

No. 682,986.

Patented Sept. 17, 1901.

W. GRAY.
TELEPHONE TOLL APPARATUS.

(Application filed Jan. 5, 1901.)

(No Model.)

2 Sheets—Sheet 1.

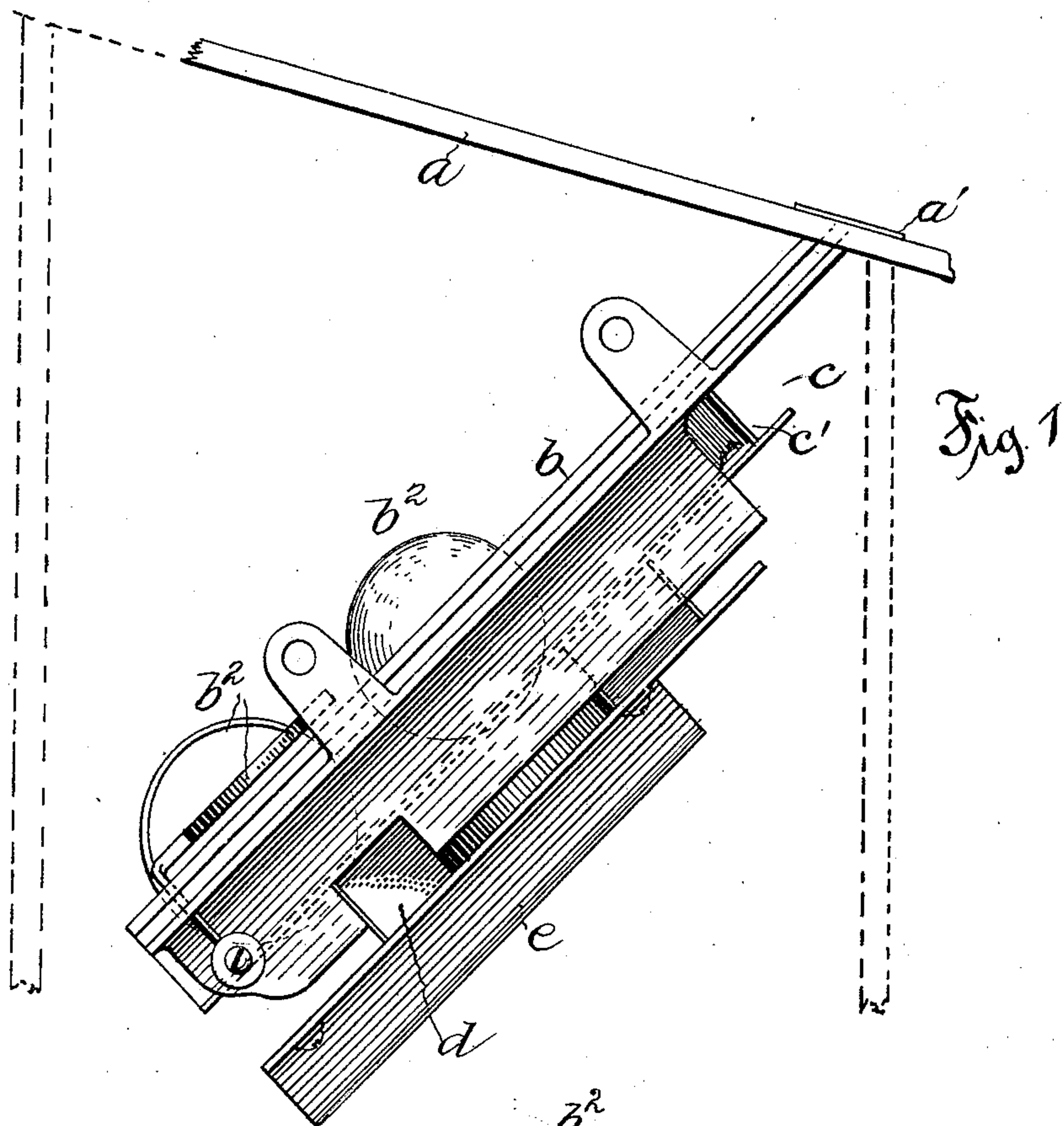


Fig. 1

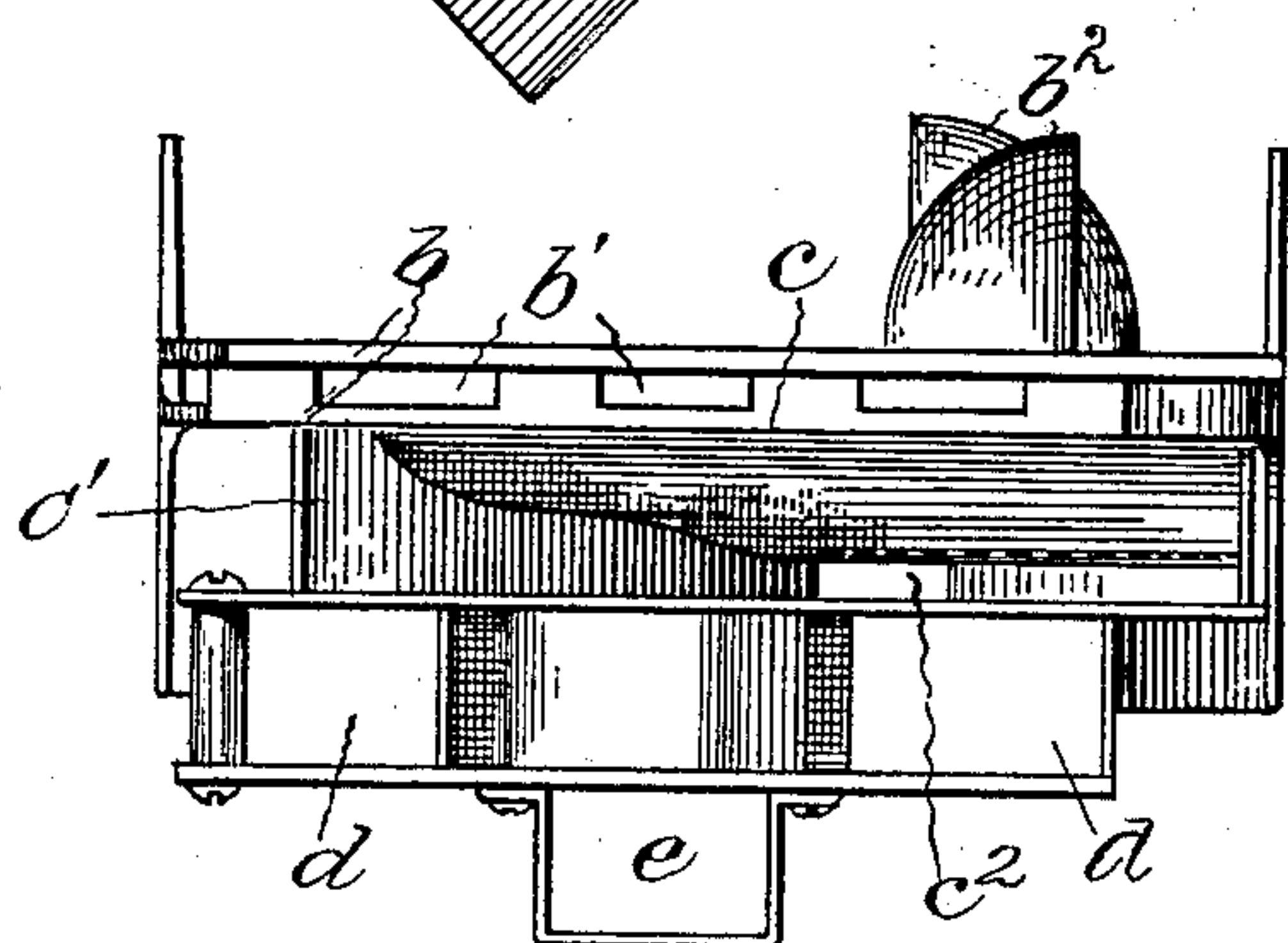


Fig. 2

Witnesses:

Arthur B. Jenkins.

R. H. Burdett

Inventor.

William Gray.

By Chas. L. Burdett
Attorney

No. 682,986.

Patented Sept. 17, 1901.

W. GRAY.
TELEPHONE TOLL APPARATUS.

(Application filed Jan. 5, 1901.)

(No Model.)

2 Sheets—Sheet 2.

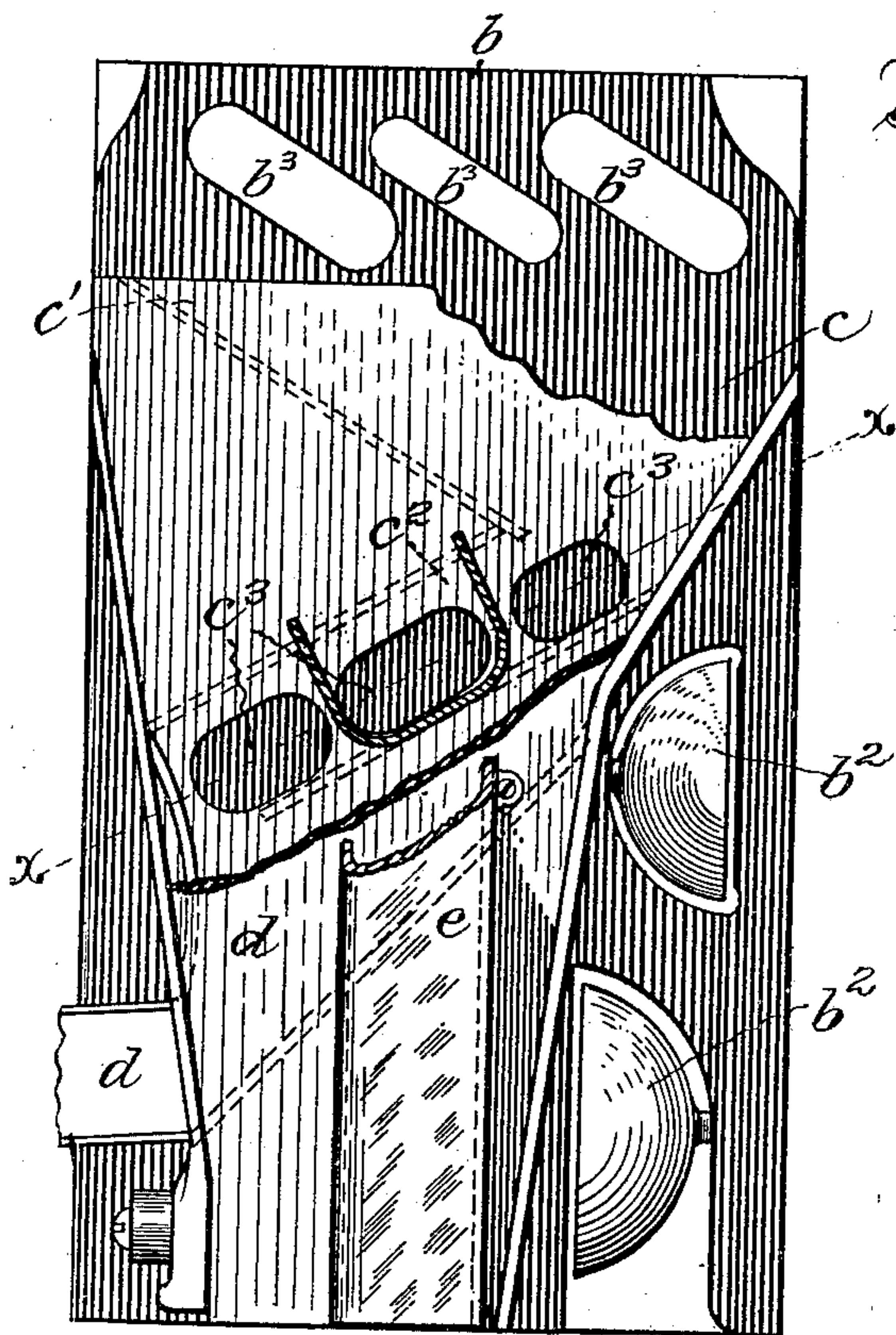


Fig. 3

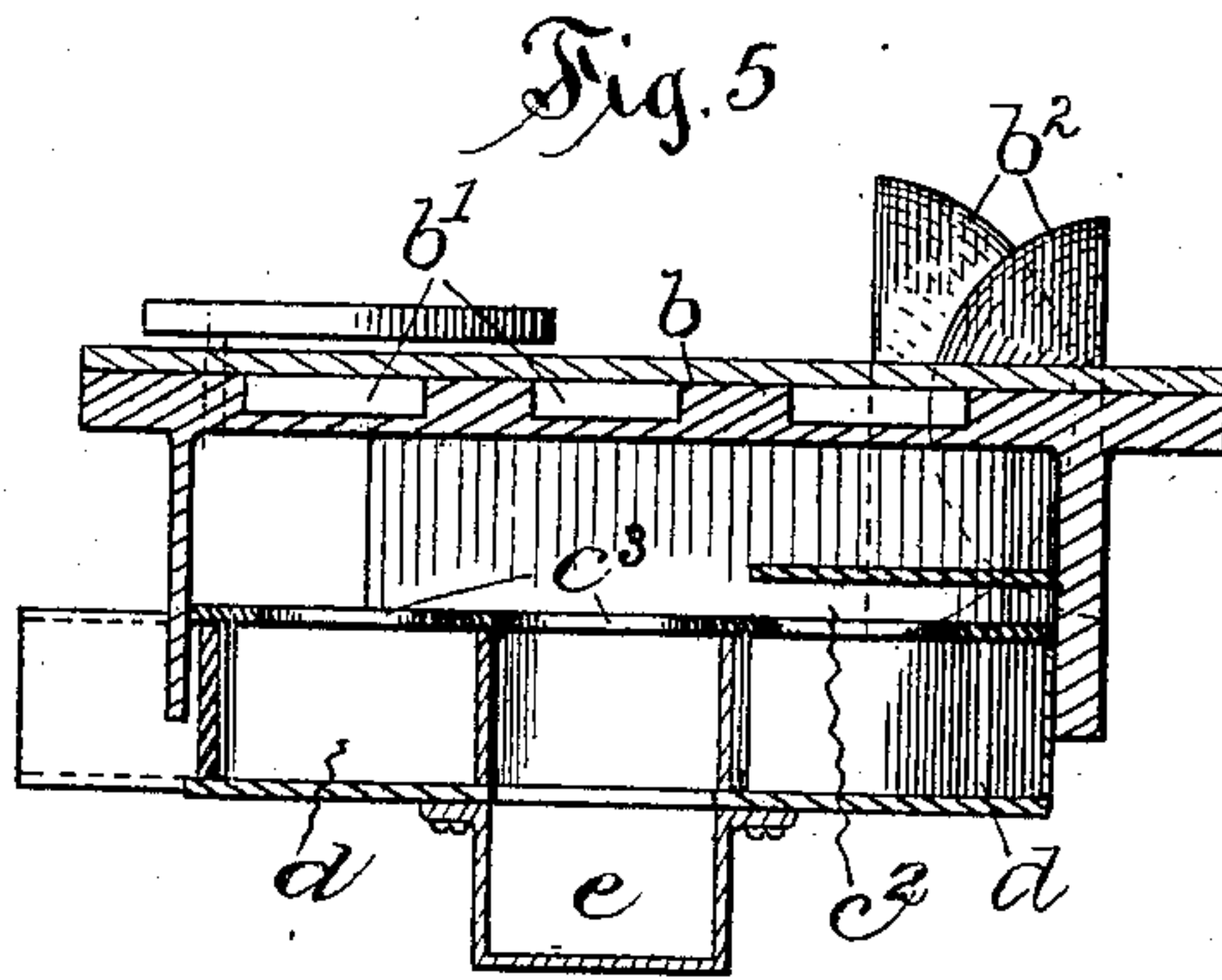


Fig. 5

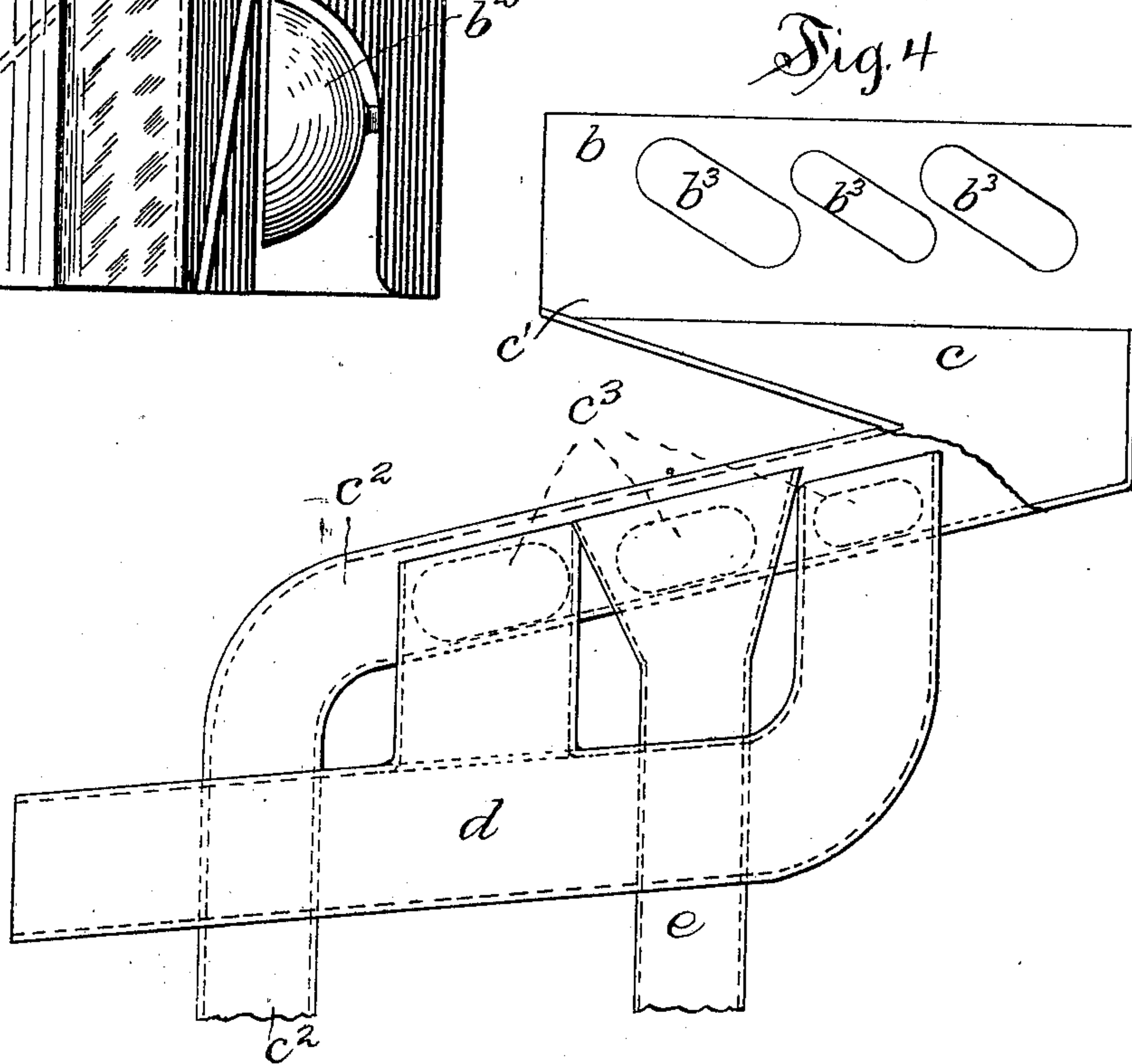


Fig. 4

Witnesses:
Arthur B. Jenkins.
R. H. Burdett

Inventor:
William Gray,
by Chas. L. Burdett,
Attorney.

UNITED STATES PATENT OFFICE.

WILLIAM GRAY, OF HARTFORD, CONNECTICUT, ASSIGNOR TO THE GRAY
TELEPHONE PAY STATION COMPANY, OF SAME PLACE.

TELEPHONE TOLL APPARATUS.

SPECIFICATION forming part of Letters Patent No. 682,986, dated September 17, 1901.

Application filed January 5, 1901. Serial No. 42,208. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM GRAY, a citizen of the United States, and a resident of Hartford, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Telephone Toll Apparatus, of which the following is a specification.

My invention relates to the class of devices used in connection with telephones for the purpose of indicating or denoting that certain requirements for the use of the telephone have been complied with, and more especially to that class of devices in which the payment of a coin of a certain designated value shall be indicated; and the object of my invention is to provide a device of this class in the use of which all coins inserted by mistake in the wrong place shall be returned to the user of the instrument, and a further object of my invention is to provide a device of this class in the attempted use of which all coins of smaller denomination than that of the coin of least value required for any use of the instrument will pass into the coin-box or other receptacle and be retained without actuating the indicating mechanism.

One form of device in which my invention may be embodied is illustrated in the accompanying drawings, in which—

Figure 1 is a view illustrating the relative arrangement of the mechanism with respect to the signal-box of a telephone apparatus and showing my improved signaling apparatus in side elevation. Fig. 2 is a top view of my improved signaling apparatus. Fig. 3 shows a detail rear view of the apparatus, with parts broken away to show construction. Fig. 4 is a detail diagram view illustrating the invention. Fig. 5 is a detail view in cross-section on line *xx* of Fig. 3 looking down.

In many of the prior devices of the class to which my invention relates slots are provided for the insertion of coins, each slot being of a size to admit no coin larger in dimensions than that intended to be inserted in the slot, and in the use of such telephone-toll apparatus prior to my within-described invention a serious difficulty has been experienced from the fact that if a coin of smaller

dimensions than that intended for a certain slot be inserted therein by mistake it will not operate the indicator nor can it be regained without much trouble. By the use of my improved apparatus I have overcome these objections by providing means whereby should a coin of smaller value than that required for a certain slot be inserted therein it will be promptly delivered to a point where the user of the instrument can obtain it, but should a wrongful use of the instrument be attempted by the employment of a coin of a smaller denomination than that of the coin of least value demanded for the use of the instrument it will be retained within the instrument and without operating the indicating mechanism.

In the accompanying drawings the letter *a* denotes a portion of the signal-box in which the signal apparatus is located. This box is provided with the usual slot-plate *a'*, having slots for the reception of coins. A signal-plate *b* is located within the signal-box and secured therein preferably in an inclined position, as shown, this plate being provided with coin-channels *b'*, through which coins intended for each channel travel to the indicating devices *b²* and thence to a proper receptacle provided for them. Through the wall of each of the coin-channels *b'* an opening is made, forming a trap *b³*, through which all coins of a size not intended for that channel and which may have been inserted therein will pass. The apparatus just described is of well-known construction, and further description is deemed unnecessary herein, reference being made to the United States Patent to Charles W. Holbrook, dated August 30, 1892, No. 481,903, for a more complete description, if such shall be required for any purpose. A main receiver *c* is located underneath the traps in the coin-channels, this receiver preferably being common to all of the traps *b³*. This main receiver has a flaring mouth *c'* and is gradually reduced in dimensions therefrom into a narrow runway *c²*, located back of the signal-plate *b* and along which the coins trapped from the channels *b'* roll. Traps *c³* of different size are formed through the wall of this runway, which is preferably intended to conduct along its entire length coins of a

single denomination only. A portion of these traps open into a delivery-chute *d*, and others (the central one shown herein) lead into a retaining-chute *e*. The delivery-chute extends
 5 to a point (herein shown just outside the signal-box) accessible to the user of the instrument, and the retaining-chute leads to the money drawer or other receptable located within the signal-box. The device herein
 10 shown is intended for the use of coins of the value of twenty-five, ten, and five cents, slots for such coins in the order named being arranged from left to right. (See Figs. 2 and 3 of the drawings.) A coin of either of the
 15 mentioned dimensions being placed in its proper slot will travel therealong to the proper indicator and from thence be delivered to the money-box. If a coin, as a ten or a five cent piece, be placed in the twenty-five-
 20 cent slot or a ten-cent piece be placed in the five-cent slot by mistake instead of being placed in the slot intended for it, said coins will pass through the traps *b*³ along the runway *c*² to the traps therein. All ten-cent
 25 pieces will pass through the upper trap in this runway, and all five-cent pieces will pass through the lower trap in this runway, each of these traps opening to the delivery-chute *d*, along which the coins travel to the point
 30 where they may be regained by the user of the instrument. If, however, an attempt is made to defraud the instrument by the use of smaller coins or those of less value than a five-cent piece, as by the use of a two-cent
 35 piece or of a one-cent piece, these coins will pass through the traps *b*³ into the runway *c*². The traps in this runway, however, not being of a size sufficient to receive a two-cent piece, that coin travels to the end of the runway,
 40 from which it drops into the money-drawer. The one-cent piece, however, will pass through the central trap in the runway *c*² and into the retaining-chute *e*, through which it is delivered to the money-drawer.

45 It is obvious that other forms of apparatus than that herein shown may be devised to accomplish the results contemplated by me in the practice of my invention and without the
 50 aid of anything more than mere mechanical skill, and I do not desire or intend to limit myself to the precise means herein shown and described, as any means of trapping and re-trapping coins of different denominations, retaining a portion and delivering others, will
 55 come within the scope of the invention.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a coin-operated device, in combination with a plural number of chutes adapted
 60 to receive coins of different value and with traps through the walls of a plural number of said chutes, a runway common to said traps and having a trap through its wall.

2. In a coin-operated device, in combination with a plural number of coin-chutes
 65 adapted to receive coins of different value and with traps through the walls of a plural num-

ber of said chutes, a runway common to said traps and having a trap in its wall, and a delivery-chute arranged to receive a coin from
 70 said coin-chutes.

3. In a coin-operated device, in combination with a main coin-chute having a trap in its wall, a runway arranged to receive a coin from said trap and having a plural number
 75 of traps in its wall.

4. In a telephone toll apparatus, in combination with a main coin-chute having a trap in its wall, an indicating device appurtenant to said main coin-chute, a runway arranged
 80 to receive a coin from said trap and having a trap in its wall, and a delivery-chute arranged to receive a coin delivered through the trap of the main coin-chute.

5. In a telephone toll apparatus, in combination, a plural number of main coin-chutes
 85 having traps through the walls thereof, indicating devices appurtenant to said coin-chutes, a runway common to said traps and having a trap in its wall, and a delivery-chute
 90 adapted to receive a coin from the trap in the runway.

6. In a coin-operated device, a main coin-chute having a trap in its wall, a runway arranged to receive a coin from said trap and
 95 having a plural number of traps in its wall, a delivery-chute arranged to receive a portion of the coins from the trap from the runway, and a retaining-chute adapted to receive coins from a trap in the runway.
 100

7. In a telephone toll apparatus, in combination, a main coin-chute having a trap in its wall, said chute delivering within a signal-box, the signal-box, a runway arranged to receive a coin from the trap of the main coin-
 105 chute, said runway delivering within the signal-box and having a trap in its wall, and a delivery-chute adapted to receive a coin from the trap in the runway and delivering at a point outside the signal-box.
 110

8. In a telephone toll apparatus, in combination, a signal-box, main coin-chutes delivering within the signal-box and having traps through the walls thereof, a runway appurtenant to traps in the main coin-chutes and
 115 having a trap in its walls, said runway delivering within the signal-box, a delivery-chute arranged to receive a coin from the trap in the runway and delivering to a point outside of the signal-box, and a signal device
 120 appurtenant to the main coin-chute.

9. In a telephone toll apparatus, in combination, a signal-box, main coin-chutes delivering within the signal-box and having traps in the walls thereof, a runway arranged to receive coins from said traps, said runway delivering within the signal-box and having a trap in its walls, a delivery-chute arranged to receive a coin from the trap in the runway and delivering to a point without the signal-
 125 box, and a signal device appurtenant to each main coin-chute.
 130

10. In a telephone toll apparatus, in combination, a signal-box, main coin-chutes deliver-

ing within the signal-box and having traps in the walls thereof, a runway common to the traps in the main coin-chutes, said runway having traps in its walls, a delivery-chute arranged to receive coins from the traps in the runway and delivering to a point outside of the signal-box, a retaining-chute arranged to receive coins from a trap in the runway and delivering within the signal-box, and indicating devices appurtenant to the main coin-chute.

11. In a coin-operated device, in combination with a plural number of chutes adapted to receive coins of different value and with

traps through the walls of a plural number of said chutes, a runway common to said traps and having a plural number of traps through its wall.

12. In a coin-operated device, in combination with a main coin-chute having a plural number of traps in its wall, a plural number of runways adapted to receive coins from said traps and deliver to different places.

WILLIAM GRAY.

Witnesses:

ARTHUR B. JENKINS,
ERMA P. COFFRIN.