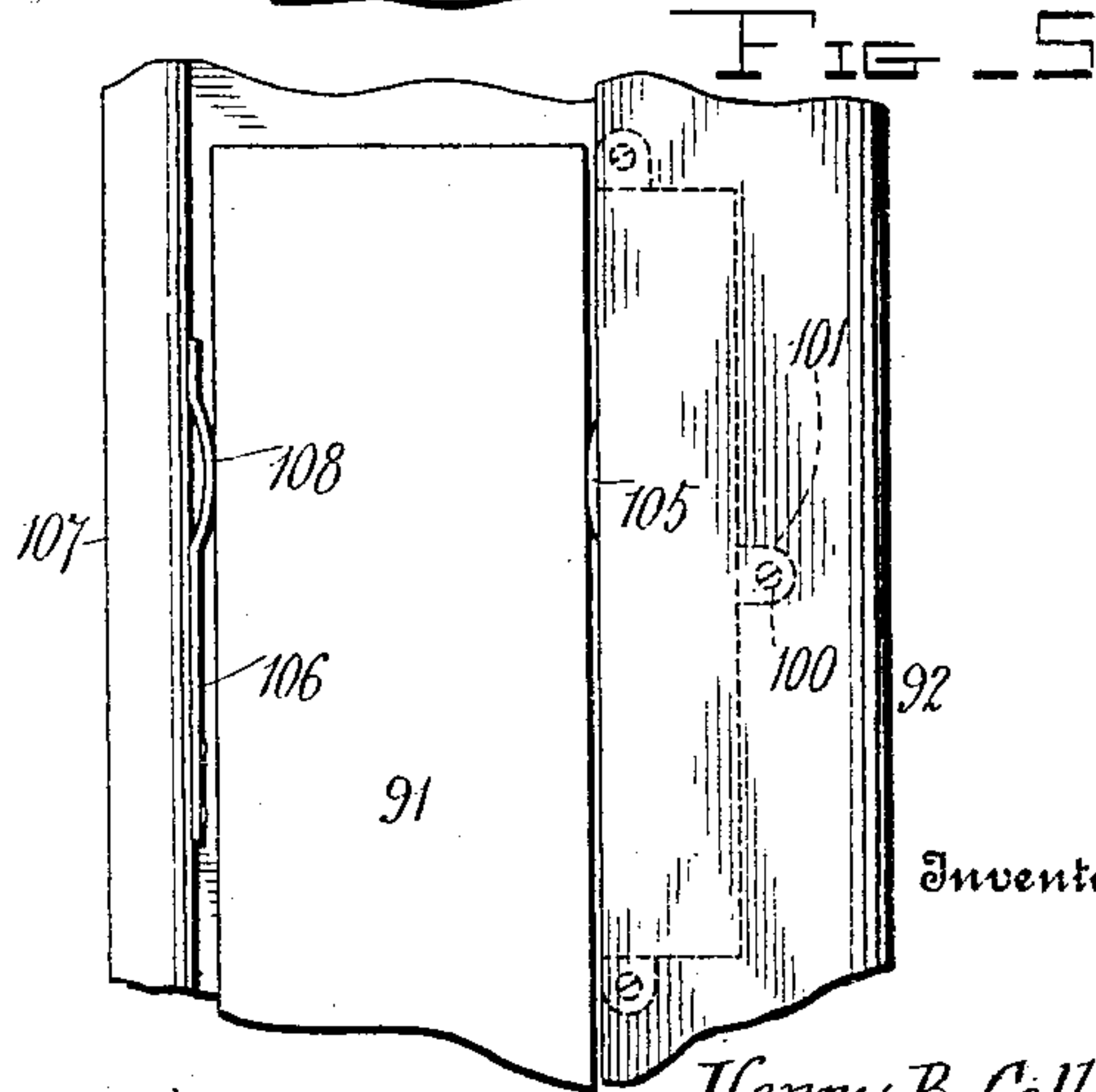
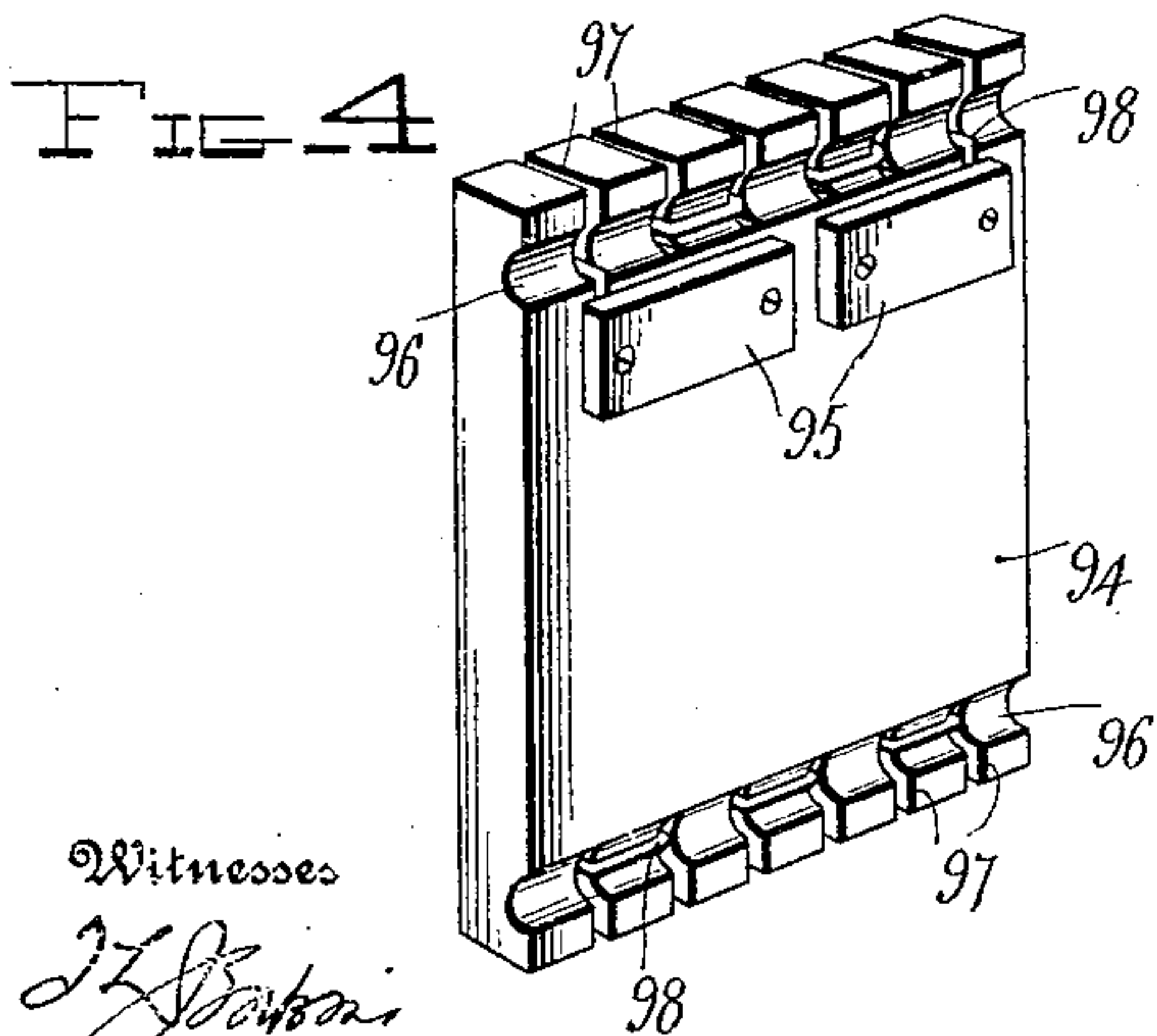
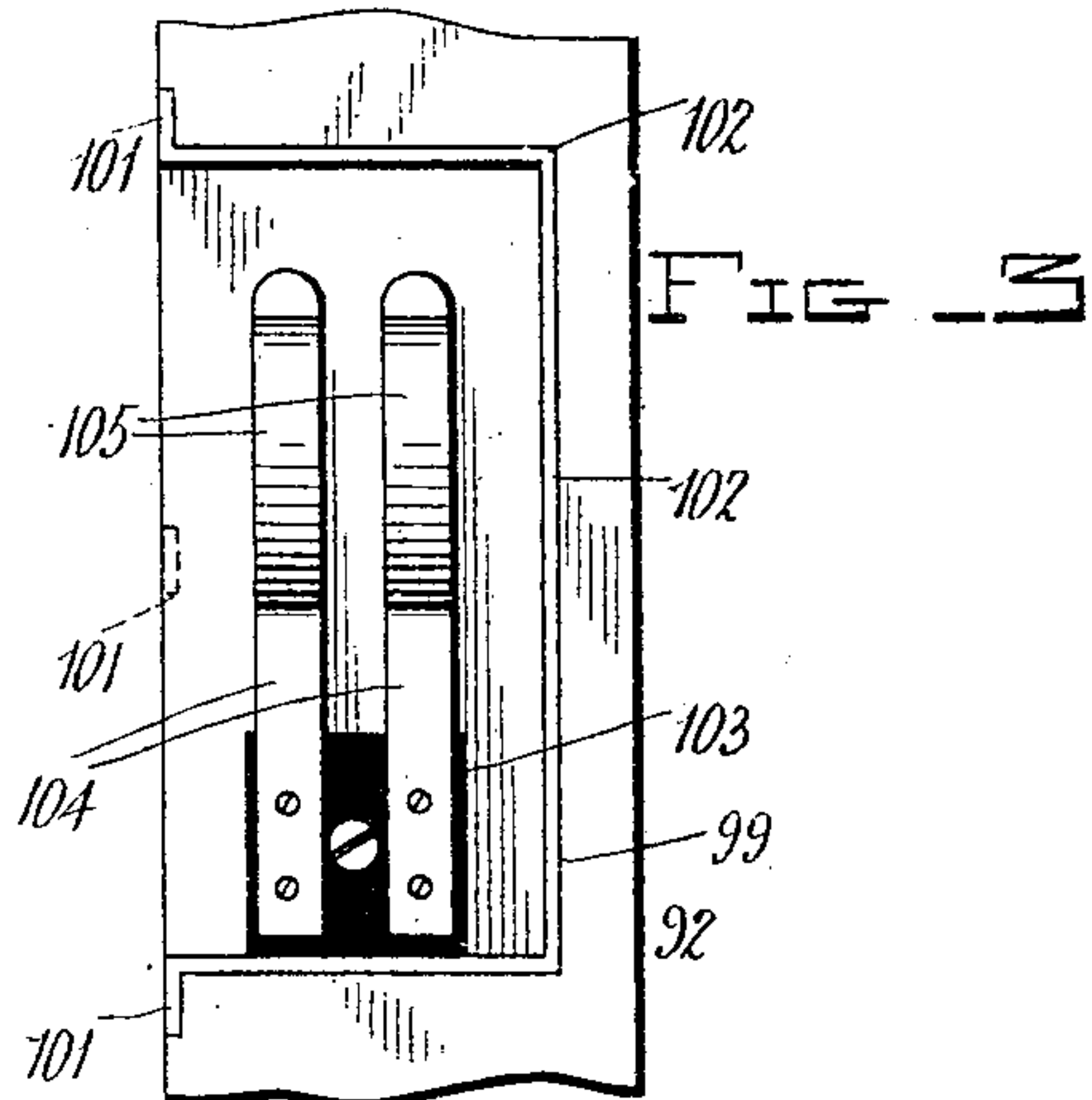
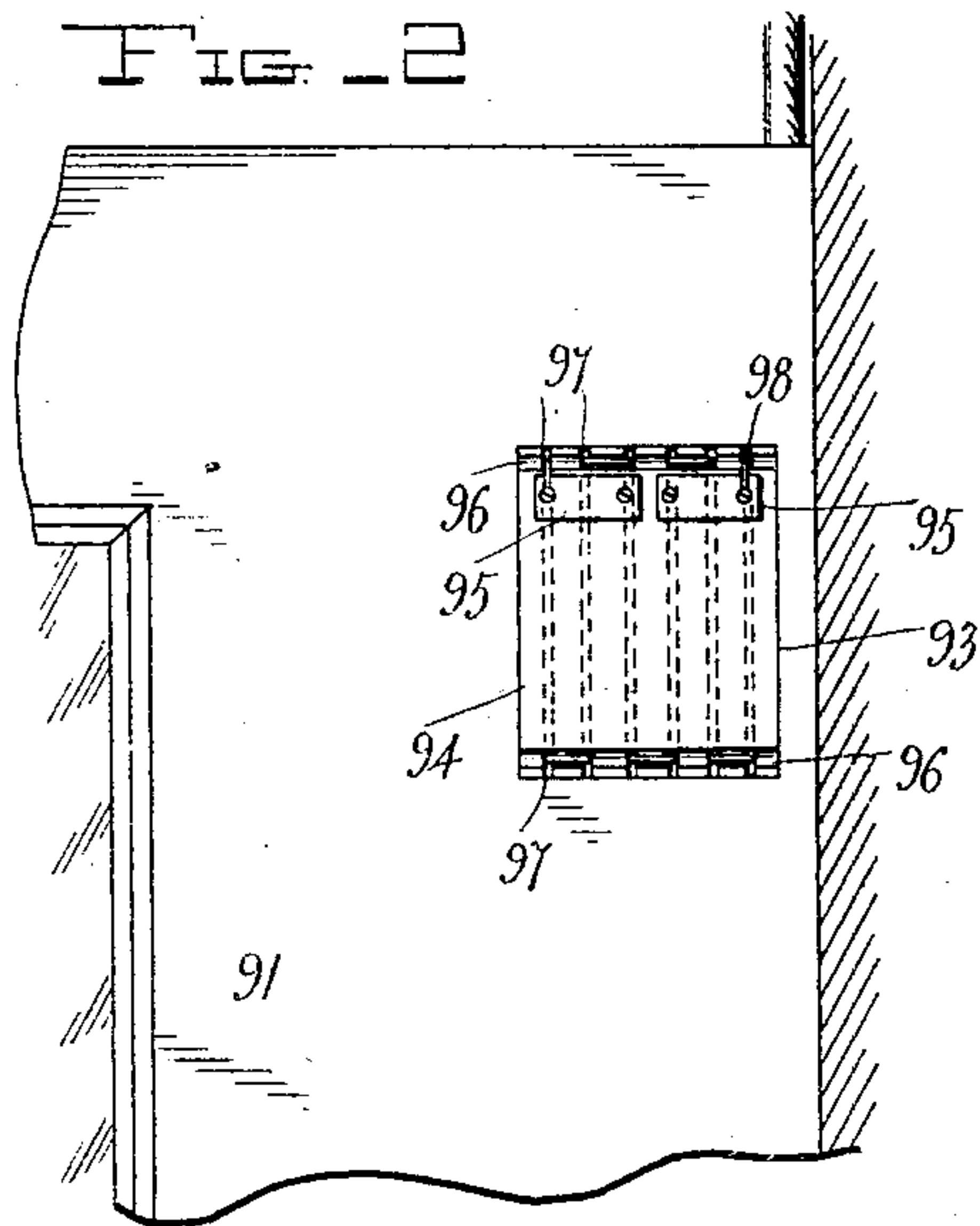
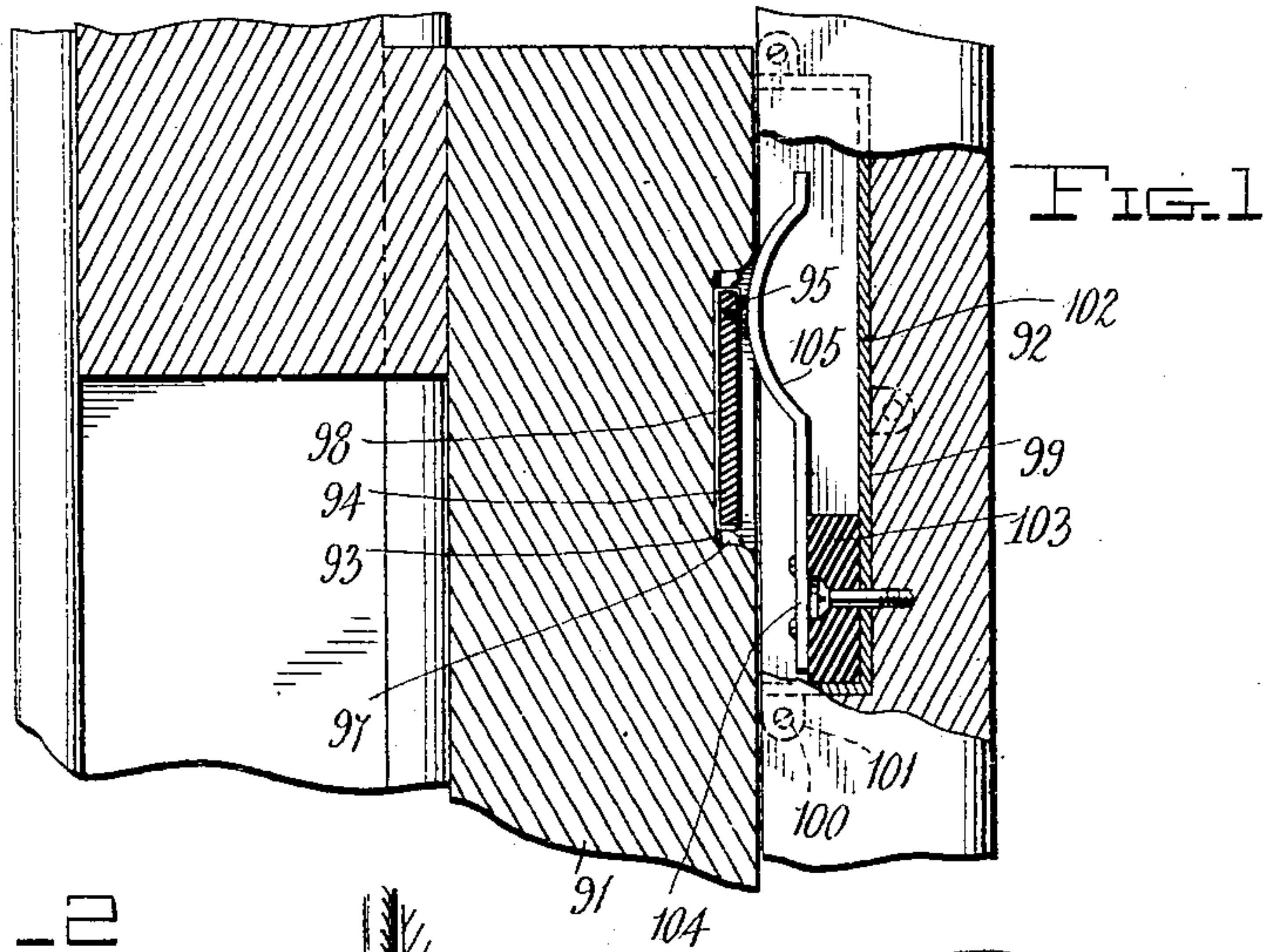


H. B. COLLIER.
AUTOMATIC BURGLAR ALARM.
APPLICATION FILED SEPT. 14, 1906.

978,269.

Patented Dec. 13, 1910.



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UNITED STATES PATENT OFFICE.

HENRY B. COLLIER, OF PRAIRIE GROVE, ARKANSAS.

AUTOMATIC BURGLAR-ALARM.

978,269.

Specification of Letters Patent.

Patented Dec. 13, 1910.

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To all whom it may concern:

Be it known that I, HENRY B. COLLIER, a citizen of the United States, residing at Prairie Grove, in the county of Washington, State of Arkansas, have invented certain new and useful Improvements in Automatic Burglar-Alarms; 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.

This invention relates to circuit closers for electric burglar alarms.

I have aimed in carrying out my invention to provide circuit closing devices for the windows of such construction that any number of them may be placed upon a window so that the window may be raised to various elevations during the night or day for the purpose of ventilation without rendering the alarm circuit ineffective.

In the accompanying drawings, Figure 1 is a vertical sectional view through the sashes and frame of an ordinary window showing the application of the window circuit closer thereto said circuit closer being shown in vertical section. Fig. 2 is a view in elevation of one side of one sash of a window showing one contact element of the circuit closer in elevation. Fig. 3 is a similar view but showing the other contact member of the circuit closer. Fig. 4 is a detail perspective view of the contact member illustrated in Fig. 2. Fig. 5 is an elevation showing a device employed for holding the sash firmly in place so as to insure of contact of the members.

In the drawings, the numeral 91 indicates the lower sash of a window to which the circuit closing device is applied and the numeral 92 one of the window stops of the window frame. Secured in a countersink 93 formed in one stile of the window sash is a plate 94 of insulating material and fixed in any suitable manner upon said plate adjacent the upper edge thereof, and upon that face which opposes the window stop 92 is a pair of contact plates 95. The said face of the plate 94 is formed adjacent its upper and lower edge with grooves 96 and through its upper and lower edges with notches 97. A conductor wire 98 is electrically connected at one of its ends with one of the contact plates 95, is passed through the corresponding end notch in the upper edge of the plate

94, thence through the corresponding notch at the lower edge of the plate, across to the next notch at the lower edge of the plate, and this method of stringing the wire is continued until it has passed through all of the notches and its other end is then attached electrically to the other contact plate 95, it being understood that the wire is stretched vertically up and down across that face of the insulating plate 94 which rests against the bottom of the countersink 93 and that it serves to electrically connect the two contact plates 95.

The window stop 92 is cut away in that face or side which opposes the sash stile as indicated by the numeral 99 and seated and secured in this cut away portion by means of screws 100 which are passed through ears 101 is a casing 102 which has two open sides or rather one open side and one open edge, the open side being presented toward the stile of the sash 91. Secured within the casing is a block 103 of insulating material and fixed to this block is a pair of contacts 104, these contacts being secured each at one end to the block and being bowed between their ends and beyond their portions which are secured to the block which are indicated by the numeral 105, the convexed sides of the bowed portions of the contact being presented toward the stile of the sash 91 and the contacts being of sheet spring metal and being adapted to bear against the said sash and normally against the two contact plates 95 which are carried by the plate 94 of insulating material which is fixed in the countersink 93 in the said stile of the sash.

As will be presently described, the conductor wires of the main circuit are connected electrically one with each of the contacts 104 and the circuit is closed normally through these contacts, the contact plates 95, and the wire 98 which bridges the said plates, it being understood that by raising the sash 91 the said plates will move out of contact with the spring contacts 104 and the circuit will in this manner be opened.

In the form of circuit closer shown in Fig. 5, there is illustrated a means for compensating for a loose sash, the means being embodied in a spring 106 which is secured at one end to the parting strip 107 of the window frame and it is formed with a bowed portion 108 which bears against the stile of the sash and serves to hold the sash firmly

against the stop 92, contact of the members 104 with the plates 95 being in this manner insured when the sash is in lowered position.

I wish to point out an advantage accruing from the specific structure of contact member illustrated, namely, the bridging of the contact plates 95 by means of the wire 98. As will be readily appreciated from an inspection of the said figures of the drawings, no portion of this circuit closing device is exposed to view but should its location be determined by a person surreptitiously entering a house in which the system is installed, and should a person attempt to destroy the circuit closing device by boring through the stile of the sash, the wire 98 will be broken at some point thereby opening the circuit.

What is claimed, is:—

1. A circuit closer for alarm circuits comprising a base of insulating material formed along parallel edges with notches and having grooves in the front face intersecting said notches, a pair of contacts fixed upon the front face of said base adjacent one of said grooves, a conductor wire connected electrically at its ends with the two contacts and passed through the notches and back and forth across the back face of the base, the loops of said wire lying in said grooves, and a pair of contacts normally in engagement with the first mentioned contacts.

2. A circuit closer for alarm circuits comprising a base of insulating material, a pair of contacts fixed upon one face of the base, said base being provided at its ends with teeth, and a single strand of conductor wire connected electrically at its ends with the

contacts upon the base and passed back and forth between its ends along the other face of the base and around the teeth, and a pair of contacts normally in engagement with the first mentioned contacts.

3. A circuit closer for alarm circuits comprising a base of insulating material formed along parallel edges with notches, a pair of contacts fixed upon one face of the base, a conductor wire connected electrically at its ends with the two contacts and passed through the notches and back and forth across the other face of the base, and a pair of contacts normally in engagement with the first mentioned contacts.

4. In a circuit closer for alarm circuits, the combination with two elements one movable with respect to the other; of a base of insulating material formed along parallel edges with notches, one of said elements being provided with a recess for the reception of said base and the front face of the base being substantially flush with the face of said element, a pair of contacts fixed upon the front face of said base, a conductor wire connected electrically at its ends with the two contacts and passed through the notches and back and forth between the bottom of said recess and the back of the base, and a second pair of contacts carried by the other element and normally in engagement with the first mentioned contacts.

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

HENRY B. COLLIER.

Witnesses:

S. R. WILSON,
J. W. EDMISTON.