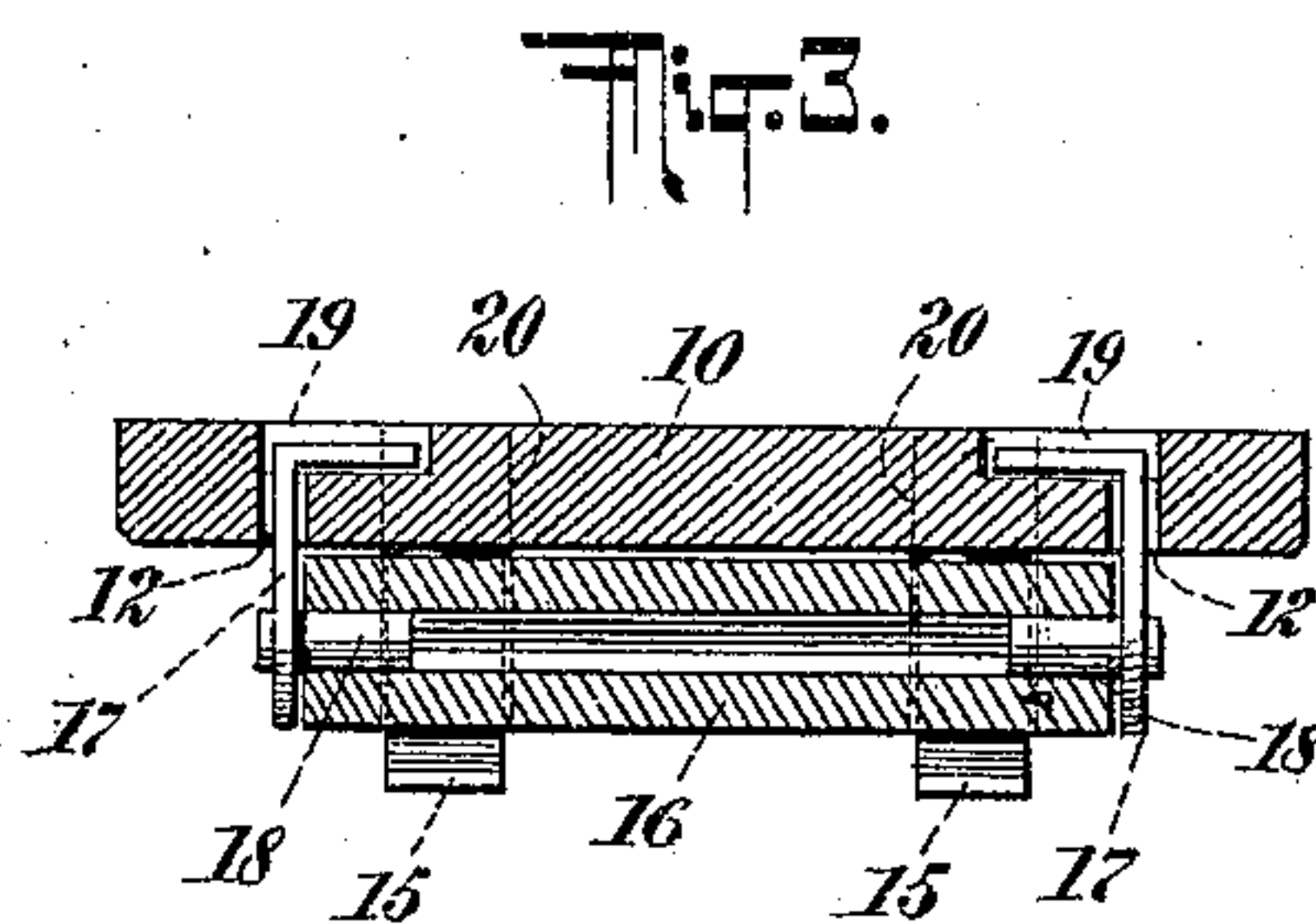
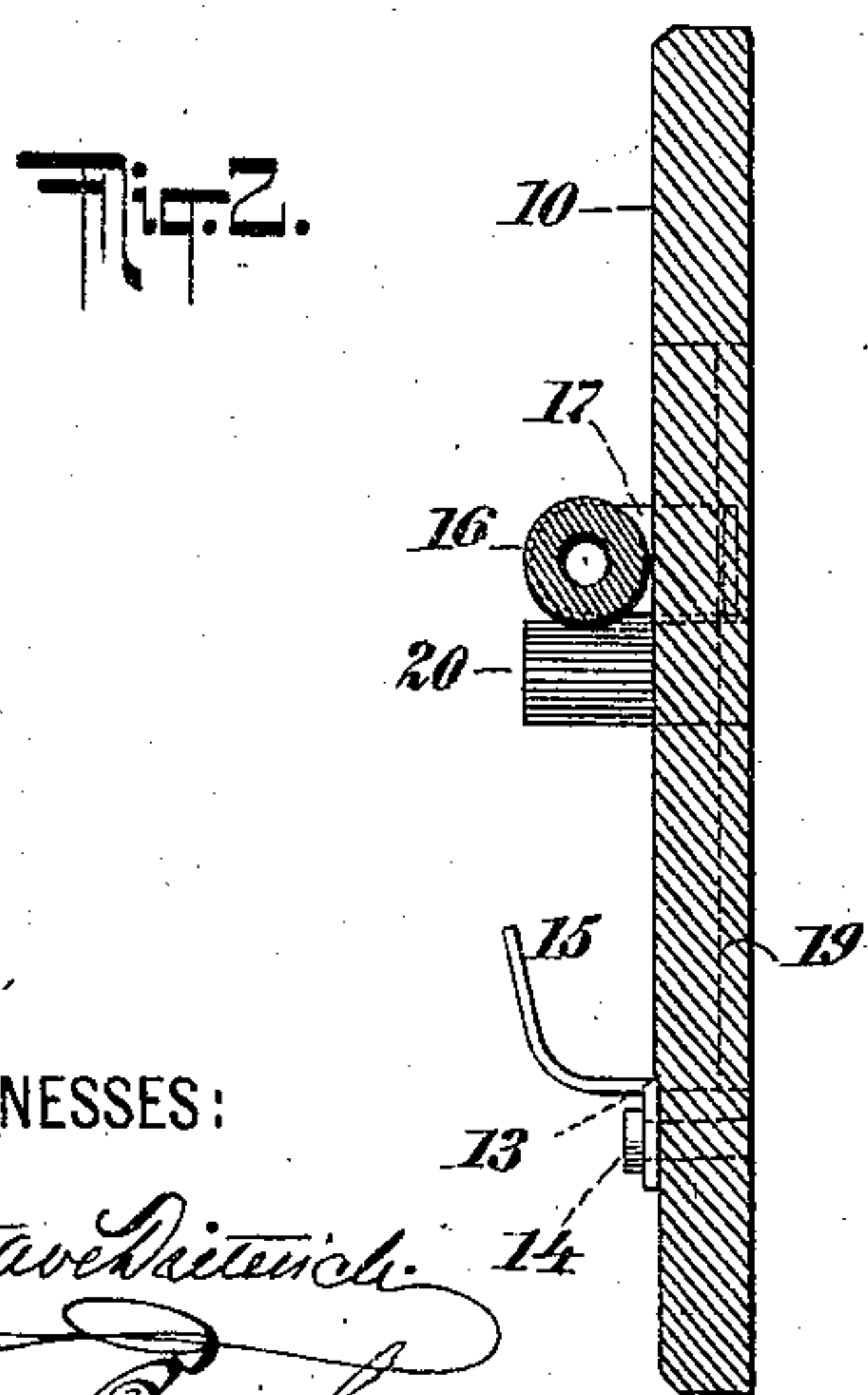
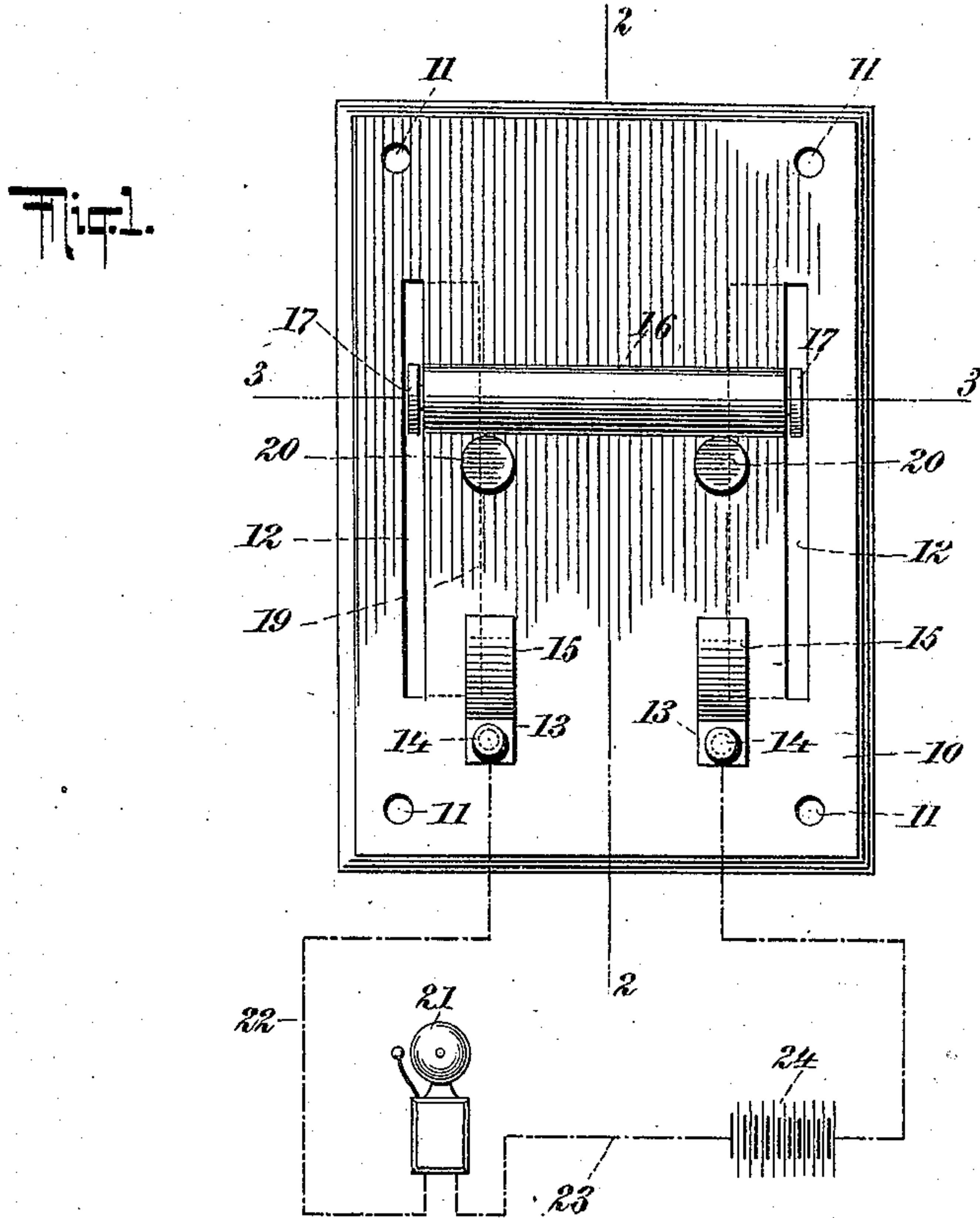


W. A. COLLINS.
 AUTOMATIC CIRCUIT CLOSING DEVICE.
 APPLICATION FILED JUNE 11, 1909.

994,375.

Patented June 6, 1911.



WITNESSES:
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UNITED STATES PATENT OFFICE.

WALTER A. COLLINS, OF MOUNT VERNON, NEW YORK.

AUTOMATIC CIRCUIT-CLOSING DEVICE.

994,375.

Specification of Letters Patent.

Patented June 6, 1911.

Application filed June 11, 1909. Serial No. 501,507.

To all whom it may concern:

Be it known that I, WALTER A. COLLINS, a citizen of the United States, residing at Mount Vernon, Westchester county, in the State of New York, have invented certain new and useful Improvements in Automatic Circuit-Closing Devices, of which the following is a full, clear, and exact specification.

My invention relates to improvements in means for automatically operating an electric signal device when the temperature in a room or other chamber rises to a predetermined degree, and the same has for its object more particularly to provide a simple, efficient and reliable device for automatically indicating the existence of fire in a room, chamber or other structure.

Further, said invention has for its object to provide a simple apparatus which may be readily attached to a wall or other support in a room, chamber or other structure and adapted to be connected with an electric signal apparatus which signal apparatus is rendered operative when said circuit-closing device is released from its support, and caused to complete the electric circuit which includes the said circuit-closing device and signal.

Further, said invention has for its object to provide an automatic circuit-closing device in which the fusible supports may be readily inserted into the base to replace those which have been destroyed in the course of the operation of the apparatus.

To the attainment of the aforesaid objects and ends, my invention consists in the novel details of construction, and in the combination, connection and arrangement of parts hereinafter more fully described and then pointed out in the claims.

In the accompanying drawings, forming a part of this specification, wherein like numerals of reference indicate like parts, Figure 1 is a front view showing one form of automatic circuit-closing device constructed according to, and embodying my said invention, and in diagrammatic form an electric signal apparatus and battery in circuit therewith; Fig. 2 is a vertical section taken on the line 2—2 of Fig. 1, and Fig. 3 is a transverse section taken on the line 3—3 of Fig. 1.

In said drawings 10 designates a base made of wood, fiber or other suitable insulating material and provided adjacent to its

corners with apertures 11 11 to receive screws or other suitable attaching means whereby said base 10 may be secured in position against a wall or other suitable support. The base 10 is provided adjacent to its opposite edges with longitudinal slots or recesses 12 12 and upon the outer side of said base 10 adjacent to the lower portion thereof, and intermediate the lower ends of the slots 12 12, are arranged contact members 13 13, which are secured at their lower ends by means of screws 14 14 to said base 10, and have their upper or free ends 15 15 bent forwardly and upwardly.

16 denotes a tubular metallic movable member secured at its opposite ends to bearings 17 17 by means of pins 18 18 which extend through said bearings 17 17. The bearings 17 17 are extended through the slots 12 12 of the base 10, and have their extreme inner ends bent inwardly toward each other to the rear of the base 10, and arranged to work within recesses 19 19 provided upon the rear side of said base 10.

20 20 denote cylindrical plugs of fusible material such as wax, or a metallic composition capable of fusing at a low temperature, which plugs are secured in the base 10 intermediate the recesses or slots 12 12 therein, and are adapted to normally support the tubular circuit-closing member 16 in position above the free ends of said contact members 15 15.

21 denotes an electric bell or other audible signal apparatus, and 22 denotes an electric conductor extending from one terminal of said signal device 21 to one of the contact members 15 on the base 10, and 23 denotes an electric conductor extending from the other terminal of said electric signal device 21 to the other contact member 15 on the base 10, which conductor includes an electric battery 24.

The operation of the apparatus is as follows. Normally the circuit-closing member 16 on the base 10 is supported in position above the free ends of the contact members 15 15 upon the fusible plugs 20 20. As soon as the temperature in the room or chamber in which the same is disposed rises to a predetermined degree the plugs 20 20 will fuse, and the tubular member 16 caused to drop into engagement with the contact members 15 15, and be supported in position thereby and close the electric circuit extending from said contacts 15 15 to the

signal device 21 and actuate the same. The signal apparatus will thereupon continue to operate until the circuit-closing device 16 is again restored to its initial position, and is supported upon new fusible plugs which must be inserted to replace the ones destroyed.

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

1. A device of the character described, comprising a base having a pair of parallel vertical recesses therein, a movable contact member, means arranged upon said movable contact member and extending into said recesses, fusible supports arranged upon said base for supporting said movable contact member, and a pair of fixed contact members arranged upon said base below said fusible supports adapted to receive and hold said movable contact member when released from said fusible supports, substantially as specified.

2. A device of the character described, comprising a base having a pair of parallel longitudinal recesses therein, a movable contact member, bearings arranged at the opposite ends of said movable contact member adapted to work in said recesses, fusible supports arranged in said base for supporting said movable contact member in position to maintain a circuit normally open, and a pair of contact members secured upon said base below said fusible supports adapted to receive and hold said movable contact member when released by the fusing of said fusible supports, substantially as specified.

3. A device of the character described,

comprising a base having a pair of separated longitudinal recesses therein, a tubular contact member arranged transversely of said recesses, bearings secured to the opposite ends of said movable contact member and adapted to work in said recesses, a plurality of fusible plugs secured in said base for supporting said tubular contact member in position to maintain a circuit normally open, and a pair of fixed contact members arranged upon said base below said movable contact member adapted to receive and hold said movable contact member when released from said fusible plugs whereby to complete an electric circuit, substantially as specified.

4. A device of the character described, comprising a flat base having a pair of parallel longitudinal recesses therein, a movable contact member, bearings secured to the opposite ends of said movable contact member and adapted to work in said recesses, a plurality of fusible plugs secured in said base for supporting said movable contact member, and a pair of contact members having their lower ends secured to said base below said movable contact member and their upper ends bent outwardly and upwardly and adapted to receive said contact member when the same is released from said fusible plugs, substantially as specified.

Signed at the city of New York, borough of Manhattan, county and State of New York, this third day of June, 1909.

WALTER A. COLLINS.

Witnesses:

CONRAD A. DIETERICH,
ELIZABETH B. KING.