I. E. JONES & F. J. TANNER.

TYPE WRITER,

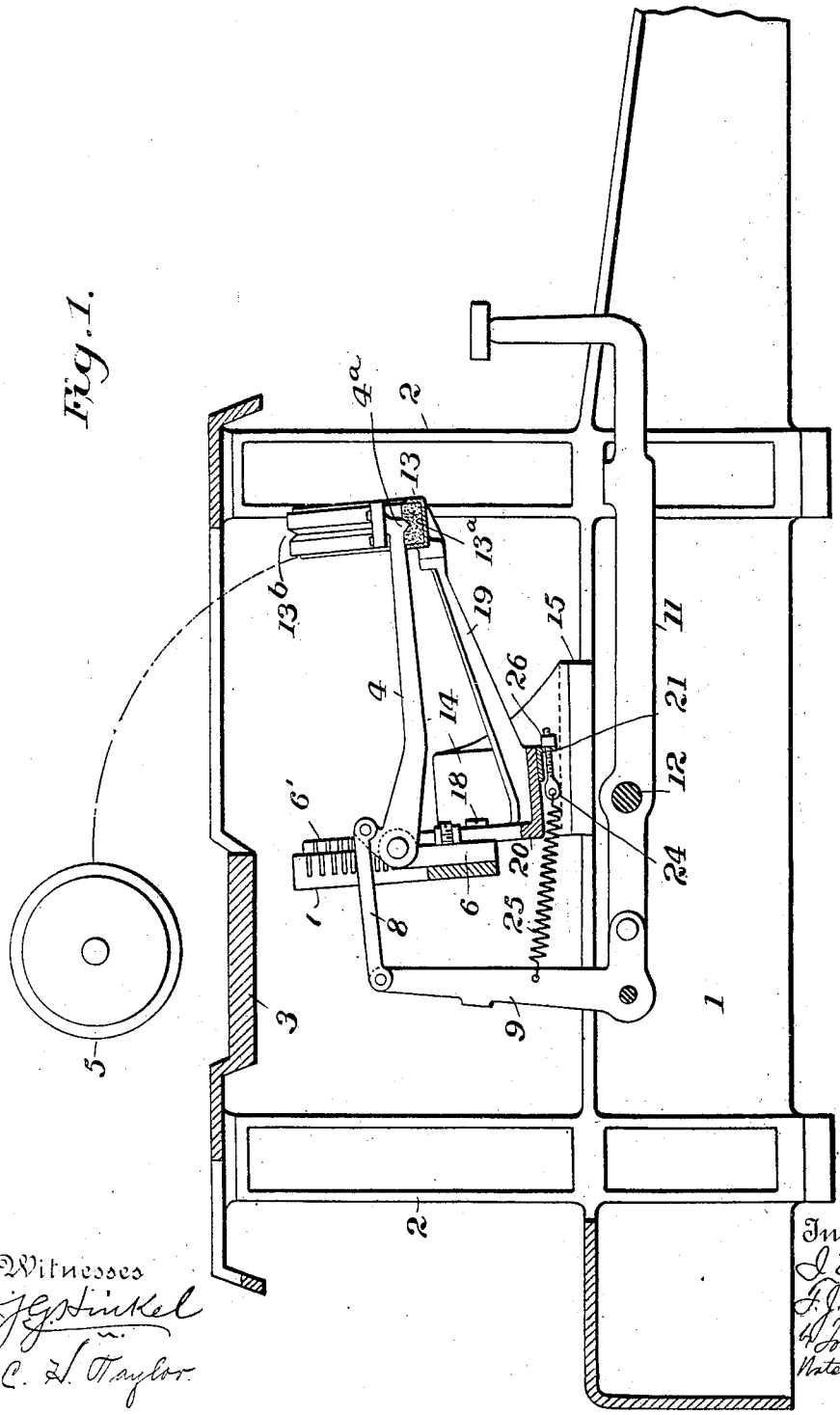
APPLICATION FILED JULY 16, 1909.

1,048,974.

Patented Dec. 31, 1912.

2 SHEETS—SHEET 1.

Fig. 1.

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2 SHEETS—SHEET 2.

Fig. 2.

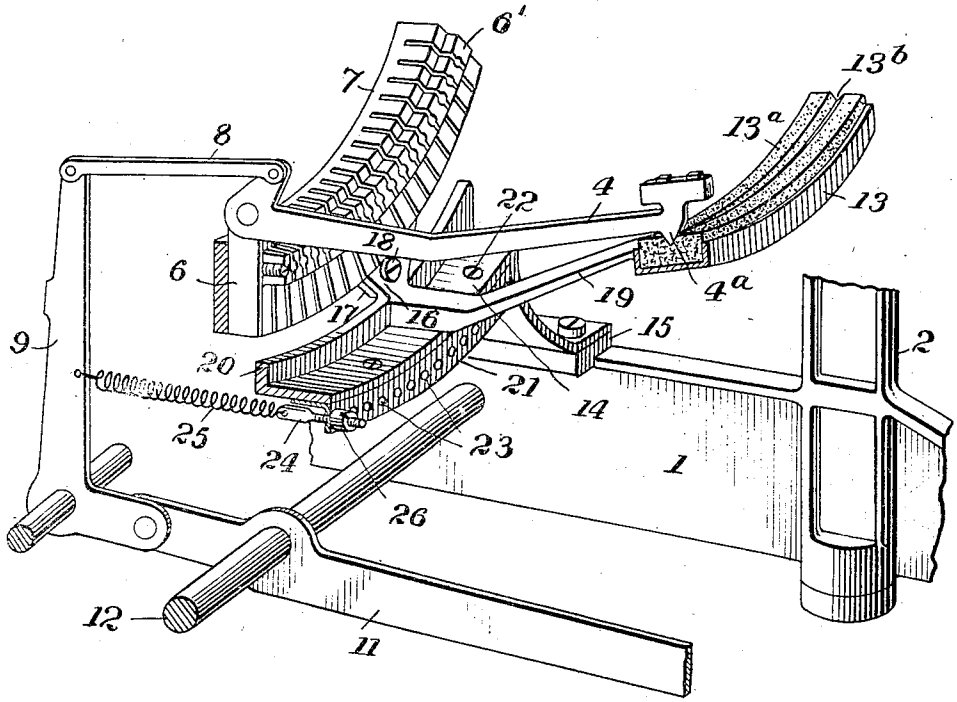
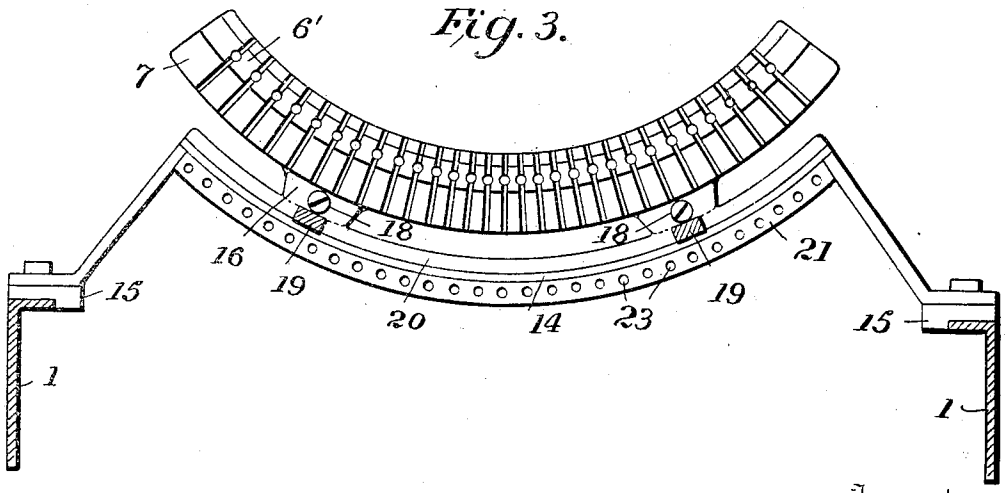



Fig. 3.

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# UNITED STATES PATENT OFFICE.

IWAN E. JONES AND FRANK J. TANNER, OF SCRANTON, PENNSYLVANIA, ASSIGNORS TO INTERNATIONAL TEXT BOOK COMPANY, OF SCRANTON, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA.

## TYPE-WRITER.

1,048,974. Specification of Letters Patent. **Patented Dec. 31, 1912.**

Application filed July 16, 1909. Serial No. 507,928.

*To all whom it may concern:*

Be it known that we, IWAN E. JONES and FRANK J. TANNER, citizens of the United States, residing at Scranton, in the county of Lackawanna and State of Pennsylvania, have invented certain new and useful Improvements in Type-Writers, of which the following is a specification.

The present invention relates to improvements in typewriting machines, and particularly to that class of machines known as visible writers, in which the type bars are arranged to swing upwardly and strike against the front surface of a platen.

One of the objects of the invention is to provide an improved means for supporting the type bar segment and the rest on which the heads of the several type bars bear when inactive.

A further object of the invention is to provide a type bar rest of such cross sectional form that the type bars will not rebound when brought into contact therewith and by which the return of the type bars to inactive position will be accomplished quietly.

Another object of the invention is to provide a very simple and easily operated means for controlling and adjusting the tension of the different key levers of the machine, each of such keys being adapted to be adjusted independently of the others.

In the accompanying drawings,—Figure 1 is a vertical sectional view through a typewriter containing an embodiment of the present invention, parts of the machine not relating to the invention being omitted; Fig. 2 is a perspective view of some of the parts shown in Fig. 1; Fig. 3 is a front elevation of the type bar segment and the supporting means therefor.

Referring to the drawings, it will be seen that the frame of the typewriter includes a suitable base having opposite sides 1, uprights 2, and a deck or top plate 3, the latter being cut away to provide a space through which the type bars 4 can move to properly coöperate with the platen 5.

Each of the type bars is pivotally connected with a hanger 6 that is secured to one of the slots 6′ of the type bar supporting segment 7, and a link 8 connects the type bar with a sub-lever 9, that in turn is pivotally connected to a key lever 11. The key levers are fulcrumed on a rod 12 mounted in the side pieces 1 of the base of the typewriter frame.

According to the present invention, the type bar segment 7 and the curved rest 13 for the outer ends of the type bars are supported directly from the base of the frame. A segmental bracket 14 of the form shown is detachably connected at its ends with lugs or bosses 15 on the side pieces 1 of the typewriter frame, and said bracket is provided with suitable upwardly extending lugs 16 to which depending lugs 17 on the segment 7 are connected by screws 18. The type bar rest 13 is supported by arms 19, preferably formed integral with and projecting forwardly from the bracket 14. As shown, said bracket is preferably provided at its rear with an upwardly extending flange 20 on which are formed the lugs 16, and the arms 19 extend across the entire upper surface of said bracket.

The type bar rest is preferably composed of a metal frame or shell, open at the top, and a resilient pad or cushion $13^a$ held within and having its outer face projecting beyond the edges of the side walls of the channel-like frame 13. In the outer face of said cushion $13^a$ is formed a groove or depression $13^b$ adapted to receive lugs or projections $4^a$ projecting downwardly from the heads of the type bars 4. Preferably said groove $13^b$ is made V-shape in cross section and the lugs or projections $4^a$ are of corresponding shape so that when the type bar is at rest, or inactive, it will be in engagement with the cushion $13^a$ throughout the length of its lug $4^a$ on both edges of the latter. The groove $13^b$ need not be deep enough to cause the body of the stem or arm of the type bar 4 to strike the cushion.

At its forward edge, the bracket 14 is provided with a downwardly extending flange 21. As shown this flange may be formed by a separate angle plate connected with the bracket 14 by screws 22. Said downwardly extending flange 21 is provided with a plurality of apertures 23, corresponding in number to the number of sub-levers 9, and through each of said apertures extends a threaded bolt 24. A coiled spring 25 connects each of said bolts with one of the sub-levers 9, and by means of a nut 26 secured on the bolt 24, the tension of said spring 25

may be readily regulated. The bracket 14 is of such form that it extends parallel with the segment 7 and it will be seen that said bracket serves for supporting both the segment and type bar rest, and also for holding the forward ends of the type-bar lever actuating springs 25. Said bracket with the lugs 16 and arms 19 may be formed by a single casting, and as before noted is easily attached to or removed from the frame of the machine. The invention therefore provides a very simple but strong and durable support for the type bar segment and rest 13.

By means of the nuts 26 and bolts 24 the tension of the several sub-lever springs 25 can be easily varied as may be desired and the adjustment of each of said springs is independent of and in no wise affects any of the others.

Having thus described the invention, what is claimed is:

1. The combination with the supporting frame of a typewriting machine, of a bracket having its ends attached to opposite sides of said frame and provided with forwardly extending arms, a type bar segment supported by said bracket at points between the sides of the frame, and a type bar rest secured to the outer ends of said arms.

2. The combination with the supporting frame of a typewriting machine, of a bracket having its ends attached to opposite sides of said frame and provided with an intermediate curved section from which project integral forwardly extending arms, a type bar segment supported by said curved section of the bracket, and a type bar rest secured to the outer ends of said arms.

3. The combination with the supporting frame of a typewriting machine, of a type bar segment, and a bracket attached to opposite sides of the typewriter frame and supporting said segment and having a depending apertured flange, substantially as and for the purpose described.

4. The combination with the supporting frame of a typewriting machine, of a bracket having its ends secured to opposite sides of the said frame, and provided with upwardly extending lugs and forwardly extending arms, a type bar segment connected with said lugs, and a type bar rest mounted on said forwardly extending arms.

5. In a type writing machine, the combination with the frame of the machine, of a bracket extending across the frame and having its ends attached to opposite sides thereof, a type bar segment supported by said bracket, a key lever, a type bar fulcrumed on the type bar segment, a sub-lever connected with the key lever and type bar, and a spring having one end attached to the sub-lever and its other end attached to said bracket.

6. In a typewriting machine, the combination with the frame of the machine, of a bracket extending across the frame and having its ends attached to opposite sides thereof, a type bar segment supported by said bracket, a key lever, a type bar fulcrumed on the type bar segment, a sub-lever connected with the key lever and type bar, a spring having one end attached to the sub-lever, and means attached to the other end of the spring and adjustably connected with said bracket.

7. In a typewriting machine, the combination with the frame of the machine, of a bracket extending across the frame and having its ends attached to opposite sides thereof, a type bar segment having depending lugs attached to said bracket, a type bar fulcrumed on the segment, a type bar rest carried by said bracket, a key lever, a sub-lever connected with the key lever and with the type bar, a spring having one end connected with the sub-lever, and an adjusting screw carried by said bracket and adapted to be engaged with the other end of the spring.

In testimony whereof we affix our signatures in presence of two witnesses.

IWAN E. JONES.
FRANK J. TANNER.

Witnesses:
WM. CARY COOKE,
NELSON H. PROUTY.