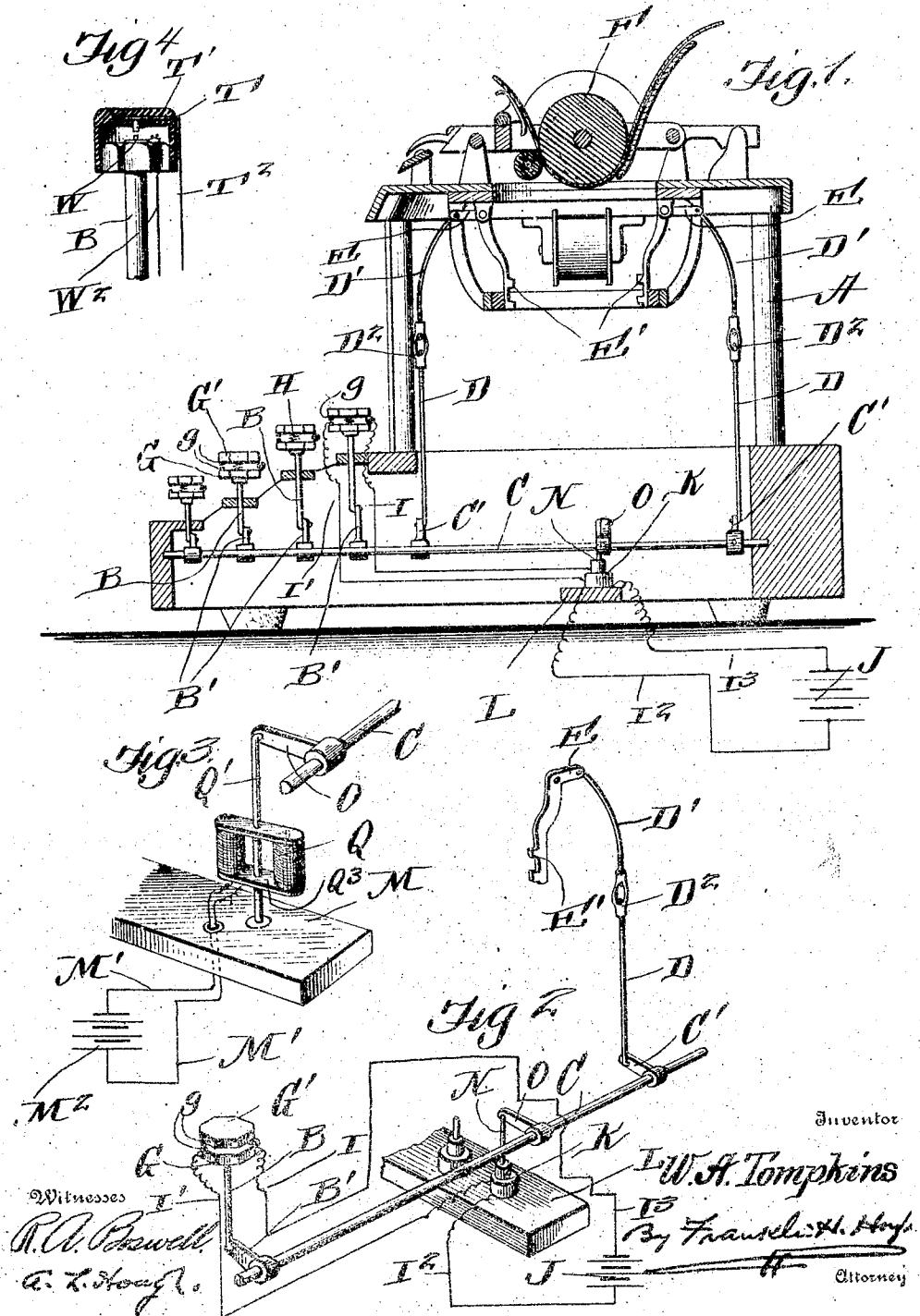


W. A. TOMPKINS.
TYPE WRITER ATTACHMENT.
APPLICATION FILED AUG. 26, 1905.

938,354.

Patented Oct. 26, 1909.
2 SHEETS—SHEET 1.



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2 SHEETS—SHEET 2.

Fig. 5.

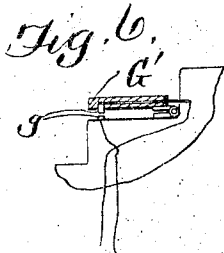
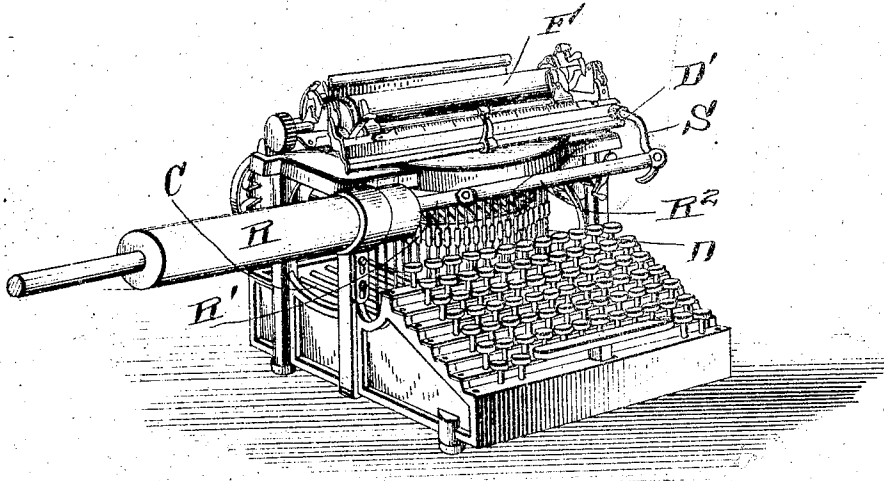
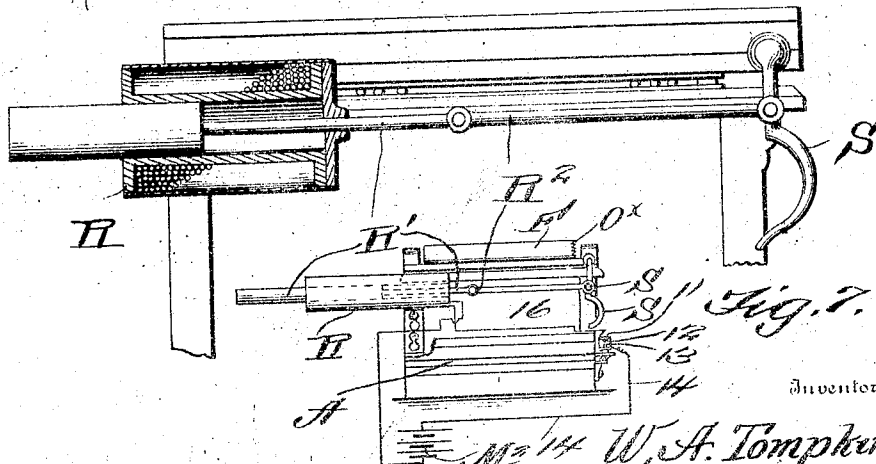


Fig. 8.



Witnesses

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UNITED STATES PATENT OFFICE.

WEBSTER A. TOMPKINS, OF PORTLAND, OREGON.

TYPE-WRITER ATTACHMENT.

938,354.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, WEBSTER A. TOMPKINS, a citizen of the United States, residing at Portland, in the county of Multnomah and State of Oregon, have invented certain new and useful improvements in Type-Writer Attachments; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to new and useful improvements in attachments for typewriters for operating the same electrically, and comprises means whereby as a slight pressure is applied to a key, a type bar may be actuated and thrown against the platen, and also in the provision of electrical means for rotating the platen, spacing the lines and actuating escapement mechanism.

My invention consists in various details of construction and in combinations and arrangements of parts which will be hereinafter fully described and then specifically defined in the appended claim.

I illustrate my invention in the accompanying drawings, in which:—

Figure 1 is a vertical sectional view through a typewriter, showing my attachment as applied thereto. Fig. 2 is a perspective diagrammatic view, showing a key and type carrying lever and immediate connections. Fig. 3 is an enlarged detail view of a slightly modified form of means for actuating the rock shaft carrying the type bar. Fig. 4 is a sectional view, showing a slightly modified form of the key attachment. Fig. 5 is a perspective view of means for actuating the platen. Fig. 6 is a detail sectional view through a key showing electrical connections therewith. Fig. 7 is an elevation of the platen actuating mechanism, showing electrical circuit wires connected therewith, and Fig. 8 is a detail sectional view through the solenoid forming a part of the platen actuating mechanism.

Reference now being had to the details of the drawings by characters, A designates an ordinary typewriter frame, having a bank of keys, each of which is supported on an angled rod B, the lower end of which is pivotally connected to a crank arm B' fixed

to a rock shaft C. Each of said shafts C, there being one for each type or character, has a crank arm C', having connection by means of the rods D and D' with an angled type-carrying lever E. Said rods D and D' are connected together by means of a turn buckle D², whereby any wear may be taken up. Said typewriter may be of any of the well-known makes, provided with a platen F against which the type E' carried by the lever E is adapted to strike as the outer ends of the levers E are tilted down.

Referring to Fig. 1 of the drawings, it will be noted that the keys are made up of two sections, designated in the drawings by letters G and G', the former of which is fastened to the rods B, and the latter hinged to the key section G at one side. A spring H serves to normally hold the two key sections separated, and each of said sections is provided with a contact point g, which, as the key section G' is depressed, may be thrown into contact with a point on the lower key section, for the purpose of closing the electric circuit.

In Fig. 1 of the drawings, it will be noted that the positive and negative wires of the lower circuit, which wires are designated, respectively, by letters I and I', are connected, one to the lower key section, and the other to the upper key section, and said wires are also connected to the two poles of the solenoid K, which is mounted upon a non-conducting strip L. Said solenoid K is also connected electrically by means of wires I² and I³ with the battery J. The core or plunger N of the solenoid is pivotally connected to a crank arm O, fixed to the rock shaft C, and every time the circuit is closed, said core, which is of soft iron, will be energized and actuated longitudinally, for the purpose of rocking the shaft C, and through its connections cause a type-carrying lever to be actuated. It will be understood that there are as many solenoids as there are keys, and each similarly connected electrically, as described.

Referring to Fig. 3 of the drawings, I have shown a slight modification of the electrical means for rocking the shaft, in which I provide an ordinary relay Q which is mounted upon a rod Q', which in turn is pivotally connected to the crank arm O fixed to the rock shaft C, and said rod Q' is adapted to pass through an insulating bushing Q² held in a hole in the plate M, which

latter is of metal and forms a common field for all of the various magnets, only one of the latter, however, being shown in Fig. 3 of the drawings. Each magnet is connected
5 by means of a wire M' with a battery M^2 , and each time the circuit is closed by the depression of a key, the magnet will be thrown toward the plate or field M and cause the shaft to rock.

10 In Fig. 8 of the drawings, I have shown a solenoid R , having a core R' , which is connected with a rod R^2 , which in turn is connected to the tilting platen actuating handle S . Said solenoid R is so mounted upon
15 a pivot R^1 that it will have a thrusting movement to allow for the movements of the platen handle S in rotating the platen, spacing for the lines and the returning of the carriage as in the Smith Premier typewriter.
20

Referring to Fig. 4 of the drawings, I have shown a slight modification of key attachment, in which a rubber cap T is provided, which may be easily slipped over the
25 key of an ordinary typewriter, and carries a contact point T' , having an electrical wire T^2 connected thereto, while to the ordinary key is fastened a contact point W to which an electrical wire W^2 is connected. Under
30 the pressure of an operator's finger, the contact may be made by the elastic wall of the cap yielding, and after pressure is relieved, the circuit will break by the top of the cap returning to its normal position. By this
35 construction an ordinary typewriter may be equipped with my electrical apparatus.

In Figs. 7 and 8 of the drawings will be seen a key 11 carrying a contact point 12 which is designed to be depressed against a
40 contact point 13 which is electrically connected through the medium of the wire 14 with the battery M^2 and also electrical connections through the wires 15 and 16 with the respective poles of the solenoid R for
45 rotating the platen F and spacing the lines as in the Smith Premier, the carriage return lever S also rotates the platen by means of a pawl which it carries and which engages

the two ratchets O^* on the end of the platen roll. The carriage return lever being jour-
naled to the carriage, a quick thrust of the
50 solenoid connecting rod R^2 acting in the direction of the arrow (Fig. 8 of the drawings), will first rotate the platen as it gradually overcomes the latent inertia of the
55 carrier.

By the provision of the apparatus shown and described, it will be noted that a simple and efficient means is provided, whereby a
slight touch without any appreciable pres-
60 sure, sufficient only to close the circuit, will suffice to provide a constant and even stroke to the hammers, making wax coated stencils and avoiding too heavy a stroke which
65 would cut out the center of the letter, or a too light stroke which would not break sufficiently to allow for a free flow of ink.

While I have shown a particular form of electrical apparatus illustrating my invention, it will be understood that I may vary
70 the detailed construction of the same, if desired, without in any way departing from the spirit of the invention.

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

In a typewriter, the combination of a rock shaft, a series of type carrying levers, connections between the same and said shaft, a
solenoid having a core pivotally connected
80 to and adapted to rock said shaft or actuate said key levers, a battery in circuit with said solenoid, key sections having contact points, and electrical connections between said sections and the solenoid, a platen, a member
85 for actuating said platen, a solenoid, a core of said solenoid positively connected to said platen actuating member, a circuit closer and electrical connections between the same
90 and said solenoid, as set forth.

In testimony whereof I hereunto affix my signature in the presence of two witnesses.

WEBSTER A. TOMPKINS.

Witnesses:

O. C. BUCHANAN,
VIRGIL COOMER.