

No. 631,251.

Patented Aug. 15, 1899.

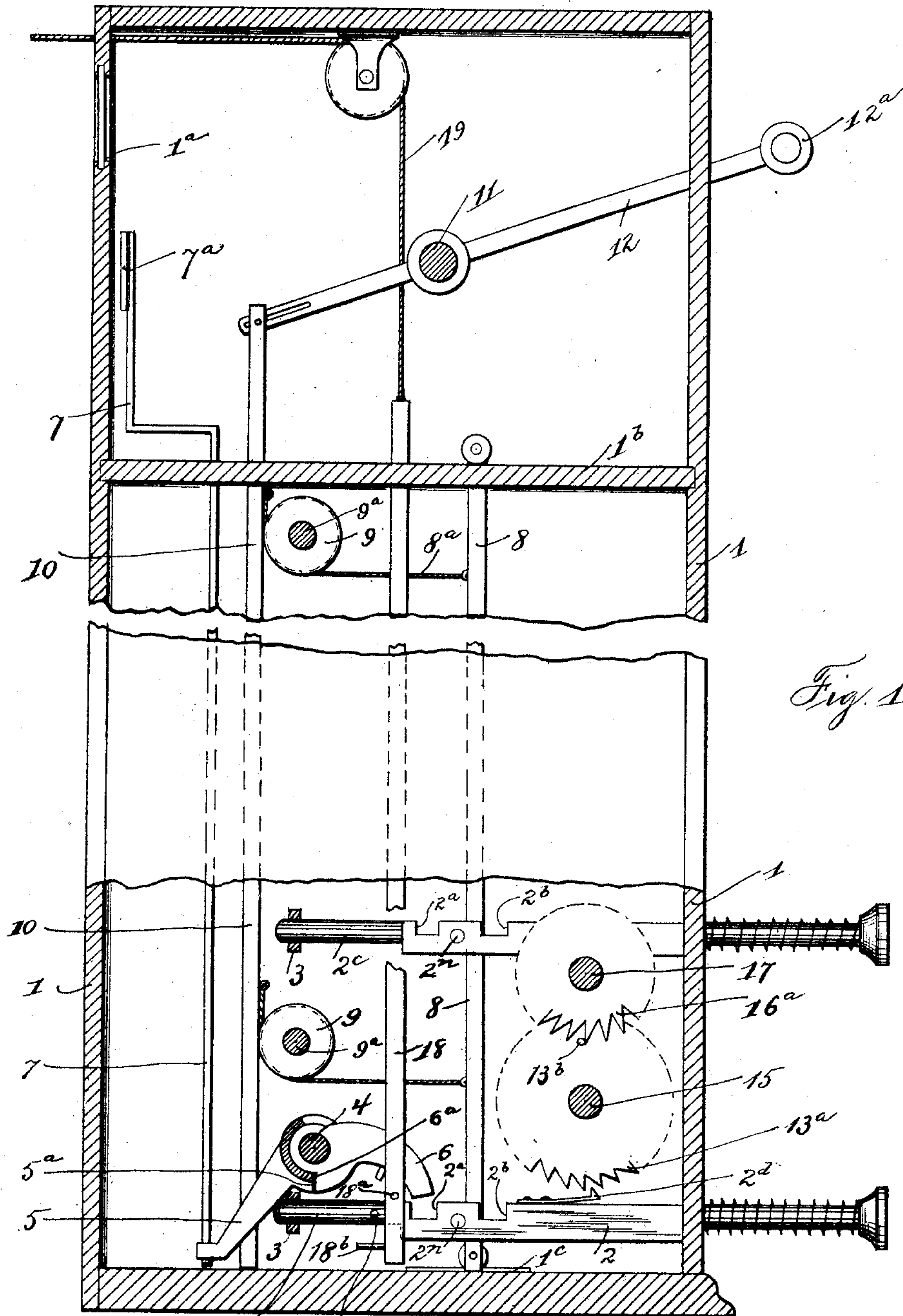
O. A. GATRELL.

VOTING MACHINE.

(Application filed Oct. 17, 1898.)

(No Model.)

6 Sheets—Sheet 1.



Witnesses

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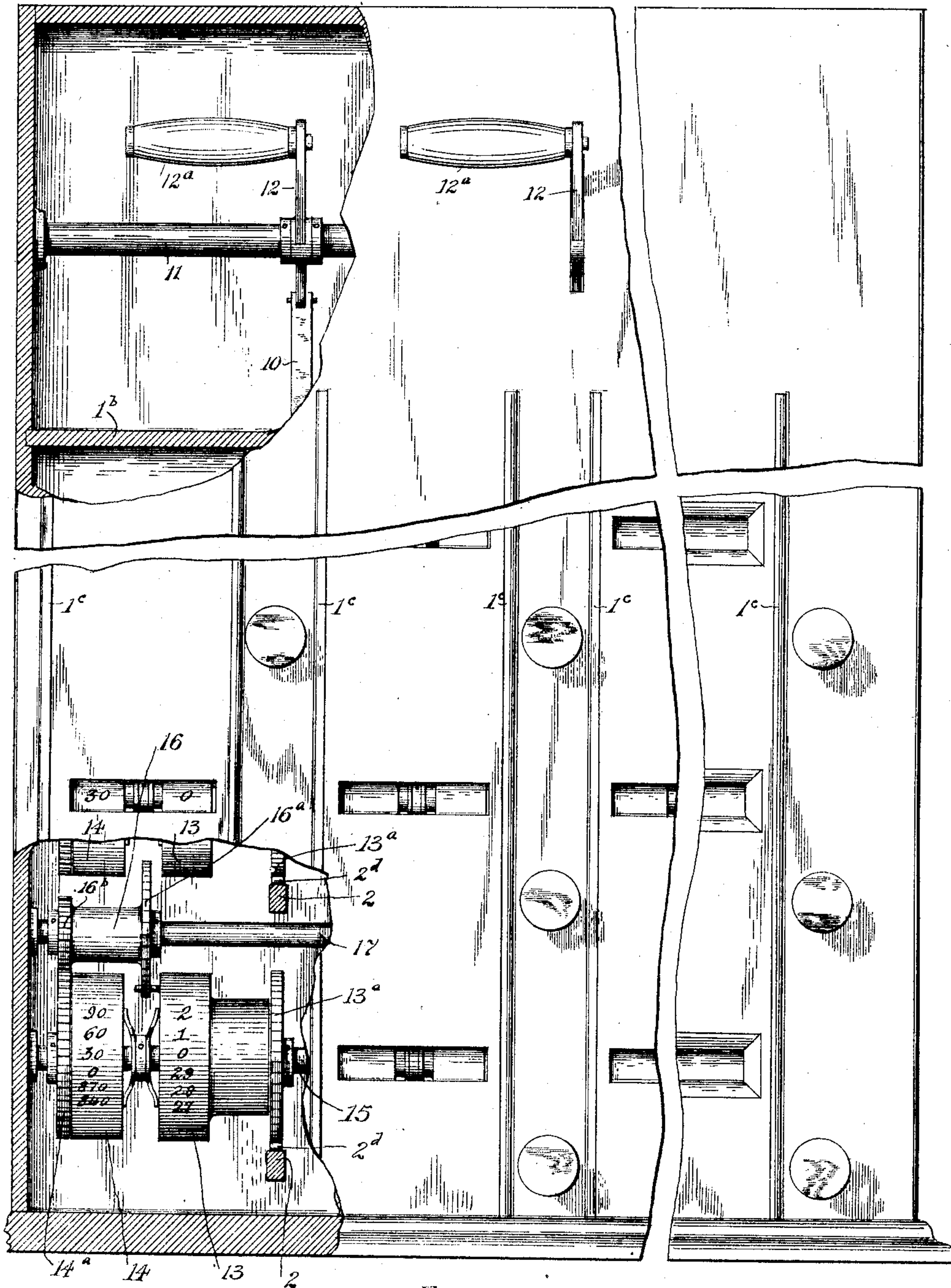
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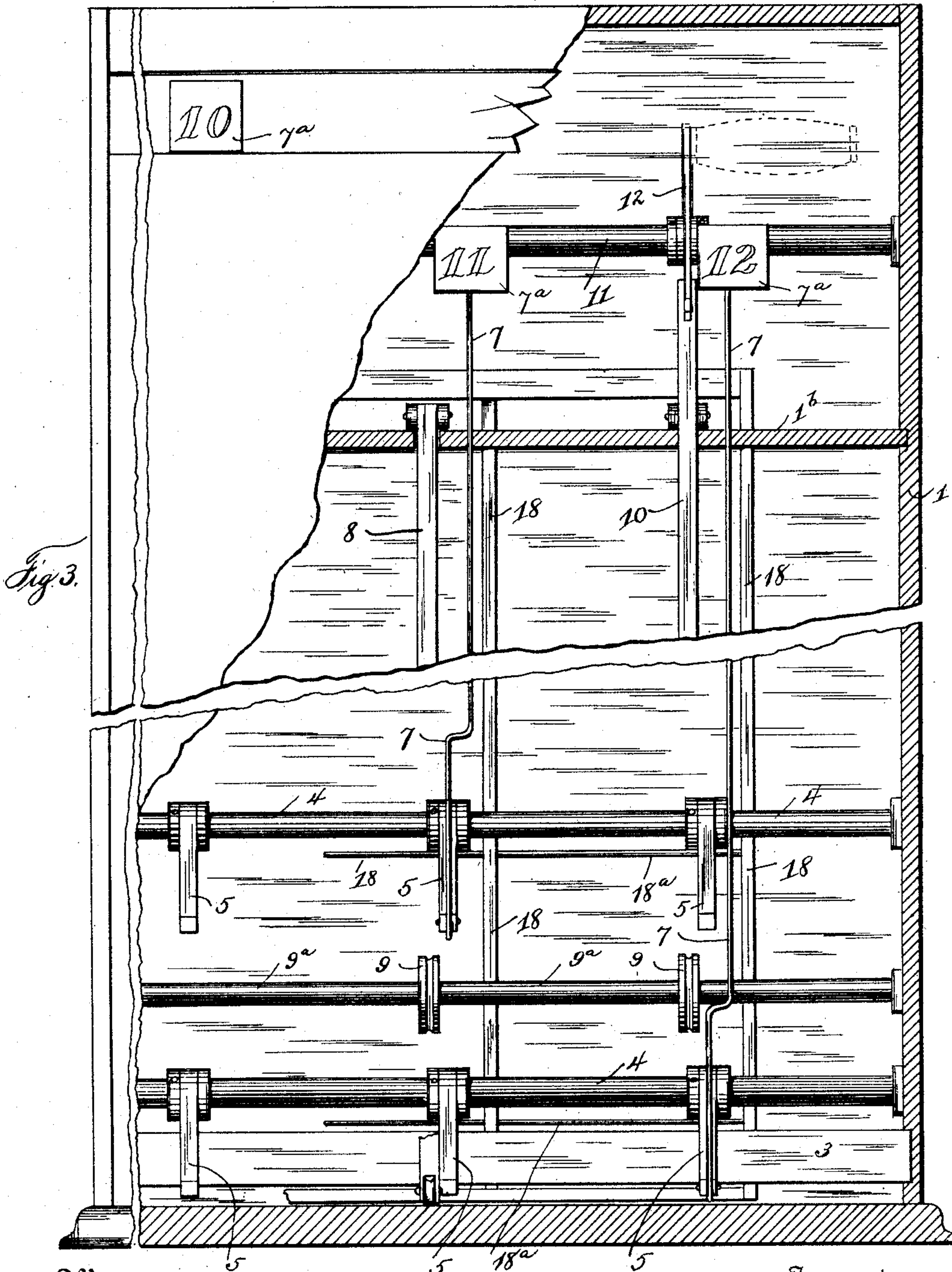
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Fig. 5.

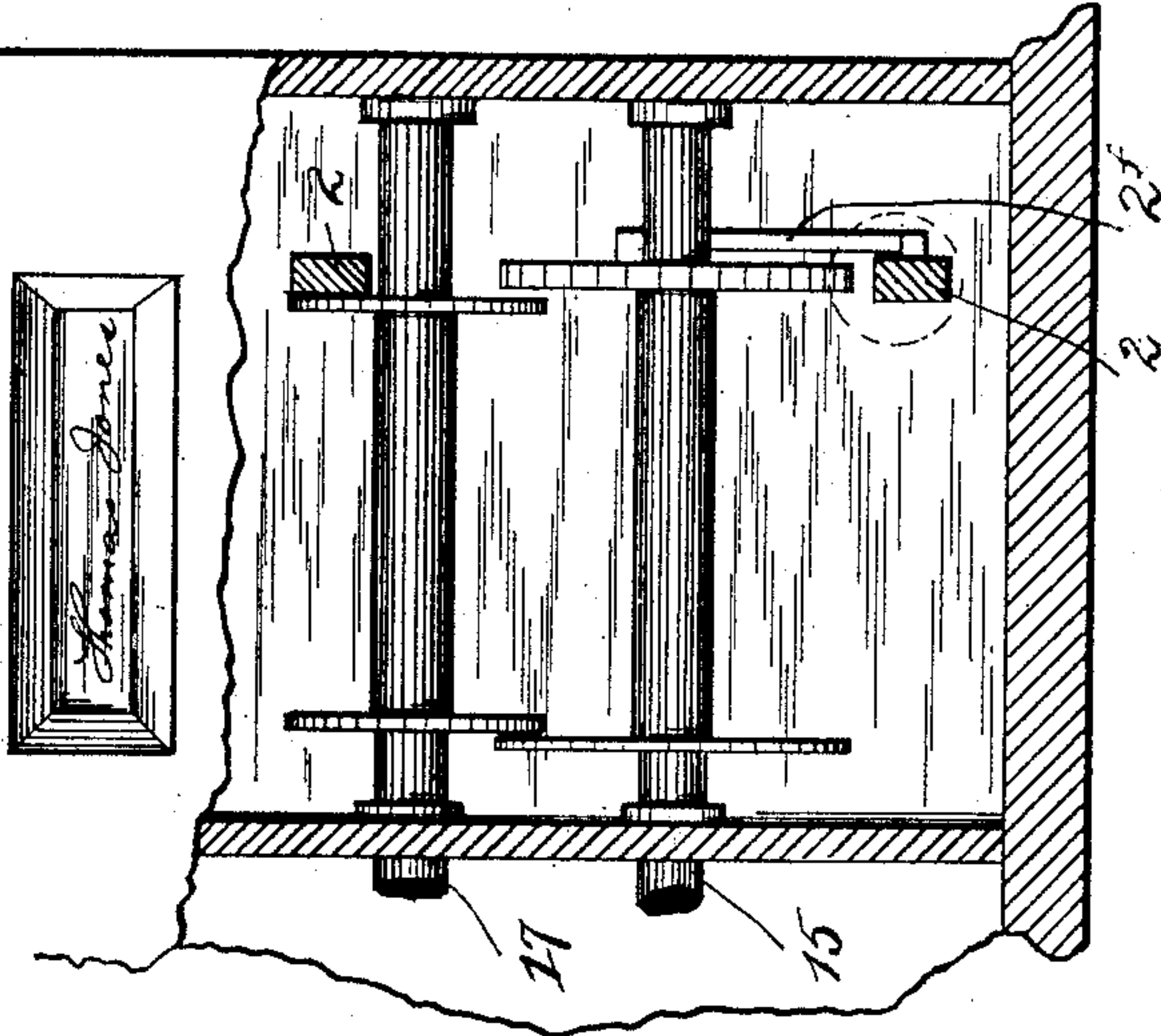
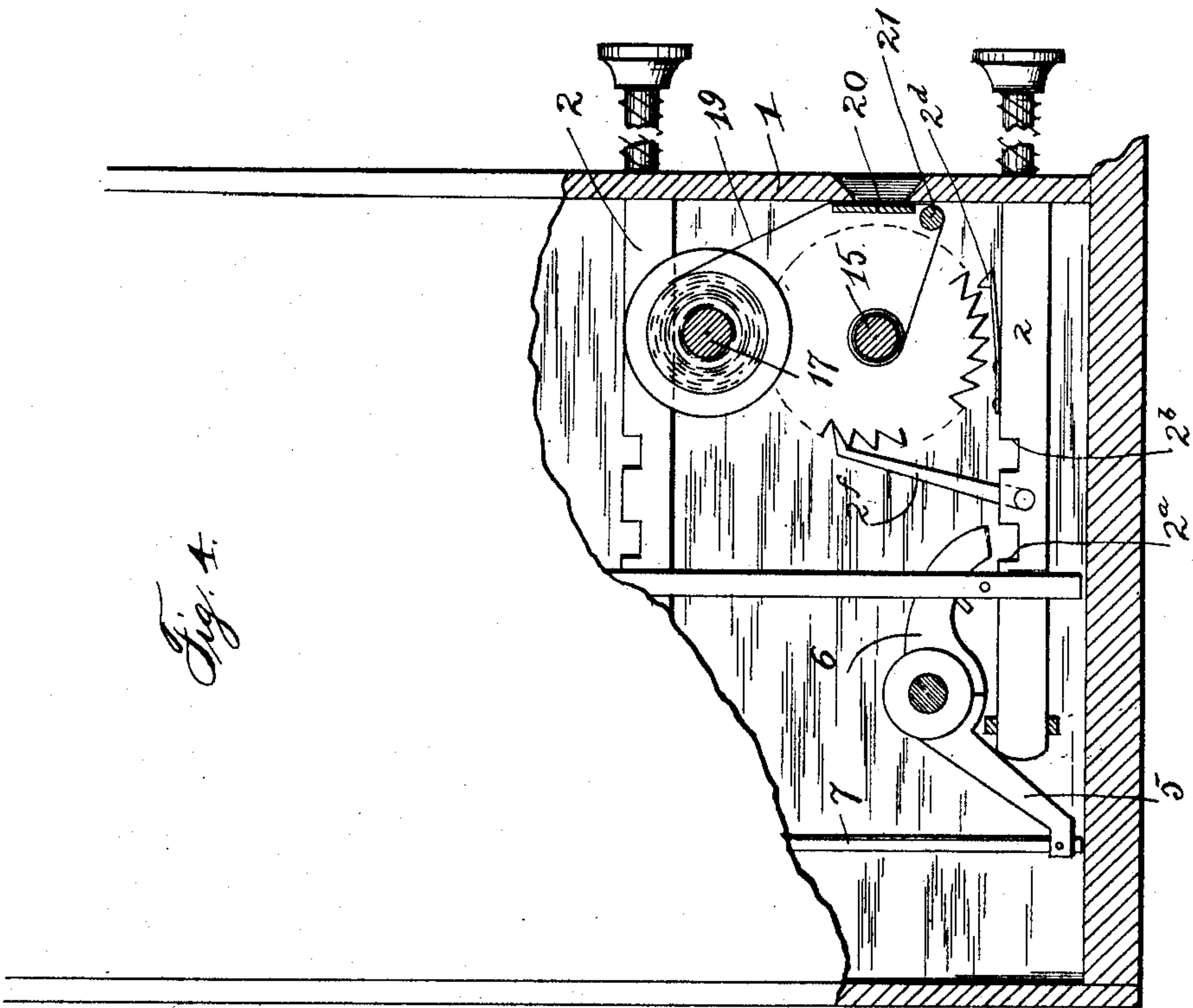


Fig. 4.



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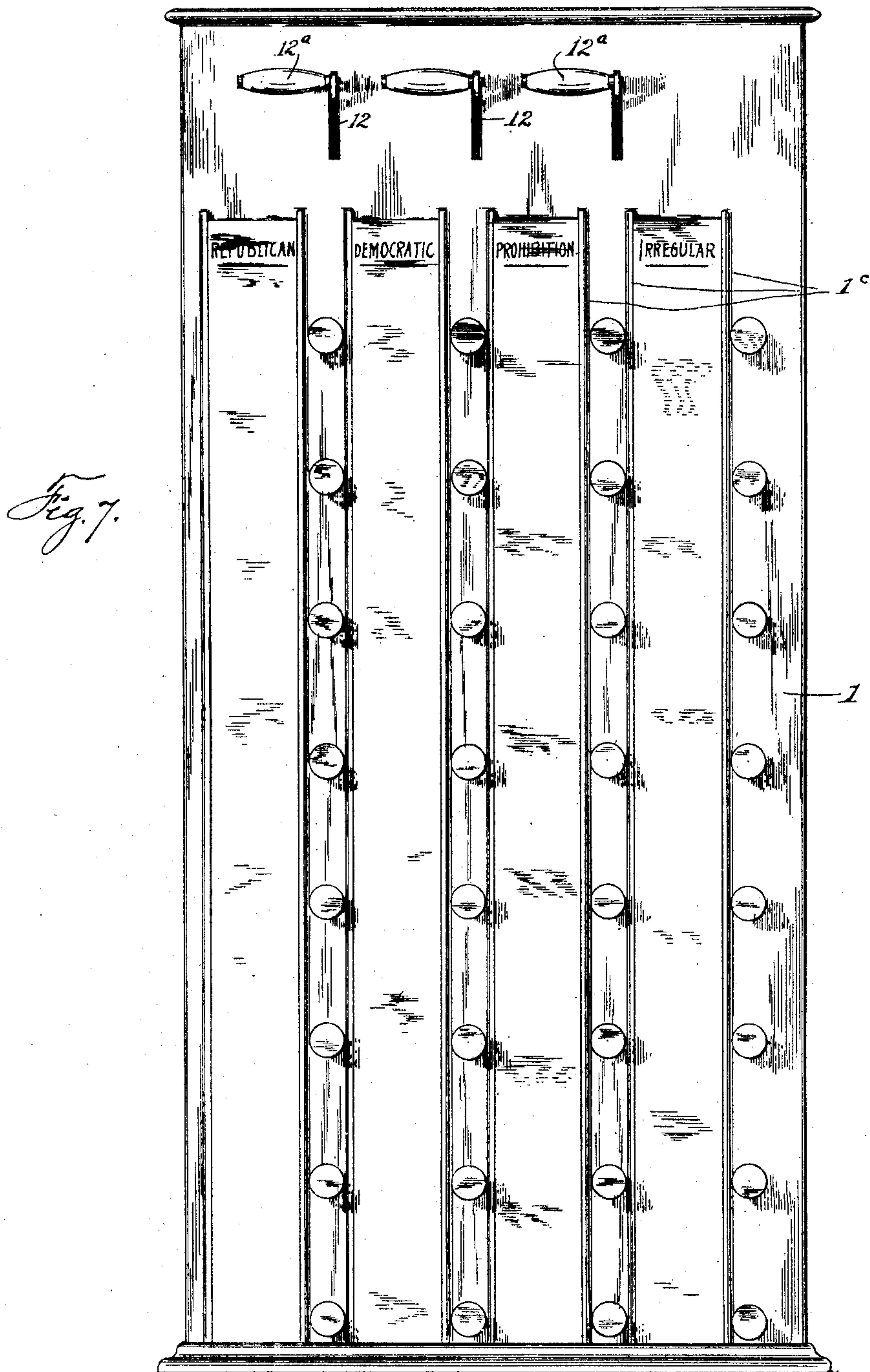
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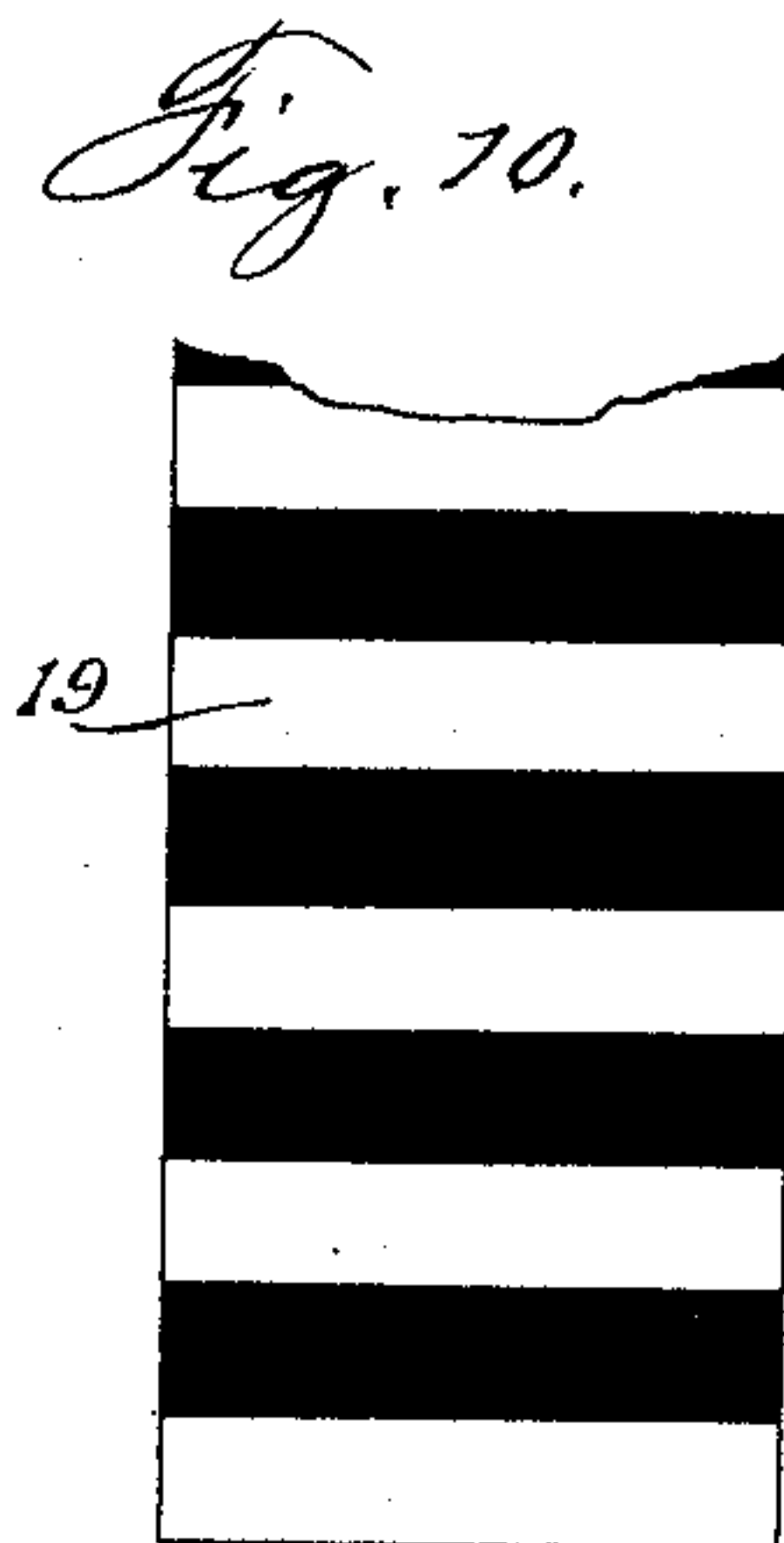
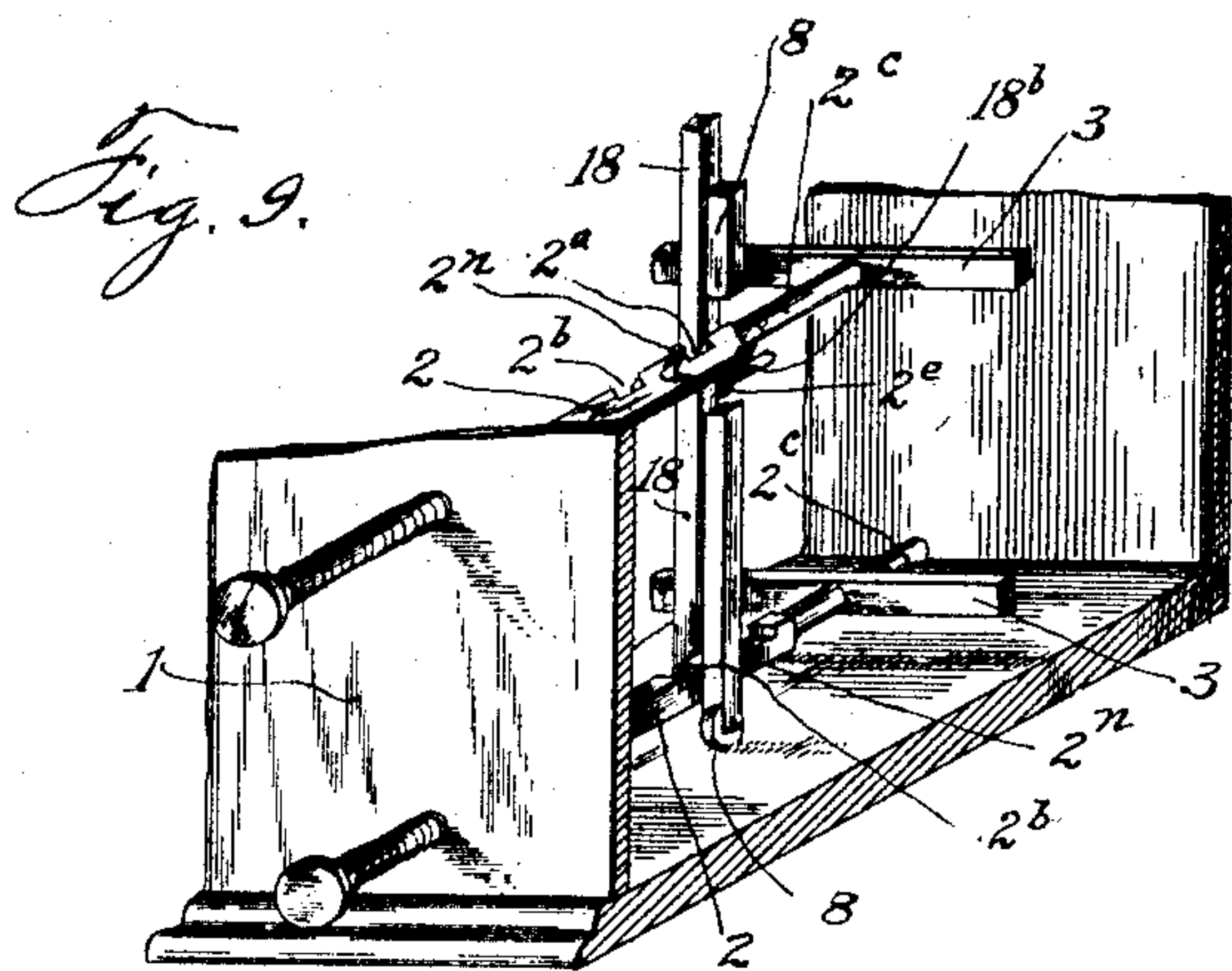
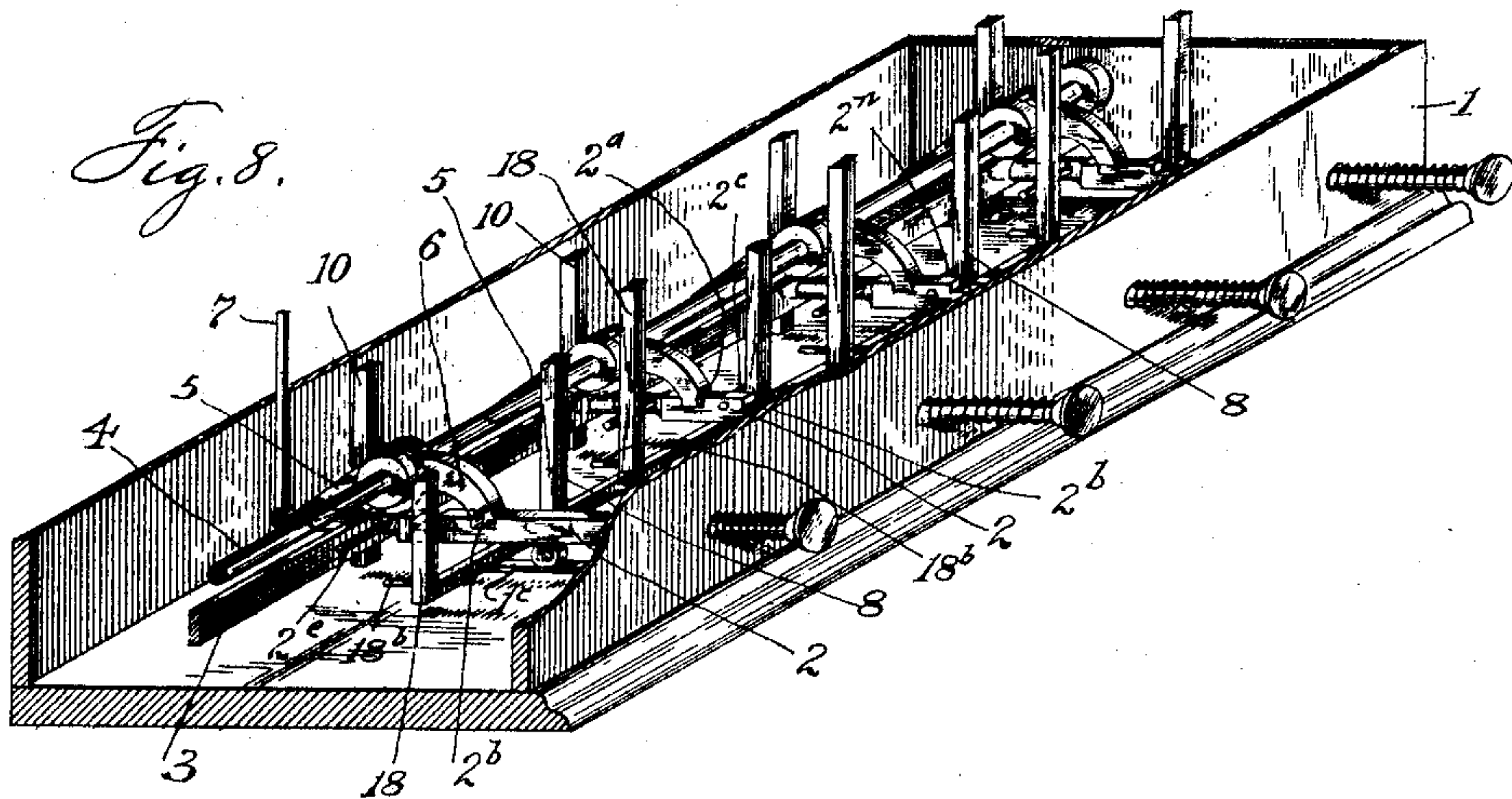
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6 Sheets—Sheet 6.



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UNITED STATES PATENT OFFICE.

OTTMAR A. GATRELL, OF COLUMBUS, OHIO, ASSIGNOR TO EMILY M. INGOLD, OF SAME PLACE.

VOTING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 631,251, dated August 15, 1899.

Application filed October 17, 1898. Serial No. 693,760. (No model.)

To all whom it may concern:

Be it known that I, OTTMAR A. GATRELL, a citizen of the United States, residing at Columbus, in the county of Franklin and State of Ohio, have invented certain new and useful Improvements in Voting-Machines; 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 which it appertains to make and use the same.

The object of my invention is to provide a machine in which the so-called Australian system of voting may be practiced.

For this purpose my invention contemplates arranging a series of push-keys in vertical and horizontal rows, the keys of the vertical rows being intended for the various nominees of the several political parties, and the provision of means whereby a voter may vote a "straight" ticket or a mixed or "scratched" ticket, but if he votes one sort precluding him from voting the other sort.

My invention also contemplates the provision of means whereby the number of votes received by each nominee is registered and may be readily ascertained after the polls are closed.

It further contemplates the provision of means whereby in the event there are a number of nominees for the same office from whom a number fewer than the whole number may be voted for to the exclusion of the others and yet a straight ticket voted.

My invention further contemplates the provision of means for enabling the voter to vote for a person whose name is not on any of the regular tickets.

My invention also contemplates other details, all of which are hereinafter particularly set forth.

In the drawings, Figure 1 is a vertical sectional view of the casing, the interior parts being illustrated partially in side elevation and partially in section. Fig. 2 is a front view, parts being broken out to illustrate the registering devices. Fig. 3 is a rear view, the casing being broken out to illustrate an arrangement of the apparatus in that part of the machine, the mechanism in the front part being omitted for the sake of clear-

ness. Figs. 4 and 5 are side and front views of appliances adapted for use where the name of a separately-selected nominee is to be written by the voter, the casing being broken out. Fig. 6 is an end view of a key, showing its relation to the straight-ticket and resetting bars. Fig. 7 is a front view of the machine, showing the arrangement of the keys. Fig. 8 is a detail view showing the devices for locking all the remaining keys of the same horizontal row in the locked position after one of the keys has been operated. Fig. 9 is a detail view showing one of the keys rotated so as to remain inoperative, the locking devices being omitted. Fig. 10 is a view showing the paper used in the device for voting for a separately-selected nominee.

In the machine shown, 1 designates the frame or casing, and 1^b a horizontal partition in the upper part thereof.

2 are keys arranged horizontally in the proper number in horizontal and vertical rows, so that their rounded shanks project through and their heads or finger-pieces stand beyond the face of the casing. A spring is placed on the protruding shank of the key. The key-bar or that portion of the key within the casing is made with two notches 2^a and 2^b in its upper edge. The extreme inner end of the key is rounded, as shown at 2^c, and is supported and is capable of sliding longitudinally as well as being turned axially in a bearing in a bar or support 3, extending, preferably, between the sides of the casing. Arranged horizontally over the inner ends of each horizontal row of keys is a rotatable shaft 4, upon which is fixed for each key an arm 5, that normally rests against the end of the key and arranged loosely so as to rotate by the action of gravity. On the shaft, between the collar of the arms 5, is a dog or detent 6, the free end of which is adapted to enter one or the other of the notches 2^a and 2^b to lock the key-bar from horizontal movement. The arm 5 has a shoulder 5^a, and the key-detent 6 has a corresponding shoulder 6^a, that abuts against the shoulder 5^a when the arm 5 is down against the end of the key-bar in its outer or voting position, as shown in Fig. 1, and the detent is held out of the inner notch 2^a, but in position to drop into the

same if the arm 5 is lifted by the inward pushing of some other key on the shaft 4. If, however, the arm 5 is lifted by the pushing in of the immediate key, the detent 6 drops into the outer notch 2^b. From this it will be observed that all the keys in the same horizontal row are locked in their outer position except that pushed in, which latter is locked as soon as it reaches its inner position. One of the arms 5 on each shaft 4 is furnished with a rod 7, having at its upper end an indicator 7^a, marked with a number, which when lifted in the voting process will be exhibited through a glazed opening 1^a to indicate to the judges of election that the voter has voted for some one nominee (but not which) for the office for which the exhibited number stands.

Each of the key-bars is furnished with a laterally-projecting pin 2^a, all on the same side and all standing in the same vertical plane, and arranged in front of these is a bar 8, preferably supported at its upper and lower ends upon antifriction-rollers, the upper ones resting on the partition 1^b and the lower one upon a short guiding-track 1^c. This bar has attached to it cords or straps 8^a, that pass under rollers 9 on a stationary shaft 9^a to another bar 10, and supported upon a fixed shaft 11 in the upper part of the casing is a rocking lever 12, the inner end of which is attached to the upper end of the aforesaid bar 10 and the outer end of which projects beyond the casing, where it is provided with a handle 12^a, by means of which the outer end of the lever is pulled down and the inner end up, thus lifting the bar 10 and drawing inward the bar 8, and consequently all the keys in the corresponding row.

Each of the keys is furnished with registering mechanism. That shown comprises two drums 13 and 14, mounted movably upon a fixed horizontally-arranged shaft 15 and intermediate drum 16 on a parallel shaft 17 for carrying the count from the faster to the slower drum. The faster drum 13 is furnished with a ratchet 13^a to be engaged by a spring-pawl 2^d on the push-key 2 and a pin 13^b to strike once in each revolution and move a toothed wheel 16^a on the drum 16. The drum 16 has fixed to it a gear 16^b, that meshes with a gear 14^a, fixed to drum 14. Thus the numbers upon the drum 13 may be multiplied upon the drum 14 and the total number of impulses given to the wheel 13 (in other words, the total number of votes) ascertained through slots in the face of the machine. The numbering of the registering-wheels is arbitrary; but in the instance shown the wheel 13 is numbered from "0" to "29" and the wheel 14 in multiples of thirty. The ticket containing the names of the nominees to be voted for is secured in ways 1^c, so as to exclude from the voter a view of the count.

When there are several nominees for a corresponding office and the voter must make choice of fewer than the whole number, each of the keys of those for whom he does not

wish to vote may in the machine as shown be turned to the left without inward movement until the pin 2^c on the key-bar comes into contact with the pin 18^b on the adjacent vertical bar 18 of the resetting-frame, and in this position the straight-ticket bar 8 will when operated pass the pin 2^c, and hence fail to operate the register of such key or keys. It will be observed that if a voter push in a single key he is precluded from subsequently voting by one operation a straight ticket other than that to which the key pushed in belongs, because the pushing in of any key in any horizontal row locks in their outer position all the remaining keys in that row and the pins 2^a of those keys will prevent the operation of any of the straight-ticket bars except that in the vertical row in which the operated key stands.

The resetting-frame is composed of vertical bars 18, one for each vertical row of keys, and small horizontal rods or pins 18^a, extending under the detents 6, so that when the frame is lifted by the pulling of the cord 19 all the detents are lifted, allowing the arms 5 to drop and the key-bars 2 under the action of their springs to resume their outer or voting position. When the resetting-frame is lifted, the pin 2^c of such keys as have been turned on their axes are also lifted by the pin 18^b (see Fig. 9) and the key reset in proper position axially.

To provide for voting for a person whose name is not printed on the ticket, I employ in place of the registering device two spools, one of the heads of the lower one being ratched, (see Figs. 4 and 5,) so that it may be operated by a spring-pawl in the key similar to that heretofore designated 2^d. The upper spool contains a roll of paper 19, which is passed over a plate 20, behind an opening in the face of the casing, and under a small friction-roller 21, after which it is attached to the shaft of the lower spool. The paper is preferably printed with black bars, as shown in Fig. 10, which bars are to stand in front of the openings when the key is in its outer or voting position, and it shall be incumbent upon the voter to push in a key previous to writing the name of his nominee, thus locking the remaining keys. When the machine is reset by the operation of the bar 18, the retraction of the key under the action of its spring further rolls up the strip through the action of a pawl 2^f on the key-bar 2, so as to bring the printed black bar opposite the opening.

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

1. In a voting-machine, the combination of a series of push-key bars arranged in rows and having notches or stops 2^a and 2^b, a rock-shaft 4, arms 5 fixed on said shaft arranged to be operated by said key-bars, detents 6 loose on said shaft and arranged to engage one or the other of said notches or stops 2^a and 2^b, shoulders to hold said detents disen-

gaged from the notches 2^a and 2^b until a key operates one of the arms 5, substantially as described.

2. In a voting-machine, the combination of
5 push-key bars arranged in several rows, said
key-bars having notches or stops 2^a and 2^b, a
rock-shaft 4 for each of said rows, arms 5 fixed
on said shaft arranged to be operated by said
key-bars, detents 6 loose on said shafts 4 and
10 arranged to engage one or the other of said
notches or stops 2^a and 2^b in the key-bars,
shoulders to hold said detents disengaged
from said notches or stops 2^a and 2^b until a
key operates one or the other of the arms 5,
15 and an indicator 7^a for each of said shafts
4 arranged to be operated upon the operation
of the arms 5 on the shaft, substantially as
described.

3. In a voting-machine, the combination of
20 push-key bars arranged in several rows, said
key-bars having notches or stops 2^a and 2^b
and pins 2^c, rock-shaft 4 for each of said rows,
arms 5 fixed on said shaft arranged to be op-
erated by said key-bars, detents 6 loose on
25 said shaft 4, and arranged to engage one or
the other of said notches or stops 2^a and 2^b,
shoulders to hold said detents disengaged
from said notches or stops 2^a and 2^b until a
key operates one of the arms 5, a bar 8 ar-
30 ranged to engage the pins 2^c on the push-keys
in a row transverse to the rows originally re-

ferred to, and means for operating said bar,
substantially as described.

4. In a voting-machine, a push-key bar with
means for locking it in its inner or outer po- 35
sition, a spool containing a paper-roll with
alternately dark and light portions and means
substantially as described for moving said
spool or paper-roll in the same direction upon
both the inward and outward movement of 40
the push-key bar.

5. In a voting-machine, a series of keys ar-
ranged in vertical and horizontal rows, means
for simultaneously operating all the keys in
any vertical row any of said keys being adapt- 45
ed to be rendered inoperative at will, sub-
stantially as described.

6. In a voting-machine, a series of keys ar-
ranged in horizontal and vertical rows, means
for simultaneously operating all the keys in 50
a vertical row, some or all of said keys being
adapted to be rendered inoperative at will,
and means for automatically restoring said
keys to operative position, substantially as
described. 55

In testimony whereof I affix my signature
in presence of two witnesses.

OTTMAR A. GATRELL.

Witnesses:

C. E. JUSTICE,
GEORGE M. FINCKEL.