

(No Model.)

W. GRAY.

COIN CONTROLLED APPARATUS FOR TELEPHONES.

No. 597,556.

Patented Jan. 18, 1898.

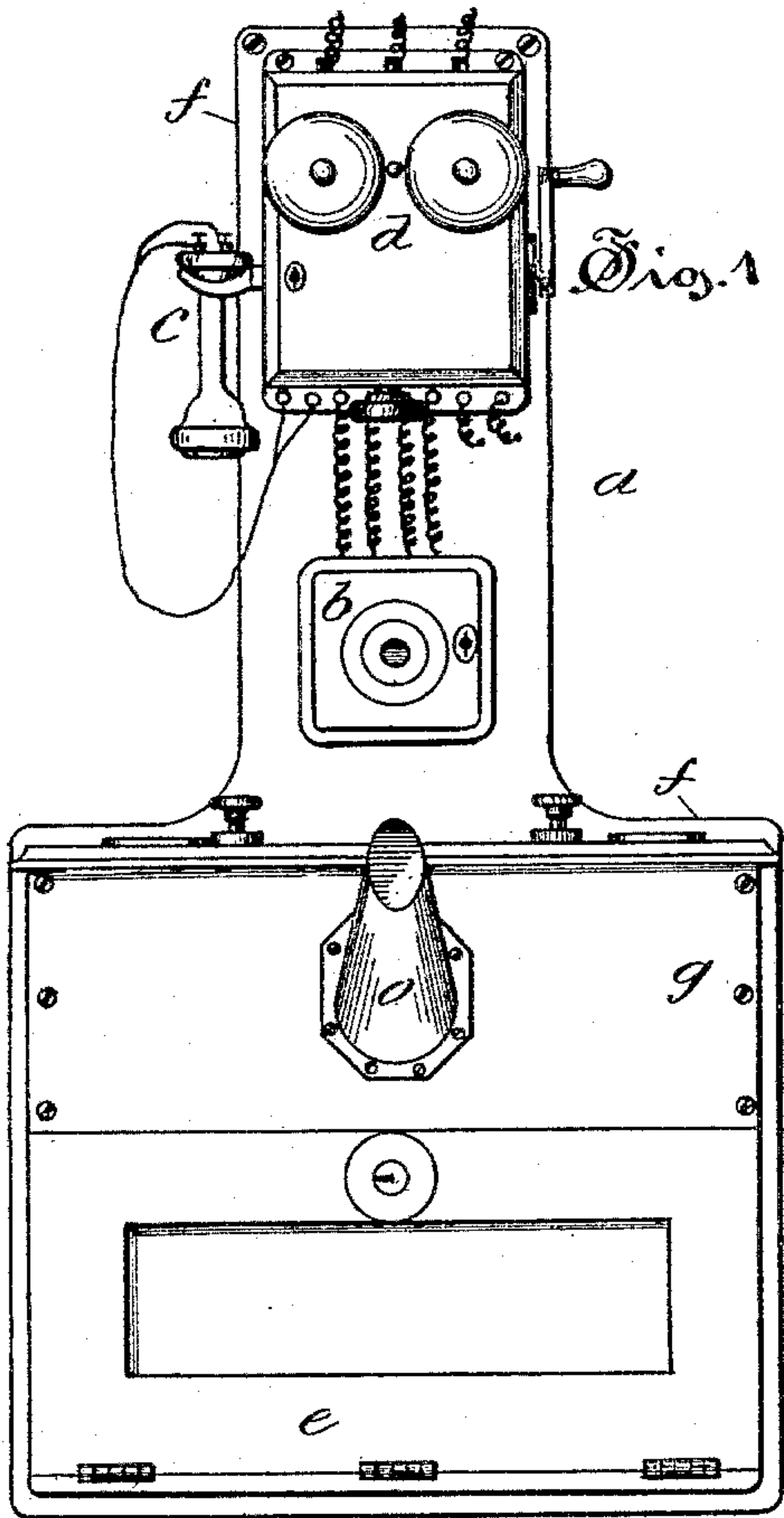


Fig. 1

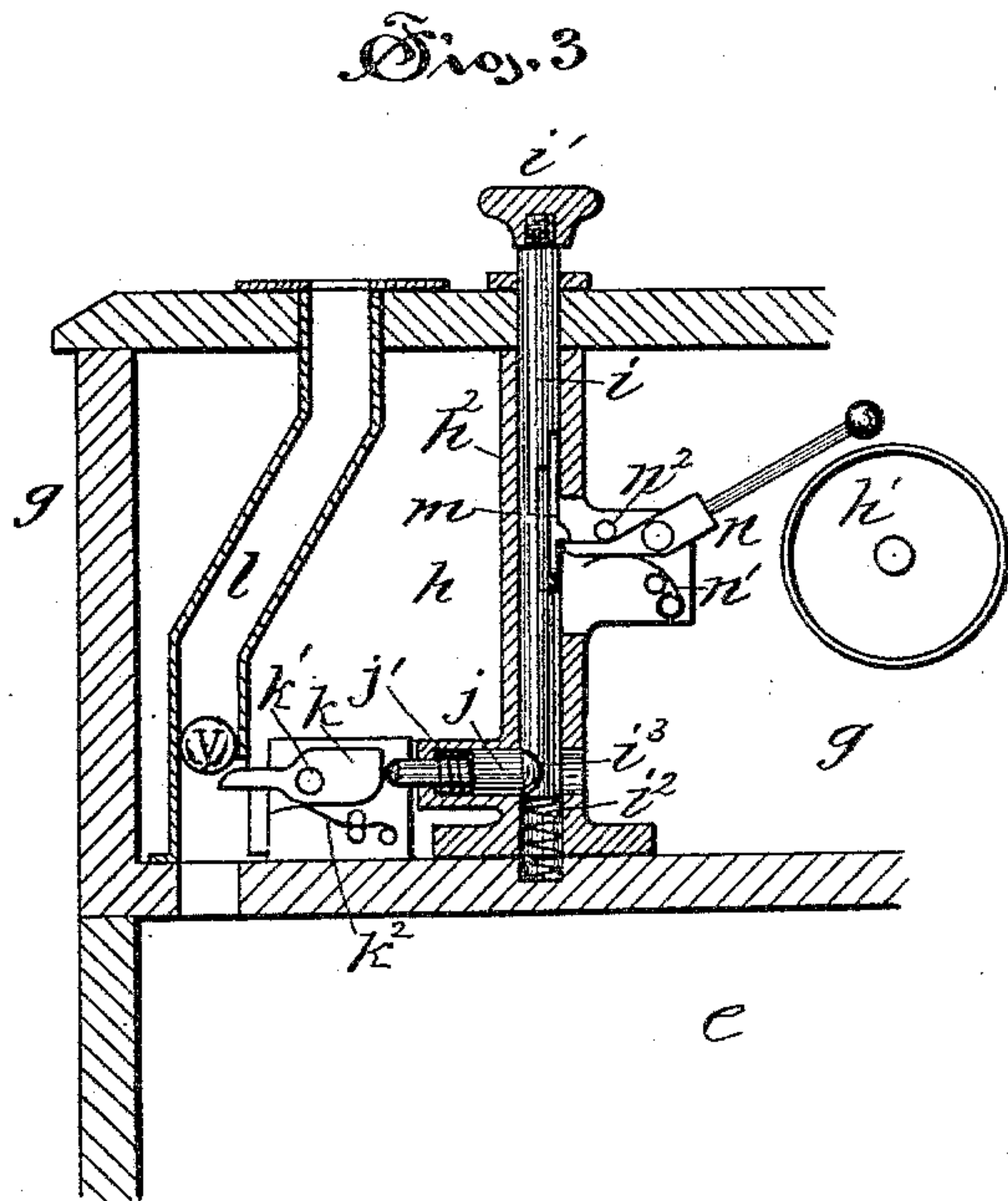
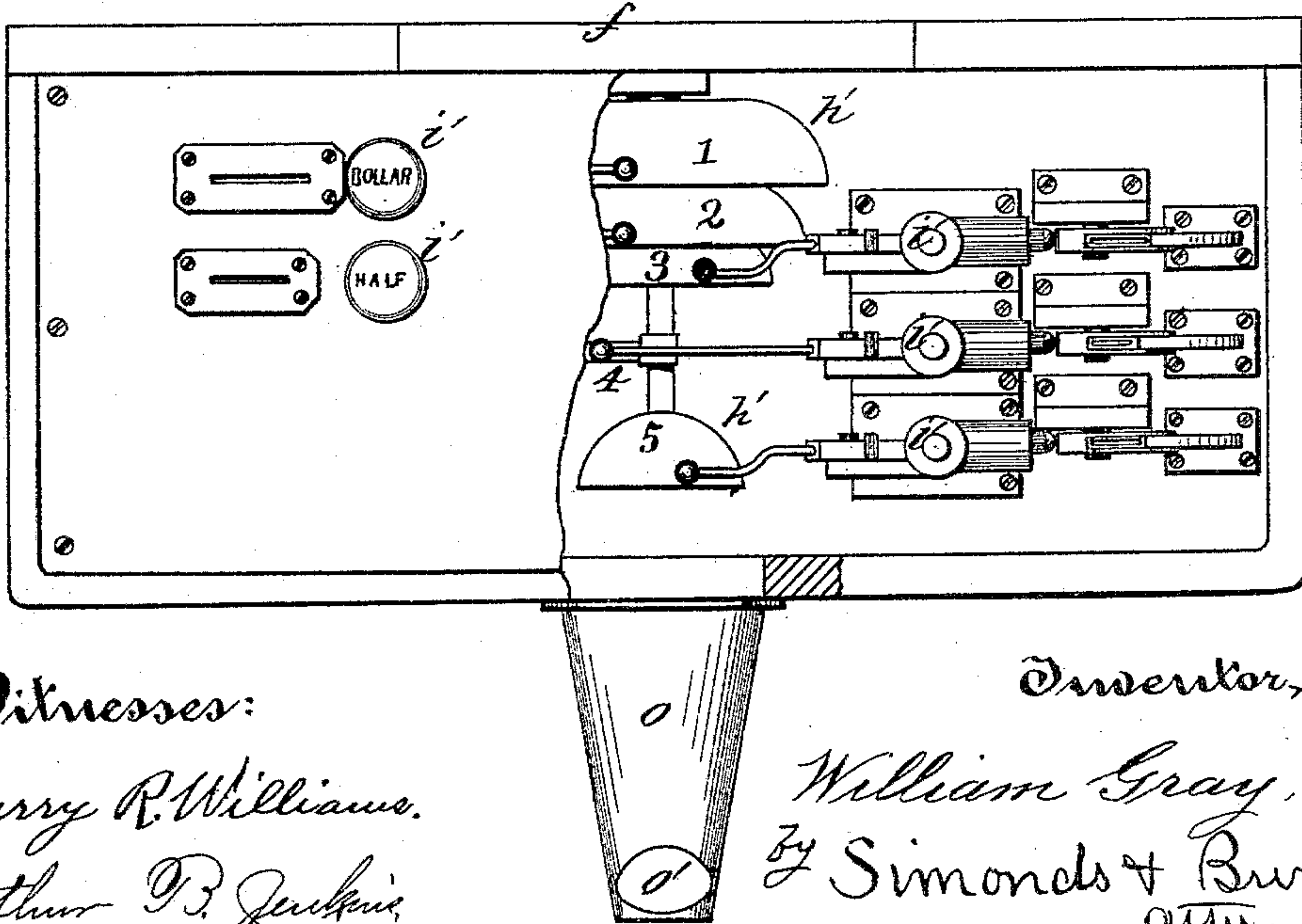


Fig. 3

Fig. 2



Witnesses:

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UNITED STATES PATENT OFFICE.

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COIN-CONTROLLED APPARATUS FOR TELEPHONES.

SPECIFICATION forming part of Letters Patent No. 597,556, dated January 18, 1898.

Application filed December 20, 1889. Serial No. 334,347. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM GRAY, of Hartford, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Coin-Controlled Apparatus for Telephones, of which the following is a full, clear, and exact description, whereby any one skilled in the art can make and use the same.

My invention relates to the class of devices that are adapted to be placed in position at telephone-stations for the purpose of automatically collecting toll for the use of the instrument at a station and for apprising the central office by distinctive signals that the requisite toll has been paid.

To this end my invention consists in the combination, with the transmitter of a set of telephone instruments, of a covered signaling device locked against ordinary access and provided with coin-controlled locking mechanism; and it also consists in details of the several parts of the device making up the apparatus as a whole and in their combination, as more particularly hereinafter described, and pointed out in the claims.

Referring to the drawings, Figure 1 is a view in front elevation of a set of telephone instruments, illustrating one form of an apparatus embodying my invention. Fig. 2 is a detail top view of the apparatus with part of the signal-box cut away to show the construction and arrangement of the signal device. Fig. 3 is a detail view, in central vertical section, of the coin-controlled signal-locking device appurtenant to one of the signals.

In this general class of apparatus I am aware that efforts have been made to provide a toll-collecting device for accomplishing in several ways the result attained by me. In one of such prior forms of apparatus the magneto call-bell is locked by a coin-controlled device which compels the payment of a fee before the central office can be called. In another form of apparatus special wires and somewhat intricate arrangements of electrical switches and other parts are required to send signals to the central office by the payment of a coin, the latter acting to effect the signaling automatically.

In my within-described invention the set of telephone instruments is left in the usual condition free to be used to call the central office or to receive calls; and the peculiar feature of my invention consists in the combination, with the transmitter, of a closed and coin-controlled signal device that can be used for notifying the central office, by striking a signal after payment of a coin, that the required fee has been paid, the signal being sent over the wire ordinarily used and requiring no special apparatus so far as the electrical parts of the telephone are concerned.

In the accompanying drawings, the letter *a* denotes what I have termed a "set of telephone apparatus" used at a station, usually consisting of the transmitter *b*, receiver or telephone *c*, magneto-bell *d*, and batteries contained in the battery-box *e*, that is fast to the backboard *f*. The signal-box *g* is attached preferably to the backboard over the battery-box, as illustrated in Fig. 1 of the drawings. In this signal-box the coin-controlled signal mechanism *h* is arranged.

In the form of signal device shown each of the bells *h'* has appurtenant to it a tubular standard *h²*, in which is arranged a reciprocating signal-rod *i*, terminating above the box with a pad *i'*, on which is marked the symbol denoting the value of the coin that is to be used in unlocking the signal-rod. The signal-rod is seated on the spring *i²*, that normally tends to hold it at the upper limit of its play, and it has on one side a cam-socket *i³*, into which the cam end of a bolt *j* projects. This bolt is held in engagement with the signal-rod *i* by means of the spring *j'*. It is located in a lateral extension of the standard, with one end in contact with the rear of the tumbler *k*, while the other is held in the socket in the signal-rod.

The tumbler *k* is supported on the pivot-pin *k'*, that is substantially just below the prolongation of the line of the axis of the reciprocating tumbler. The forward end of the tumbler *k* projects through an opening in the side of the coin-channel *l* in position to be struck by a coin and tilted by its weight, the tumbler being held in a horizontal position by means of a spring *k²*.

On the side of the signal-rod *i* there is a spring-lug *m*, adapted to engage the short arm of a hammer *n*, that is held by the spring *n'* against a stop-pin *n*², the outer end of the hammer being so arranged with regard to a bell that when the downward movement of the signal-rod trips the hammer the latter will strike the bell. As soon as pressure on the rod is removed the latter is lifted by means of the spring *i*² and the spring-catch yields so as to allow the lug on its side to pass to the upper side of the inner end of the hammer in a position ready to repeat the stroke on the bell by a downward movement of the signal-rod.

On the front side of the signal-box there is arranged a deflector *o*, with its upper end provided with an opening *o'*, arranged in such position with relation to the transmitter as to deflect the sound of the signal against it.

The great advantage of my within-described invention is that a number of distinct signals 1, 2, 3, 4, and 5 may be arranged in the signal-box, the difference in kind or quality of sound enabling the operator at the central office to distinguish between the signals, there being appurtenant to each gong, bell, or like sounding device a coin-controlled signal-striking mechanism. All of the coin-controlled striking mechanisms are substantially alike and duplicates of each other.

The coin-channel extends through a coin-receiving opening in the upper part of the signal-box into a money drawer or receptacle in the lower part of or below the box.

The method of operating the apparatus is as follows: The apparatus, as described, being located at a public station, the one wishing to call the central office uses the telephone in the usual manner and asks to be connected with the one to whom he wishes to talk. As soon as the operator at the central office informs the person wishing to talk that the connection can be made he drops into the appropriate slot a coin of the amount required to pay the toll for such use of the telephone

and striking upon the top of the signal-rod signals to the central office that he has paid the required fee. The connection is then made and the telephone used.

The apparatus is preferably so arranged that but one signal can be made by any one of the signal devices after the payment of a single coin, a repetition of the payment being required before a second signal can be given.

By arranging the coin-channels so that No. 5 is controlled by a five-cent piece, No. 4 by a ten-cent piece, No. 3 by a twenty-five-cent piece, No. 2 by a half-dollar, and No. 1 by a one-dollar piece a great combination of values can be made that will enable a person to pay any desired amount for the use of the telephone to accommodate the various charges for local or out-of-town service.

I claim as my invention—

1. In combination with the transmitter of a telephone apparatus, a signal device located adjacent to the transmitter, the sound-deflector leading from the signal-box to the transmitter, the signal-locking tumbler, the coin-controlled signal-rod normally locked, and the signal-sounding mechanism, all substantially as described.

2. In combination with the transmitter of a telephone apparatus, a signal device located adjacent to the transmitter, the hammer having an end in engagement with the sliding signal-rod, the sliding signal-rod having a cam-recess, the bolt with one end normally in engagement with the cam-recess in the signal-rod and the other end adapted to engage the end of a tumbler whereby the sliding movement of the bolt is prevented, the swinging tumbler with one end projecting into the path of movement of the bolt and the other projecting into a coin-channel, and the coin-channel, all substantially as described.

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Witnesses:

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