

No. 660,714.

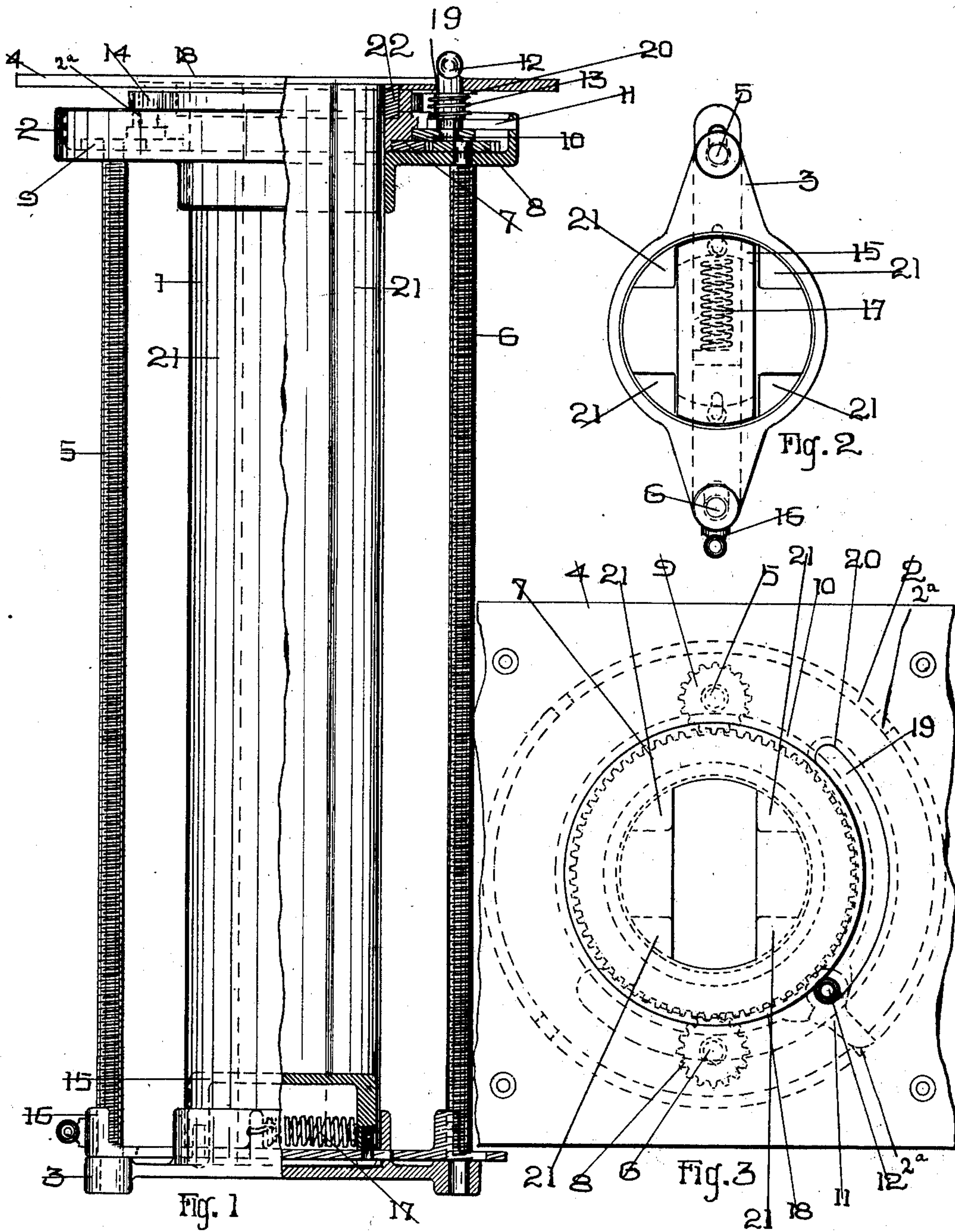
Patented Oct. 30, 1900.

S. WHEELER.
DELIVERY MECHANISM.

(Application filed June 29, 1898.)

(No Model)

2 Sheets—Sheet 1.



Witnesses.

Eugene Wheeler
Wm. A. Wheeler

Inventor.

S. Wheeler

No. 660,714.

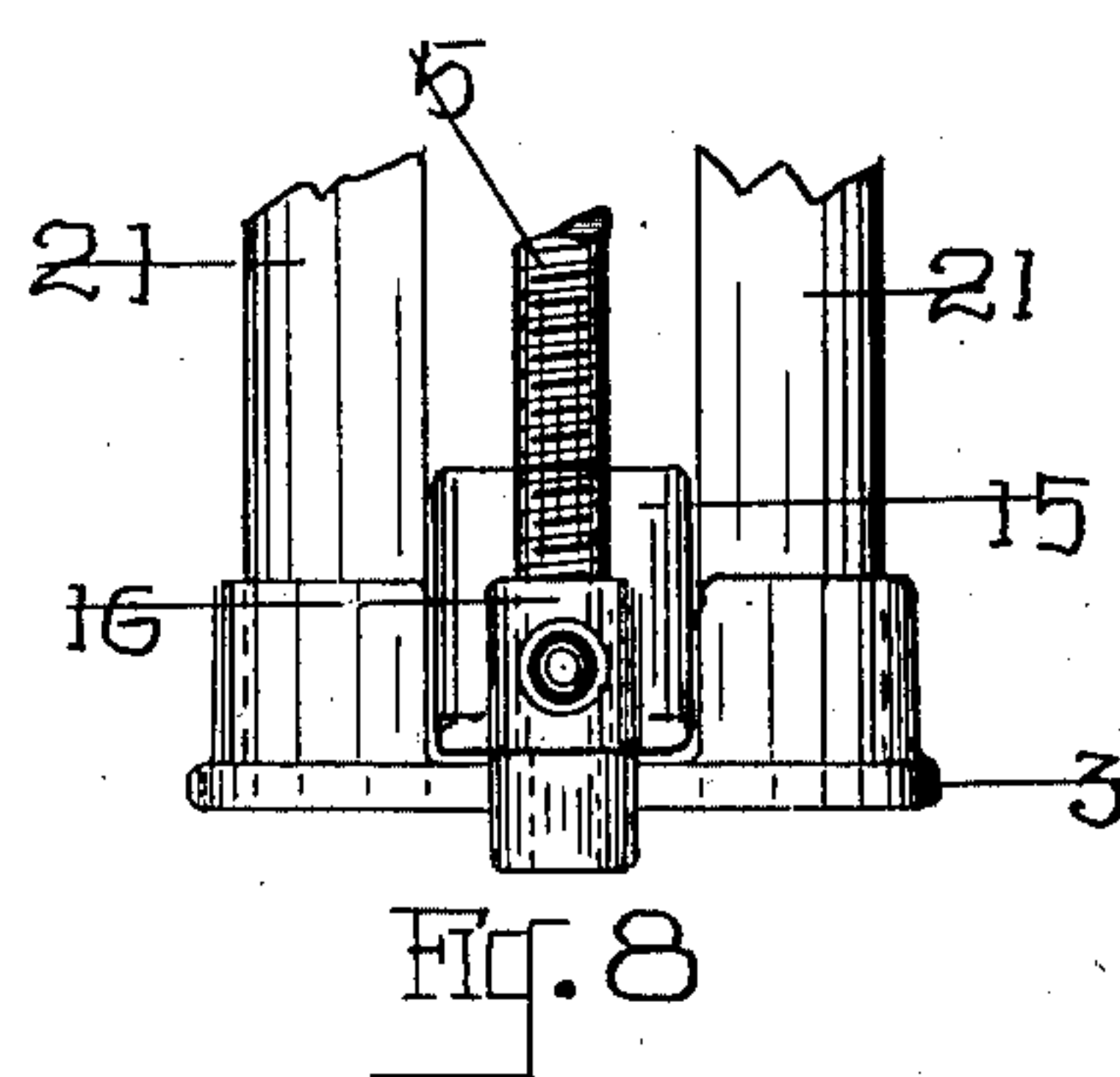
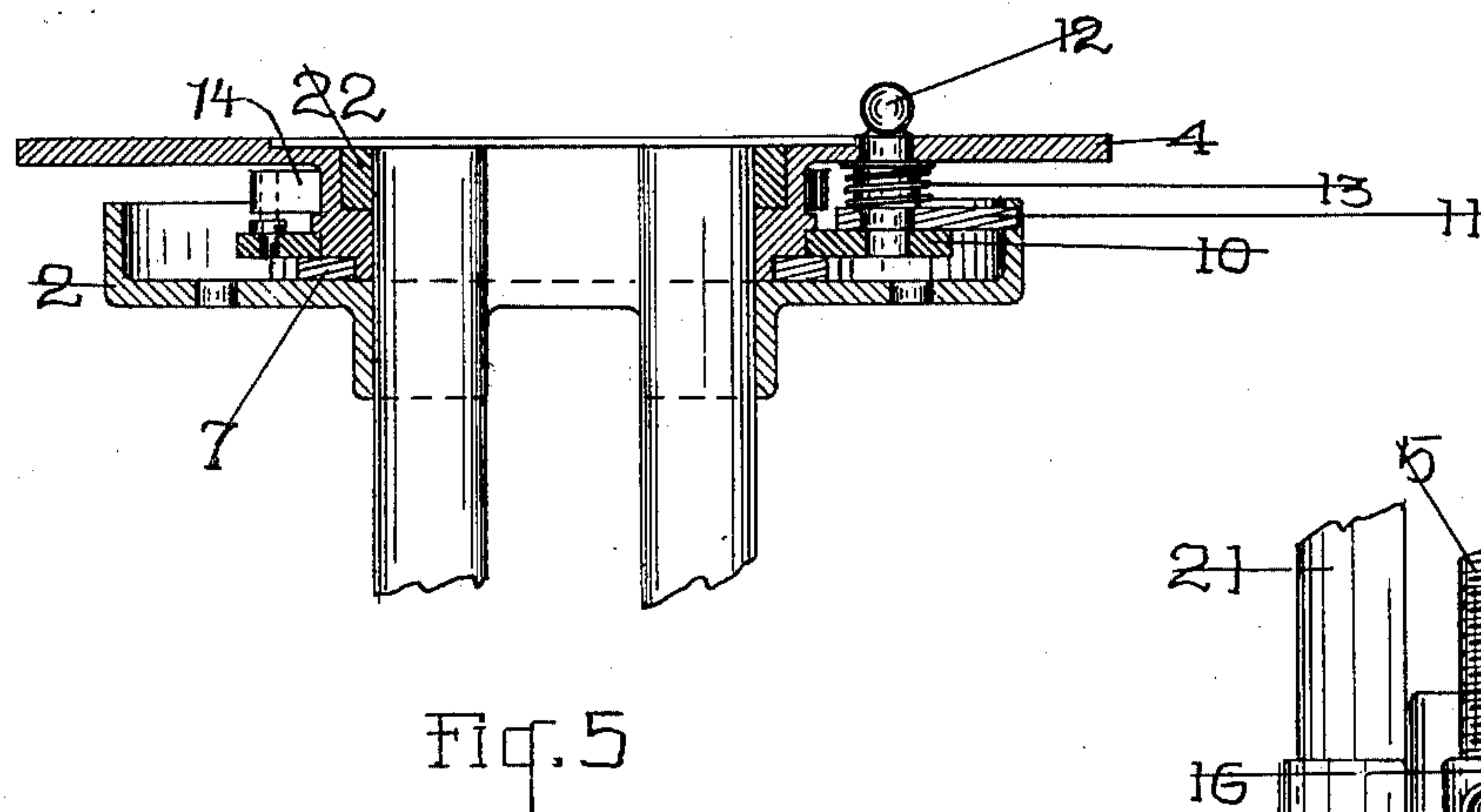
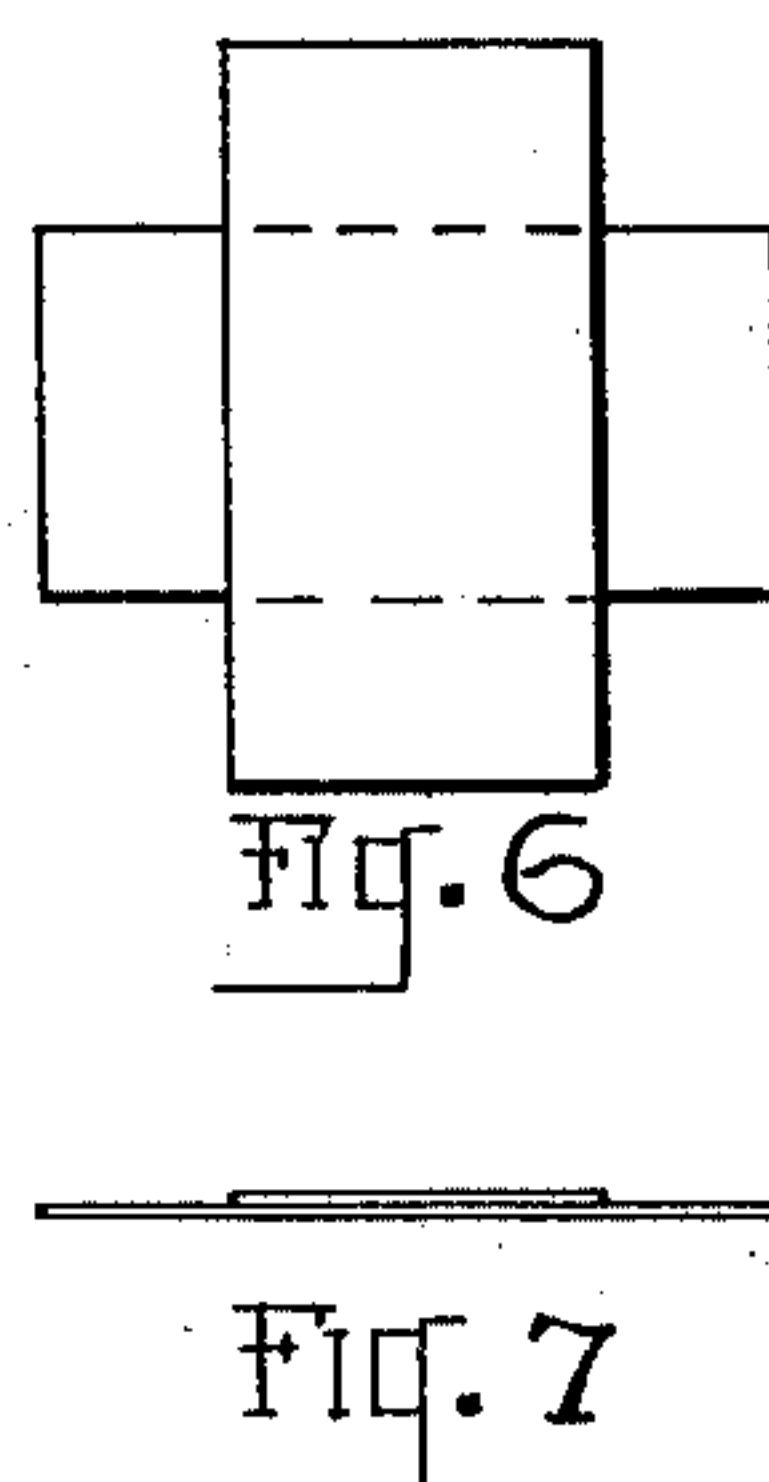
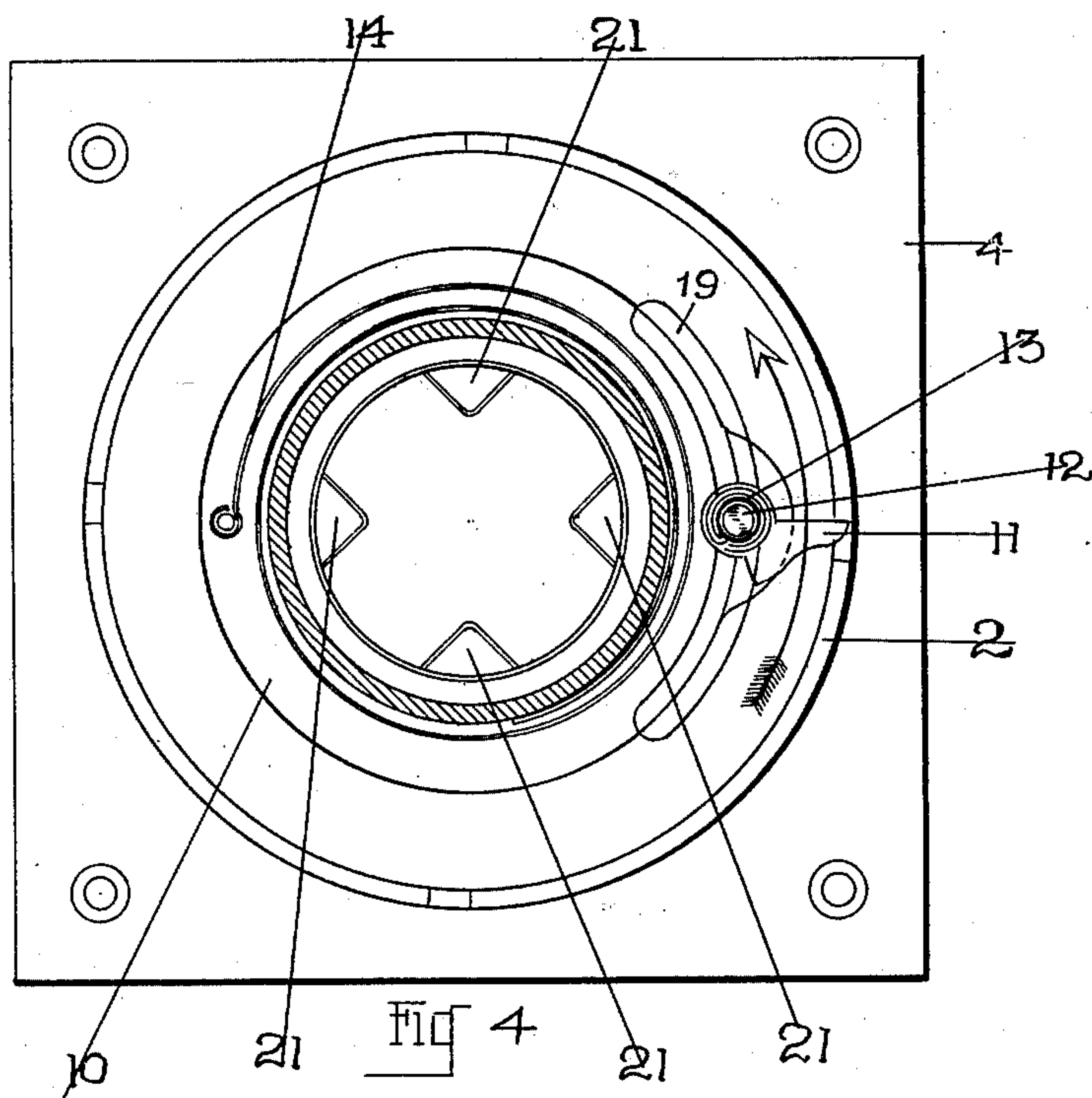
Patented Oct. 30, 1900.

S. WHEELER.
DELIVERY MECHANISM.

(Application filed June 29, 1898.)

(No Model.)

2 Sheets—Sheet 2.



Witnesses.

Egan Wheeler
S. Wheeler

Inventor.

S. Wheeler

UNITED STATES PATENT OFFICE.

SETH WHEELER, OF CASTLETON, NEW YORK.

DELIVERY MECHANISM.

SPECIFICATION forming part of Letters Patent No. 660,714, dated October 30, 1900.

Application filed June 29, 1898. Serial No. 684,736. (No model.)

To all whom it may concern:

Be it known that I, SETH WHEELER, a citizen of the United States of America, and a resident of Castleton, Rensselaer county, New York, have invented certain new and useful Improvements in Delivery Mechanism, of which the following is a specification.

My invention relates to delivery mechanism wherein articles may be delivered one at a time or in predetermined quantities.

My invention consists in a receptacle or magazine for containing the articles to be delivered so arranged that each alternate article or alternate articles shall be at an angle to the others, a discharge-plate having an orifice of the same superficial area as one of the articles to be delivered, means for rotating the magazine to successively bring the articles set at different angles opposite the discharge-orifice, and a follower adapted to raise the column of articles as they are successively brought into position for delivery.

The objects of my invention are to positively and accurately deliver one or more articles at a time from the top of an apparatus, thereby enabling the rest of the mechanism to be concealed below a table or platform, upon which the top plate of the apparatus may be mounted.

My invention further consists in certain novel details of construction and combination of parts, as shall hereinafter be more fully set forth.

I will now proceed to describe mechanism embodying my invention with reference to the accompanying drawings and will then point out the novel features in claims.

Figure 1 is a side elevation, partly in section, of a delivery apparatus embodying my invention. Fig. 2 is a view from the bottom of same looking upward. Fig. 3 is a top view of the apparatus with the top plate partly broken away. Fig. 4 is a diagrammatic view of mechanism in the top portion of the apparatus. Fig. 5 is a central vertical section of the said top portion. Fig. 6 is a detail view showing the relative position of two adjacent articles when in different channels in the magazine. Fig. 7 is an edge view of same. Fig. 8 is a detail elevational view of the lower portion of the apparatus at right angles to Fig. 1.

Similar reference characters designate corresponding parts throughout the several views.

Reference character 1 designates the magazine for containing the articles to be delivered. As here shown, it consists of a cylindrical casing secured at its upper end to a casting or support 2, having four notches 2^a formed in its outer peripheral flange, and at its lower end to a base-support 3.

4 designates a stationary plate having a discharge-orifice through the center and through which the articles may be delivered from the magazine. The discharge-plate 4 is provided with a depending flange, which fits loosely around the cylindrical casing of the magazine, and the cylindrical casing is provided at its extreme upper end with a ring 22, securely attached thereto, and which is fitted in a recess in the said depending flange. By this construction it will be seen that while the discharge-plate is held stationary the magazine will be free to rotate, but will be held against longitudinal movement in either direction. Thus the whole apparatus may be supported by the discharge-plate, but be free to revolve.

7 designates a gear-wheel securely attached to the depending flange of the discharge-plate and held stationary therewith.

5 and 6 are threaded rods which connect together the upper and lower supports 2 and 3. The upper ends of these rods are provided with gear-wheels 8 and 9, which mesh with the gear-wheel 7.

10 is a plate loosely surrounding the depending flange of the discharge-plate and adapted to rotate thereon. 11 is a dog or pawl carried thereby, and 12 is a knob or handle by which the said plate may be revolved. For convenience sake I have mounted the pawl 11 upon the shank of the said knob or handle 12. A spring 13 is adapted to press the pawl in one direction and a suitable stop engaging a shoulder formed upon the pawl to limit the movement of the same in the other direction.

14 designates a coil-spring, one end of which is secured to the operating-plate 10 and the other end to the depending flange of the discharge-plate.

19 designates a slot in the discharge-plate

through which the shank of the handle or knob is arranged to pass, and 20 is a plate carried by the same for closing the said slot. The slot limits the movement of the operating-plate in either direction, and the spring 14 operates to normally keep the same in the position shown in Fig. 3.

15 designates a follower adapted to support the column or columns of articles in the magazine 1. The follower 15 is mounted on a base-piece having screw-threaded portions 16 engaging with the screw-threaded rods 5 and 6. A rotation or partial rotation of these rods in the proper direction will cause the follower to rise and to bring with it the column or columns of articles within the magazine. The follower is attached to its base-piece by means of screws threaded into the follower and passing through slots in the base-piece. The orifices through which the threaded rods 5 and 6 pass in the base-piece are also slotted. By this it will be seen that the base-piece may readily be disengaged from the rods 5 and 6, and with the follower it may be moved up or down by hand. A spring 17 normally keeps the parts in their proper relative positions and the female portion of the threads upon the base-piece in engagement with the threaded rods 5 and 6.

The magazine is provided interiorly with strips 21, of substantially triangular shape in cross-section and which extend clear from the top to the bottom thereof. The disposition of these strips, as shown, forms two channels of equal size within the outer cylindrical casing, and in these channels may be deposited in any desired number and order the articles to be delivered. Two of such articles are illustrated in Figs. 6 and 7, in which figures they are also illustrated at the angle relatively to each other that they will be when contained in the said channels.

The follower 15, as shown more clearly in Figs. 2 and 8, is adapted to fit loosely in one of the said channels and between the strips 21. There will be slots in the cylindrical casing to permit of the movement of the follower and its base-piece. In Fig. 8 the cylindrical casing has been omitted in order to better illustrate the other parts, which would have been obscured thereby.

The method of using the apparatus is as follows: The handle or knob 12 is grasped and moved in the direction of the arrow in Fig. 4, and with it moves the operating-plate 10 against the pressure of the spring 14. The pawl 11, carried by the said operating-plate, is in engagement with one of four notches 2^a in the support 2. Hence when the plate 10 is rotated a quarter of a revolution, which is the limit of movement allowed by the slot 19 in the stationary plate 4, the support 2 and parts attached thereto will be rotated at the same time. The gear 7, as before stated, is held stationary at all times. Hence as the gear-wheels 8 and 9 travel around the same they will be rotated upon

their axes and with them their screw-threaded shafts or rods 5 and 6. The rotation of these rods will cause an upward movement of the follower 15, which will raise the column or columns of articles in the magazine a predetermined distance. This distance is arranged to be just equal to the thickness of one of the articles, if the said articles are arranged alternately in the channels of the magazine and it is desired to deliver them one at a time, or it is arranged to be equal to the thickness of more than one article, according to the number which are arranged alternately and which are to be delivered at a time. The article or articles are delivered through the discharge-orifice in the stationary plate, from whence they can be removed by hand. The central portion of the plate is reduced in thickness around the discharge-opening, as at 18, for this purpose. When the support 2 is rotated, as just explained, and with it the magazine and appurtenances, the article or articles which are brought opposite the discharge-opening will be delivered, while those below will be held back by the next succeeding article or articles, which will lie crosswise of the said discharge-opening, and thus be held down by their ends. After a delivery has been made the handle or knob will be released and the operating-plate will return to its normal position under the influence of the spring 14, moving rearwardly one-quarter of a revolution. During this movement the dog or pawl 11 will release itself from engagement with the support 2, which together with the magazine and its appurtenances will remain stationary. At the end of such rearward motion the pawl will drop into the next notch, and this will be ready to operate as before.

What I claim is—

1. In a delivery apparatus the combination of a receptacle or magazine having a plurality of channels for the reception of articles to be delivered, the articles in one channel being so arranged that they shall overlap the articles in the next, a follower in said magazine, a discharge-opening at the top of said magazine of such size as shall permit the passage therethrough of one only of two articles set at such angle to each other, means for successively bringing the articles set at such angles opposite the discharge-opening, and means operated thereby for raising the follower in the magazine to compensate for the delivery of the articles substantially as specified.

2. In a delivery apparatus the combination of a receptacle or magazine having a plurality of channels for the reception of articles to be delivered, the articles in one channel being so arranged that they shall overlap the articles in the next, a follower in said magazine, a discharge-opening above said magazine of such size as shall permit the passage therethrough of one only of two articles set at such angle relatively to each other, means

for rotating the magazine relatively to the discharge-opening to successively present the said articles set at such angle opposite the said discharge-opening, and means operated
5 thereby for raising the follower in the magazine to compensate for the delivery of the articles substantially as specified.

3. In a delivery apparatus, the combination of a receptacle or magazine having a plurality
10 of channels for the reception of articles to be delivered, the articles in one channel being so arranged that they shall overlap the articles in the next, a follower in said magazine, a discharge-opening of substantially the
15 same size and shape as the end of one of the channels, means for rotating the magazine successively to bring the channels therein opposite the discharge-opening, and means operated by such rotation for raising the follower
20 in the magazine to compensate for the delivery of the articles substantially as specified.

4. In a delivery apparatus the combination of a receptacle or magazine having a plurality
25 of channels for the reception of articles to be delivered, the articles in one channel being so arranged that they shall overlap the articles in the next, a stationary plate having a discharge-opening above said magazine, said magazine being rotatably supported by
30 said stationary plate, a gear stationary with said plate, a follower in said magazine, a feed-screw carried by said magazine for raising said follower, a gear-wheel on said feed-screw and gearing with said stationary gear-wheel,
35 means for rotating the magazine step by step in one direction, whereby the channels are brought successively opposite the said discharge-opening and the follower is fed upwardly to compensate for the delivery of the
40 articles substantially as specified.

5. In a delivery apparatus the combination of a receptacle or magazine having a plurality
of channels for the reception of articles to be delivered, the articles in one channel being
45 so arranged that they shall overlap the articles in the next, a stationary plate having a discharge-opening above said magazine, said magazine being rotatably supported by said stationary plate, a gear stationary with said
50 plate, a follower in said magazine, a feed-screw carried by said magazine for raising said follower, a gear-wheel on said feed-screw and gearing with said stationary gear-wheel,

an operating-plate, a pawl or dog carried by said operating-plate, and adapted to engage
55 with and rotate the magazine and its appurtenances in one direction, but to disengage and run freely in the other direction substantially as specified.

6. In a delivery apparatus the combination
60 of a receptacle or magazine having a plurality of channels for the reception of articles to be delivered, the articles in one channel being so arranged that they shall overlap the articles in the next, a stationary plate having a
65 discharge-opening above said magazine, said magazine being rotatably supported by said stationary plate, a gear stationary with said plate, a follower in said magazine, a feed-screw carried by said magazine for raising
70 said follower, a gear-wheel on said feed-screw and gearing with said stationary gear-wheel, an operating-plate, a pawl or dog carried by said operating-plate, notches or lugs carried by the magazine for said dog or pawl to en-
75 gage with, a stop for limiting the movement of the operating-plate in either direction, and a spring for returning said plate to its normal position substantially as specified.

7. In a delivery apparatus, the combination
80 of a stationary plate having a discharge-opening, a rotatable magazine below said plate adapted to carry articles to be delivered, a follower in the bottom of said magazine and means operated by the rotation of said maga-
85 zine to cause the follower to move upward and deliver an article or articles from the magazine through the discharge-opening in the plate.

8. In a delivery apparatus, the combination
90 of a plate having a discharge-opening, a magazine rotatably supported by said plate, said magazine being adapted to contain articles which are to be delivered through the said opening after a rotation of the magazine,
95 means for rotating the magazine, and a follower within said magazine adapted when the magazine is rotated to deliver an article or articles from the magazine through said opening in the plate.
100

Signed by me at Albany, New York, this 22d day of June, 1898.

SETH WHEELER.

Witnesses:

EDGAR WHEELER,
WM. A. WHEELER.