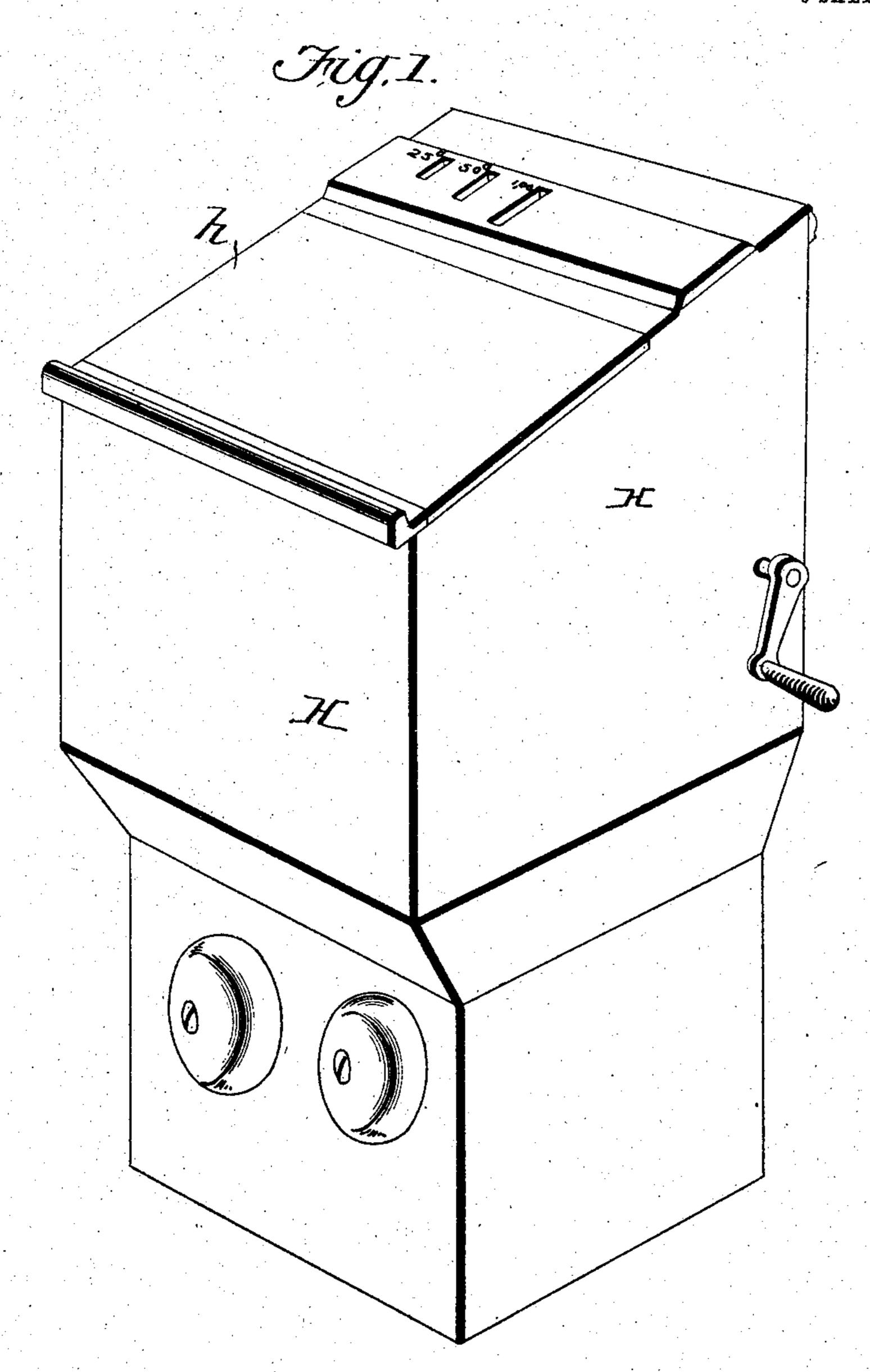
RENT COLLECTING MEANS FOR TELEPHONE SERVICE.

APPLICATION FILED JAN. 15, 1904.

9 SHEETS-SHEET 1.



WITNESSES: for a Ryan Meddonsylver

Joseph L. Peavey

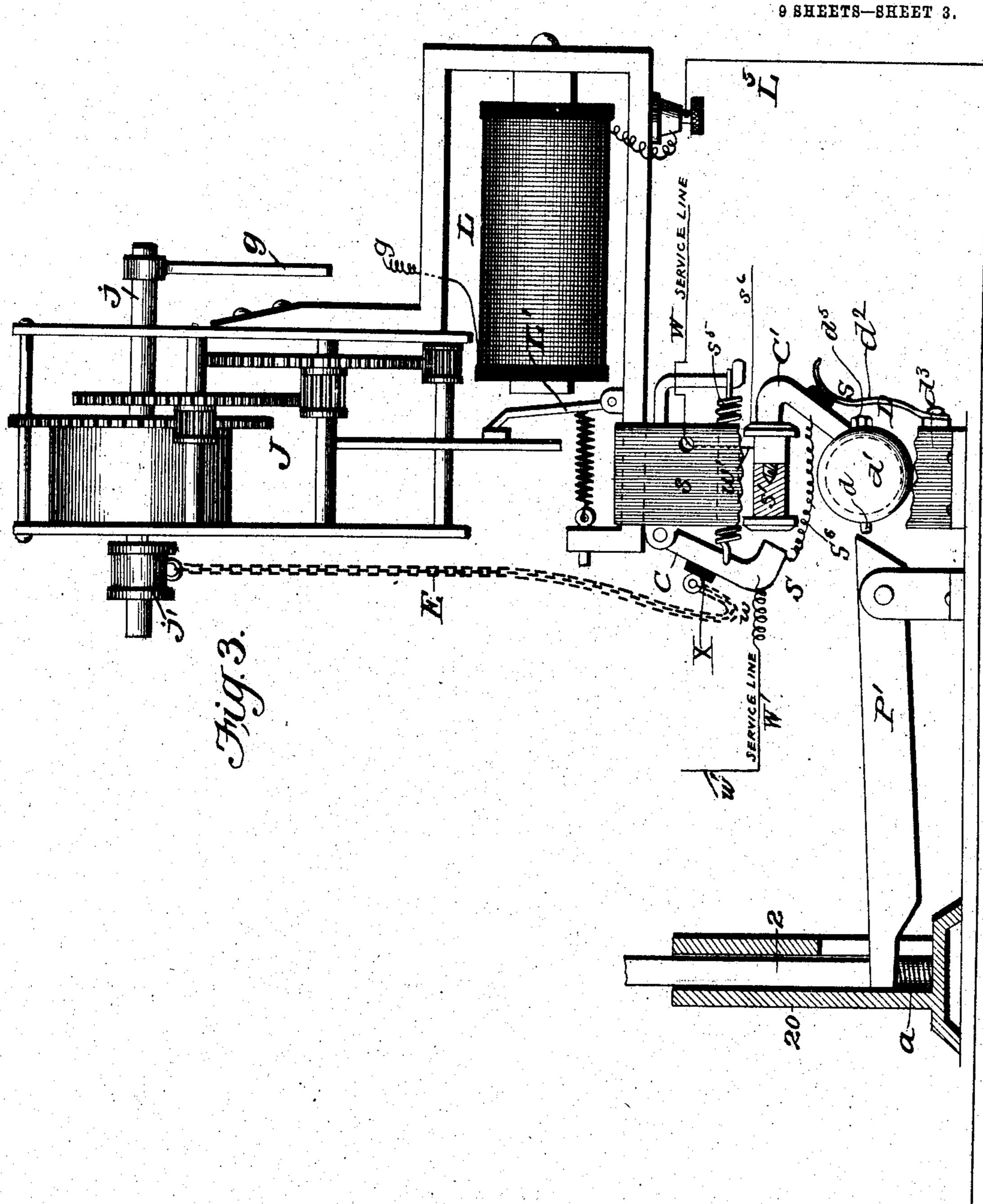
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RENT COLLECTING MEANS FOR TELEPHONE SERVICE.

APPLICATION FILED JAN. 15, 1904. 9 SHEETS-SHEET 2. PERSEES BEREES HIMEMENT PRENI PARENT PARENT (17)7年(東京教育者を教育的本語と開発者に関すると 田田 田子 田子田子(1 15 5 2 8 6 M 8 M 8 M 8 M 8 M 8 M 8 M 8 K 5 .TR181#1#1#1#1#1. TO TELEPHONE WITNESSES: Jos. a. Ryan Treds Bradford Joseph I. Peavey

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RENT COLLECTING MEANS FOR TELEPHONE SERVICE. APPLICATION FILED JAN. 15, 1904.



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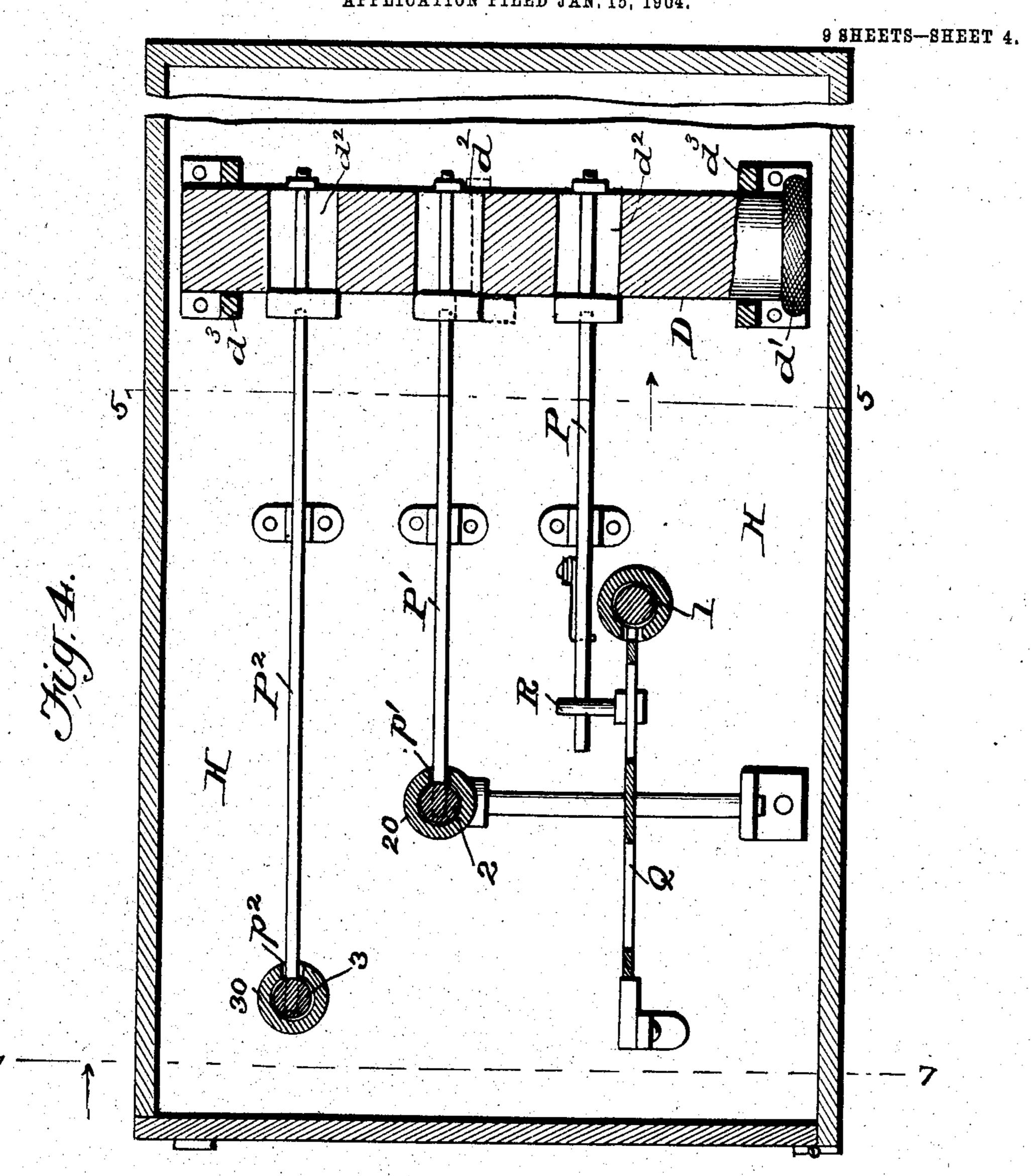
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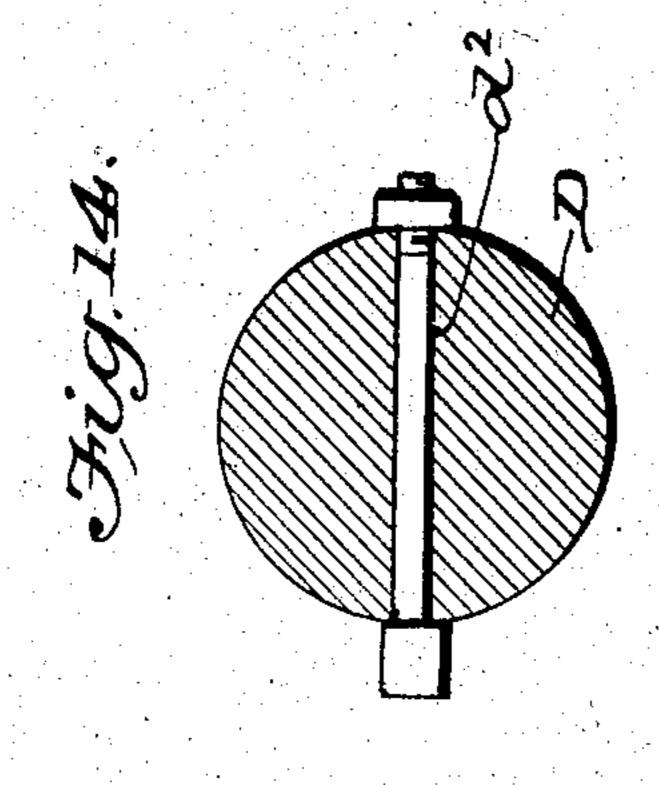
INVENTOR Joseph L. Peavey

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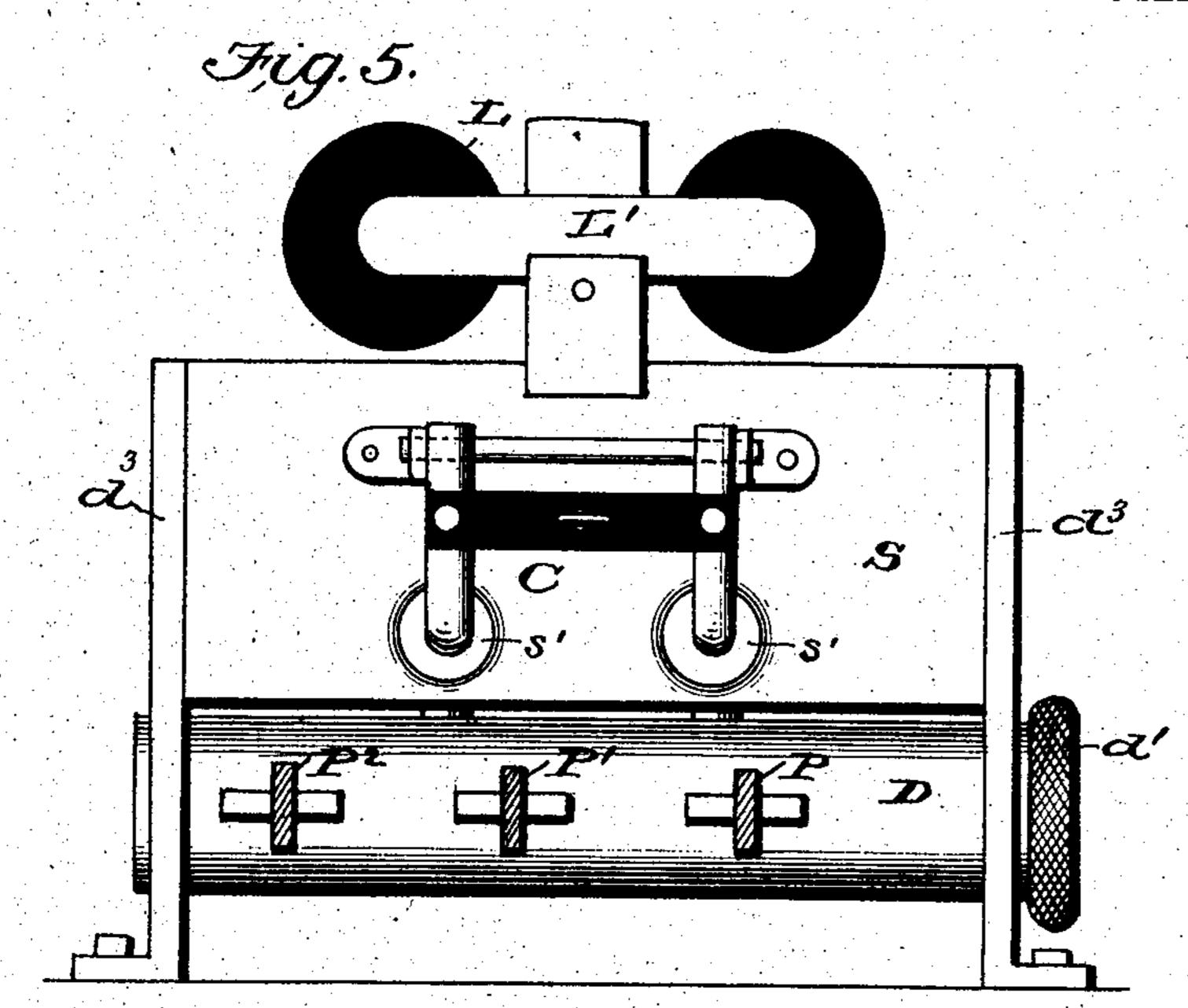
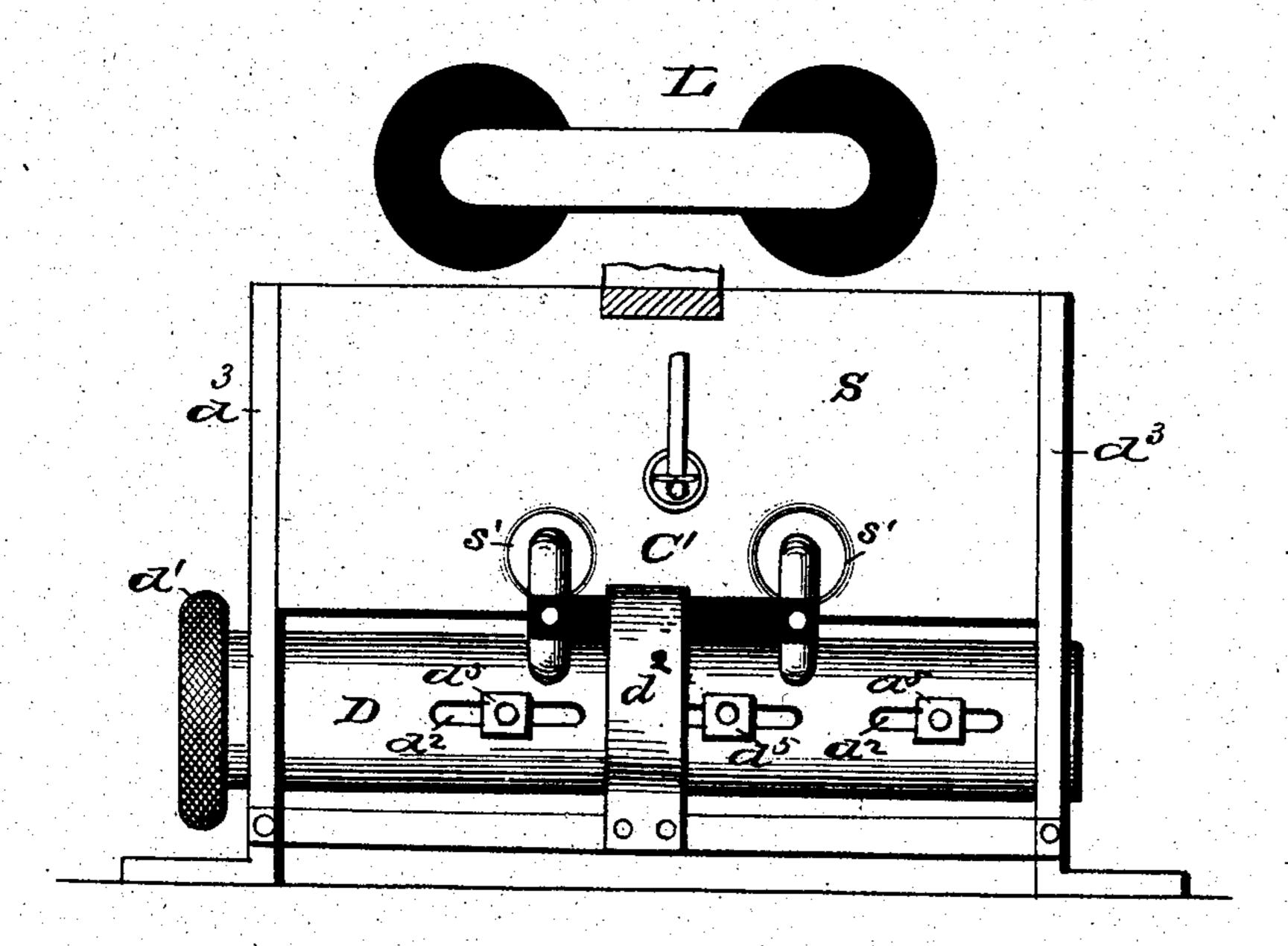


Fig. 9.



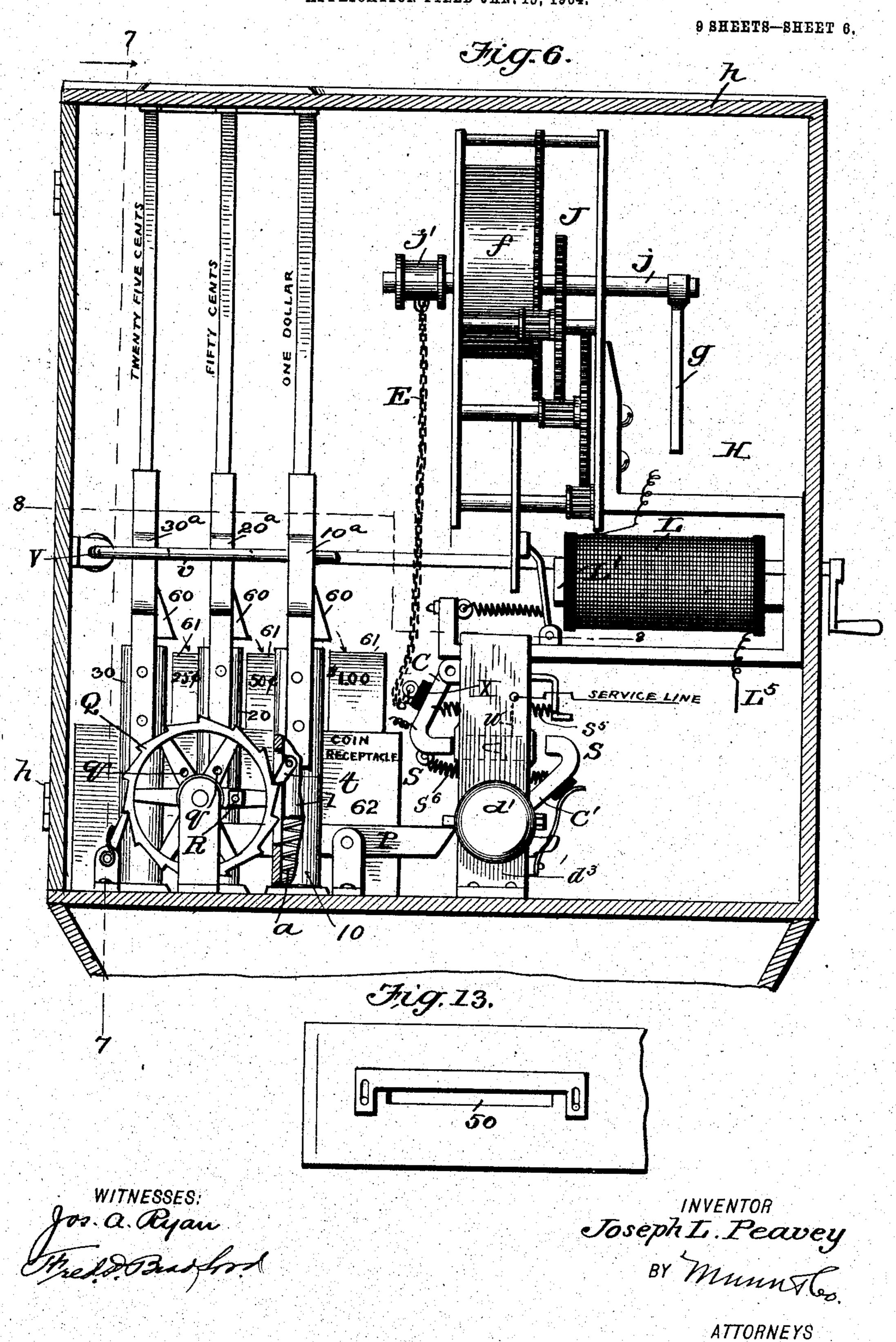
WITNESSES: Jos. a. Ryan Fred DO Bridges INVENTOR
Joseph L. Peavey

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J. L. PEAVEY.

RENT COLLECTING MEANS FOR TELEPHONE SERVICE.

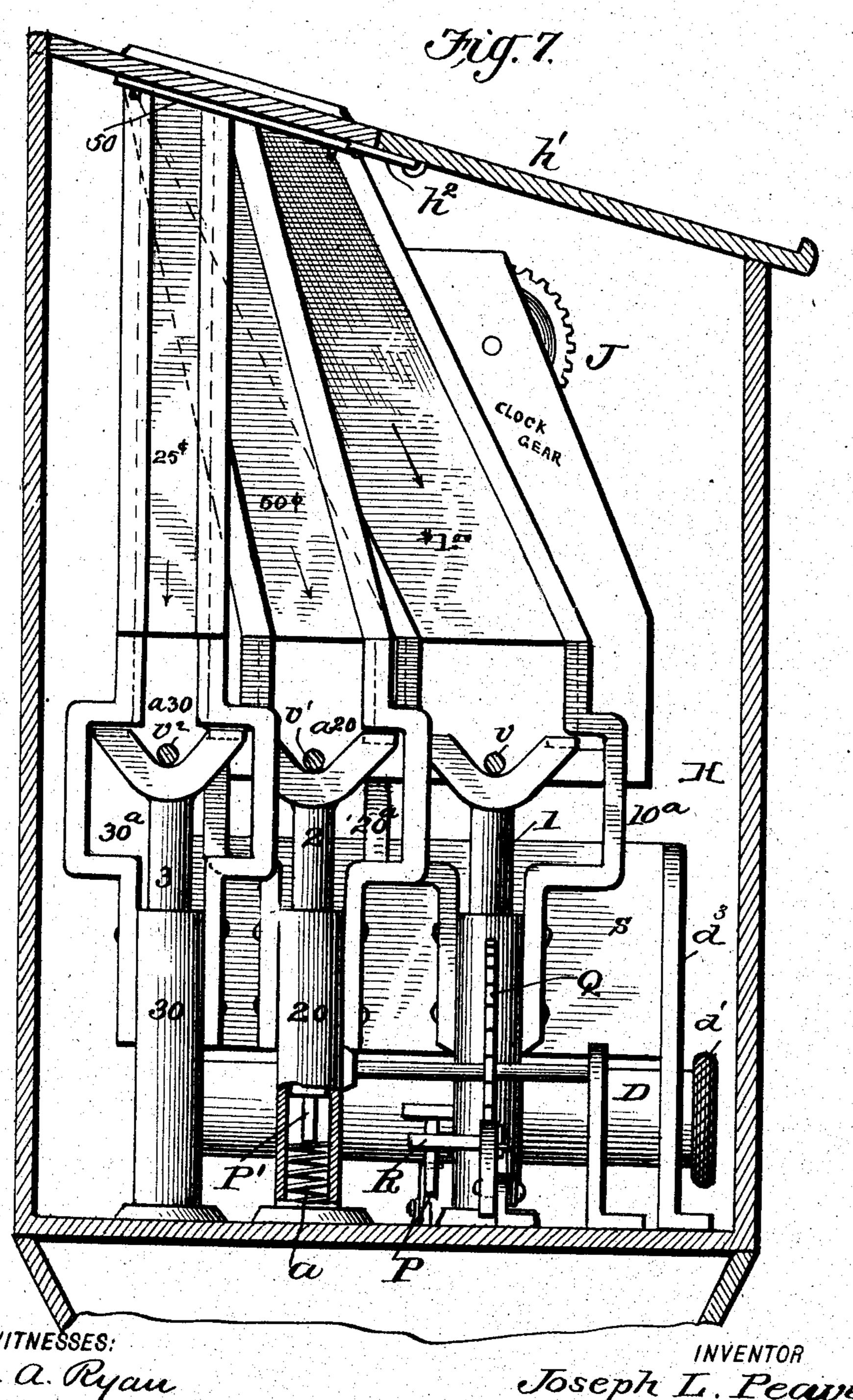
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RENT COLLECTING MEANS FOR TELEPHONE SERVICE.

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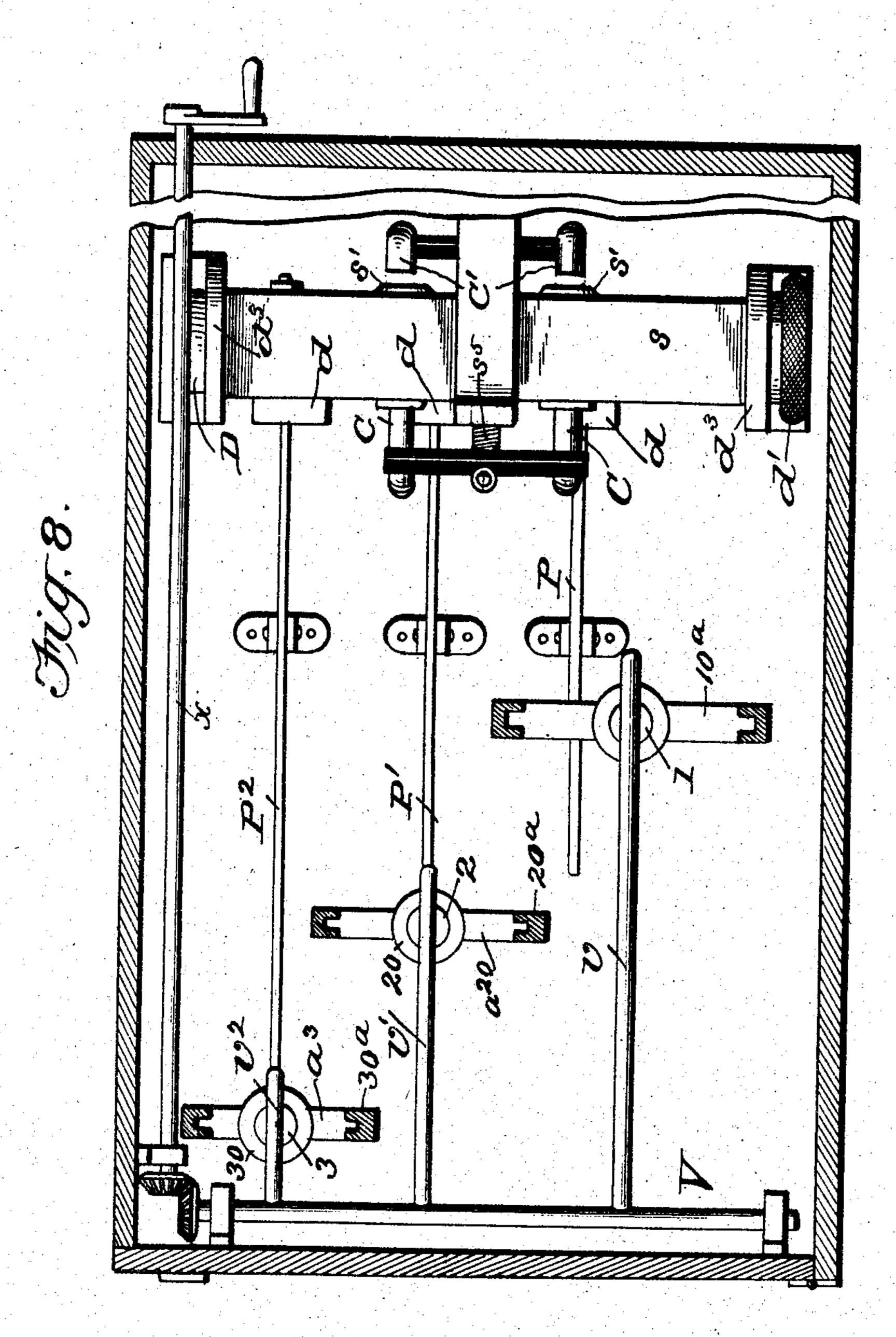
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RENT COLLECTING MEANS FOR TELEPHONE SERVICE. APPLICATION FILED JAN. 15, 1904.

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WITNESSES: Jos. a. Ryan Fredd Bradford

Joseph L. Peavey

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J. L. PEAVEY. RENT COLLECTING MEANS FOR TELEPHONE SERVICE. APPLICATION FILED JAN, 15, 1904. 9 SHEETS-SHEET 9.

WITNESSES: Jos. a. Ryan Freda Bradford

Joseph L. Peavey

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United States Patent Office.

JOSEPH LANE PEAVEY, OF MERIDIAN, MISSISSIPPI.

RENT-COLLECTING MEANS FOR TELEPHONE SERVICE.

SPECIFICATION forming part of Letters Patent No. 781,225, dated January 31, 1905.

Application filed January 15, 1904. Serial No. 189,124.

To all whom it may concern:

Be it known that I, Joseph Lane Peavey, residing at Meridian, in the county of Lauderdale and State of Mississippi, have invented a new and Improved Rent-Collecting Means for Telephone Service, of which the following is

a specification.

My invention is in the nature of an improved means especially designed for collecting the regular monthly, quarterly, or annual tolls from a subscriber for telephone service, of a simple and inexpensive character, that can be readily coupled up with the ordinary telephone-signal-bell housing, and which can be adjusted for use without disorganizing the usual arrangement of the telephone service.

Primarily my invention seeks to provide a telephone-rent-collecting means so operable that the office force usually necessary to post unpaid service bills, as well as the service of rent collectors, can be dispensed with and the rent or toll readily obtained by the regular

monthly inspector.

Another object of my invention is to provide a simple and easily-operated means for compelling the subscriber to deposit the amount of his rental at the proper predetermined times and which means is so controlled from the main or central office, whereby the subscriber's telephone can be cut out of service and so held until the proper amount of rental for the next stated period has been deposited by the said subscriber for the use of the telephone company.

With the above objects in view and other objects to be hereinafter explained, my invention in its generic nature comprehends a means electrically operable from the central or main office for cutting out the telephone from the main or service line and a coin-controlled means preferably located adjacent the telephone and adapted when actuated to again place the telephone into circuit with the main

or service line.

In its more complete make-up my invention embodies a switch mechanism in the feeder or service circuit to the telephone that is suitably housed adjacent the telephone, adapted to be initially set to its service-circuit closed position and then shifted to a position to break the said circuit to cut out the

telephone by electromagnet-actuated devices that are controlled from the main office and adapted to be energized when the circuit to the said magnet is closed at the main or cen- 55 tral station, whereby to set in operation the electromagnet-controlled devices to move the switch mechanism to an open or circuit-breaking position, and a coin-controlled mechanism also located within the switch-housing that is 60 cooperatively joined with the switch mechanism and is adapted under the insertion of the proper coin, or coins amounting to the agreed service rental, to be actuated by a suitable hand-lever disposed externally of the housing, 65 whereby to throw the switch mechanism back to close in the service-circuit to the telephone.

Again, my invention embodies a peculiar cooperative arrangement of a service-controlling
switch and a coin-actuated means that coacts 70
therewith, so combined whereby the coin-controlled mechanism is held inoperative with respect to actuating the switch after it has initially acted upon the said switch mechanism
to shift it to its closed position until the said 75
switch mechanism and the actuating means
therefor, together with the devices controlled
by the electromagnet for shifting the switch
to its open position, have been reset by the
inspector after he has collected the rentals deposited within the housing in which the several mechanisms referred to are located.

Another and important feature of my invention lies in the provision of a special cooperative arrangement of the switch for cut- 85 ting out the telephone, which is magnetically operated from the main office, a coin-controlled means for adjusting the switch to again cut in the telephone, and a special construction of adjustable switch-actuated devices 90 whereby said actuated devices can be conveniently and positively set to meet changes in the telephone-rental rates and also for avoiding the danger of the said coin-actuated means being energized or set in motion by atmospheric 95 electric disturbances.

In its more subordinate features my invention consists in certain details of construction and combination of parts, all of which will be hereinafter explained, and pointed out in the 100 accompanying drawings, in which—

Figure 1 is a perspective view illustrating

the general arrangement of my invention. Fig. 2 is a view illustrating diagrammatically my improved rent-collecting telephone-service means, the several parts being shown in their 5 initial or manually-adjusted position, the magnet-released contact member of the switch device in the telephone-service line being shown closed in full lines and shown in dotted lines in the position to which it is moved by the 10 gear devices when the latter devices are set in motion through the shifting of the electromagnet when the magnet-controlling circuit is closed at the central or main office. Fig. 3 is a diagram which illustrates the switch 15 member shifted by the action of the coin-controlled lever device to close in the main or service line to the telephone. Fig. 4 is a detail horizontal section taken practically on the line 4 4 of Fig. 2 and illustrates a number 20 of coin-actuated levers and their coöperative relation with the radial projections adjustably connected to the rock member of the switch mechanism that controls the service-line to the telephone. Fig. 5 is a vertical section of 25 the parts shown in Fig. 4, taken practically on the line 5 5 of Fig. 4. Fig. 6 is a sectional elevation of the usual telephone bell-housing provided with a supplemental compartment in which is located a preferred arrangement 30 of my switch-controlling mechanism, the parts being in their manually or initially set position. Fig. 7 is a vertical section taken on the line 7 7 of Fig. 6 looking in the direction of the arrow, also indicated on line 77 on 35 Fig. 4 looking in the direction of the arrow. Fig. 8 is a horizontal section taken on the line 8 8 of Fig. 6. Fig. 9 is a reverse or rear view of Fig. 5. Figs. 10, 11, and 12 are diagrammatic views. Figs. 13 and 14 are views illus-

In the accompanying drawings I have illustrated one form of mechanism which embodies the generic arrangement of my invention, and I desire it understood that the said mechan-45 ism may be modified or varied according to the particular arrangement of the telephone

40 trating details.

service to which my invention is to be applied without departing from the spirit of my invention or the scope of the appended claims. In the ordinary application of my inven-

tion—say to a bracket or wall telephone—the operating mechanism is placed in a housing that covers the bell, and when bells are used the housing in which the said mechanism is 55 located is so arranged as to cover all the binding-posts on top of the bell, so that a cross connection cannot be made by the subscriber through the telephone.

In its essential features my invention com-60 prises a switch for continuing or interrupting the circuit from the main or service line to the telephone, and the said switch mechanism, designated S, is located in the housing H, one side of which, preferably the left, is 65 hinged at h to form a door whereby access

can be readily had to the operating parts, and in practice the said door is provided with a lock the key of which is held by the telephone inspector, and to also provide for easily making repairs the top h' of the housing from 70 the front edge up to the coin-slots, presently again referred to, is hinged and is held closed by the hook-catch h^2 on the side of the housing, as shown.

The switch mechanism S, the construction 75 of which is fully shown in Figs. 2 and 3, comprises an insulating-block s, on the lower end of which is mounted a longitudinally-adjustable contact-piece s', with which connects one of the separated ends, w, of the service or main 80 line conductor-wire W to the telephone, the other end, w, of which connects with the hinged contact member C, that is actuated by the spring or equivalent device s⁵ to normally close against one end of the contact s', and 85 thereby continue the main or service line circuit through the switch S to the telephone.

The contact member C is electrically coupled through the crossover-wire s⁶ with the contact member C', adapted to engage with 90 the other end of the contact-piece s' after the engagement between the member s' and the contact member C is broken.

The contacting member C' projects radially from the horizontally-disposed head-block D, 95 of wood or other non-conducting material, which is rockably mounted in brackets d^3 , pendent over the ends of the block s, and at one end the rocking block D has a knob-handle d' for turning it in the direction against 100 the tension of the spring d^2 , that normally rocks the head D to the position shown in Fig. 3.

J designates a train of clock-gears, and j'designates a pulley upon one of the shafts j 105 of the said gearing, to which connects one end of the short chain or cable E, the other end of which joins to an insulated member X on the contact-maker C, and the said chain E is of such length that it normally hangs a little 110 slack, the reason for which will hereinafter appear. The clock-gearing also includes a power-spring f and a lever g, the latter being secured to the shaft j, upon which the powerspring is mounted, and which also carries the 115 chain-receiving pulley j', above referred to. The lever g is provided for conveniently setting the parts to their initial position when the rent-collecting mechanism is first set up and after each collection of the rent is made 120 by the telephone inspector.

L designates an electromagnet which is suitably mounted within the housing H, the armature L' of which acts as a brake for the clock-gearing and under normal conditions 125 holds the said gearing inert. The magnet L is in a supplemental-line circuit L⁵ from the main or central station, at which point the said circuit L⁵ is normally broken by removal of the plug-switch Y (see Fig. 2) by means of the shift-130

ing of any ordinary type of switch. When, however, the break in the magnet-circuit is closed by proper application of the switch Y at the main or central station, the armature 5 L' is drawn over and the clock mechanism is therefore released, which mechanism then through the rotation of the shaft j winds up the chain connected to the contact-maker C, and therefore swings the said member C away 10 from the contact-piece s', which breaks the circuit in the service-line and in consequence cuts out the telephone from further use until the service or main line circuit is restored, which operation is effected in a manner presently to be described. At this point, it should be stated, the slack in the chain E is provided in order that lightning or other atmospheric disturbances will not release the contact member C, such arrangement of the chain effect-20 ing the results stated, as it requires but a little slack in the chain to take up all lightning discharges usual in a month, and it thereby follows that danger of the magnetic circuit being accidentally energized for a sufficient period 25 to shift member C is overcome.

In practice I find it sufficient to energize. the magnet for a period of about ten seconds to allow for the desired action of the clock-

gearing mechanism.

To put the telephone back in service after being cut out from the main office, as explained in my appliance, it is necessary for the telephone subscriber to deposit his next month's rental within the housing H before he can 35 manually shift the switch mechanism to prop-· erly connect the telephone with the main or service line. In the drawings I have illustrated but three coin-receiving slots and chutes and a plunger mechanism for each coin-40 slot and chute; but it is obvious that a greater or less number of said coin-controlled plungers may be employed as the rental rates may make necessary.

In the drawings one of the plungers, (desig-45 nated 1,) that engages with the pivoted lever P, that coacts with the rotary head D of the switch S, is arranged to be actuated only on the insertion of a dollar coin. The next plunger 2 acts upon the lever P' on the insertion 5° of a half-dollar coin, and the plunger 3 is arranged to operate its corresponding lever P² on the insertion of a quarter-dollar coin.

The plungers 2 and 3 operate in the hollow posts designated 20 and 30, (see Figs. 7, 4, 8,) 55 and each plunger is normally thrust upward in the post in which it moves by a stout coilspring a, which springs are located under the outer ends of the levers P' and P2, that project into the said hollow posts through slots 60 p^2 and p' to engage with the plungers, as shown. The plungers 2 and 3 each have a yoke 20° and 30°, provided with a coin-receiving crotch a^{20} and a^{30} , which under normal conditions register with and are close under the discharge end of the coin-chutes that coact therewith. The plunger 1 is also provided with a coin-actuating yoke 10°; but the said plunger does not act directly on its corresponding lever P, but indirectly thereon through a ratchet-

wheel Q for the following reasons.

The ratchet-wheel Q in the construction shown in the drawings is designed to provide for collecting from one dollar up to sixteen dollars rental, and for such purpose it has a number of equally-spaced concentric aper- 75 tures q, into any one of which is adapted to fit a pin R, that projects laterally from the wheel Q over the adjacent end of the lever P.

Assuming the rental to be four dollars, the pin would be set back four holes from the end 80

of the tripping-point of the lever P.

By referring now more particularly to Fig. 6 it will be noticed that the peripheral edge of the ratchet-wheel Q travels within a slot in the post 10, and the plunger in the said 85 post has a pawl t, that engages the notched edge of the wheel Q, whereby on each depression of the plunger within the post 10 the wheel Q is turned the distance of one notch, and when depressed four times (after the in- 90 sertion of four coin dollars) the pin R engages the lever P and lifts it up past the projection with which it engages on the rocking head D, and thereby permits the spring acting upon the said head D to turn said head in the di- 95 rection indicated in Fig. 2, and thereby closes in the contacting member C' against the contact-piece s', and thus closes the main or service line back to the telephone again.

Should the rates be under or over the amount 100 stated, the pin R is moved toward or from the tripping-point of the lever with which it co-

acts correspondingly.

Now should the telephone rent rate be, say, four dollars and seventy-five cents per month, 105 the operator before he could put the telephone back into commission would have to shift the levers P and P² the same as he did lever P by first inserting the proper coin in the fifty and twenty-five cent chutes and depressing the 110 plungers that cooperate therewith, and after each of the three levers P, P', and P² have been thus shifted the head D will automatically turn under its spring action and close the member C' against the part s'.

The plunger depression is effected by a crank-shaft V, journaled within the housing H and provided with three crank members v, v', and v^2 , which are adapted (when the shaft V is rocked by the geared shaft x, that projects 120 through the right side of the housing and has a pull-handle) to sweep through the slots provided in the coin-chutes to engage the coin held in the crotches in the several plungeryoke members.

While I have not illustrated the same, it is obvious that a larger number of coin-chute plunger and lever devices such as described may be used to provide for collecting such fractional charges as five cents, ten cents, &c. 130

To prevent placing coins in coin-chutes not in use, a cut-off slide for each coin-slot 50 is arranged on the under side of the housingtop, (see Fig. 13,) which can be shifted to 5 close the coin-slots when so desired. To provide for such changes in the rates, as sometimes occur in telephone-service, a separate lug d on the head D for each lever P, P', and P^2 is provided, and each of the said lugs d10 works within the longitudinal slot d^2 in the head D, and each is firmly held to its adjusted position by the clamp-nut d^5 . Supposing now, for example, the rent rate to be changed from four dollars seventy-five cents to three 15 dollars and a half, the pin R on the wheel Q is first properly shifted, and the mechanism that controls the lever P² (the twenty-fivecent lever) is thrown out of action by properly shifting the lug d, that coacts with the 20 said lever, and thereby provide for an automatic shifting of the head D and the contact C' after the levers P P' have been acted upon after the insertion of three dollars and fifty cents into the housing through the proper 25 coin slots and chutes.

Each coin-chute has a suitable member 60 for deflecting the coins after the plungers have been sufficiently depressed to properly engage with their coacting levers, and a col-30 lecting-trough 61 is provided for each chute that carries the coin into a box 62 at the door

side of the housing.

After the telephone is put in service again by the subscriber in the manner above stated 35 the inspector "robs" the receipts in the housing and resets the switch-contacts C and C' to their normal or initial position. The number of ohms used in the relay-magnet is governed by the system operated on and with 40 which the switch mechanism and coin-operated devices are combined.

On special single grounded-line service (see Fig. 10) twenty to one hundred and fifty ohms relay would be necessary. On metallic-45 line service with bridging-bells one thousand ohms relay would be necessary and bridged on the several lines, as shown in Fig. 11.

The one-hundred-and-fifty-ohms relay may be used at a time by placing the same in se-50 ries with the service-line. (See Fig. 12.)

From the foregoing description, taken in connection with the accompanying drawings, it is believed the complete operation and the advantages of my invention will be readily ap-

55 parent.

Briefly stated, however, the operation of my invention is as follows: Under normal conditions the current from the main line passes from the line end w through the switch-head 60 into the contacting member C (see Fig. 3) and from thence to the telephone. When the electromagnet-controlled gearing is set in operation from the central station, the chain E is wound up and the member C is swung up, 65 (see dotted lines, Fig. 2,) which cuts out the

telephone. The member C is normally held out of contact with the switch S (see Fig. 3) by reason of the lugs d engaging with the levers P. By depressing the several levers P they turn the head D further against the ten- 70 sion of the spring d^2 until the ends of the said levers P slip past the said lugs d. The head D when thus controlled is turned back by the action of the spring d^2 , which brings the member C' into contact with the switch. The cur- 75 rent is then through the switch-head, the contact member C', across from the said member C', through the connection s^6 to the contact C, and from thence to the telephone. Thus the parts remain until the telephone-man collects 80 the rent and resets the said parts to the position shown in Fig. 2.

Having thus described my invention, what I claim, and desire to secure by Letters Pat-

ent, is—

1. A means for cutting out a telephone service-line operable from the main or central office, and which comprises a switch in the said service-line located at the subscriber's station and normally held to its circuit-closing posi- 90 tion, an electromagnet-controlled means for shifting said switch to an open position, the said switch including a supplemental contactmaker for closing in the service-line, and manually-operated devices at the subscriber's sta- 95 tion for actuating the said supplemental contact-maker to move it to a circuit-closing position.

2. A telephone-service-controlling means, which consists of a switch in the service-line 100 at the subscriber's station, an automaticallyactuating mechanism for opening the said switch, and electromagnet controlling devices for normally maintaining the said normally actuating means in operation, an electrocir- 105 cuit controlled from the central or main station for energizing the magnet whereby to set the said automatically-operating means into action to open the switch to cut out the telephone line-service, a mechanism for restoring 110 the switch to its normal or line-service-closing position, and a manually-operated lever device for actuating the last-named mechanism, as set forth.

3. In a telephone cut-out mechanism of the 115 character described, a switch in the serviceline, a clock mechanism for moving the said switch to its open or circuit-breaking position, electromagnet controlling devices adapted when deënergized to lock the clock mech- 120 anism from operation, a supplemental electrical circuit adapted to be rendered inactive at the central or main station for energizing the magnet to release the clock mechanism, and coin-controlled devices at the subscriber's 125 station for shifting the switch to again close the line service, as set forth.

4. A telephone-service-controlling means, which comprises a switch in the service-line located at the subscriber's station, the said 130

switch having a pair of alternately-operating circuit-closers, a mechanism for automatically moving one of the said circuit-closers to its open position, said mechanism including an electromagnet in line with the central or main station adapted when energized from the main station to set in operation the mechanism that automatically opens one of the circuit-closers to cut out the service-line to the telephone, and a manually-operated means for moving the circuit-closers into position to close in the circuit-line to the telephone, as set forth.

5. A telephone-service-line-controlling means, which comprises a circuit-controller at the subscriber's station, electromechanical means arranged to be energized from the main or central station to actuate the said circuit-controller and cut out the telephone service-line, and a manually-operated means at the subscriber's station that cooperates with the circuit-controller and is arranged, when actuated, to close the break in the service-line and to restore the communication between the subscriber's and central station.

of the character described, a switch in the service-line, a clock mechanism for moving the switch to an open position, an electromagnet - controlled detent for holding the said clock from acting on the switch and adapted when energized to become disengaged from the clock mechanism, and a manually-actuated means for setting the switch independently of its clock-gearing-controlled movements for closing in the service-line to the telephone after the switch has been automatically moved to its open position, as set forth.

7. In a telephone-service-controlling means of the character described, the combination 40 with the service-line to the telephone; of a housed switch in the said service-line having two alternately-operating contact-makers, one of which is automatically held to its circuitclosing position and the other to its open posi-45 tion, electromechanical devices for actuating the switch to shift its automatically-closed contact-maker to a circuit-breaking position, and a means operable from the outside of the housing in which is contained the switch for 50 actuating the switch to bring its normally open contact-maker in position to close in the service-line circuit to the telephone, as set forth.

8. In a telephone-service-controlling means of the character described, the combination with the service-line to the telephone, of the switch-block s, the contact-piece s' which forms a part of the block, and with which one terminal of the break in the service-line connects, and a pivoted contact-maker C that normally engages the contact-piece s', with which the other terminal of the break the service connects; of a rockably-mounted block D, the contact-maker C' secured thereto, and normally held from engaging the contact-piece

s', said contact-makers C' and C being connected in multiple, and a plurality of independently-actuated manually-operated levers for rocking the block D to move the contact-maker C' into engagement with the piece s', 70 as set forth

9. In a telephone-controlling means of the character described, in combination with a switch mechanism located at the subscriber's station and in the service-line circuit to the 75 telephone, said switch mechanism including a pivoted contact-maker normally held to the circuit-closing position; of a motor coupled with said pivoted contact when set in motion

with said pivoted contact when set in motion to move the pivoted contact to the circuit-80 breaking position, and an electromagnet-controlled detent for holding the aforesaid motor inert, means for energizing the magnet from the main or central station, and a manually-operated means at the subscriber's station for 85 restoring the motor and the pivoted contact-maker to their normal positions.

10. A telephone-service-controlling means which comprises electromechanical devices at the subscriber's station, operable from the 9° main or central station to cut out the serviceline to the telephone, the said devices consisting of a contact-maker automatically moved to its circuit-closing position, a clock mechanism normally held from operation by the 95 magnet device when it is deënergized and adapted to be set in operation when the said magnet device is energized; and a connection between the clock mechanism and the pivoted contact-maker arranged to allow for a limited 100 movement of the clock mechanism before moving the said contact-maker to its circuit-breaking position, for the purposes set forth.

11. In a telephone-service-controlling apparatus of the character described, a switch in the service-line to the telephone, automatically closable but normally held open, a rocking head to which the switch is attached, a pivoted lever-detent for holding the said rocking head from movement in one direction, a plunger, a ratchet-wheel intermittently operable by the plunger, and a member adjustably mounted on the said ratchet-wheel for engaging the pivoted lever-detent at predetermined intervals, as set forth.

12. In a telephone-service-controlling means of the character described, a switch within the service-line to the telephone which is automatically movable to its circuit-closing position, a series of detent-levers for holding the said switch normally open, each of the said detent-levers being independently operable, a plunger for each of the said detent-levers, and a means for shifting the connections between one or more of the said detent-levers 125 and the switch, for the purposes set forth.

JOSEPH LANE PEAVEY.

Witnesses:

THOMAS WINDSOR MALONE, EDWIN RUBY DYER.