided with an eye 29 above and slightly in front of its pivot, and the link 16 is U-shaped in section and provided with extensions or ears 30, which embrace the eye 29. Within the eyes 29 are spherical pivoted pins 31, which are free to rock laterally, which pins have smaller pintles 32, extending into corresponding holes in the ears 30. The links 16 are preferably formed of spring metal, and the ears 30 are thus adapted to be spread, so as to connect them with or detach them from the pivot-pins.

It will be evident that the form and construction of the device illustrated and described may be more or less varied without departing from the spirit and scope of the present invention, and therefore this invention is not limited to the precise construction and arrangement of parts illustrated and described.

What I claim as new, and desire to secure by Letters Patent, is—

1. In a type-writing machine, a type-bar having the usual type-head at its free end and provided at its pivotal end with two walls having inner parallel bearing-surfaces to cooperate with the bearing of the type-bar hanger and a part connecting said walls and forming with the walls a housing over the bearing.

2. In a type-writing machine, the combination with a type-bar hanger having opposite parallel bearing-surfaces, of a type-bar having the usual type-head at its free end and provided at its pivotal end with two walls having inner parallel bearing-surfaces to cooperate with the bearing of the type-bar hanger and a part connecting said walls and forming with the walls a housing over the bearing.

3. In a type-writing machine, the combination of a platen, a hanger arranged below the platen and having a type-bar bearing with opposite parallel bearing-surfaces, and a type-bar mounted on said hanger, said type-bar having a U-shaped end adapted and arranged to form a housing over the bearing, whereby dirt and rubbings from the platen are excluded from the type-bar joint.

4. In a type-writing machine, the combination of a platen, a type-bar segment arranged below the platen, a type-bar hanger mounted upon said segment and having a bearing portion at its upper end and a type-bar pivotally connected to said hanger, said type-bar having a housing portion extending over the top and sides of said bearing, whereby dirt is excluded from the type-bar joint.

5. In a type-writing machine, the combination of a platen, a type-bar bearing below the platen and a front-strike type-bar pivotally mounted on said bearing, said type-bar being constructed and arranged to cover the top and sides of the bearing, whereby dirt and rubbings from the platen are excluded from the type-bar joint.

6. In a type-writing machine, the combination of a platen, a segment arranged below the platen, a type-bar hanger radially adjustable upon said segment and provided with a bearing for the type-bar at its upper end, and a front-strike type-bar pivoted to said hanger, said type-bar being constructed and arranged to cover the top and opposite sides of said bearing, whereby the dirt and rubbings from the platen are excluded from said bearing.

7. In a type-writing machine, the combination of a platen, a segment arranged below the platen, a series of type-bar hangers supported on said segment, and a series of front-strike type-bars pivotally connected to said hangers, said type-bars being constructed and arranged to inclose and protect the top and sides of the bearing portions of the hangers, for the purpose set forth.

8. In a type-writing machine, the combination of a platen, a type-bar hanger below the platen having opposite parallel bearing-surfaces, and a solid type-bar having a slot with parallel walls milled or formed in the under side of its pivotal end, said bearing working in said slot, whereby the bearing is protected from falling dirt.

9. In a type-writing machine, the combination of a platen, a segment arranged below the platen, type-bar hangers mounted on said segment, type-bars pivotally connected to said hangers, sublevers, and links of U-shaped cross-section connecting the type-bars with the said levers, one end of each link having ears embracing the type-bar, and a spherical pin sustained by said ears and located in an opening in the type-bar, for the purpose set forth.

10. In a type-writing machine, the combination with a type-bar having an eye 29, of a spherical pin located in said eye and forming a universal joint therewith, and a U-shaped link having ears or extensions provided with perforations to receive the ends of said pin.

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

CARL GABRIELSON.

Witnesses:
E. BRAVENDER,
W. A. KANN.