

No. 712,559.

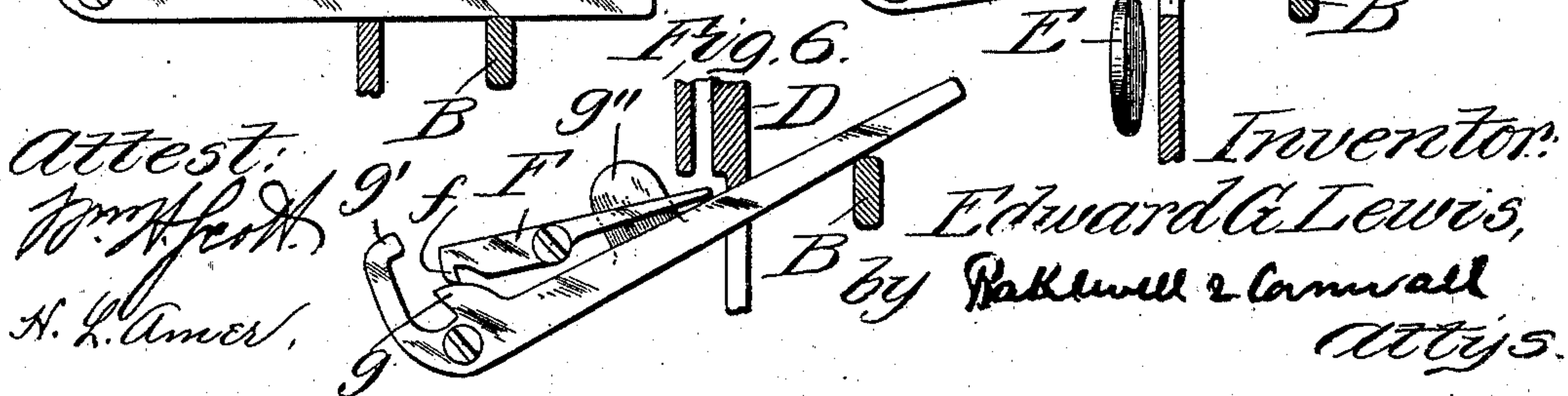
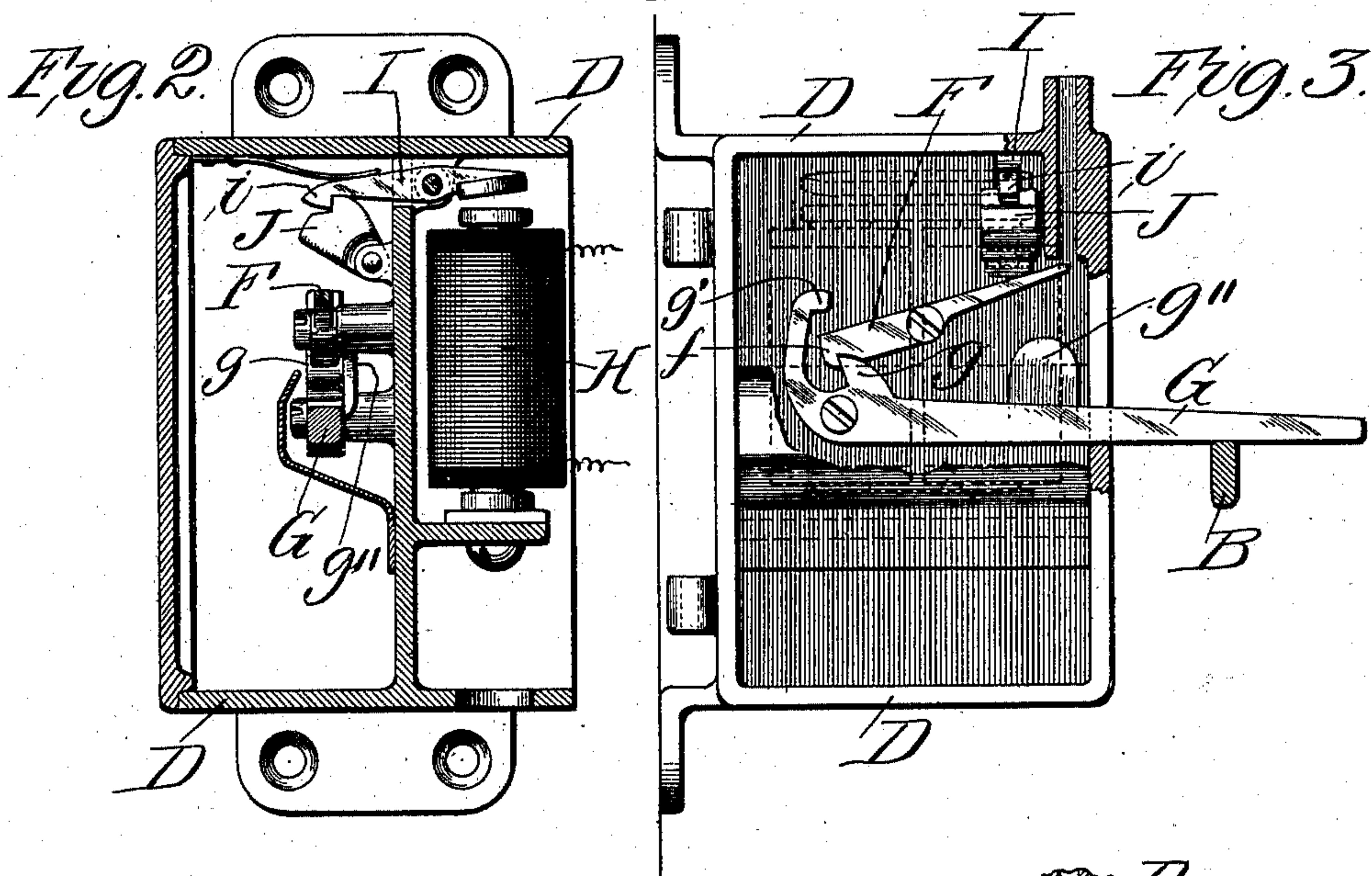
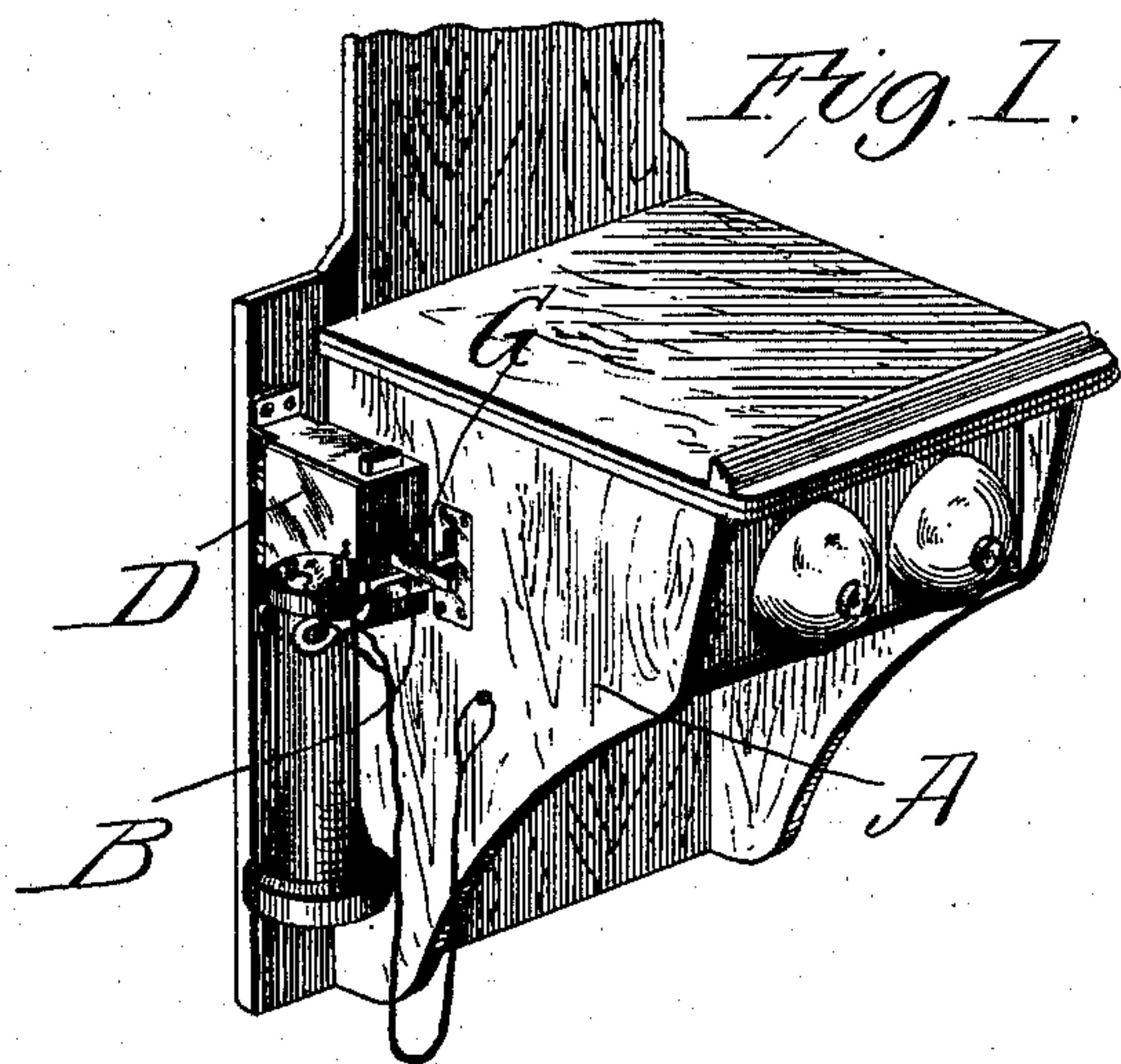
Patented Nov. 4, 1902.

E. G. LEWIS.

COIN CONTROLLED APPARATUS FOR TELEPHONES.

(Application filed Feb. 1, 1901.)

(No Model.)



UNITED STATES PATENT OFFICE.

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COIN-CONTROLLED APPARATUS FOR TELEPHONES.

SPECIFICATION forming part of Letters Patent No. 712,559, dated November 4, 1902.

Application filed February 1, 1901. Serial No. 45,579. (No model.)

To all whom it may concern:

Be it known that I, EDWARD GARDNER LEWIS, a citizen of the United States, residing at the city of St. Louis, State of Missouri, have invented a certain new and useful Improvement in Coin-Controlled Apparatus for Telephones, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which it ap-
10 pertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a view of a portion of a telephone-box which is provided with my improved coin-controlled apparatus. Fig. 2 is a vertical sectional view through the apparatus. Fig. 3 is an elevational view with the front cover removed to more clearly show the interior mechanism. Fig. 4 is a detail view
20 showing the moving parts in the position they assume upon the introduction of the coin. Fig. 5 is a similar view when the telephone-receiver is being removed from the hook and the coin is being discharged into its receptacle; and Fig. 6 is a detail view showing the position of the parts after the coin has been discharged into the receptacle, the receiver of the telephone being entirely off of the hook.

This invention relates to a new and useful improvement in coin-controlled apparatus for telephones designed especially for use in connection with telephone-receivers, the object being to lock the receiver-hook against movement, and consequently preventing the use of the telephone in the absence of a disk or some appropriate token, such as a coin, being introduced into the apparatus. The introduction of a coin into the apparatus first releases the mechanism, and when the re-
40 ceiver is removed from the hook the hook is permitted to rise, after which when the receiver is placed upon the hook the mechanism is automatically locked and the hook will not again rise until another coin is introduced.

Another object of the invention is to enable the telephone to be used in receiving messages without requiring the introduction of a coin into the apparatus. To accomplish
50 this a magnet is placed in the signal or other

circuit, so that when an electrical current is passed through the instrument, the instrument being in all respects normal, it will effect the release of the coin-controlled apparatus and enable the hook to rise upon the removal of the receiver therefrom, thus obviating the necessity of using a coin when receiving a message.

With these objects in view the invention consists in the construction, arrangement, and combination of the several parts, all as will hereinafter be described and afterward pointed out in the claims.

In the drawings, A indicates a portion of an ordinary telephone-box, B the hook, which hook controls the several switches in the box to make and break certain circuits in the instrument, said hook also supporting the receiver when said receiver is not in use. When the receiver is in position on the hook, the hook is depressed, as is well known; but when the receiver is removed from the hook for use a spring forces the hook to rise and make and break the circuits in the instrument. My improved coin-controlled apparatus is designed to cooperate with this hook and prevent it from rising, and consequently breaking and completing the proper circuits in the instrument, without the introduction of an appropriate coin. By locking the hook in its depressed position the telephone is practically useless, no call being received at the central office when the hook is depressed, and consequently no message can be sent over the instrument.

D indicates a box of any suitable shape, preferably cast, which box is provided with a slot for the introduction of a disk or coin E. The passage for this coin may be shaped in any suitable manner to prevent unauthorized tampering with the mechanism within.

F indicates a hook-lever one end of which receives the coin while the other end is provided with a hook *f*, which cooperates with a projection *g* on a lever-arm G. This lever-arm protrudes through the box over the hook B, as shown in Fig. 1, and when said lever-arm is in its normal position hook B cannot be raised by reason of the arm G being locked against movement by the hook *f*. However,

when a coin is introduced into the slot it raises the hook *f* out of engagement with the projection *g*, as shown in Fig. 4. The coin is prevented from being discharged from the lever F by the walls of the slot, the hook end of lever F engaging with an overhanging projection *g'* on the inner end of lever G, which projection is practically over the projection *g*. The outer end of lever G is weighted sufficiently to hold the parts in the positions shown in Fig. 4 until the receiver is removed from the hook B, when the spring attached to hook B causes the hook to rise, and in so doing elevates the outer end of lever G, as shown in Figs. 5 and 6, and permits the coin to be discharged into the receptacle at the bottom of the box D. The hook end of the lever F overbalances the coin-receiving end thereof, and after the coin is discharged from the lever said hook end falls until it engages the curved edge of the projection *g*, as shown in Fig. 6. The hook B holds the outer end of lever G in its elevated position while the receiver is absent from the hook; but when said receiver is placed on the hook the hook is depressed, and the outer weighted end of lever G consequently drops, and in so doing causes the projection *g* to ride under the hook *f*, thereby locking the lever G against elevation until another coin of the proper size is introduced through the slot.

From the above it will be seen that the introduction of a coin first accomplishes the release of lever G, and when said lever G is elevated it effects the discharge of the coin, the restoration of the receiver and the hook B enabling the lever G to be restored to its normal position, in which normal position its outer end is locked against vertical movement by the lever F.

In order to release the mechanism without resorting to the introduction of a coin into the apparatus every time the calling-signal is sounded, I have arranged, preferably, inside of the box D an electromagnet H, which is in circuit with the calling-signal of the telephone, and arranged in proper relation to said magnet is a spring-actuated lever I, one end of which serves as the armature of said magnet, while the other end of said lever I is provided with a hook portion *i*, which cooperates with a pivoted weight or lever J. This weight or lever J is arranged above both of the levers F and G and is designed to cooperate with the former to depress its outer end when released, and when so released or in its lowermost position is in the path of movement of and is designed to be raised by a projection *g''*, carried by the latter, after the receiver is removed from its hook, as will be described in the following.

When a calling-signal is sounded, the magnet H becomes energized and attracts the armature-carrying end of lever I, causing the other end of said lever carrying the hook *i* to release the free end of the weight or lever J, allowing the same to drop onto the outer end

of lever F, overbalancing the same and causing the hook portion *f*, carried thereby, to disengage the projection *g* and release the lever G in like manner as if a coin had been dropped into the box, as is obvious.

When the parts are in the position just described, a person desiring to receive a message will of course remove the receiver from hook B, which permits said hook B and its controlled lever G to rise, as before explained, and cause the projection *g''*, carried by said lever G, to contact with and raise the weight or lever J sufficiently far to become engaged and held by the hook *i* of the spring-actuated armature-lever I, thereby resetting the parts for another call-signal.

I am aware that minor changes in the arrangement, construction, and combination of the several parts of my device can be made and substituted for those herein shown and described without in the least departing from the nature and principle of my invention.

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

1. The combination with the receiver-hook of a telephone, of a box, a lever G pivoted in said box and having its outer end over said receiver-hook, said lever G being provided with projections *g* and *g'*, and a lever F provided with a hook *f* for cooperating with the projection *g*, one end of said lever F extending across a slot in the box D; substantially as described.

2. The combination with the receiver-hook of a telephone, of an arm for locking the same, a coin-controlled mechanism cooperating with said arm, an armature, means in operative relation to said armature for actuating said coin-controlled mechanism, and a magnet in the telephone-circuit which when energized attracts the armature to permit operation of said means for actuating the coin-controlled mechanism; substantially as described.

3. The combination with the receiver-hook of a telephone, of an arm for locking the same against movement, a coin-controlled mechanism cooperating with said arm, in which mechanism is included a lever F, a weight pivoted above said lever, an armature normally engaging the weight and holding it in an elevated position, a magnet in the telephone-circuit for operating said armature and releasing the weight, and means on the arm which locks the receiver-hook against movement, for restoring said weight-lever, substantially as described.

4. The combination with a receiver-hook of a telephone, of an arm G for holding same in a depressed position, a lever F for locking the arm G against vertical movement, a box inclosing lever F and the inner end of arm G, said box being provided with a slot, one end of lever F traversing said slot, a projection on lever G, a pivoted weight or lever J, an armature, and a magnet which is ener-

gized from the telephone-circuit; substantially as described.

5 5. The combination with the receiver-hook of a telephone, of an arm for holding the same in its depressed position, a coin-controlled mechanism coöperating with said arm, a weight for operating said coin-controlled mechanism to release said arm, and a magnet for operating said weight, substantially as described.
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6. The combination with the receiver-hook of a telephone, of an arm for locking the same in its depressed position, coin-controlled mechanism for locking said arm against movement, a suspended weight for operating said
15 coin-controlled mechanism to release the arm,

and devices for releasing said weight, substantially as described.

7. The combination with the receiver-hook of a telephone, of an arm for locking the same in its depressed position, coin-controlled mechanism for locking said arm against movement, a magnet, and means under control of said magnet for actuating said coin-controlled mechanism; substantially as described. 20 25

In testimony whereof I hereunto affix my signature, in the presence of two witnesses, this 26th day of January, 1901.

EDWARD GARDNER LEWIS.

Witnesses:

WM. H. SCOTT,

HARRY L. AMER.