

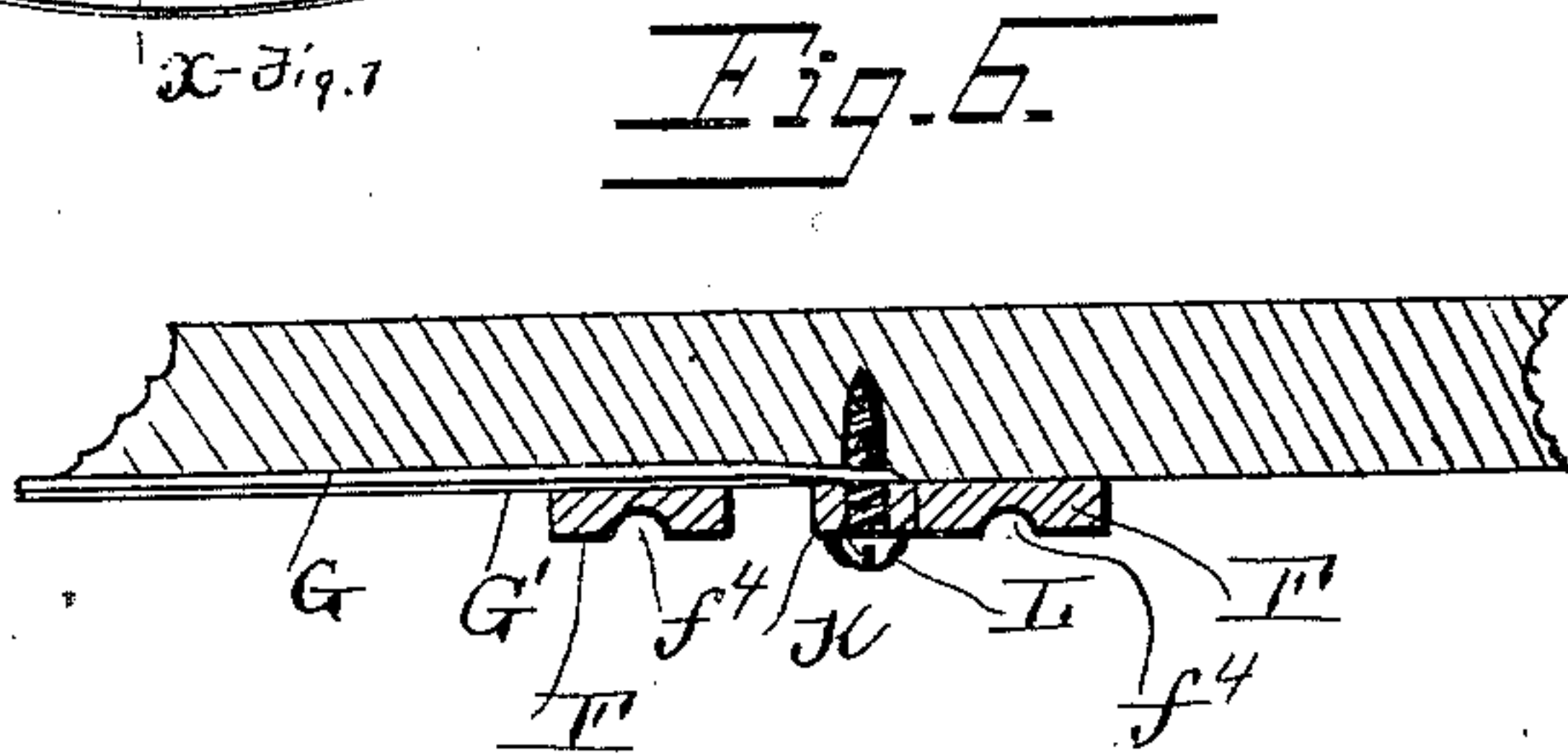
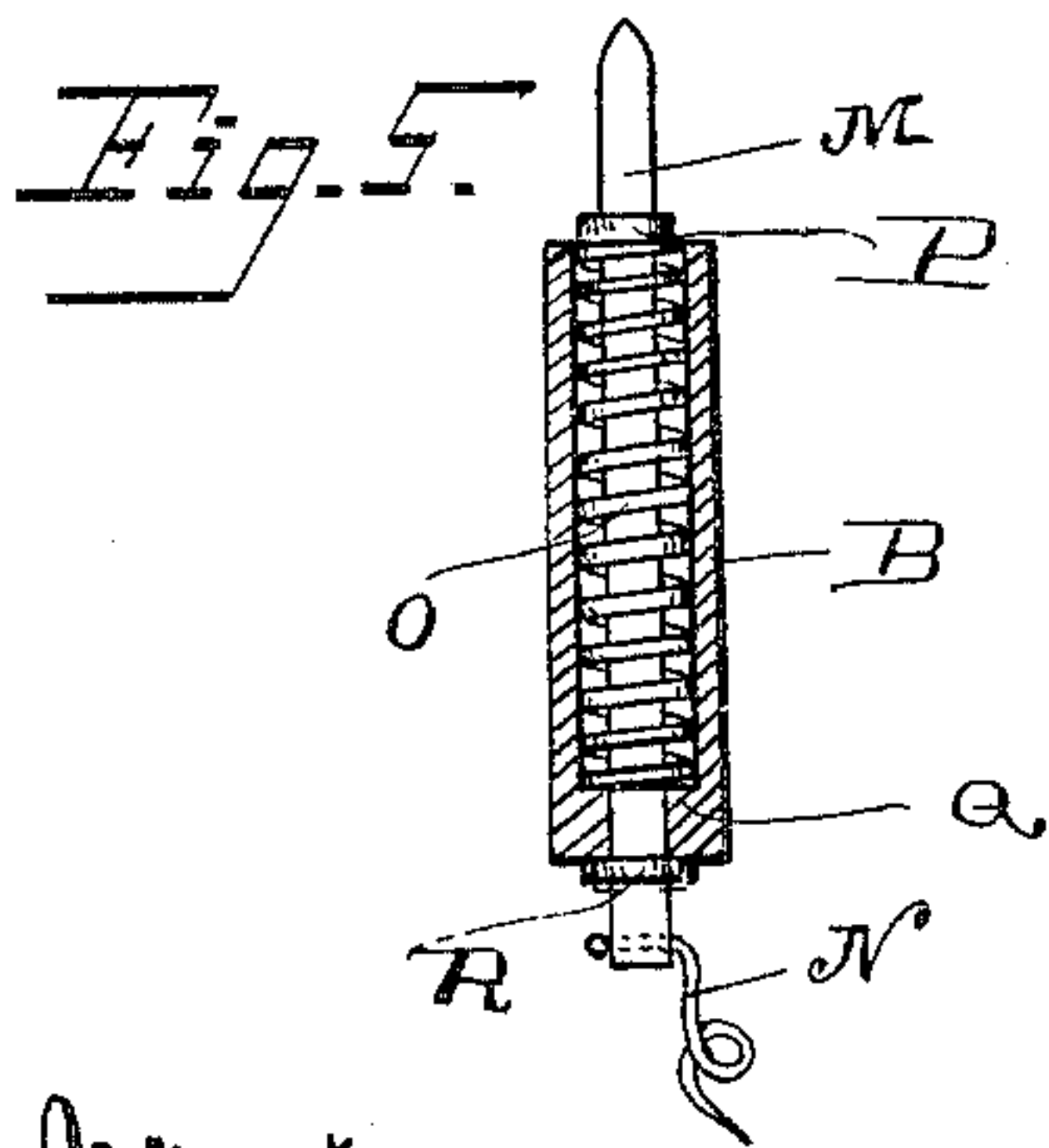
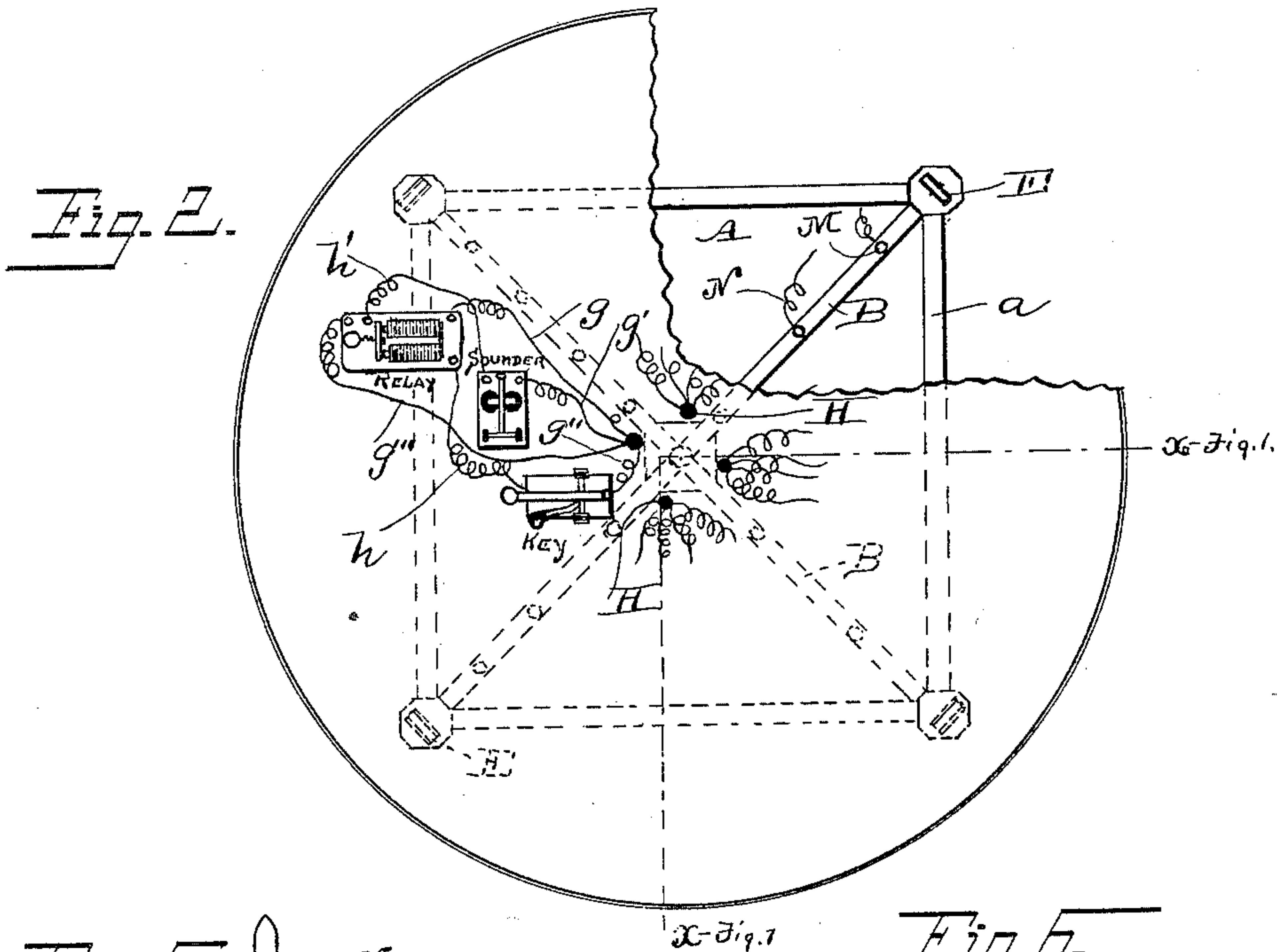
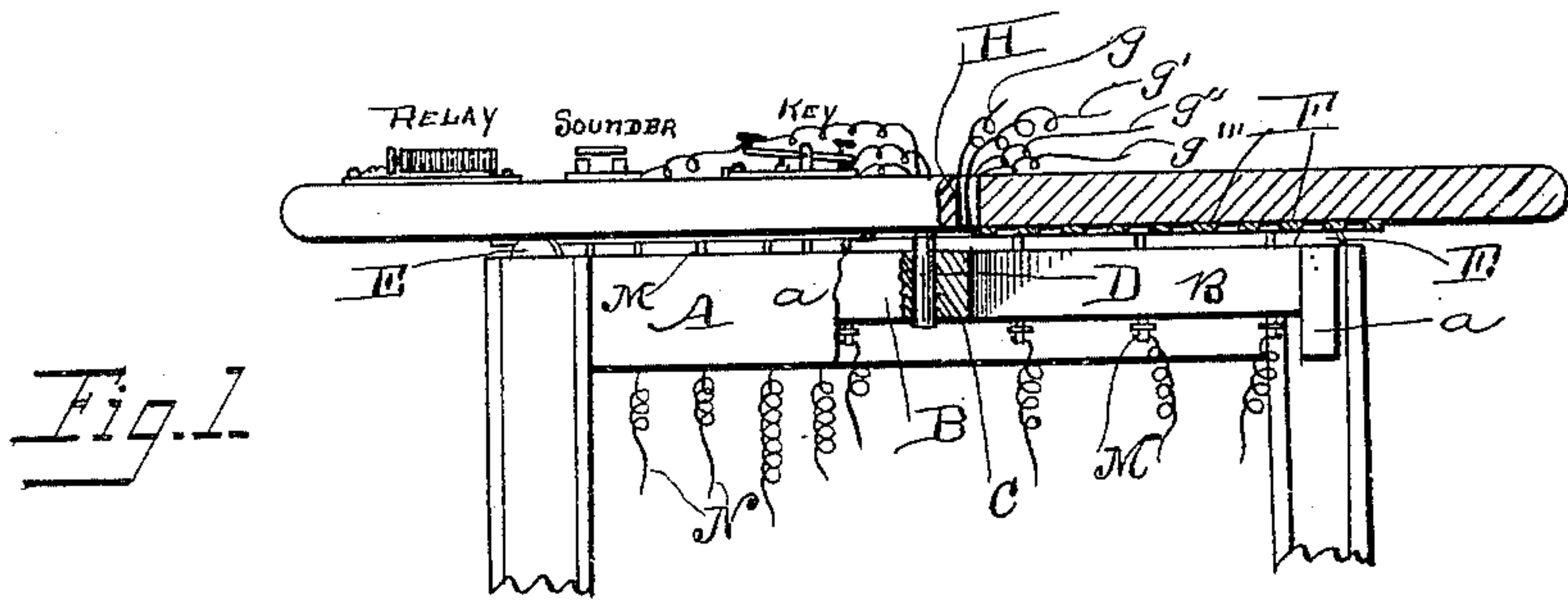
(No Model.)

2 Sheets—Sheet 1.

K. V. MILLER.
TELEGRAPH TABLE.

No. 462,720.

Patented Nov. 10, 1891.



Attest:
H. C. Johnson
L. J. Higdon

Inventor:
Katie V. Miller.,
By her Attorneys
Higdon & Higdon

(No Model.)

2 Sheets—Sheet 2.

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Fig. 3.

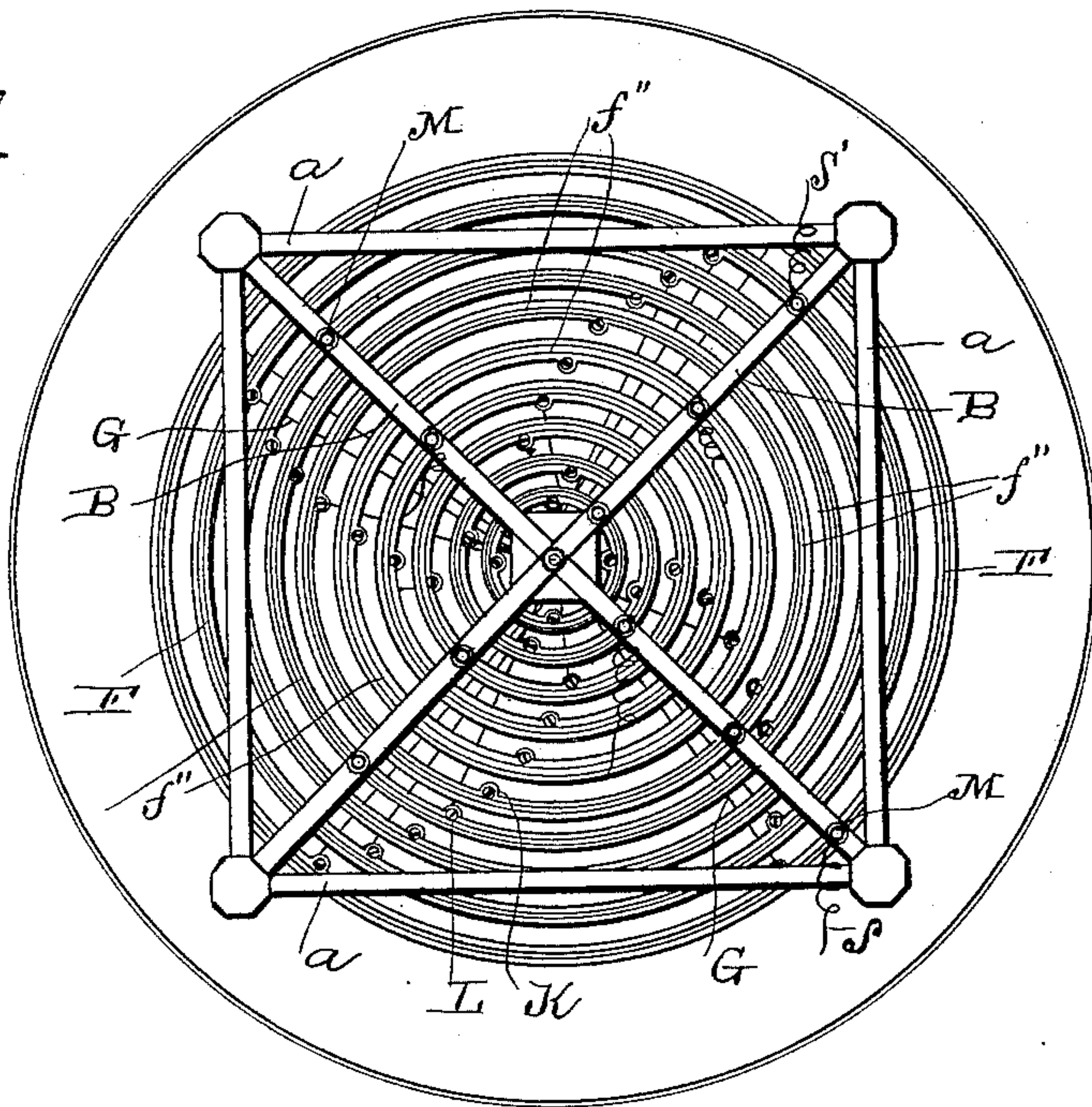
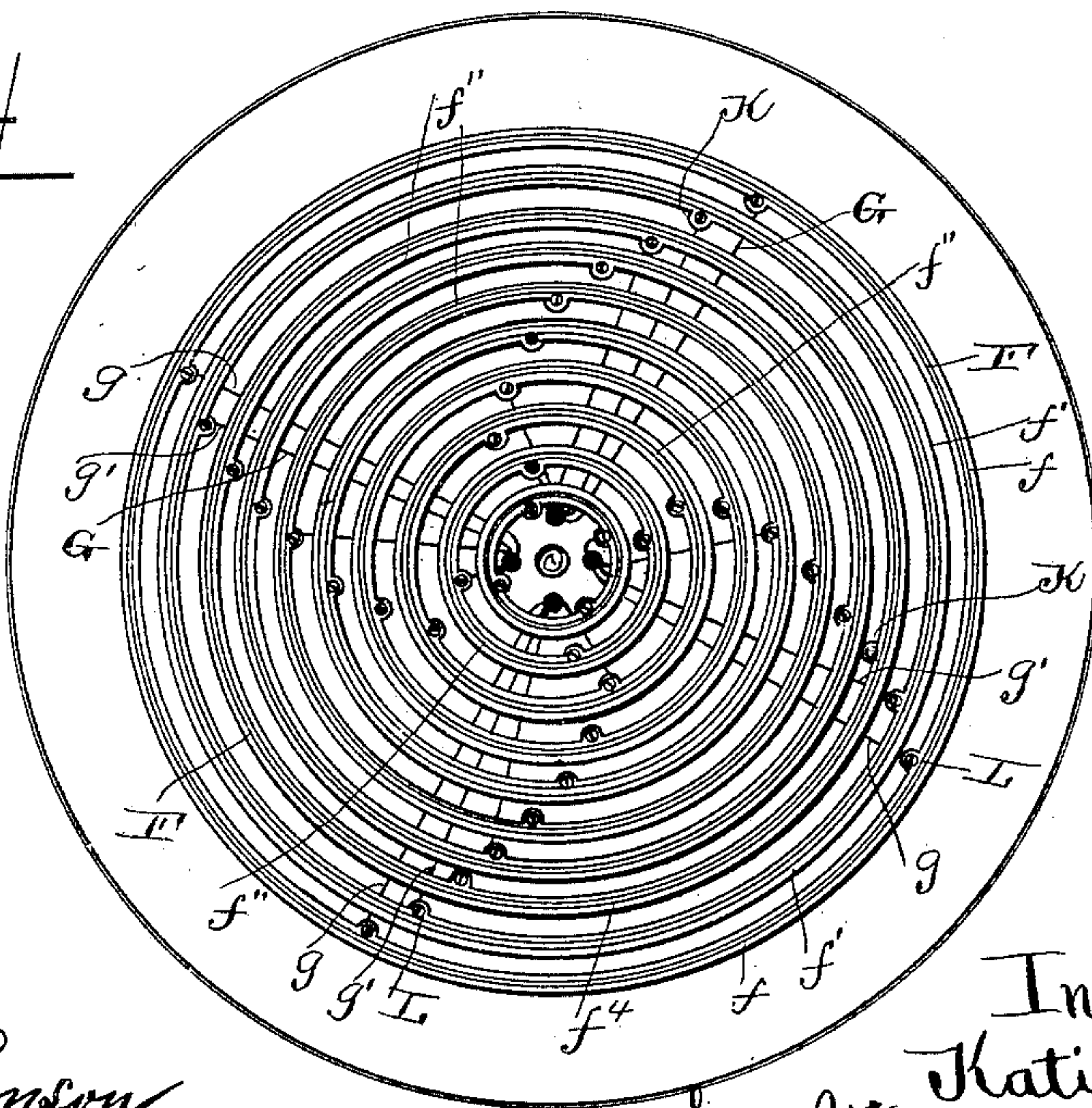


Fig. 4



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UNITED STATES PATENT OFFICE.

KATIE V. MILLER, OF LEWISBURG, OHIO.

TELEGRAPH-TABLE.

SPECIFICATION forming part of Letters Patent No. 462,720, dated November 10, 1891.

Application filed September 23, 1890. Serial No. 365,907. (No model.)

To all whom it may concern:

Be it known that I, KATIE V. MILLER, a citizen of the United States, residing at Lewisburg, in the county of Preble and State of Ohio, have invented certain new and useful Improvements in Telegraph-Tables; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the invention, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to tables which are used for the support of telegraph-instruments, and has special relation to tables having rotary tops, which enable an operator to bring any one of the several instruments thereon within reach without changing position.

My object is to provide a simple, cheap, and effective table in which the parts are so arranged as to economize space and produce a compact support for the instruments without such complication as would render frequent repair and adjustment necessary.

In the drawings, Figure 1 is a side view, partly broken away, on line $x x$, Fig. 2, of a table embodying my invention. Fig. 2 is a plan view, partly broken away. Fig. 3 is a reversed plan view of the same. Fig. 4 is a reversed plan view of the table-top detached to show the arrangement of the concentric rings and the attachment of the office-wires thereto. Fig. 5 is a detail sectional view, line $x x$ of Fig. 2, to show construction and arrangement of spring-actuated contact-pins. Fig. 6 is a detail section showing binding-screw and grooves in the rings.

The frame A of my improved table is composed of the side pieces $a a$, and within this frame is arranged an X-frame formed by the intersecting bars B B, which extend diagonally between the corners of the table-frame and intersect at their centers. In this intersection is a socket C, in which fits and operates the vertical depending spindle D, which is attached to the center of the circular table-top. At the corners of the table-frame are arranged anti-friction rollers or casters E, which project slightly above the surface of

the table-frame and are adapted to bear the weight of the table-top and its contents.

To the under surface of the table-top are attached a series of concentric rings F F, to which are connected the connecting-wires G G, which extend through openings H near the center of the table-top and thence to the instruments. The said concentric rings are preferably provided with perforated ears K K, through which pass screws L L, which secure the rings to the table-top, and the ends of the connecting-wires are arranged under these ears and are held in place in contact with the rings by the screws. Each connecting-wire is connected to one of the rings, so as to establish communication between said ring and the instrument to which the wire extends, and the wires are embedded in grooves G' in the under surface of the table-top to enable them to pass over other rings without being in contact therewith. In the cross-bars which form the X-frame are arranged vertical contact-pins M, which bear at their upper ends against the concentric rings and to which are attached the office-wires N. Thus communication is established through the pins, the rings, and the connecting-wires to the instruments. These contact-pins are fitted in vertical bores or sockets in the cross-bars B B, and around the pins within said bores or sockets are disposed coiled springs O, which bear at their upper ends against collars P near the upper ends of the pins and bear at their lower ends against flanges Q at the lower ends of the bores or sockets, whereby the pins are pressed upward and are normally held in contact with the concentric rings. The upper ends of the pins are rounded or pointed, and the rings are provided with longitudinal grooves f^4 , in which the upper ends of the pins fit. The lower ends of the pins are provided with collars R to limit their upward movement.

From the above description it will be seen that the connection between the office or line wires and the instrument is perfect and is maintained in all positions of the table-top, the movement of the latter not affecting the operation of the same, and it will be noted also that by the arrangement of the contact-pins in the cross-bars of the table-frame they

are out of the way and leave the space beneath the table clear of obstruction. Furthermore, the connecting devices are simple and inexpensive, and at the same time light in weight, thereby not adding materially to the weight of the table.

The contact-pins and concentric rings are of metal, preferably brass, and the binding-screws, which secure the rings to the table-top and also bind the ends of the connecting-wires in place, may be of the same.

It is obvious that any desired number of instruments may be arranged on the improved table. Attachments for only four are shown in the drawings; but by multiplying the number of rings and contact-pins this number may be increased indefinitely.

The connecting-wires, as shown in the drawings, are arranged in groups of four, and two wires g and g' of each group are connected, respectively, to the two outer concentric rings f and f' , which are in turn connected by the contact-pins, which bear thereon, and the office-wires S S' , which are attached to said pins, to a local battery, (not shown,) which may be located at any convenient point, either beneath or at a distance from the table.

Only one set of instruments, a key, a relay, and a sounder are shown in the drawings, and the connecting-wires g g' are carried, respectively, to the relay and sounder, while the other two wires g'' g''' , which extend from the key and the relay, respectively, are connected to two of the inner rings f'' . The relay is connected to the key by the wire h and to the sounder by the wire h' , which wires extend above the surface of the table, as they are so short as not to interfere with the movements of the operator.

The connecting-wires, as above described, are arranged in groups of four, each group passing down through a separate perforation H near the center of the table-top, from which point the wires radiate and are connected two of them to the outer rings f f' , respectively, and the other two to two of the inner rings f'' , said rings f'' being in the main-line circuit. Thus all the wires, with the exception of those which run to the local battery or are in the main-line circuits and which are attached, as described, to the contact-pins, are secured permanently to the table-top, and therefore there are no loose or hanging wires to interfere with the operator. The table-top may be lifted from the table-frame without disarranging any of the instruments or disconnecting any of the wires.

It will be seen that the instruments and their connections are all carried by the top, irrespective of the frame, thus enabling the former to be detached at any time from the latter without disturbing any of the connections, and, furthermore, the instrument-wires being passed through openings near the center of the top and passing across the under surface of the latter in grooves to connect with the various rings are always visible, and

therefore may be readily repaired and kept in order. The rings are arranged around the central spindle of the top and concentric with the latter, and they are continuous, as shown, thus maintaining an unbroken circuit through all the wires and instruments at all times.

I am aware that switch-boards or tables have been constructed heretofore with revoluble disks provided with concentric rings and contact-pins, said rings being cut or divided at certain points to enable one set of instruments to be used in a number of circuits and in connection with various lines at different times.

I do not desire to claim, broadly, the use of concentric rings on a revoluble disk or table-top; but by the use of continuous or unbroken rings I am enabled to keep a number of instruments in circuit at all times ready for use, and one or all of the instruments may be used, as desired. All of the instruments are in circuit in all positions of the table-top.

Having thus described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. The combination of a table-frame and revoluble table-top adapted to carry telegraph-instruments, one of the parts carrying pairs of insulated contact-rings and the other carrying pairs of insulated contact devices, each ring having electrical connection in all its positions with one and only one contact device, pairs of instrument-wires secured to one set of the co-operating contacts, and pairs of line-wires secured to the other set.

2. In a telegraph-operator's table, the revoluble top, in combination with a series of concentric rings f , f' , and f'' , arranged on the under surface of the top, the connecting-wires g g' g'' g''' , connected with said rings and with the instruments supported by said top, and the contact-pins mounted on the table-frame to bear, respectively, upon said rings and having the local battery and main-line wires connected thereto, substantially as and for the purpose specified.

3. In a revoluble telegraph-table, the combination, with a table-frame provided with cross-bars and having a central socket C and spring-actuated contact-pins M , mounted in sockets in said cross-bars and connected to the main and local circuit wires, of a revoluble top provided with a central spindle to fit in the socket C , the concentric rings secured to the under surface of the top and connecting said rings to the instruments supported on the top to bear on said contact-pins, and the connecting-wires embedded in the under surface of the top, substantially as specified.

4. In a revoluble telegraph-table, the combination, with contact-pins mounted on the table-frame, of a revoluble top, the concentric rings secured to the under surface of the top and provided with binding-screws, and the connecting-wires secured at their ends to

the concentric rings by said binding-screws, substantially as and for the purpose specified.

5 In a revoluble telegraph-table, the combination, with a table-frame provided with anti-friction rollers or casters on its upper surface, and also provided with intersecting cross-bars having a socket at their intersection, and a revoluble top bearing on said rollers or casters and provided with a depending spindle fitting in said socket, of the concentric rings secured to the under surface of the top and connected to main and local circuit wires, and spring-actuated contact-pins mounted on the said cross-bars and bearing
15 at their upper ends against said rings, these pins being connected to the main and local circuit wires, substantially as specified.

6. In a telegraph-operator's table, the stationary frame provided with horizontal cross-
20 bars B, having vertical bores or sockets, the

contact-pins M, having tapered upper ends and collars P, the springs O, coiled around the pins, bearing at their upper ends against the collars P and at their lower ends against flanges Q in said bores or sockets, and line-
25 wires N, connected to the projecting lower ends of the pins, in combination with a revoluble top mounted on the said frame, the concentric rings secured to the under surface of the top and provided with central longitudinal grooves to receive the upper tapered
30 ends of the contact-pins, and the instrument-wires connected to said rings, substantially as specified.

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

KATIE V. MILLER.

Witnesses:

ISAAC MILLER,
J. E. ROGERS.