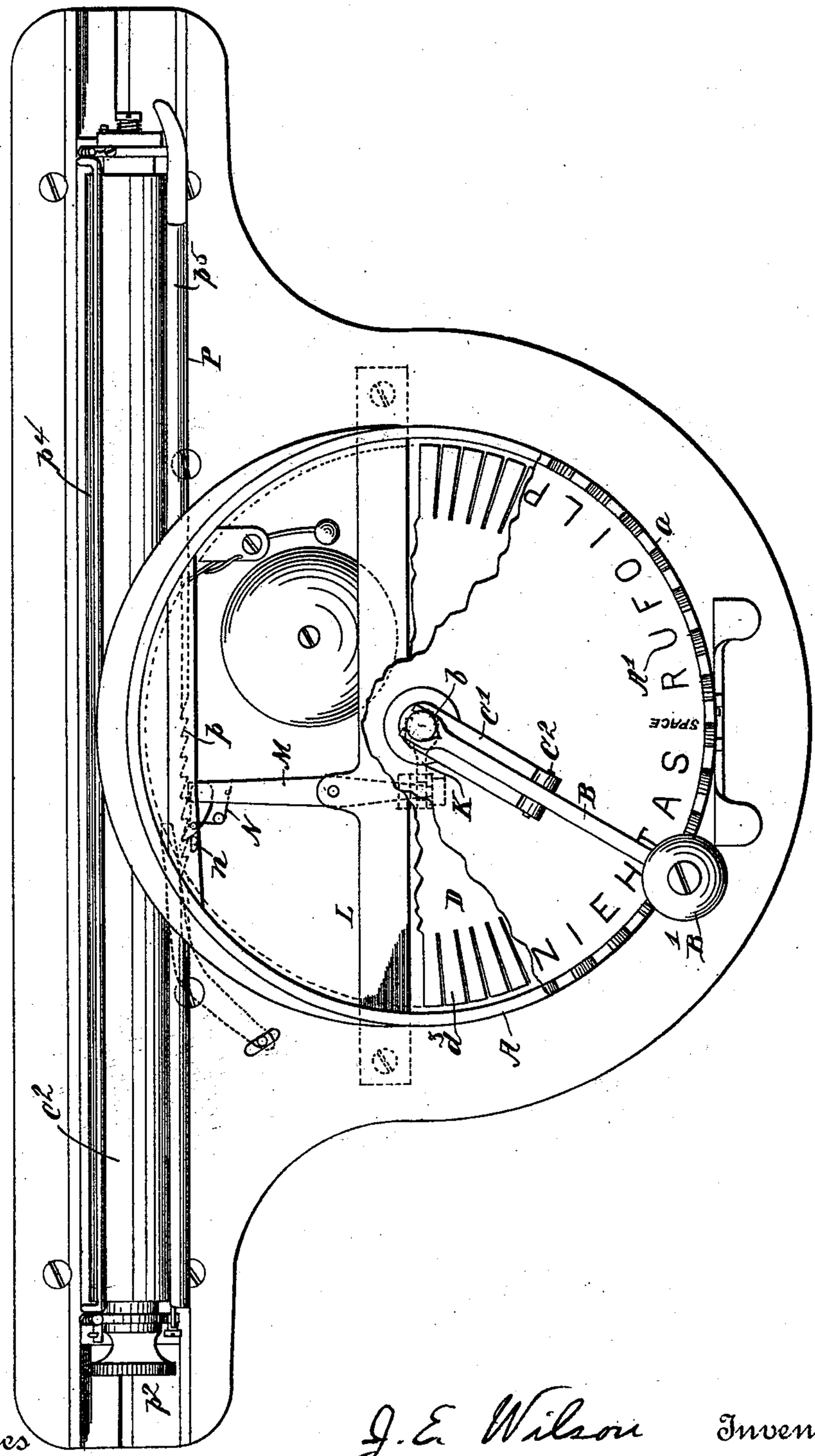
(No Model.) 2 Sheets—Sheet 1.

J. E. WILSON.

TYPE WRITING MACHINE.

No. 510,222. Patented Dec. 5, 1893.



Witnesses
V. P. Wilson.
W. M. V. Fowler.

J. E. Wilson Inventor
By his Attorney J. O. Fowler

THE NATIONAL LITHOGRAPHING COMPANY,
WASHINGTON, D. C.

(No Model.) 2 Sheets—Sheet 2.

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Fig. 3.

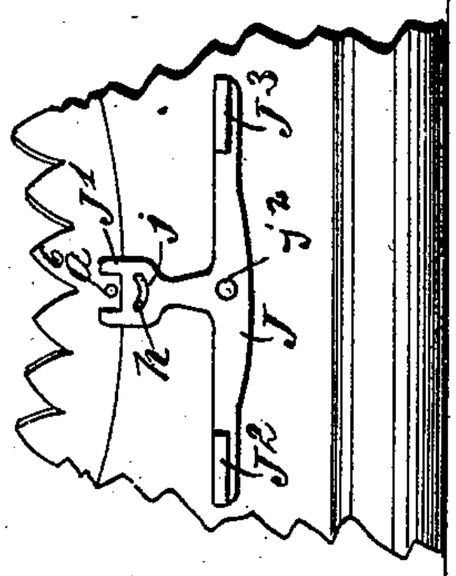


Fig. 2.

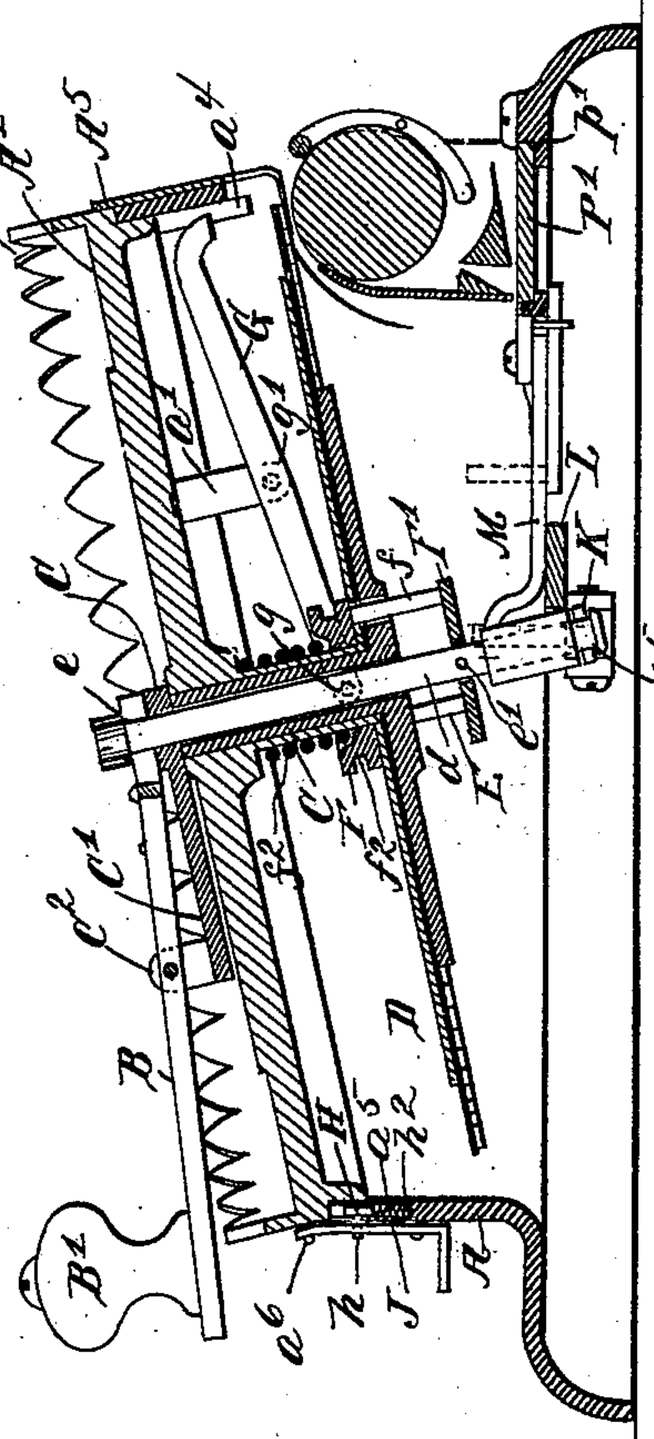
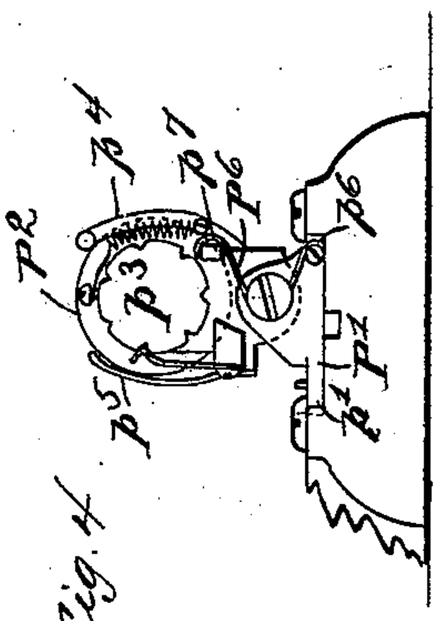


Fig. 4.



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By his Attorney J. O. Fowler

THE NATIONAL LITHOGRAPHING COMPANY,
WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JAMES E. WILSON, OF NEW YORK, N. Y., ASSIGNOR TO THE LIBERTY MANUFACTURING COMPANY, OF SAME PLACE.

TYPE-WRITING MACHINE.

SPECIFICATION forming part of Letters Patent No. 510,222, dated December 5, 1893.

Application filed July 30, 1892. Serial No. 441,758. (No model.)

To all whom it may concern:

Be it known that I, JAMES E. WILSON, a citizen of the United States, and a resident of New York, county and State of New York, certify that I have invented certain new and useful Improvements in Type-Writing Machines, of which the following is a specification.

My invention relates to writing machines of the class ordinarily designated as single key typewriters and has for its object a machine that can be employed in any kind of writing the essential features of which are simplicity, durability and perfect working qualities.

To attain the desired end my invention consists in the construction and arrangement of parts hereinafter first fully described and then pointed out in the claims.

In the drawings which form a part of this specification Figure 1 represents a plan view of my machine, a portion of the same being cut away. Fig. 2 is a central transverse section of the same; and Figs. 3 and 4 are respectively views in detail of my shift lock and my paper carriages.

Like letters wherever they occur indicate like parts in all the figures.

Referring again to the drawings A represents an inclined drum fixed centrally on the base and preferably integral therewith surmounting which is a dial A′ with a notched flange *a*, serving as a guide to the printing lever B, and causing it to descend accurately for each character. The dial A′, is centrally bored and serves to support in a movable relation a sleeve C, provided at its lower end with a type disk D provided with flexible type fingers d^3 supporting plate *d*, at its upper extremity with a lateral extending arm C′ terminating in vertical lugs C^2 between which is pivoted the printing lever B which lever has at its outer end a handle B′; and having its inner bifurcated end *b* in engagement with the annular groove *e* of the shaft E which works within the said sleeve C. Two disks F, F′, are rigidly connected by pins *f*, which pass through the type disk D the upper of which disks F works on the sleeve C and is provided with a groove f^2, by means of which the said disk is engaged with the inner bifurcated end *g*, of the hammer G, pivoted at *g′* to a lug *a′* depending from the dial A′ the outer extremity of said hammer serving to depress the type fingers d^3. The lower disk F′ is secured to the central shaft E by a pin *e′*. A spiral spring f^2 is located between the disk F and the dial A′ which serves to normally hold the shaft E, grooved disk F and consequently the inner end of the hammer G in a depressed relation. The drum A is provided with a vertical groove a^4 which serves as a guide for the outer extremity of the hammer G, by which precision of stroke is secured.

The shell of the drum A is provided with a vertical hole a^5 in which reciprocates a rod H provided with a laterally extending pin *h*. The rod H is normally sustained in an elevated position by a spring h^2. The pin *h* works in a curved slot *j* of my three armed shift lever J pivoted at j^2 to the exterior of the drum A and is normally in either one raised extremity of said slot *j* or else the other according to whether the lever J is pushed to the right hand or the left, the said pin *h* serving to hold and lock the said shift lever in either a right hand or left hand position. The bifurcated vertical arm J′ of my shift lever serves to carry the pin a^6, projecting from the dial A′ and consequently the said dial to the right or left whenever the shift lever J is operated by means of the horizontal operating plates or keys J^2, J^3—the lever or hammer G thus being caused to depress either a type finger d^3 of the type disk provided with a capital type face, or an alternate adjacent type finger provided with a lower case type face, whenever the printing lever B is operated.

The horizontal bifurcated arm of an elbow lever K pivoted on the cross arm L within the drum A, engages a groove e^5 formed in the lower extremity of the shaft E, and the depression of the printing lever B and consequent elevation of the shaft E will tilt the said elbow lever K causing the vertical arm of the same to move the bifurcated extremity of the horizontal lever M also pivoted to the cross arm L to the left. The return movements caused primarily by the expansion of the spring f^2 upon the upward movement of the printing lever B serves to cause the pawl N secured to the longer arm of the horizontal

lever M to move to the right and to carry the paper carriage P along with the same by means of the engagement with the serrated rack *p*, of the carriage P of the said pawl N.

The extremity of the pawl N normally lies adjacent and in engagement with a pin *n*, secured to the base of the machine, thus holding the said pawl against the rack *p*, that the parts become locked and the paper carriage P cannot be moved except upon a subsequent operation of the printing lever B whereby the carriage P is again fed along one notch as hereinbefore described.

The paper carriage has a flat lower portion P′ which moves in keepers *p*′, in the base and has the rack *p* on its inner side. In the carriage is connected a rubber roll P^2 which serves as a feed roll and a printing platen, the roll having a thumb piece p^2 at one end by which it is revolved and a ratchet p^3 preventing backward movement. The carriage P^2 is also provided with a wire clamp p^4 and friction clamp p^5 to hold the paper in position. To one end of the frame in which is located roll p^2 is secured one extremity p^6 of a coiled spring P^6 the other end p^7 being attached to the carriage P. The other end of the frame containing the roll P^2 is similarly secured to the carriage, and a hinge is thus formed which normally holds the roll P^2 against the friction clamp p^5, but which allows the roll to be turned back in order that the written matter may be inspected.

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

1. A typewriter comprising a drum or frame having an inclined movable dial provided with a projecting pin mounted on its face, the said shell being provided with a hole constructed and arranged to contain a vertical locking rod a vertical rod provided with a laterally extending locking pin, a sustaining spring, a printing roller arranged adjacent to the drum, a revoluble shaft extending through the dial and provided with a printing lever, a plate carried by the shaft and provided with type fingers which extend above the printing roller, a lever mechanism for operating the type-fingers, a vertical shift lever for actuating the dial provided with a bifurcated extension constructed and arranged to engage the pin of the dial, and also provided with a concaved slot constructed and arranged to also engage the locking pin of said vertical rod and hold the same in either one of its higher positions substantially as described.

2. In a type writer, a drum or frame the shell of which is provided with a vertical hole, a rod provided with a laterally extending pin working therein, a sustaining spring, and a shift lever provided with a concaved slot constructed and arranged to engage the said lateral pin substantially as described.

3. In a typewriter comprising a drum or frame having a dial mounted on its face provided with a pin projecting therefrom, a three armed shift lever, the two lower arms serving as keys and the upper arm being provided with bifurcated extensions for operating the dial pin, and with a slot for engaging a locking pin, and a locking pin substantially as described.

4. A type writer comprising a drum or frame having a dial provided with a pin projecting therefrom mounted on its face, a printing roller arranged adjacent to the drum, a revoluble shaft extending through the dial and provided with a printing lever, a plate carried by the shaft and provided with type fingers which extend above the printing roller, a lever mechanism for operating the type fingers, a three armed shift lever for actuating the dial the two lower arms serving as keys and the upper arm being provided with bifurcated extensions for operating the dial pin, and with a slot for engaging a locking pin, and a locking pin substantially as described.

5. In a typewriter a sliding carriage having a movable frame provided with a roll thereon, and a hinge consisting of a coiled spring, one end of which is secured to the carriage and the other portion of which is secured to the frame containing the roll, in combination with a drum or frame provided with a rearward cut away portion in which the carriage works, substantially as described.

In testimony of the foregoing specification I do hereby sign the same, in the city of New York, county and State of New York, this 12th day of July, A. D. 1888.

JAMES E. WILSON.

Witnesses:
J. ODELL FOWLER, Jr.,
H. H. HULL.