

No. 661,578.

Patented Nov. 13, 1900.

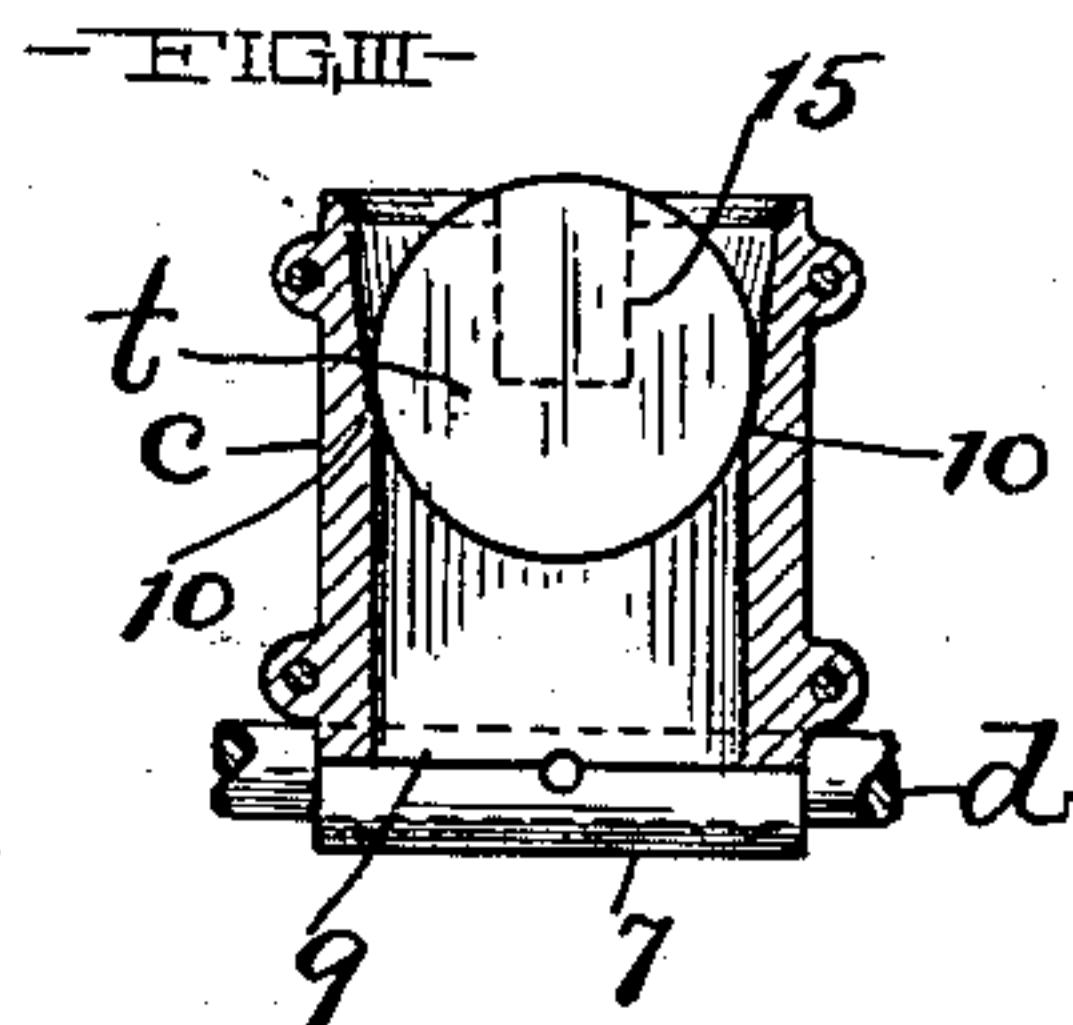
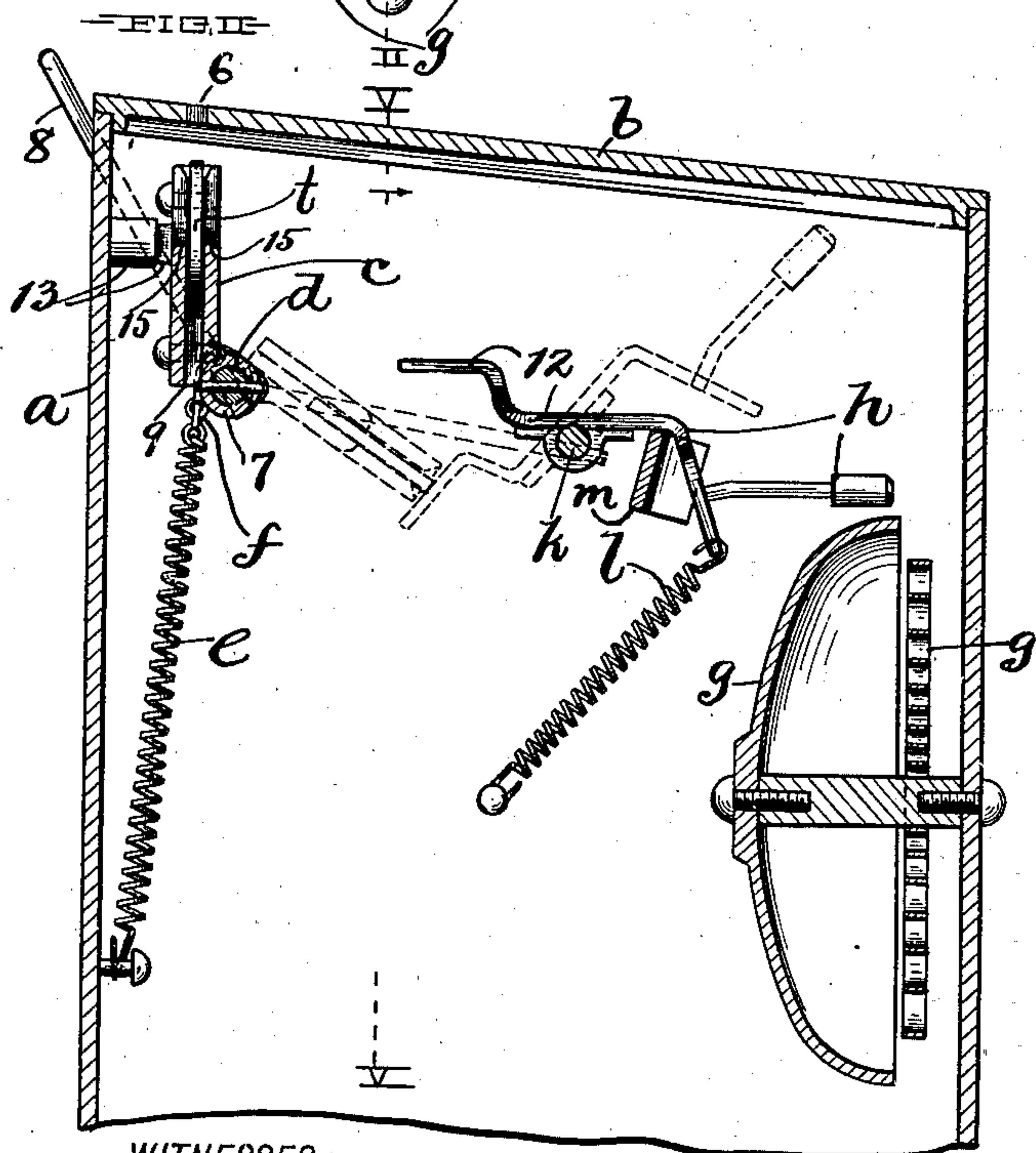
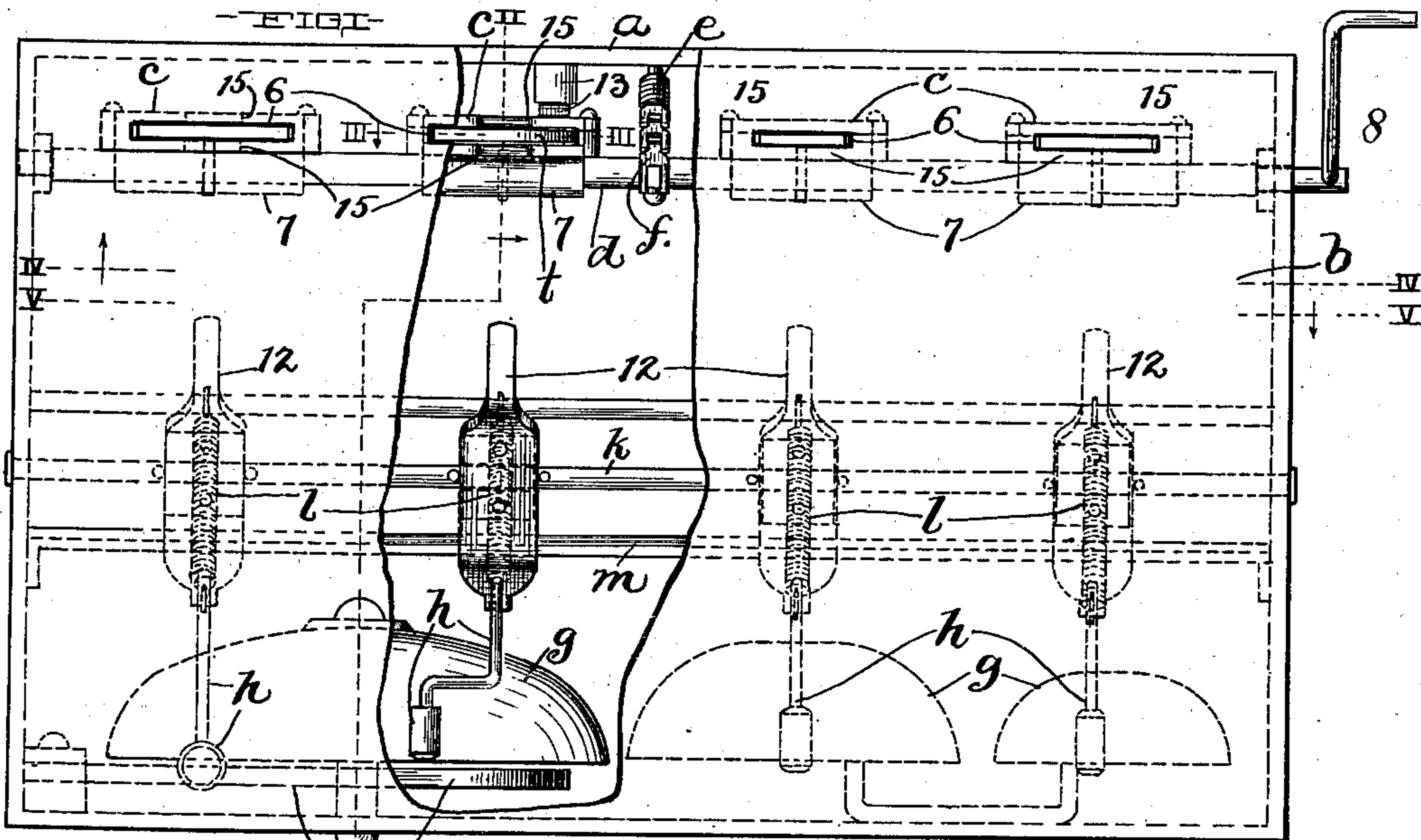
W. A. FOSS.

TOLL COLLECTING DEVICE FOR TELEPHONES.

(Application filed July 26, 1900.)

(No Model.)

2 Sheets—Sheet 1.



WITNESSES:

Daniel E. Daly
Victor C. Lynch.

INVENTOR

William A. Foss

BY

Lynch & Dorer
his ATTORNEYS

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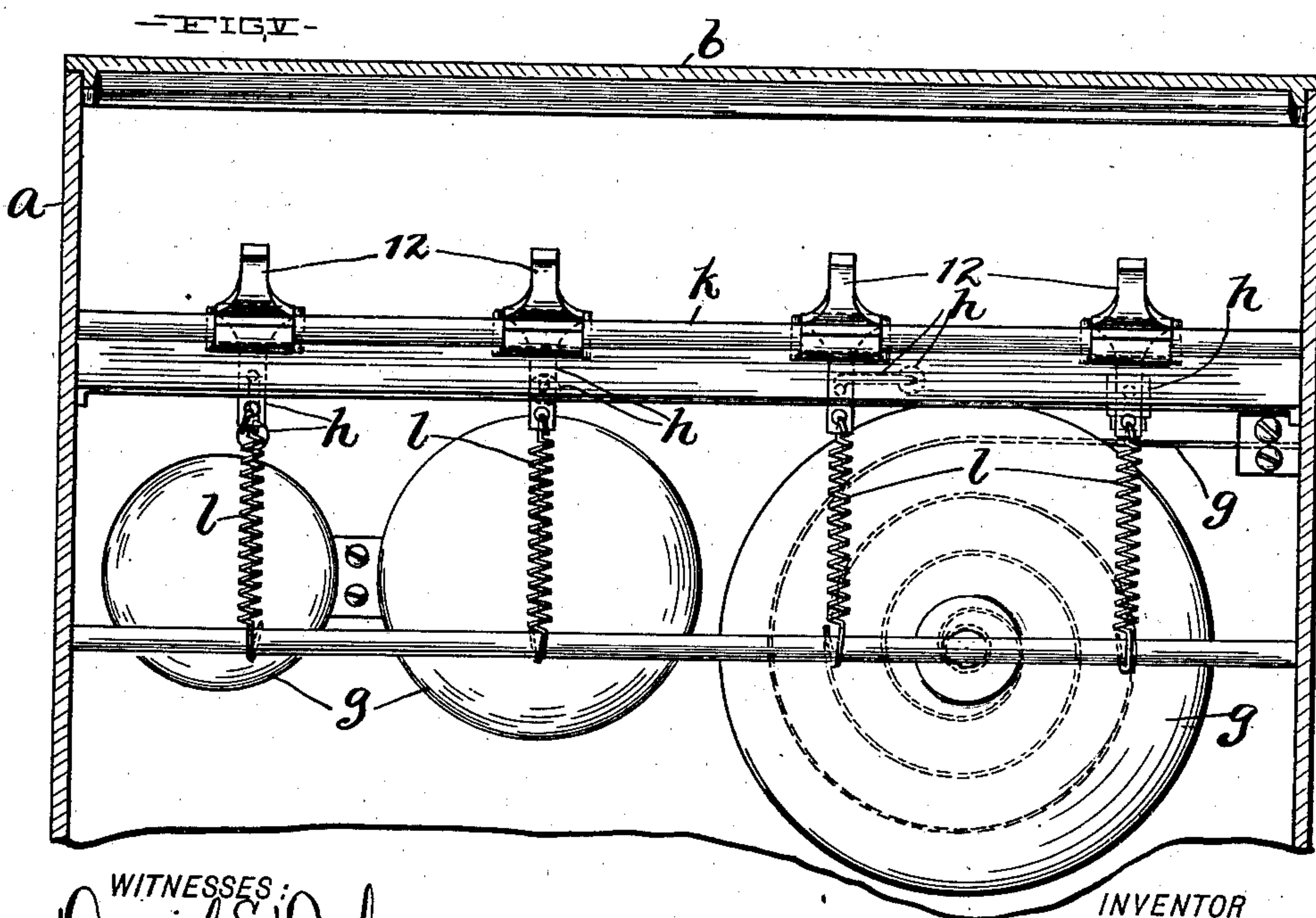
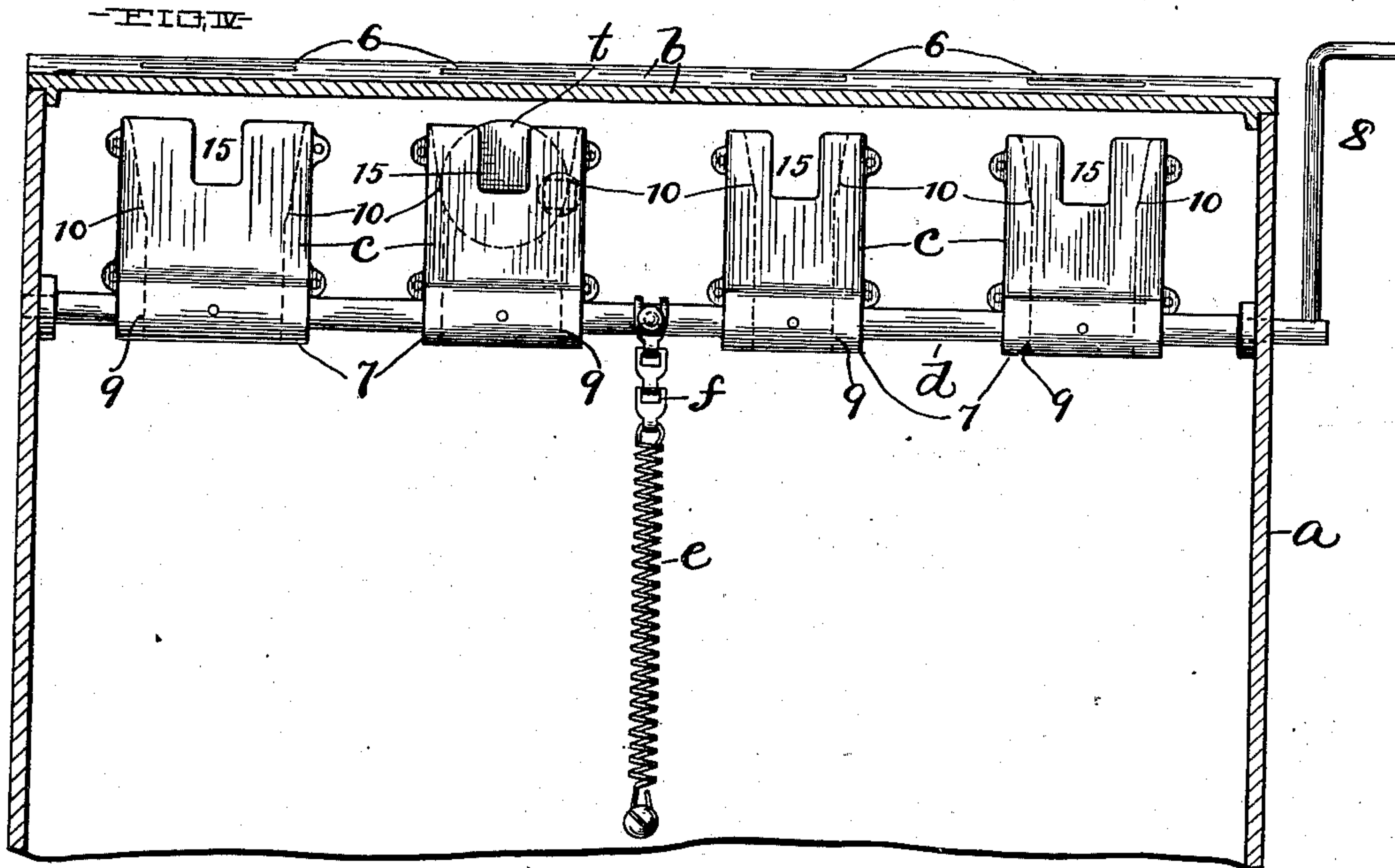
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TOLL COLLECTING DEVICE FOR TELEPHONES.

(Application filed July 28, 1900.)

(No Model.)

2 Sheets—Sheet 2.



WITNESSES:
Daniel E. Daly.
Victor C. Lynch.

INVENTOR
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BY
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UNITED STATES PATENT OFFICE.

WILLIAM A. FOSS, OF CLEVELAND, OHIO, ASSIGNOR TO THE AMERICAN
TOLL TELEPHONE COMPANY, OF SAME PLACE.

TOLL-COLLECTING DEVICE FOR TELEPHONES.

Specification forming part of Letters Patent No. 661,578, dated November 13, 1900.

Application filed July 26, 1900. Serial No. 24,878. (No model.)

All whom it may concern:

5 It is known that I, WILLIAM A. FOSS, a resi-
dent of Cleveland, in the county of Cuyahoga
and State of Ohio, have invented cer-
tain new and useful Improvements in Toll-
Collecting Machines for Telephones; 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
10 which it pertains to make and use the same.

My invention relates to improvements in
toll-collecting machines for telephones, and
more especially to a machine of the character
indicated designed for use with a long-dis-
15 tance telephone.

The primary object of this invention is to
provide a toll-collecting machine wherein the
toll-representing coin or check introduced
into the machine participates directly in the
20 operation of a signal that is audible at the
telephone-exchange and which signal is not
operated until the toll has passed into the
machine beyond control of the operator.

With this object in view and to the end of
25 realizing other advantages hereinafter ap-
pearing the invention consists in certain fea-
tures of construction and combinations of
parts hereinafter described, and pointed out
in the claims.

30 In the accompanying drawings, Figure I is
a top plan of a toll-collecting machine em-
bodying my invention, and in this figure por-
tions of the top of the inclosing case of the
machine are broken away to more clearly
35 show the construction. Fig. II is a left-hand
side elevation, mostly in vertical section, on
line II II, Fig. I. Fig. III is a rear side ele-
vation in section on line III III, Fig. I. Fig.
IV is a front side elevation in section on line
40 IV IV, Fig. I. Fig. V is a rear elevation in
section on line V V, Figs. I and II.

Referring to the drawings, *a* designates the
inclosing case of my improved machine, and
b represents the top of the said case, that is
45 provided at or near its rear portion with sev-
eral slots 6, arranged in line at suitable inter-
vals between the right-hand and left-hand
sides of the case.

50 The toll-representing coins or checks re-
quired in the operation of the machine are
introduced at the slots 6, that differ in size,

and consequently each slot 6 has the dimen-
sions required to admit only the toll-repre-
senting coin or check of a certain denomina-
tion. Below and in register with and in close
55 proximity to each slot 6 is arranged an up-
right toll-receiving hopper *c*. The series of
hoppers are arranged in line, therefore, be-
tween the right-hand and left-hand sides
of the case *a*, within the rear and upper
60 portion of the said case. Each hopper *c*
at its lower end is provided with a sleeve 7,
that is integral with and formed upon the
forward side and lower end of the hopper
and fixed or operatively mounted upon a hori-
65 zontally-arranged shaft *d*, that extends be-
tween and is supported from the right-hand
and left-hand side walls of the inclosing case.
All the hoppers are therefore mounted upon
one and the same shaft that has one end ex-
70 tending outside of the case *a* and provided
with a crank 8 or device for oscillating the
shaft. Each hopper *c* has its toll-receiving
chamber arranged at the rear side of the hop-
per-bearing shaft and is open top and bot-
75 tom—that is, each hopper *c* has its lower end
provided, preferably, with an outlet 9 at the
rear side of its sleeve 7. The toll-represent-
ing coin or check adapted to be received by
each hopper is introduced at the slot 6 above
80 the said hopper and dropped through the said
slot into the hopper, where the said coin or
check, if it is the proper coin or check for
passage into the said hopper, will lodge upon
two downwardly-converging shoulders 10 and
85 10, that are formed internally of the hopper
a suitable distance apart longitudinally of the
hopper-bearing shaft, and the said coin or
check, if it is a smaller coin or check than
that which is to pass into the said hopper,
90 will escape between the aforesaid shoulders
downwardly through the hopper and drop
upon the bottom of the case without perform-
ing any function in the operation of the ma-
chine. The chamber of each hopper has the
95 dimensions required to receive the toll-rep-
resenting coin or check edgewise.

A suitably-applied spring *e*, preferably a
coil-spring, acts to retain the hopper-bearing
shaft in its normal position, wherein one of
100 the hoppers has its rear side engaging a lug 13,
projecting forwardly from and formed upon

the rear side wall of the case *a*. The spring *e* is arranged uprightly below the shaft, has its lower end attached to the case *a*, and has its upper end attached to one end of a chain *f*, that has its opposite end attached to the shaft and leads from the spring to and over the rear side of the shaft, so that the spring when the shaft is oscillated forwardly, as required to tilt or oscillate the hoppers forwardly, is placed under tension.

Within the forward portion of the inclosing case are provided as many gongs or sound-yielding instruments *g* as there are toll-receiving hoppers, and the said instruments are supported from the forward wall of the case *a* in any approved manner. Each instrument *g* is arranged to be struck and sounded by a hammer *h*, that is journaled upon a horizontally-arranged rod *k*, that extends between and is supported from the right-hand and left-hand side walls of the case *a*.

The hammers for sounding the different instruments *g* are journaled, therefore, upon one and the same rod *k*, and each hammer is provided with an arm 12, that projects rearwardly into the sweep of the toll-representing coin or check adapted to be received, carried, and dumped by a toll-receiving hopper *c*.

Suitably-applied coil-springs *l* act to retain the hammers in their normal position, wherein the hammers have their lower sides resting upon or engaging the upwardly-facing surface of a bar *m*, arranged horizontally and extending between and fixed to the right-hand and left-hand side walls of the case *a*.

Each toll-receiving hopper has its forward and rear walls slotted or cut away centrally and from the upper edges downwardly, as at 15, to expose the coin or check received and lodged therein at the forward side of the hopper and to accommodate the location and operation of the hammer-arm 12, arranged to be engaged by the forward side of the said coin or check during the forwardly-tilting or toll-dumping operation of the said hopper, so that when the hopper is oscillated forwardly, as required to dump the toll received thereby into the lower portion of the case *a*, the toll-representing coin or check will have its forward side come into engagement with the upper side of the said hammer-arm 12 and thereupon tilt the respective hammer away from the opposing gong or sound-yielding body, as shown in dotted lines, Fig. II, until the hopper has been oscillated far enough to become disengaged from and pass below the said hammer-arm, whereupon the elevated hammer will by the action of the spring acting to retain the hammer in its normal position be forcibly thrown against the said gong or sound-yielding body, and thereby signal or notify the telephone-exchange that the proper toll has been introduced into the machine beyond the control of the person desiring to use the telephone provided with the said machine. It will be observed that a toll-representing coin or check carried by any hopper below

and beyond the hammer that is operated directly by the said coin or check cannot be withdrawn by a string or cord attached thereto, because a coin or check remaining in the hopper would upon the return of the hopper-bearing shaft into its normal position by the actuation of the spring *e* come into engagement with the under side of the respective hammer-arm 12, so that any further return movement of the coin or check, and consequently of the hopper and connected shaft, would be prevented by the said arm.

My invention comprises, broadly, a suitably-actuated toll-receiving hopper, means for actuating the said hopper in the direction and to the extent required to discharge the toll therefrom, and a signaling instrument—such, for instance, as a gong and a gong-sounding hammer—arranged to be operated directly by the toll-representing coin or check during the aforesaid toll-discharging movement of the hopper.

In Figs. I, II, III, and IV a toll-representing coin or check is shown in one of the hoppers, and *t* designates the said coin or check.

What I claim is—

1. A toll-collecting machine comprising an oscillating toll-receiving hopper, means for oscillating the hopper to the extent required to discharge the toll therefrom, a gong or sound-yielding body, and a suitably-applied movable hammer having an arm extending into the sweep of the toll-representing coin or check so as to result in the operation of the hammer directly by the said coin or check during the toll-discharging oscillation of the hopper.

2. A toll-collecting machine comprising an oscillating hopper for receiving the toll-representing coin or check edgewise, which hopper has its rear and forward side walls slotted, as at 15, from the upper edges of the said walls downwardly; means for oscillating the hopper; a gong or sound-yielding body, and a suitably-applied tiltable hammer having an arm extending into the sweep of the slotted portions of the aforesaid walls of the hopper so that a coin or check within the hopper shall come into engagement with the said hammer-arm at the slots in the aforesaid walls of the hopper during the oscillation of the hopper into its toll-discharging position.

3. A toll-collecting machine comprising a signaling device, a suitably-supported oscillating shaft, a hopper fixed upon the shaft and adapted to receive the said toll-representing coin or check, means for oscillating the shaft, an inclosing case having a slot registering with the hopper, a coil-spring arranged below the shaft and having its lower end attached to the inclosing case, a chain attached to the upper end of the spring and leading thence to the rear side of and over the shaft to which the chain is fixed.

4. A toll-collecting machine comprising a horizontally-arranged shaft, several toll-re-

ceiving hoppers fixed upon the shaft, means for oscillating the shaft, gongs or sound-yielding bodies, and mechanisms for sounding the different sound-yielding bodies, respectively, and arranged to be operated by a toll-representing coin or check within the different hoppers, respectively, during the toll-discharging oscillation of the hoppers.

5. A toll-collecting machine comprising an inclosing case *a* having a top provided with slots *b*; an oscillating shaft *d*; hopper *c* fixed upon the shaft; means for oscillating the shaft;

means acting to retain the shaft and attached hoppers in their normal position; gongs or sound-yielding bodies *g*; the rod *k* and the hammers *h* journaled upon the said rod, all arranged and operating substantially as shown, for the purpose specified.

Signed by me at Cleveland, Ohio, this 18th day of July, 1900.

WILLIAM A. FOSS.

Witnesses:

C. H. DORER,

A. H. PARRATT.

DISCLAIMER.

661,578.—*William A. Foss*, of Cleveland, Ohio. IMPROVEMENT IN TOLL-COLLECTING DEVICES FOR TELEPHONES. Patent dated November 13, 1900. Disclaimer filed October 25, 1901, by the present assignee, *The Baird Manufacturing Company*, a corporation organized under the laws of the State of Illinois.

Enters its disclaimer—

“To the subject-matter of claims 1 and 2 of said Letters Patent, viz:

“1. A toll-collecting machine comprising an oscillating toll-receiving hopper, means for oscillating the hopper to the extent required to discharge the toll therefrom, a gong or sound-yielding body, and a suitably-applied movable hammer having an arm extending into the sweep of the toll-representing coin or check so as to result in the operation of the hammer directly by the said coin or check during the toll-discharging oscillation of the hopper.

“2. A toll-collecting machine comprising an oscillating hopper for receiving the toll-representing coin or check edgewise, which hopper has its rear and forward side walls slotted, as at 15, from the upper edges of the said walls downwardly; means for oscillating the hopper; a gong or sound-yielding body, and a suitably-applied tiltable hammer having an arm extending into the sweep of the slotted portions of the aforesaid walls of the hopper so that a coin or check within the hopper shall come into engagement with the said hammer-arm at the slots in the aforesaid walls of the hopper during the oscillation of the hopper into its toll-discharging position.—[*Official Gazette*, October 29, 1901.]