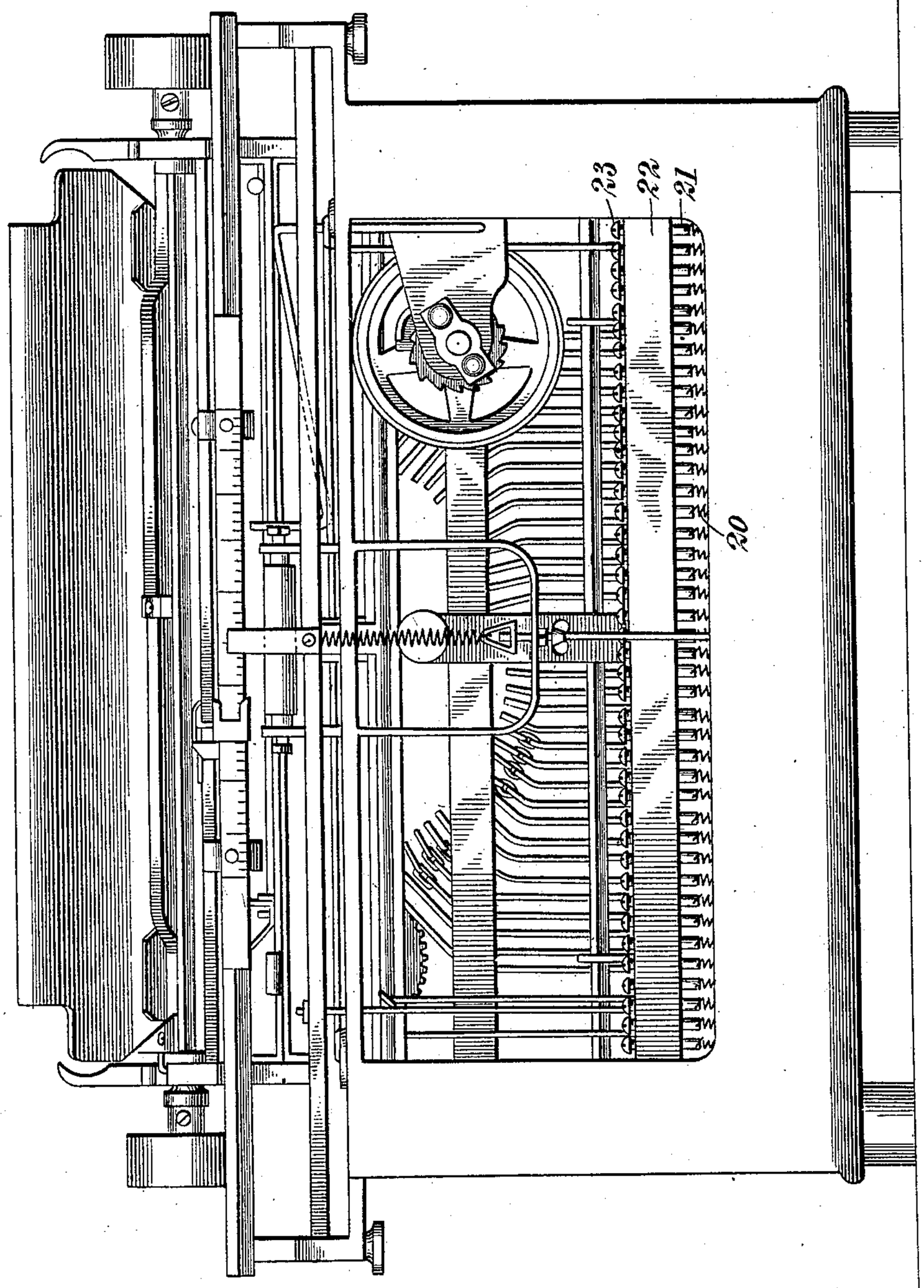
No. 763,452. PATENTED JUNE 28, 1904.

J. ALEXANDER.

TYPE WRITER.

APPLICATION FILED DEC. 13, 1900.

NO MODEL. 3 SHEETS—SHEET 1.



WITNESSES:

G. D. Kingsbury.

C. R. Ferguson

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NO MODEL. 3 SHEETS—SHEET 2.

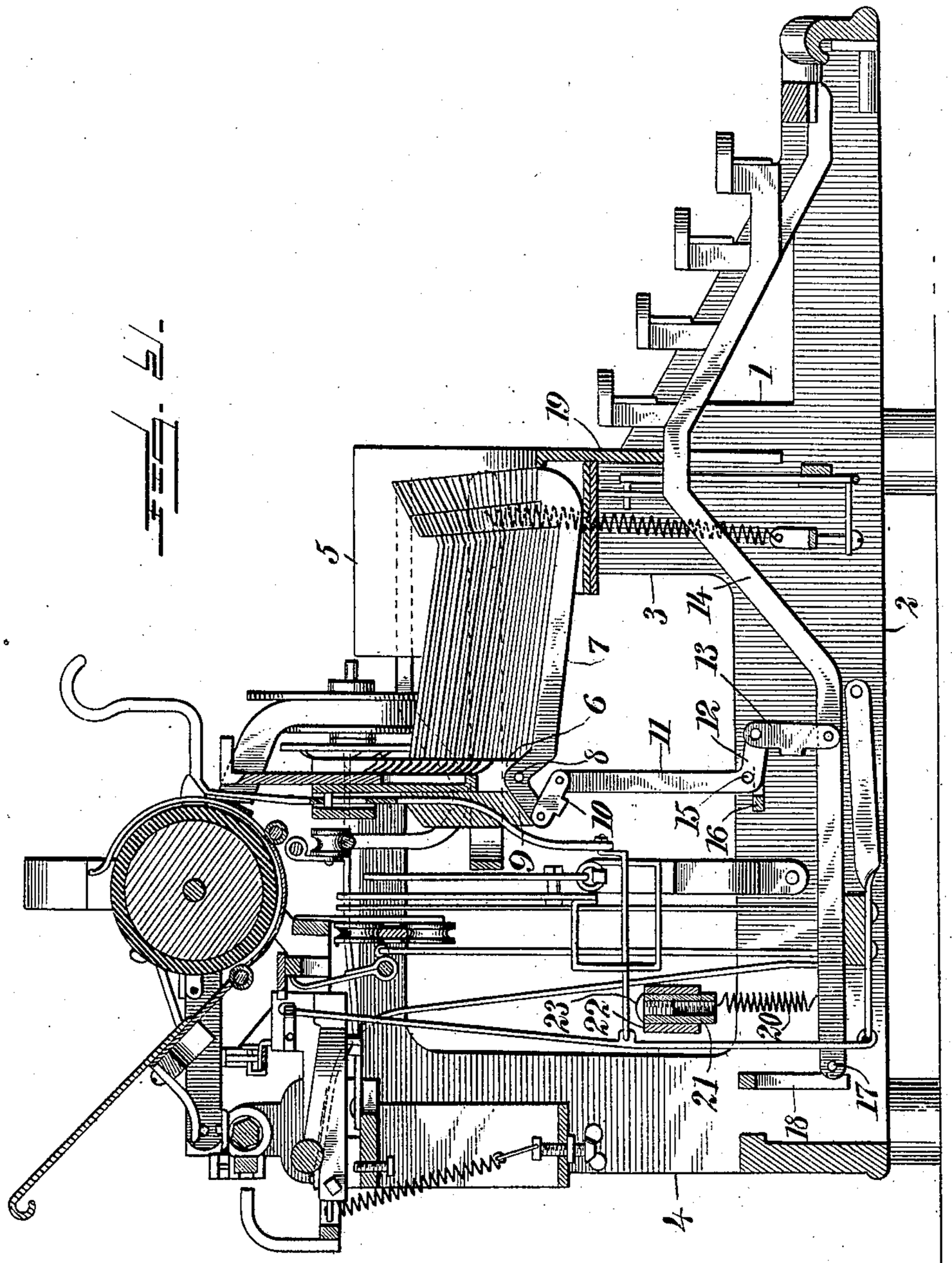

FIG. 2.

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NO MODEL. 3 SHEETS—SHEET 3.

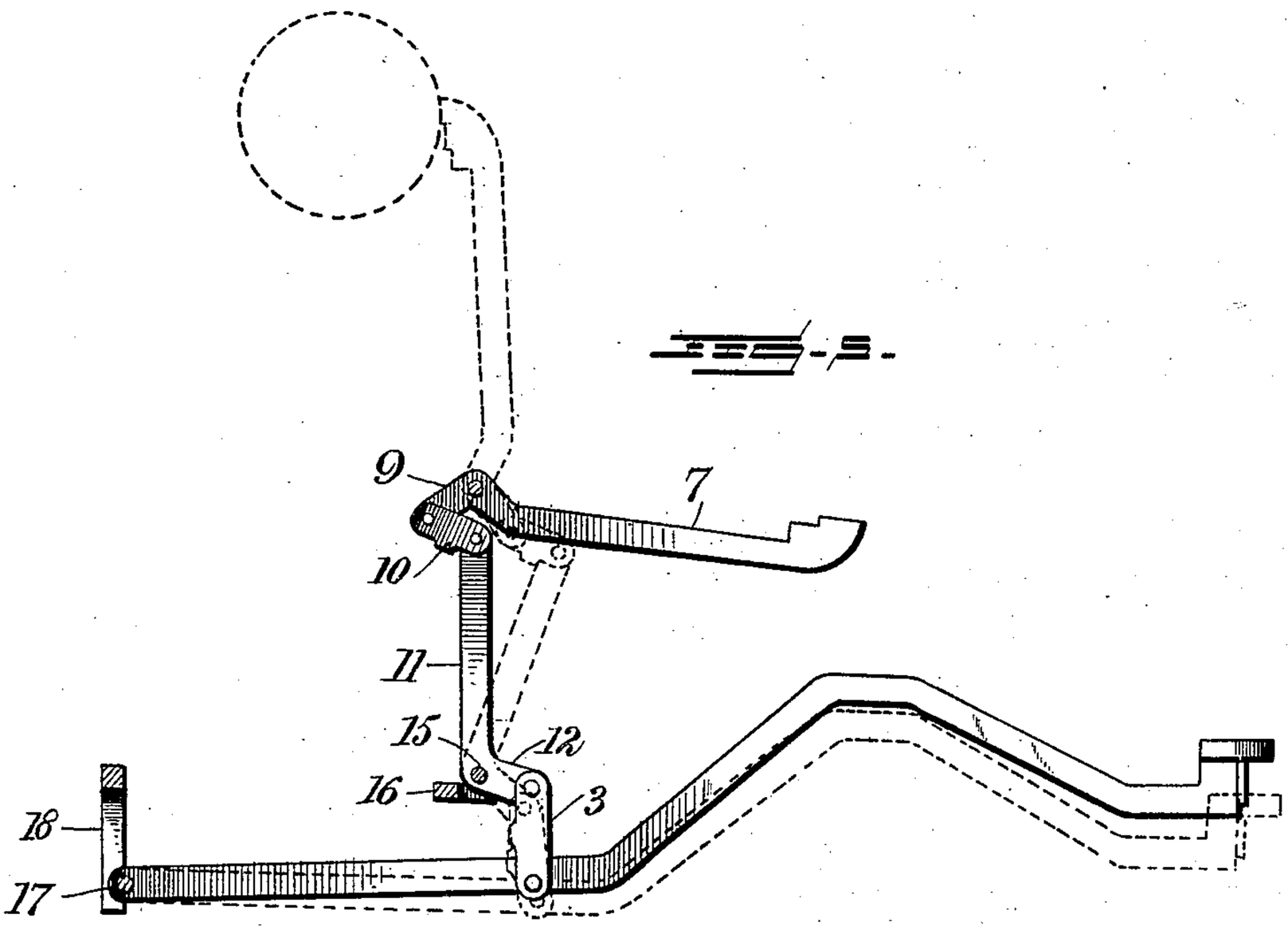


FIG. 5.

FIG. 4.

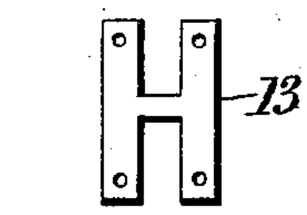


FIG. 6.

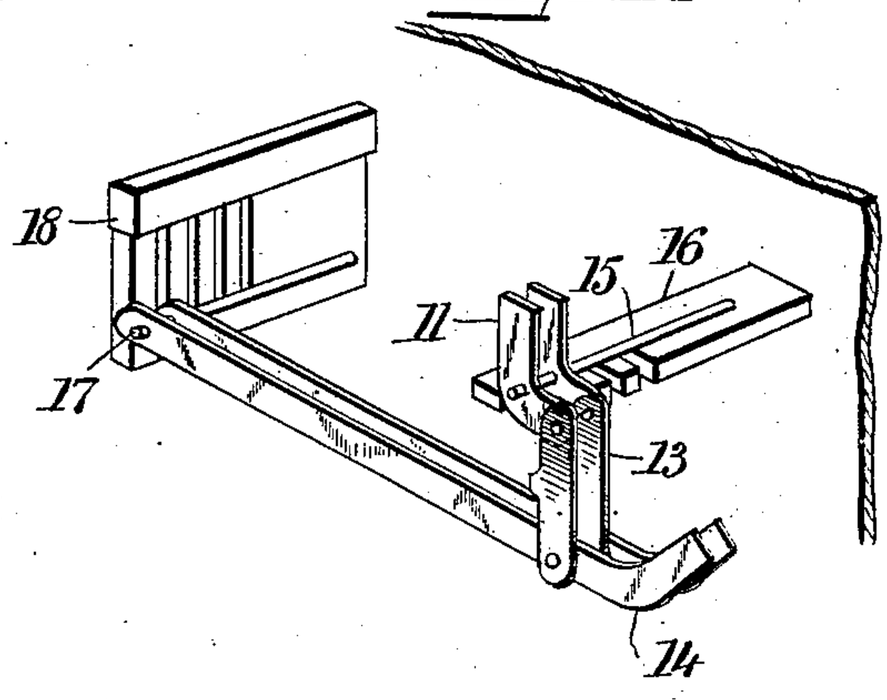
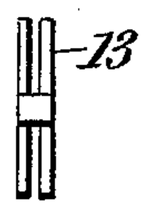


FIG. 7.



WITNESSES:

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No. 763,452. Patented June 28, 1904.

UNITED STATES PATENT OFFICE.

JESSE ALEXANDER, OF NEW YORK, N. Y., ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, OF TWO-THIRDS TO WILLIAM H. K. DAVEY, OF BELLEVILLE, NEW JERSEY.

TYPE-WRITER.

SPECIFICATION forming part of Letters Patent No. 763,452, dated June 28, 1904.

Application filed December 13, 1900. Serial No. 39,669. (No model.)

To all whom it may concern:

Be it known that I, JESSE ALEXANDER, a citizen of the United States, and a resident of the city of New York, borough of Manhattan, in the county and State of New York, have invented a new and Improved Type-Writer, of which the following is a full, clear, and exact description.

This invention relates to improvements in type-writing machines; and the object is to provide a type-writing machine of comparatively simple construction so arranged that the type-carrying bars and operating-levers may be moved to printing operation by a very little pressure and upon release be quickly returned to their normal position.

I will describe a type-writer embodying my invention and then point out the novel features in the appended claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a rear elevation of a type-writer embodying my invention. Fig. 2 is a sectional elevation of the same. Fig. 3 is a view of a blank from which certain links are formed. Fig. 4 is a view of a formed link. Fig. 5 is a detail view of the type-bar and lever mechanism, and Fig. 6 is a perspective view showing bearings in the finger-levers and connections.

Referring to the drawings, 1 designates the frame of the machine, comprising a base 2, the front uprights 3, the rear uprights 4, and the top plate 5. Secured in the forward portion of the frame is an arc-shaped plate 6, to which the type-bars 7 are fulcrumed. This plate 6 is longitudinally curved on its under side, so that on the operation of the type-bars each one will be thrown to the center for printing and to reduce the friction of the type-bars to a minimum. They are mounted to swing on a rod 8, attached to the plate 6, and having portions extended slightly into kerfs formed in the lower edge of said plate 6, the side walls of these kerfs forming guides for the type-bars and preventing any possible lateral movement thereof during their up-and-down movements. The type-bars have rearward and downward projecting portions 9, which have link connections 10 with vertical portions 11 of angle-levers, the lower or substantially horizontal portions 12 of which have link connections 13 with the finger-levers 14. At the angle portions these angle-levers are mounted to swing on a wire or rod 15, attached to a comb-like bar 16, secured at its ends to the main frame. The side walls of the spaces in this comb-like bar form guides for the angle-levers and prevent lateral movement thereof, and as the bearing of said bars is but slight within said recesses there will be but little friction. As a further means for preventing lateral or torsional movement of the angle-levers relatively to the type-bars and to the finger-levers the links 10 and 13 are of a novel form. The blank for each link is made substantially in the form of the letter **H**, as indicated in Fig. 3, and when the side members are turned to the position indicated in Fig. 4 the said side members will present flat surfaces to the parts with which they engage.

The inner ends of the finger-levers 14 are pivoted on a wire or rod 17, connected to the forward side of a comb-plate 18, the ends of which are attached to the frame of the machine. The ends of the levers 14 extend but slightly into the spaces of the comb-plate, so that very little resistance is presented and the bars are prevented from torsional movement. The forward portions of the finger-levers are guided in slots formed in a plate 19, attached to the frame of the machine, and of course upon the outer ends of these finger-levers are finger-pieces bearing the characters to be printed. Connected near the rear end of each finger-lever and forward of its pivotal point is the lower end of a spring 20, the upper end of which is connected to an interiorly-threaded sleeve 21, movable through an opening in a bar 22, attached to the frame of the machine, and engaging in this threaded sleeve is an adjusting-screw 23, the head of which bears upon the upper side of the bar 22. By manipulating the screw 23 it is ob-