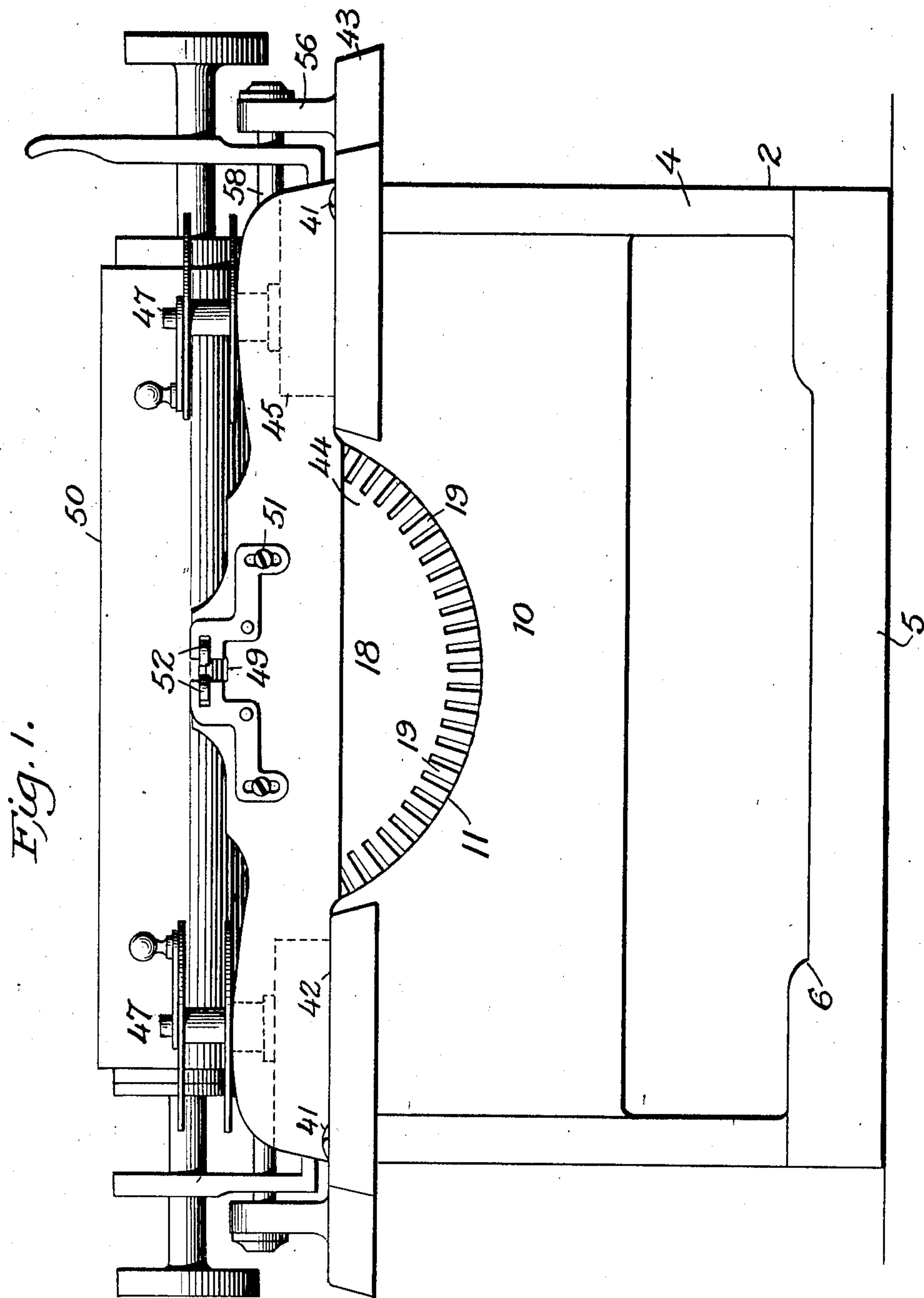


No. 876,308.

PATENTED JAN. 7, 1908.

G. A. SMITH.
TYPE WRITER FRAME.
APPLICATION FILED DEC. 17, 1906.

4 SHEETS—SHEET 1.



WITNESSES

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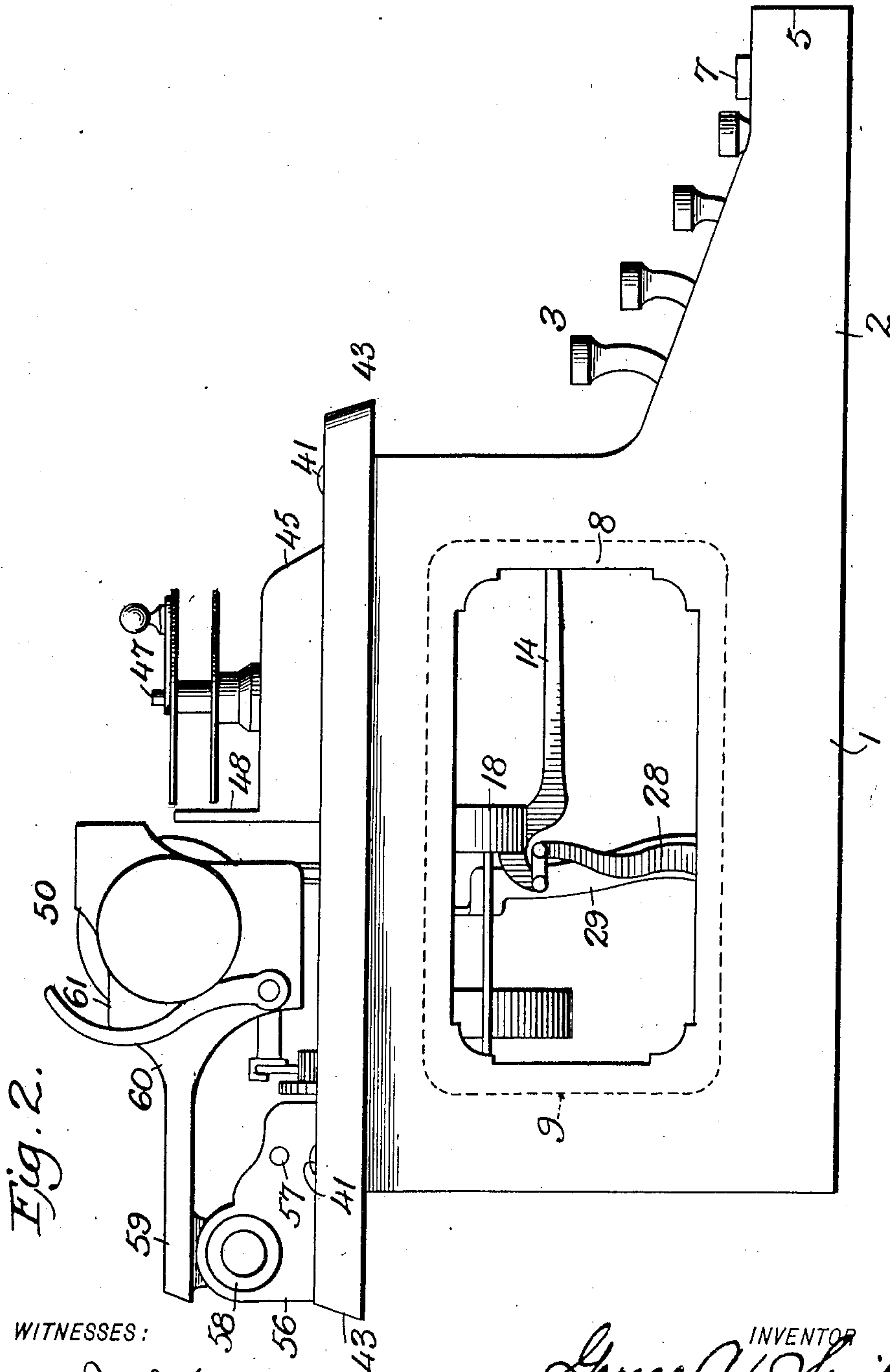
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4 SHEETS—SHEET 2.



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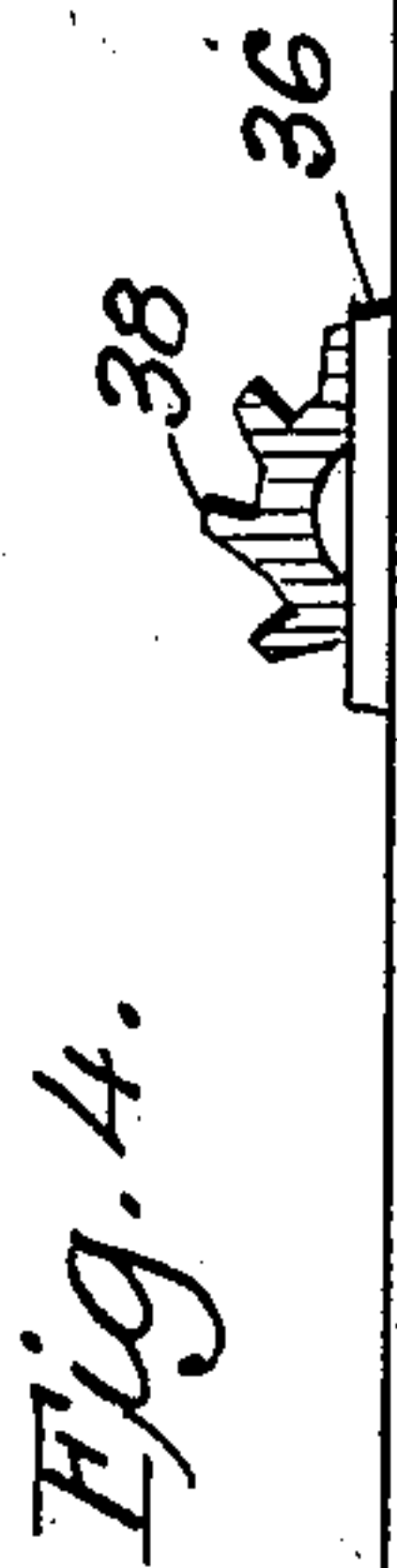
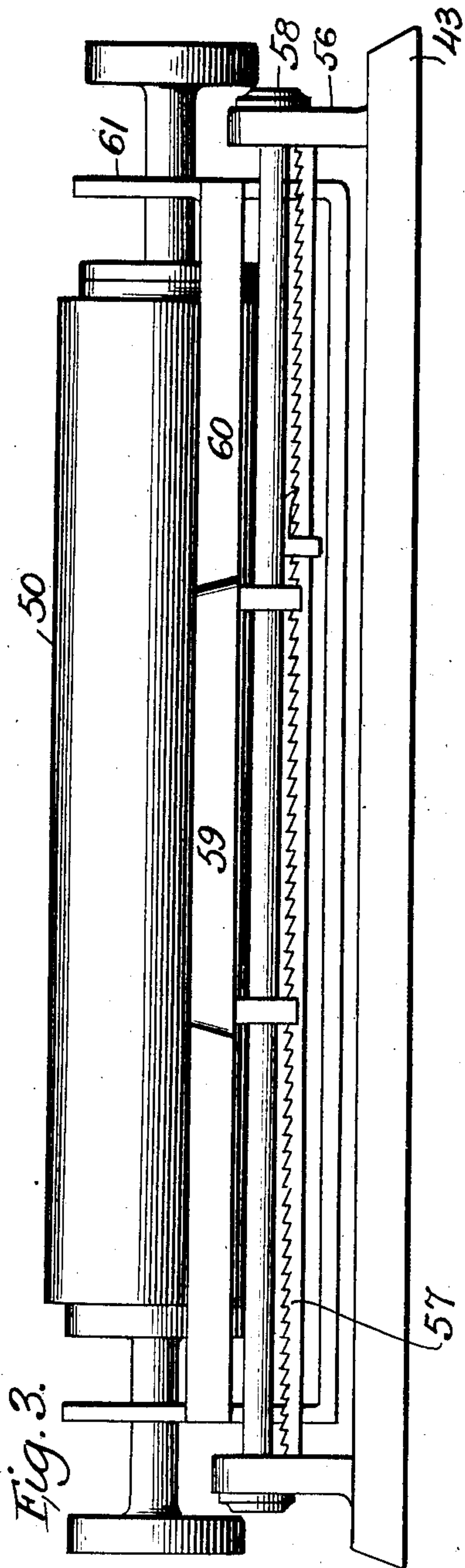
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4 SHEETS—SHEET 3.



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4 SHEETS—SHEET 4.

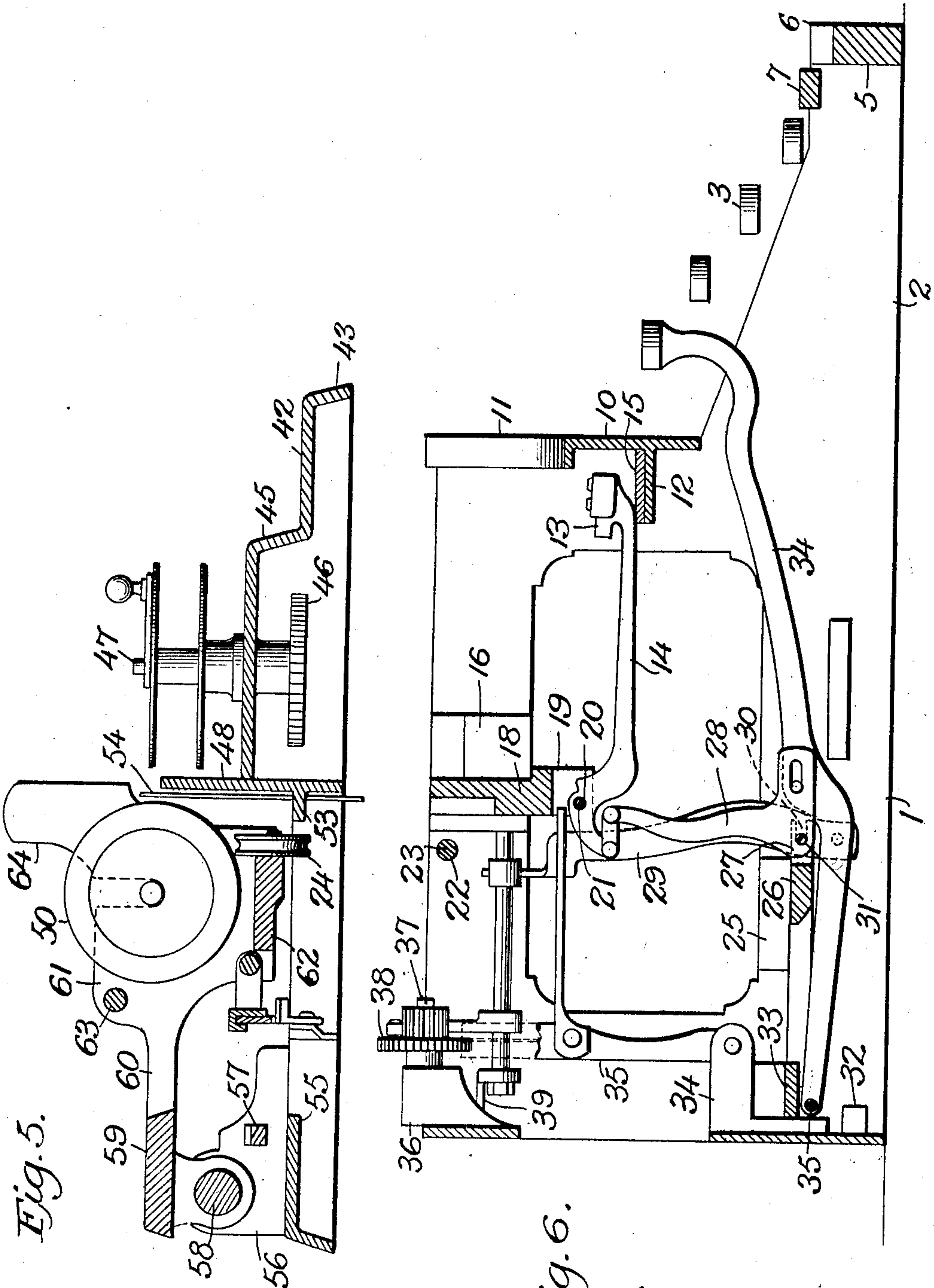


Fig. 5.

Fig. 6.

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UNITED STATES PATENT OFFICE.

GEORGE A. SMITH, OF NEW YORK, N. Y., ASSIGNOR OF SIXTEEN ONE-HUNDRED-AND-FOURTHS TO JAMES W. HENNESSEY, OF NEW YORK, N. Y.; FORTY-SIX ONE-HUNDRED-AND-FOURTHS TO ARTHUR LETTS, OF LOS ANGELES, CALIFORNIA, AND TWENTY-ONE ONE-HUNDRED-AND-FOURTHS TO FREDERICK H. WARD, OF BROOKLYN, NEW YORK.

TYPE-WRITER FRAME.

No. 876,308.

Specification of Letters Patent.

Patented Jan. 7, 1908.

Application filed December 17, 1906. Serial No. 348,293.

To all whom it may concern:

Be it known that I, GEORGE A. SMITH, a citizen of the United States of America, and a resident of the city, county, and State of New York, have invented certain new and useful Improvements in Type-Writer Frames, of which the following is a specification.

My invention relates to typewriters and more particularly to typewriter frames, having among its objects to provide a frame easily separated into two sections in order to facilitate the repair, cleaning, etc., of the inclosed component parts of the machine; and also to provide a frame of such a construction as to more thoroughly protect these parts, and a frame of such light weight as to greatly facilitate its transportation.

Further, my invention has for an object to provide a frame having supports for a novel arrangement of the operating parts permitting a construction of a greatly simplified form of machine.

With these and other objects in view, the invention consists of the construction and combination of parts hereinafter described and finally recited in the claims.

In the accompanying drawings illustrating my invention: Figure 1 is a front elevation of my improved typewriter frame. Fig. 2 is a side elevation of the same. Fig. 3 is a rear elevation of the upper frame, showing the carriage and the rail supporting said carriage. Fig. 4 is a rear elevation of the lower frame, showing the rectangular opening and the parts supported by the rear wall. Fig. 5 is a transverse sectional view of the upper frame on line 5 5 of Fig. 1. Fig. 6 is a similar sectional view of the lower frame on line 6 6 of Fig. 1.

Similar characters of reference denote corresponding parts throughout the several views.

1 denotes the lower section of the main frame, of skeleton form, approximately rectangular in shape and having an integrally-cast forwardly-sloping portion 2 at the front, said portion being open to permit the arrangement and use of the finger bars 3. The upper edge of said portion 2 is provided with inwardly extending flanges 4 which in part are inclined and in part are parallel with the bottom near the front bar 5, said front bar 5 having a longitudinal recess or depressed

portion 6 to facilitate the use of the spacer bar 7. The lower frame 1 is provided with approximately rectangular openings 8 in the back and sides, said openings being adapted to be covered by suitable plates 9, preferably aluminium, to better protect the parts inclosed. Suitably supported in said frame is a front plate 10 provided with an inwardly flanged semicircular opening 11 at the top and a lower inwardly projecting rib 12 conforming to the shape of the opening 11. Said rib 12 supports the type ends 13 of the type bars 14 and is adapted to carry a felt strip 15 for lessening the force of contact on the return movement of said type bars.

On the sides, intermediate between the front plate 10 and the rear wall of the frame 1, said frame is provided with integrally-cast supports 16 for a horizontal cross-piece 17 having an attached semi-circular plate 18. Said plate 18 is kerfed at 19 on its lower curved portion to allow the upward movement of the type bars 14 and has perforations 20 in said kerfed portion 19, through which passes a rod 21 conforming to the curvature of the plate, and pivoting said bars 14. Adjacent to the supports of said plate 18 on the frame 1, are perforations 22 supporting a transverse ribbon shifting rod 23 which controls the direction of the ribbon movement and performs a second function of acting as a way-rod for the carriage wheel 24. Immediately beneath said ribbon shifting rod 23 and near the bottom edge of the frame 1, said frame has supports 25 for a transverse bar 26, said bar being kerfed at 27 to allow the upward movement of the type and back spacer actuating levers 28 and 29, and provided with a longitudinal groove or forked portion 30 extending through the kerf 27. In said groove is retained a fulcrum rod 31 pivoting the levers 28 and 29. Extending along the bottom of the rear wall of the main frame 1 is an inwardly projecting rib 32 cast integral with the frame. Above said rib is a flange 33, which, in combination with said rib forms a recess or housing for the extremities of the finger levers 34 pivoted on a transverse rod 35. In the center of the rear wall above the flange 33 the frame 1 is provided with an inwardly projecting support or arm 34, to which is pivoted a lever 35. Above and adjacent to the upper extremity of said

lever, and cast integral with the frame 1, is a block 36 adapted to receive the shaft 37 of the escapement or carriage actuating pinion 38, and with said pinion extending above the upper edge of the main frame 1. Adjacent said block 36 and near the corner of the frame is a lug 39 adapted to support a bell 40.

Attached by screws 41 to the corner posts of the frame 1, though in such a manner as to be readily removed, is an upper section or covering frame 42. Said upper frame extends beyond the lines of the main frame 1 and is provided with a downwardly extending flange 43, save at the front where an approximately rectangular-shaped recess 44 extends rearwardly to the semi-circular plate 18, rendering the type bars 14 readily accessible. On the top frame 42 at both sides of the recess 44 are raised or turret-like portions 45 cast integral with the frame and adapted to contain the ribbon-actuating ratchets 46, said portions 45 being perforated to allow the passage of their spool-actuating shafts 47. At the rear of said portions 45 is an integrally-cast irregular-shaped vertical plate 48 provided with a recess 49 through which the type blocks 13 pass in striking the platen 50. Said vertical plate 48 is provided at the sides of said recess 49 with supports 51 for a type-bar guide or alining-mechanism 52. Beneath said guide and on the rear wall of the plate 48 is a rearwardly-projecting flange 53, adapted to support and guide the ribbon plate 54. Extending from said flange and towards the rear of the upper frame is an irregular opening 55 adapted to allow the easy operation of the mechanism, while to the rear of said opening, and on the sides of the covering frame 42 are vertical projections 56 adapted to support the tabulating rod 57 and a rail 58, on which moves the carriage 59. The arms 60 of the carriage are flattened near their forward extremities, forming plates 61. Said plates are connected by an integrally-cast lower connecting plate 62 and are adapted to support a platen shift rod 63, which rod controls the reciprocal movement of the platen 50 in a recess 64 in the top of said plates 61.

Among the advantages of my improved frame its sectional construction is of paramount importance. By it and the combination of the inclosed parts supported as described, the sections or frames are readily separated, simply through removing the screws and lifting the upper of said frames, without recourse to the usual disentanglement of the parts. With the upper frame removed the repairing, cleaning, etc., of the mechanism in the sections is greatly facilitated through the ready access to the neces-

sary parts. Further, the rectangular openings in the back and sides of the lower frame cooperate in providing ready means of access to the parts for the specified purposes. Though during use the machine is protected by the cover plates covering these openings, the total weight of the frame is minimized by the elimination of the heavier frame metal. Again, the raised portions on the removable upper frame protect the ribbon ratchets and allow the ready removal, repairing, cleaning, etc., of said ribbon ratchets, and the conformation of these portions lends a finished touch to the appearance of the machine. Finally, the arrangement of the lugs or supports, etc., herein specified, permits a construction of the inclosed parts which greatly lessens the number of parts necessary for the efficient operation of a machine, consequently reducing the liability of breakage, decreasing the weight, and otherwise adding to the merits of a machine.

Having thus described my invention what I claim as new and desire to secure by Letters-Patent, is:—

1. In a typewriter frame, a lower frame, an upper or covering frame consisting of raised portions protecting the ribbon ratchets, a vertical plate at the rear of said portions, an inwardly extending rib on the lower portion of said plate, supports for a carriage rail, all of said parts of the upper frame being integral with each other.

2. In a typewriter frame, a lower frame carrying supports for the operating mechanism, an upper or covering frame provided with an integral vertical plate, and raised portions adjacent thereto and inclosing the ribbon ratchets.

3. In a typewriter frame, a lower frame carrying supports for the operating mechanism, an upper or covering frame consisting of raised portions protecting the ribbon ratchets, a vertical plate at the rear of said portions, an inwardly extending rib on the lower portion of said plate, supports for a carriage rail, all of said parts of the upper frame being integral with each other.

4. In a typewriter frame, a lower frame carrying supports for the operating mechanism, an upper covering frame provided with an integral vertical plate having a lower rearwardly-extending rib adapted to support a ribbon-guiding plate.

Signed at New York city this 13th day of December, 1906.

GEORGE A. SMITH.

Witnesses:

JOHN H. HAZELTON
C. B. SCHROEDER.