

No. 737,742.

PATENTED SEPT. 1, 1903.

O. C. KAVLE.
SUPPORT FOR LINKS OF TYPE WRITER ACTIONS.
APPLICATION FILED NOV. 13, 1902.

NO MODEL.

Fig. 1.

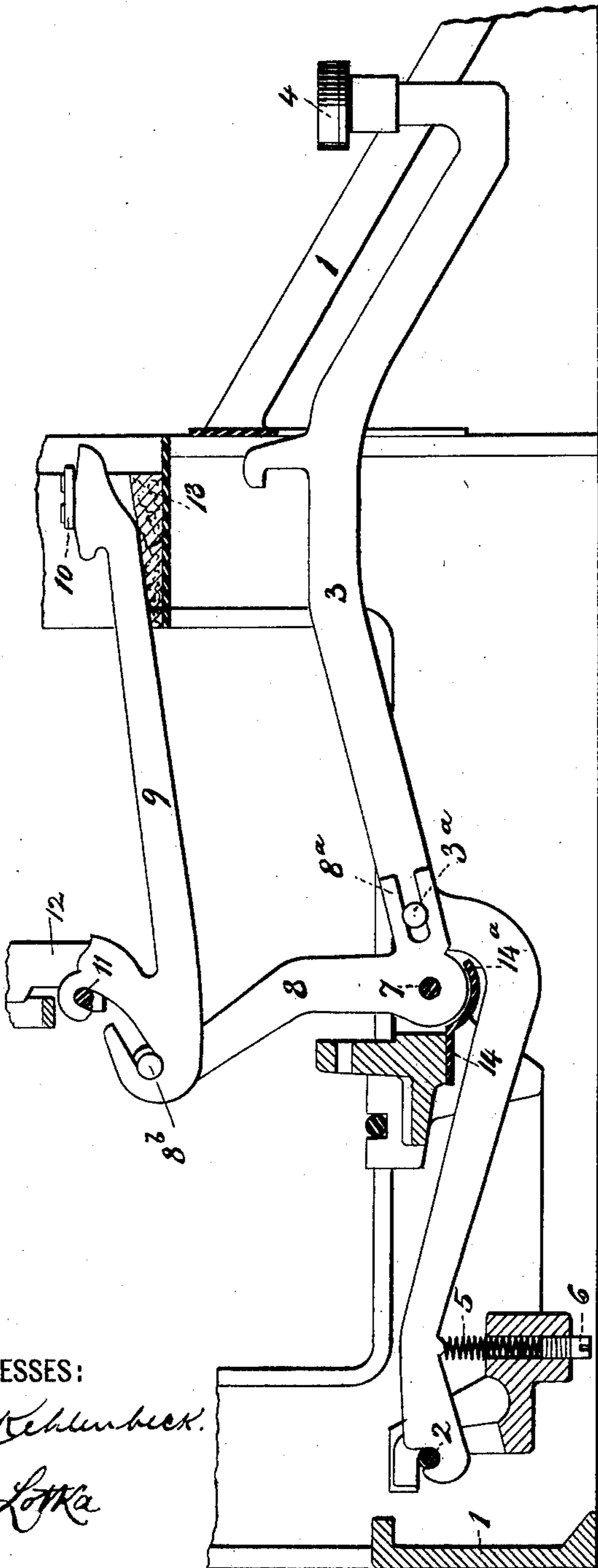
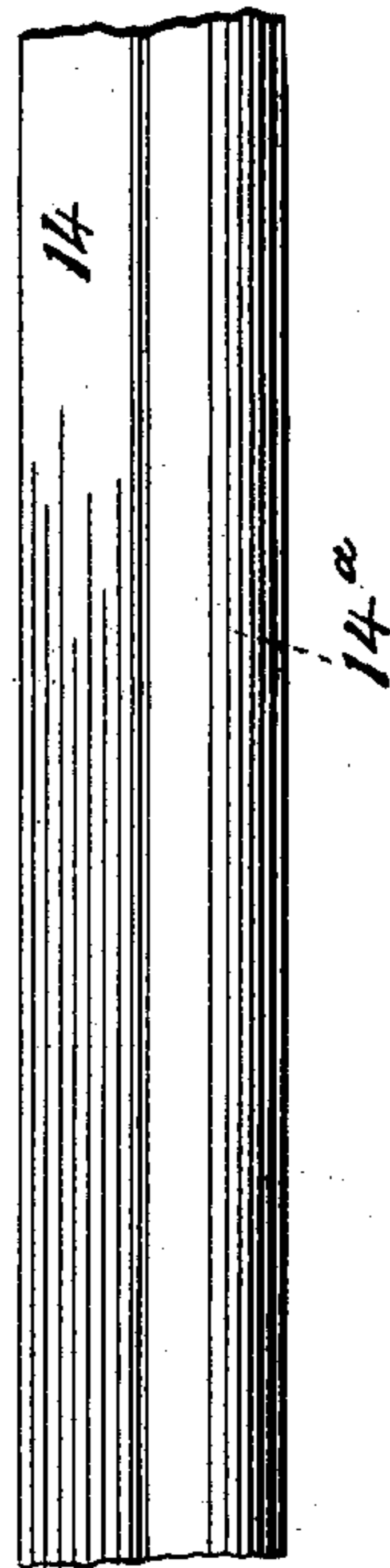


Fig. 2.



WITNESSES:

J. A. Schlenker.
John Lotka

INVENTOR

Oscar C. Kavle

BY

Brisson & Trautts
his ATTORNEYS

UNITED STATES PATENT OFFICE.

OSCAR C. KAVLE, OF HARTFORD, CONNECTICUT, ASSIGNOR, BY MESNE ASSIGNMENTS, TO UNDERWOOD TYPEWRITER COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW JERSEY.

SUPPORT FOR LINKS OF TYPE-WRITER ACTIONS.

SPECIFICATION forming part of Letters Patent No. 737,742, dated September 1, 1903.

Application filed November 13, 1902. Serial No. 131,088. (No model.)

To all whom it may concern:

Be it known that I, OSCAR C. KAVLE, a citizen of the United States, residing in the city of Hartford, county of Hartford, and State of Connecticut, have invented certain new and useful Improvements in Supports for the Links of Type-Writer Actions, of which the following is a specification.

My invention relates to type-writer actions—that is, to the mechanism for transmitting motion from a key to the corresponding type—and has for its object to provide a novel support for the links which form part of the action, which support operates to hold the said links in place even when their ordinary support or pivot is removed for effecting the repair or renewal of parts.

The invention will be fully described hereinafter and the features of novelty pointed out in the appended claims.

Reference is to be had to the accompanying drawings, which illustrate a typical form of my invention, it being understood, however, that various modifications may be made without departing from the nature of my invention.

Figure 1 is a sectional elevation of a portion of a type-writer embodying my invention, and Fig. 2 is a bottom view of a portion of the improved link-support.

Upon the frame 1 of the machine is located the fulcrum 2, with which are detachably engaged the levers 3, each carrying a key 4 at its forward end. A spring 5, the tension of which is adjustable by means of a screw 6, normally keeps the key-lever 3 in its upper position. The frame also carries the pivot or fulcrum-rod 7, which is removable by sliding it lengthwise in its bearings, as is usual in machines of the character illustrated—that is, in front-strike machines such as the Underwood type-writer. On the pivot or fulcrum-rod 7 are mounted the links 8, made in the nature of elbow-levers, said links forming connections between the key-levers 3 and the corresponding type-levers 9. The latter carry type 10 and are fulcrumed at 11 on the segment 12, secured to the frame 1. The type-levers normally rest upon a cushion 13. The links 8 have a loose engagement both with

the type-levers 9 and with the key-levers 3. As shown, each link has a bifurcated end 8^a, embracing a pin 3^a upon the key-lever 3, and the type-lever has an open slot 9^a, into which fits a pin 8^b on the link 8. With this construction (which, however, I do not claim as my invention) the key-levers and the type-levers may be readily removed from the machine without disturbing the links. When it becomes necessary to withdraw one or more of the links 8, this is done in the usual manner by pulling the fulcrum-rod 7 out partly or entirely. Of course as soon as the links are no longer engaged by the fulcrum-rod they will be entirely free, except for their connection with the type-levers and key-levers, and if released from these levers they would fall to the bottom of the machine. Inasmuch, however, as it is desirable to leave those links undisturbed which are not to be taken out for repair or replacement, I have provided an auxiliary support which keeps the links 8 from dropping, even when they are no longer supported by the fulcrum-rod 7. This auxiliary support is preferably slightly spaced from the links, so that normally they will not engage it, and consists of a bar or shield 14, extending parallel with the rod 7, and preferably having a flat portion adapted for attachment to the frame of the machine, and a curved portion 14^a, which is arranged adjacent to the links and forms the support proper. When the fulcrum-rod 7 is withdrawn from engagement with any one or more of the links 8, these links will rest on the auxiliary support 14 and will thus remain in position to again receive the fulcrum-rod 7, (it being only necessary to slightly raise the links from the auxiliary support,) while those links it is desired to remove are simply disengaged from the corresponding type-levers and key-levers and withdrawn forward.

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

1. In a type-writer action, the combination, with the key-levers, the type-levers, the links connecting the key-levers with the corresponding type-levers, and the longitudinally-movable pivot or fulcrum-rod for said links, of an auxiliary support extending below and

beyond the pivot of the links and adapted to support those links from which the fulcrum-rod is withdrawn.

2. In a type-writer action, the combination, with the key-levers, the type-levers, the links connecting the key-levers with the corresponding type-levers and a movable fulcrum on which said links are pivoted, of a support extending below and beyond the pivot of the links and adapted to support them when they are disconnected from said fulcrum.

3. In a type-writer action, the combination, with a series of links or levers forming part of the action, and a longitudinally-movable pivot or fulcrum-rod engaging said links or levers, of an auxiliary support extending below and beyond the pivot of the links or levers, and adapted to support those links or levers from which the fulcrum-rod is withdrawn.

4. In a type-writer action, the combination, with a series of links or levers forming part of the action, and a longitudinally-movable pivot or fulcrum-rod engaging said links or levers, of an auxiliary support having a portion attached to the frame of the machine and a curved member extending underneath the links or levers adjacent to the said fulcrum-rod and adapted to support those links or levers from which the fulcrum-rod is withdrawn.

5. In a type-writer action, the combination, with the key-levers, the type-levers, the links

connecting the key-levers with the corresponding type-levers, and the longitudinally-movable pivot or fulcrum-rod for said links, of an auxiliary support having a portion attached to the frame of the machine and a curved member extending underneath the links adjacent to the said fulcrum-rod and adapted to support those links from which the fulcrum-rod is withdrawn.

6. In an action for type-writers and other machines, a support, an action member, a movable fulcrum or pivot through the medium of which the said member is pivotally carried on said support, and an auxiliary support extending below and beyond the pivot to hold the pivoted member when the pivot is disengaged therefrom.

7. In an action for type-writers and other machines, a support, a longitudinally-movable fulcrum or pivot carried by said support, an action member pivotally mounted on said fulcrum and adapted to be released by the longitudinal movement thereof, and an auxiliary support extending below and beyond the pivot to hold the said member when the fulcrum is disengaged therefrom.

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

OSCAR C. KAVLE.

Witnesses:

EDWARD J. MANNING,
WILLIAM F. HELMOND.