

No. 710,264.

Patented Sept. 30, 1902.

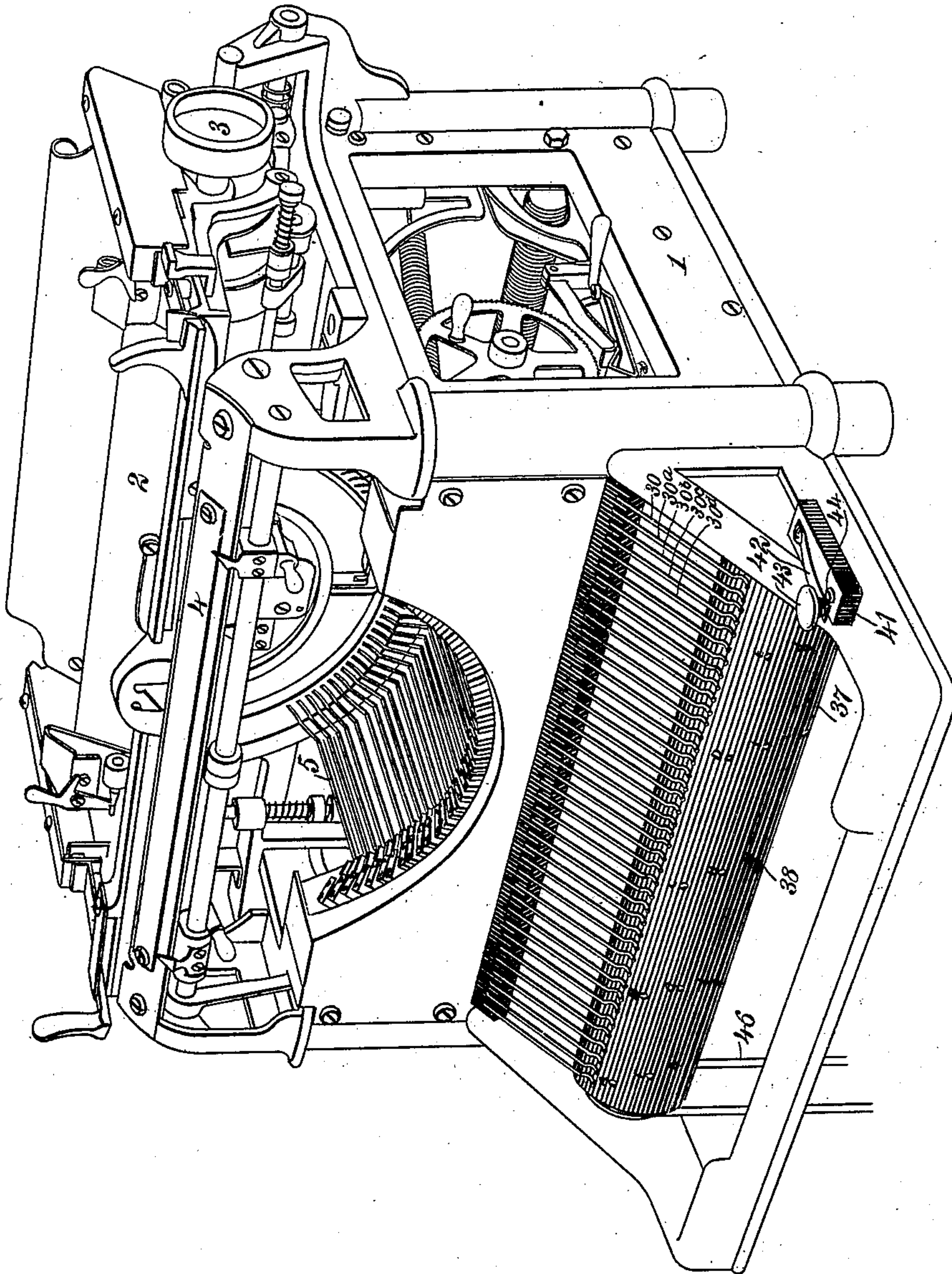
C. GIBBS.
ELECTRICAL TYPE WRITER.

(Application filed Apr. 18, 1902.)

(No Model.)

3 Sheets—Sheet 1

Fig. 1.



WITNESSES:

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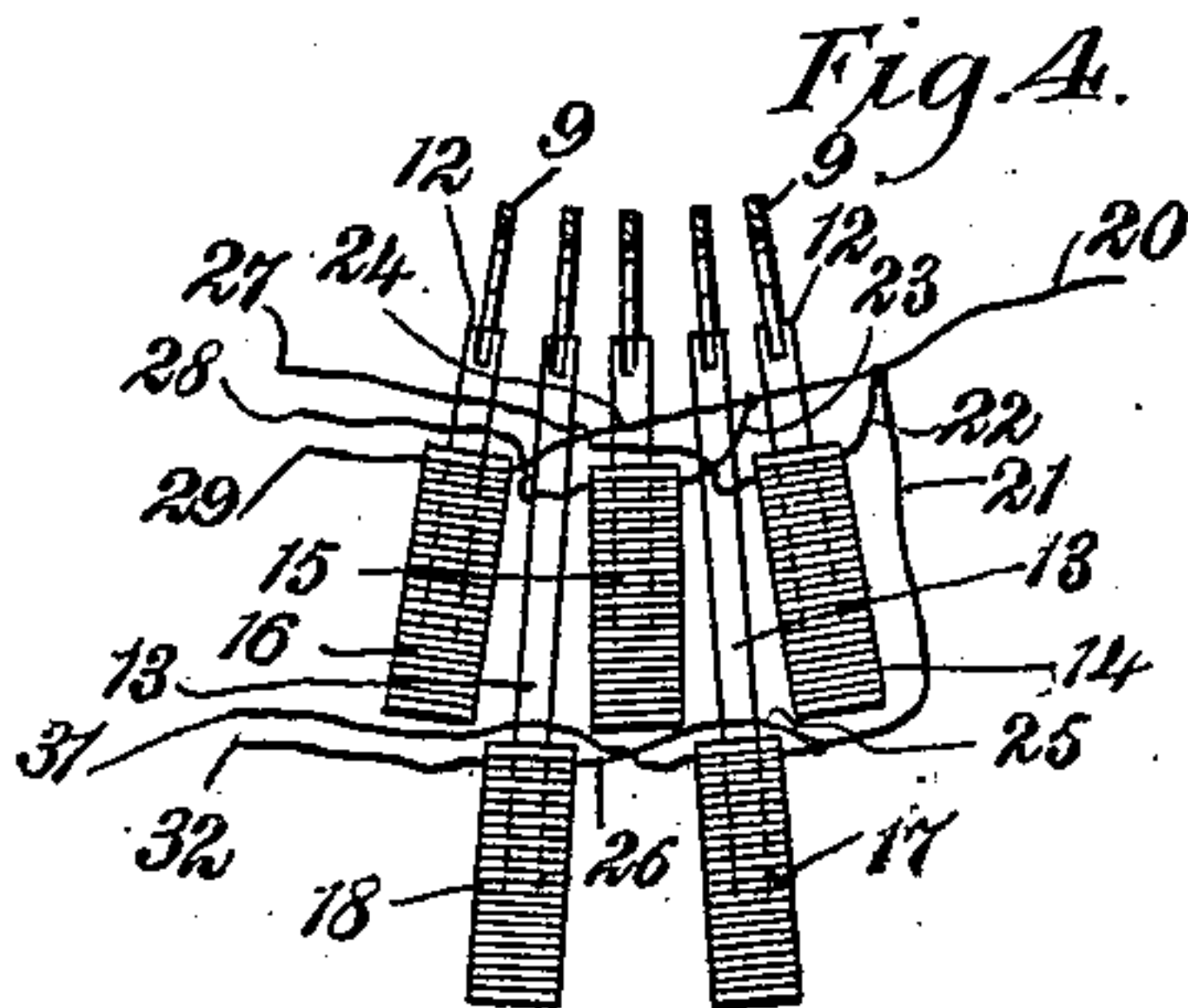
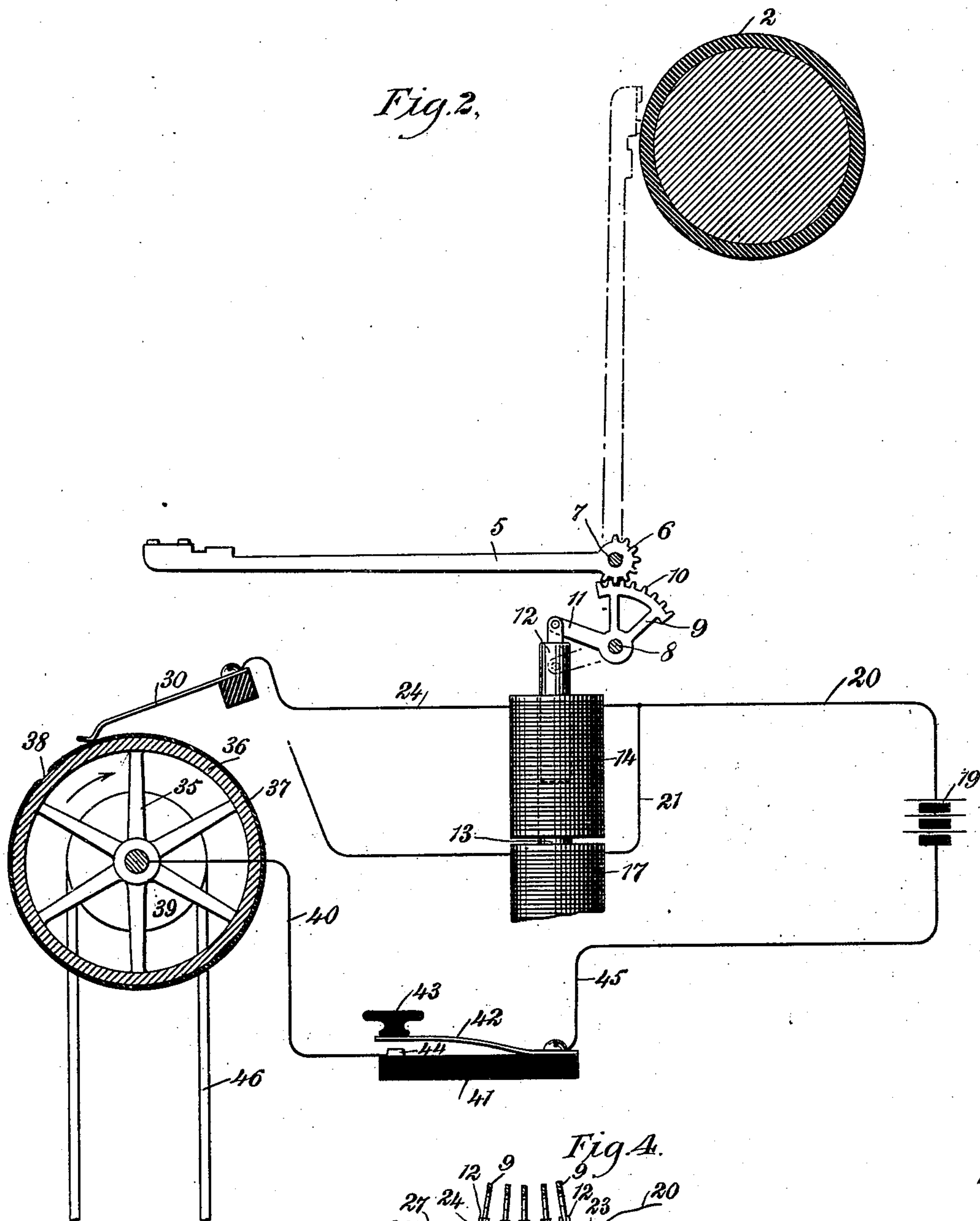
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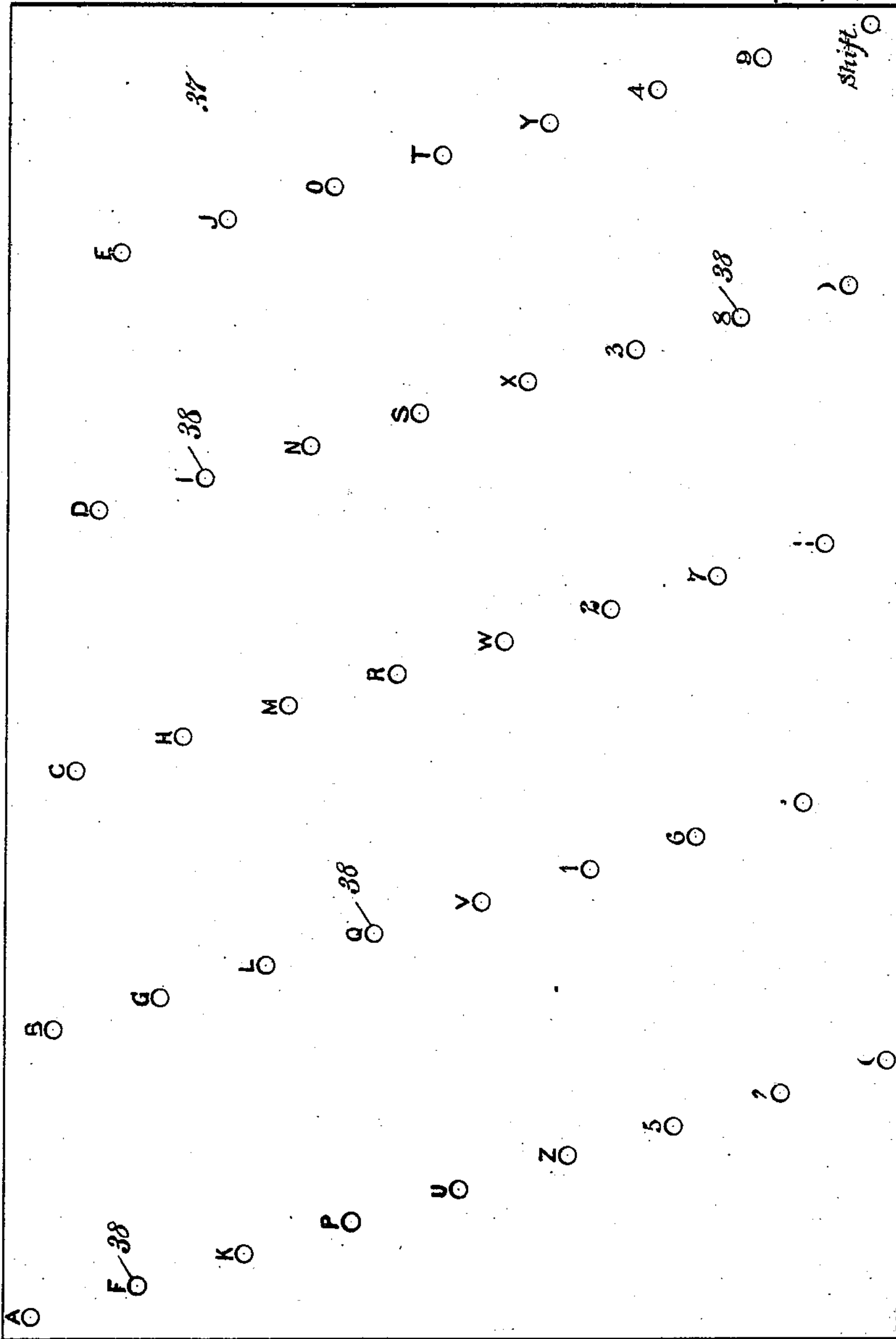
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3 Sheets—Sheet 3.

Fig. 3.



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UNITED STATES PATENT OFFICE.

CHARLES GIBBS, OF NEW YORK, N. Y.

ELECTRICAL TYPE-WRITER.

SPECIFICATION forming part of Letters Patent No. 710,264, dated September 30, 1902.

Application filed April 18, 1902. Serial No. 103,521. (No model.)

To all whom it may concern:

Be it known that I, CHARLES GIBBS, a citizen of the United States, and a resident of the city of New York, borough of the Bronx, in the county and State of New York, have invented new and useful Improvements in Electrical Type-Writers, of which the following is a full, clear, and exact description.

My invention relates to electrical type-writers—that is, to type-writers operated by electricity.

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 perspective view showing my invention as applied to an ordinary Underwood type-writer. Fig. 2 is a fragmentary vertical section showing the arrangement of the type-bars, solenoids, and contacts. Fig. 3 is a plan view showing the development of the insulating-cylinder provided with contact-surfaces, and Fig. 4 is a reduced fragmentary section showing the disposition of the solenoids and the wires connected therewith.

An ordinary mechanical type-writer 1 is provided with the usual parts—such as platen-roller 2, hand-wheel 3, spacing device 4, type-bars 5, and the other parts—all arranged in the usual manner. Each type-bar 5 is provided with a sector-shaped gear 6 and is pivotally mounted upon a shaft 7. Upon another shaft 8 is mounted a sector 9, provided with teeth 10 and integrally connected with an arm 11, thus constituting a toothed lever for actuating the type-bar. This arm is connected with a solenoid-core 12 or 13. The solenoids 14 15 16 are preferably arranged in an arc or a circle, as indicated in Fig. 4, and below them are placed a series of other solenoids 17 18, also arranged in an arc of a circle, the two rows of solenoids being disposed, as shown, so that the individual solenoids appear in a staggering relation. This is for the purpose of economizing space, there being comparatively little room in which the solenoids may be placed. From the battery 19 a wire 20 is connected with several other wires 21 22 23 24 25 26, thus forming a series of parallel circuits. These wires run to the respective solenoids, and from the solenoids the wires 27 28 29 31 32 lead, respectively, to the spring

tongues or brushes 30 30^a 30^b 30^c 30^d, &c., the number of brushes being commensurate with the number of wires leading thereto. Members 35 carry a cylinder 36, made of conducting material and surrounded by an insulated cylinder 37, provided with holes or perforations 38, these holes or perforations being disposed in a staggered relation and in rows, as indicated in Figs. 1 and 3. A wheel 39 is connected with the cylinder 36 for the purpose of rotating the cylinder. The cylinder 36 is electrically connected with the wire 40 and the key 41, comprising a spring 42, a button 43, and a contact 44, this key being connected, by means of a wire 45, with the battery 19. The wheel 39 is provided with a belt 46, whereby it may be driven. The holes in the cylinder 37 are arranged in parallel spiral rows, as indicated by the plane development shown in Fig. 2.

The operation of my device is as follows: The operative arranges the mechanical type-writer in substantially the usual manner, and the belt 46 causes the cylinder 36 to rotate, carrying with it the insulating-cylinder 37. The tongues or brushes 30 30^a 30^b, &c., are disposed in alinement with the contact-holes 38 in the insulating-cylinder 37, so that the rotation of this cylinder brings the brushes into periodical contact with the cylinder 36 of conducting material. Each solenoid is separately connected with an individual brush, so that when the solenoid is energized the particular core 12 or 13 moves its particular sector 9, thereby actuating a particular type-bar 5 and causing the machine to make a particular letter. The electric circuit is not complete, however, until the button 43 is depressed so that the spring 42 touches the contact 44. When this happens, if one of the brushes is making contact with the cylinder 36 through one of the apertures 38 the solenoid corresponding to that particular aperture is energized, thus causing the corresponding type-bar to print a particular letter or to cause a movement of the type-writer analogous to that employed in making a letter. When the button 43 of the key is not depressed, the cylinder 36 revolves idly, the brushes making idle contact through the holes 38, the solenoids not being affected. The operative watches the rotating cylinder 37 until

the particular letter which is desired to be formed is almost under the row of brushes and then depresses the button 43. The mere depressing of the button alone is not sufficient to close the circuit unless the brushes happen to be in one of the holes. The key should therefore be depressed either just before the hole representing the desired lever passes under the row of brushes or at the latest while the brush is making contact with the cylinder 36 through the hole in question. In other words, the operative should depress the button either while the brush is making its contact through a hole representing a desired letter or just before the brush reaches the hole representing this letter. As the motion of the rotating cylinder may be either rapid or slow, the speed can be rendered suitable for any person whether skilled or unskilled in the use of the machine.

It will be observed, therefore, that I have produced a neat and compact electrical type-writer, simple in construction and having nearly all of its parts relating to electricity so disposed as to be readily accessible. It is a one-key type-writer and admits of general use.

I do not confine myself strictly to the above arrangement in which the key and rotating cylinder are placed immediately adjacent to the solenoids. They may be placed anywhere else without departing from the spirit of my invention. Neither do I limit myself to the particular mechanism above described.

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

1. An electric type-writer, comprising a mechanical type-writer provided with levers, a plurality of magnetic members connected individually with said levers for operating the same, a battery for energizing said magnetic members, a plurality of brushes connected separately with said magnetic members and provided with contact-surfaces, a revoluble member provided with contact-surfaces for engaging said brushes, means for actuating said revoluble member, and a manually-operated key connected with said cylinder and with said battery for the purpose of closing the circuit thereof.

2. An electric type-writer, comprising a mechanical type-writer provided with levers, a plurality of magnetic members connected individually with said levers for operating the same, a battery for energizing said magnetic members, brushes connected to said battery and provided with contact-surfaces, a member of conducting material, means for intermittently making and breaking contact between said brushes and said members, and a manually-operated key connected with said battery and with said member.

3. An electric type-writer comprising a me-

chanical type-writer provided with levers, a plurality of magnetic members connected individually with said levers for operating the same, a battery for energizing said magnetic members, brushes provided with contact-surfaces, a revoluble cylinder of conducting material, means for rotating the same, a jacket of insulating material provided with apertures and mounted upon said cylinder, said apertures being in alinement with said brushes, and a manually-operated key connected with said cylinder of conducting material and with said battery.

4. An electric type-writer, comprising a mechanical type-writer provided with levers, a plurality of magnetic members connected individually with said levers for operating the same, a battery for energizing said magnetic members, a series of separable contacts, means for automatically opening and closing said contacts in a predetermined relative order, and manually-operated mechanism provided with contacts free to open and close independently of said first-mentioned contact.

5. An electric type-writer, comprising a mechanical type-writer provided with levers, a plurality of magnetic members connected individually with said levers for operating the same, a source of electrical supply for energizing said magnetic members, a plurality of conductors connecting said source of electrical supply and said magnetic members together in parallel, a plurality of brush-contacts connected individually with said conductors, a revoluble member provided with a series of contact-surfaces to be engaged individually by said brush-contacts, means for causing said brush-contacts to engage said contact-surfaces periodically and in a predetermined order, and a single electric key connected with said member and with said source of electrical supply for opening and closing the circuit thereof at will.

6. An electric type-writer, comprising a mechanical type-writer provided with levers, a plurality of magnetic members connected individually with said levers for operating the same, a battery for energizing said magnetic members, a plurality of brushes connected in parallel with said battery and said magnetic members, a cylinder of conducting material, an insulating-jacket mounted thereon and provided with holes disposed in parallel spiral rows, said holes being in alinement with said brushes, and a single key electrically connected with said cylinder and said battery.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CHARLES GIBBS.

Witnesses:

JNO. M. RITTER,
WALTON HARRISON.