

No. 704,218.

Patented July 8, 1902.

S. J. SEIFRIED.
TYPE WRITER HAMMER MECHANISM.

(Application filed June 15, 1901.)

(No Model.)

2 Sheets—Sheet 1.

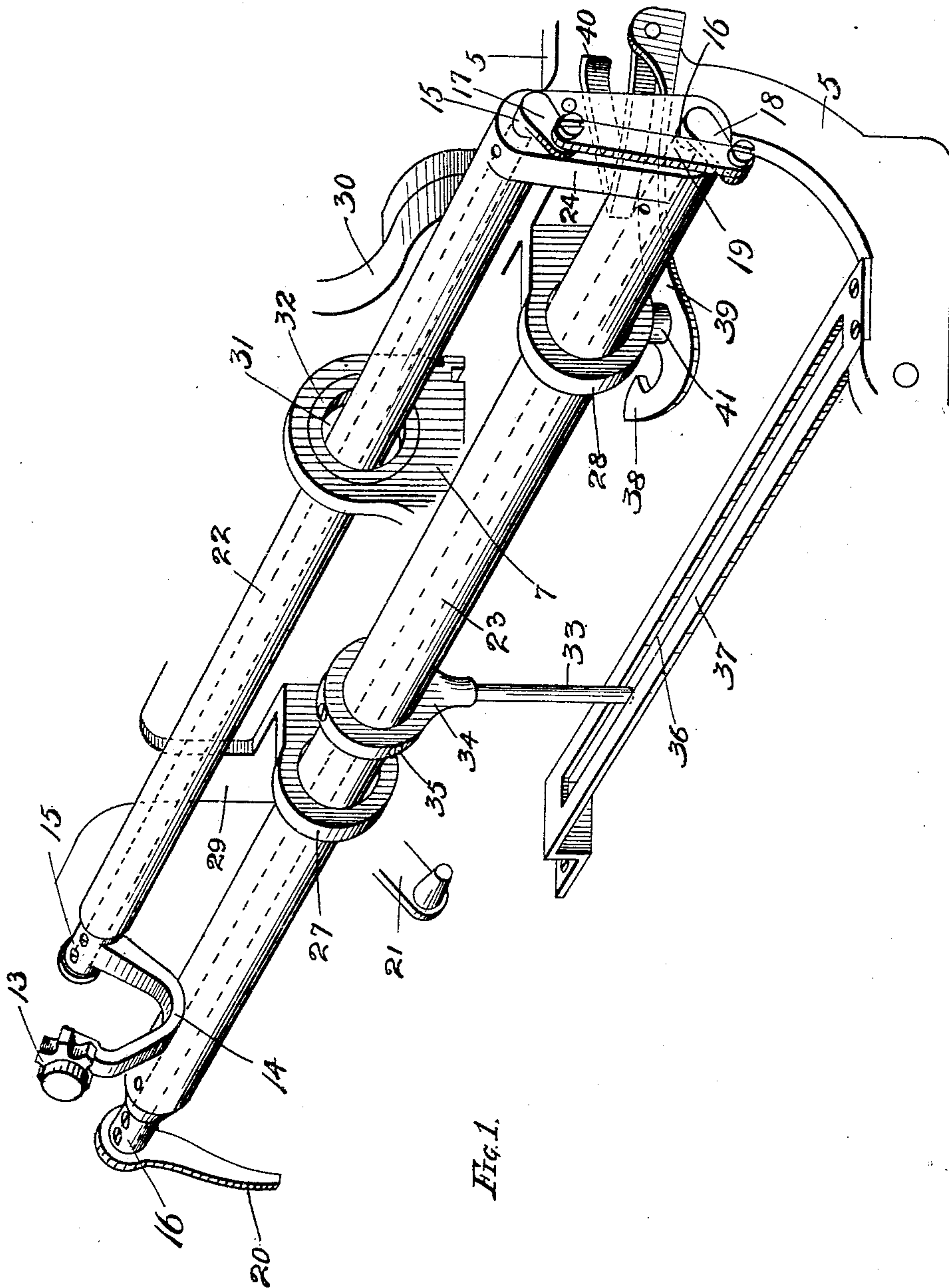


Fig. 1.

WITNESSES:

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INVENTOR.

Samuel J. Seifried
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Munday, Everts & Loeck
ATTORNEYS

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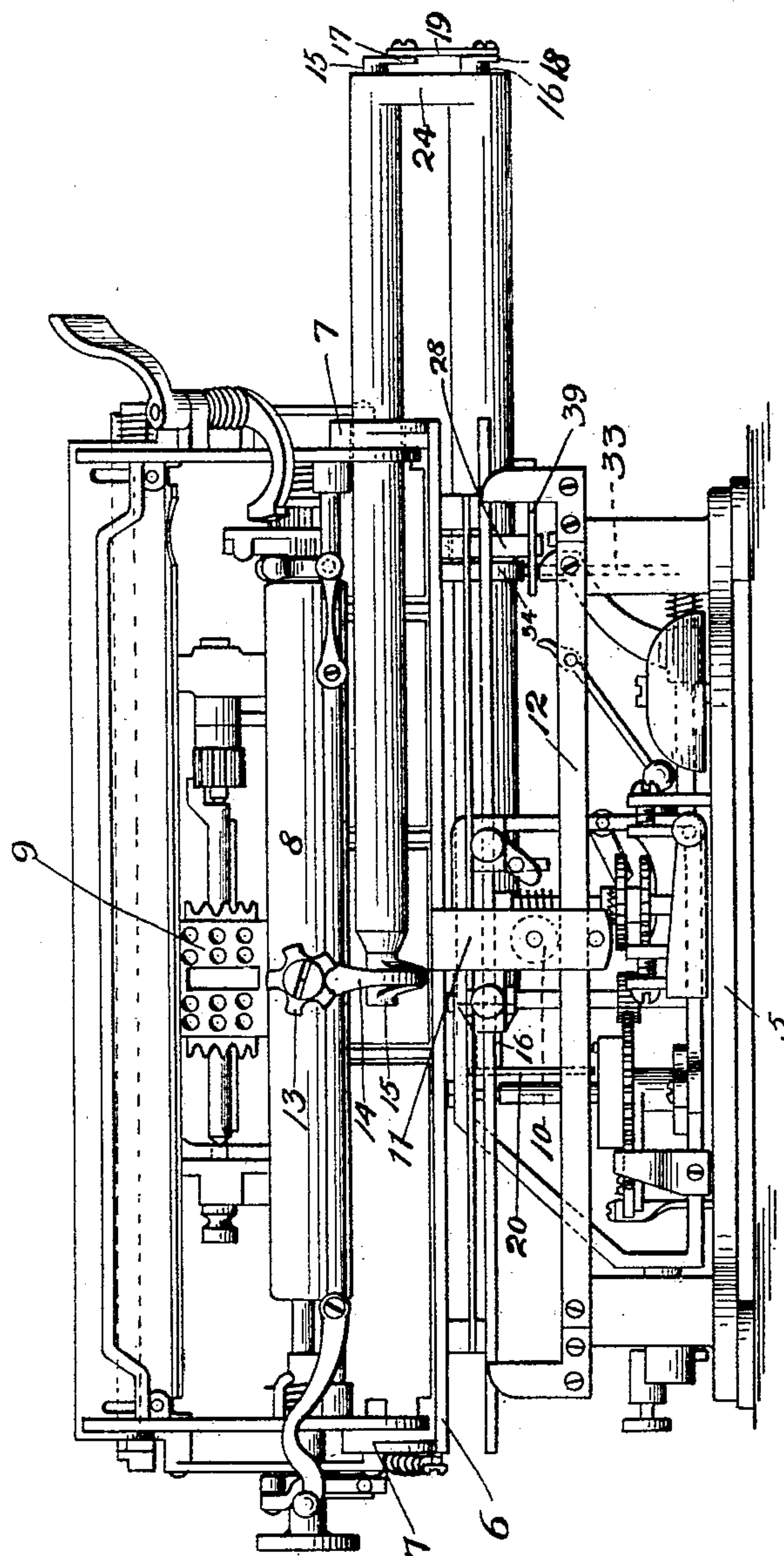


Fig. 2.

WITNESSES:

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UNITED STATES PATENT OFFICE.

SAMUEL J. SEIFRIED, OF CHICAGO, ILLINOIS, ASSIGNOR TO CHICAGO WRITING MACHINE COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

TYPE-WRITER HAMMER MECHANISM.

SPECIFICATION forming part of Letters Patent No. 704,218, dated July 8, 1902.

Application filed June 15, 1901. Serial No. 64,646. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL J. SEIFRIED, a citizen of the United States, residing in Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Type-Writer Hammer Mechanism, of which the following is a specification.

This invention relates to improvements in the type-writers formerly known as the "Munson" and more recently as the "Chicago" type-writers, and particularly to the hammer-support and operating mechanism.

The invention is an improvement upon the construction shown in my Patent No. 474,350, dated May 3, 1892; and it consists in the novel construction of parts and devices and in the novel combinations of parts and devices hereinafter fully explained and shown in the accompanying drawings, in which latter—

Figure 1 is a perspective of that portion of the machine embodying my invention, and Fig. 2 is a rear elevation of the machine.

In said drawings, 5 represents the frame of the machine; 6, a horizontal plate forming the main frame member of the paper-carriage.

7 7 are risers on plate 6, and 8 is the paper-feed roller.

9 is the type-cylinder, 10 the roller supporting the rear of the carriage and attached to plate 6 by bracket 11, and 12 is the track on which said roller moves.

The hammer is shown at 13 and is mounted on an arm 14, rigidly secured on a rock-shaft 15, corresponding to the shaft R^2 of my said patent. Shaft 15 is actuated by a companion and parallel rock-shaft 16, corresponding to the rock-shaft R^1 of said patent, and the two shafts are connected by cranks 17 and 18, one on each shaft, and a link 19. Shaft 16 is provided at its end with an arm 20, which receives impulses from the lifter 21 at each actuation of any of the printing-keys.

In my present improvement instead of supporting the rock-shafts exteriorly of the U-shaped frame R' , as in said patent, I now employ a U-shaped frame the limbs of which are hollow and form bearings for the shafts.

This tubular frame is shown at 22, 23, and 24, 22 being the limb-inclosing shaft 15, 23 the limb-inclosing shaft 16, and 24 being the

cross-head of the frame. The shafts project beyond the frame at both ends, so that they may be provided with the arms 14 and 20 at one end and with the cranks 17 and 18 at the other end. By thus inclosing the shafts in the tubular limbs of the frames I not only obtain all the benefits of the patented construction—viz., an open space between the limbs of the frame through which the carriage may move and through which the paper may be inserted without interfering with the hammer—but in addition I bring the hammer-shaft into coincidence with the axis on which the carriage is tipped when making erasures or inspecting the writing, thus rendering it easy to avoid interference between the hammer and the carriage at such times.

The frame is intended to be moved longitudinally from the position occupied when the machine is not in use (shown at Fig. 1) to that of Fig. 2 when the machine is to be used, and this change of position brings the hammer opposite the printing-center and the arm 20 into operative relation to the lifter 21, as will be understood. The frame is supported with this freedom to move longitudinally in arms 27 and 28, attached to the stationary parts 29 and 30 of the frame, the arms loosely encircling the tubular member 23 of the frame. The carriage-riser 7 is provided with an opening 31, through which the limb 22 of the frame passes, and the opening 31 is preferably lined with a bushing-ring 32.

The tubular hammer-frame is maintained with limb 22 located vertically above limb 23, so that the open space between the limbs is rendered available for the passage of the carriage and paper, by a depending arm 33, rigid with a collar 34, secured to limb 23 by a set-screw 35. The lower end of this arm enters and moves longitudinally through the slot 36 in a stationary guide 37, the slot being narrow and fitting the arm, so as to prevent any rocking of the hammer-frame. This arm and guide-slot also limit the sliding movements of the hammer-frame, as will be understood from Fig. 1.

When the hammer-frame is moved outward to the position of Fig. 2, it is held against any backward sliding movement by the engage-

ment with arm 33 of the hooked end 38 of a lever 39, pivoted at 41 to the support 28. A spring 40 presses upon the lever 39 to hold it in engagement. By this device the hammer-frame is rendered wholly independent of the carriage movement. The hook is so shaped as to insure its automatic engagement with arm 33 as soon as the latter has moved far enough to carry the arm past the point of the hook.

I claim—

1. The hammer-frame having tubular limbs, in combination with the hammer rock-shaft in one limb of the frame, the rock-shaft actuated by the keys and supported in the other limb of the frame, and the connections between the shafts, substantially as specified.

2. The hammer-frame made U-shaped and having its limbs made tubular, in combination with the hammer, and mechanism for actuating it, such mechanism embodying rock-shafts supported in the tubular limbs of the frame, substantially as specified.

3. The combination with the paper-carriage and the hammer of a shaft for actuating the hammer located coincidentally with the axis upon which the carriage tips, and means for supporting the shaft in such position without interfering with the carriage, substantially as specified.

4. The combination with the paper-carriage, the hammer, and the hammer-shaft, of a U-shaped frame supporting said shaft in one of its limbs and positioning it in coincidence

with the axis on which the carriage tips, substantially as specified.

5. The combination with the hammer, of a frame made U-shaped and with tubular limbs, a rock-shaft for vibrating the hammer supported in one limb of the frame, a second rock-shaft for actuating the first-mentioned one and itself rocked by the keys, connections between the shafts at one end thereof, and supports for the frame permitting longitudinal movement thereof, substantially as specified.

6. The combination in a type-writer, of a carriage, the hammer and the U-shaped hammer-frame, the hammer being supported upon a shaft in said frame whose axis is coincident with the axle upon which the carriage tips, substantially as specified.

7. The type-writer wherein are combined a laterally-movable hammer-frame, and means for automatically locking said frame, such means consisting of the arm 33 attached to the frame, and the spring-pressed hooked lever 39, substantially as specified.

8. The type-writer wherein are combined a laterally-movable hammer-frame, an arm 33 attached to the frame, and the slotted stationary guide 33 traversed by the arm, substantially as specified.

SAMUEL J. SEIFRIED.

Witnesses:

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