

No. 608,413.

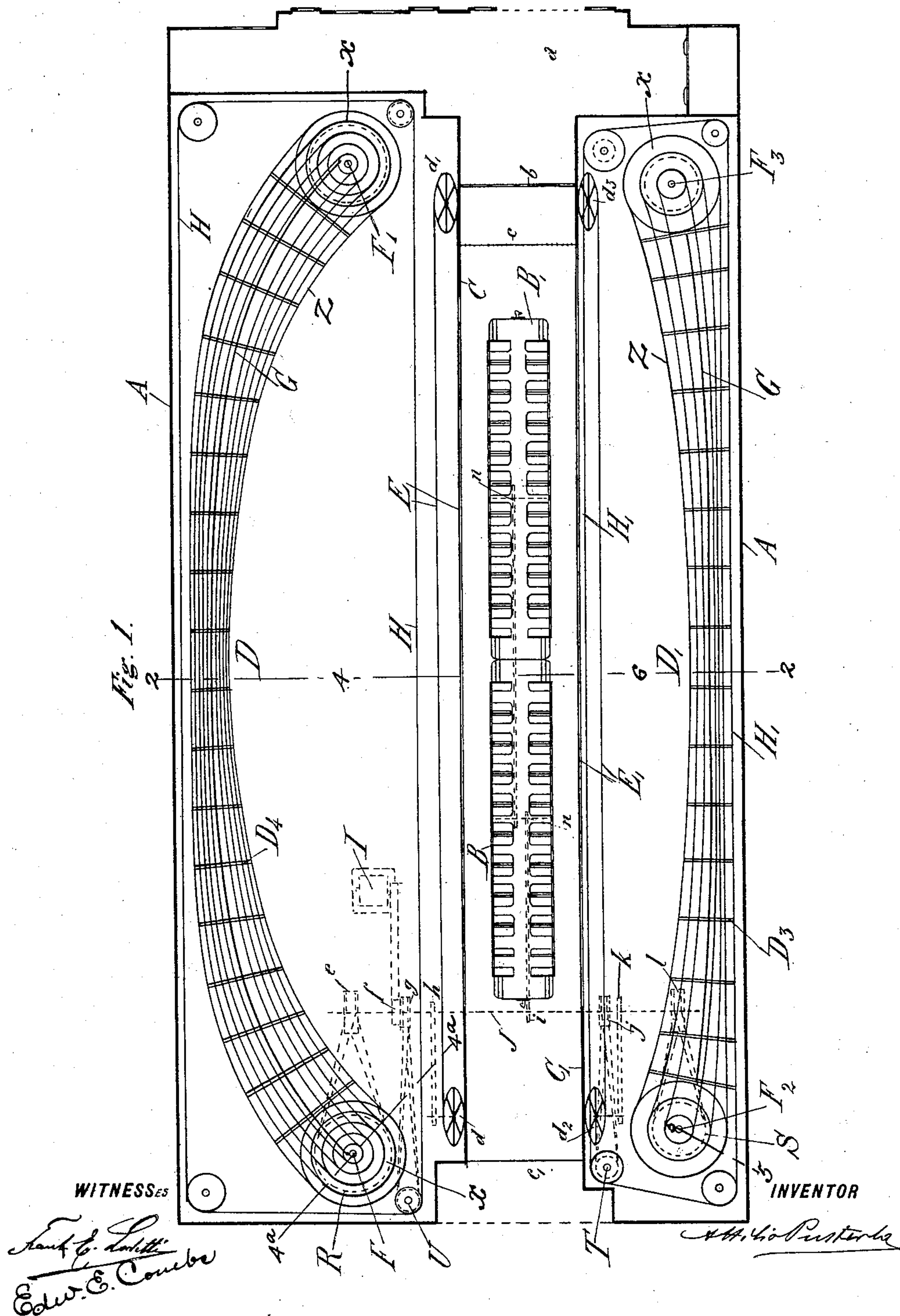
**Patented Aug. 2, 1898.**

**A. PUSTERLA.**  
**ILLUSION APPARATUS.**

(Application filed June 11, 1897.)

(No Model.)

**5 Sheets—Sheet 1.**



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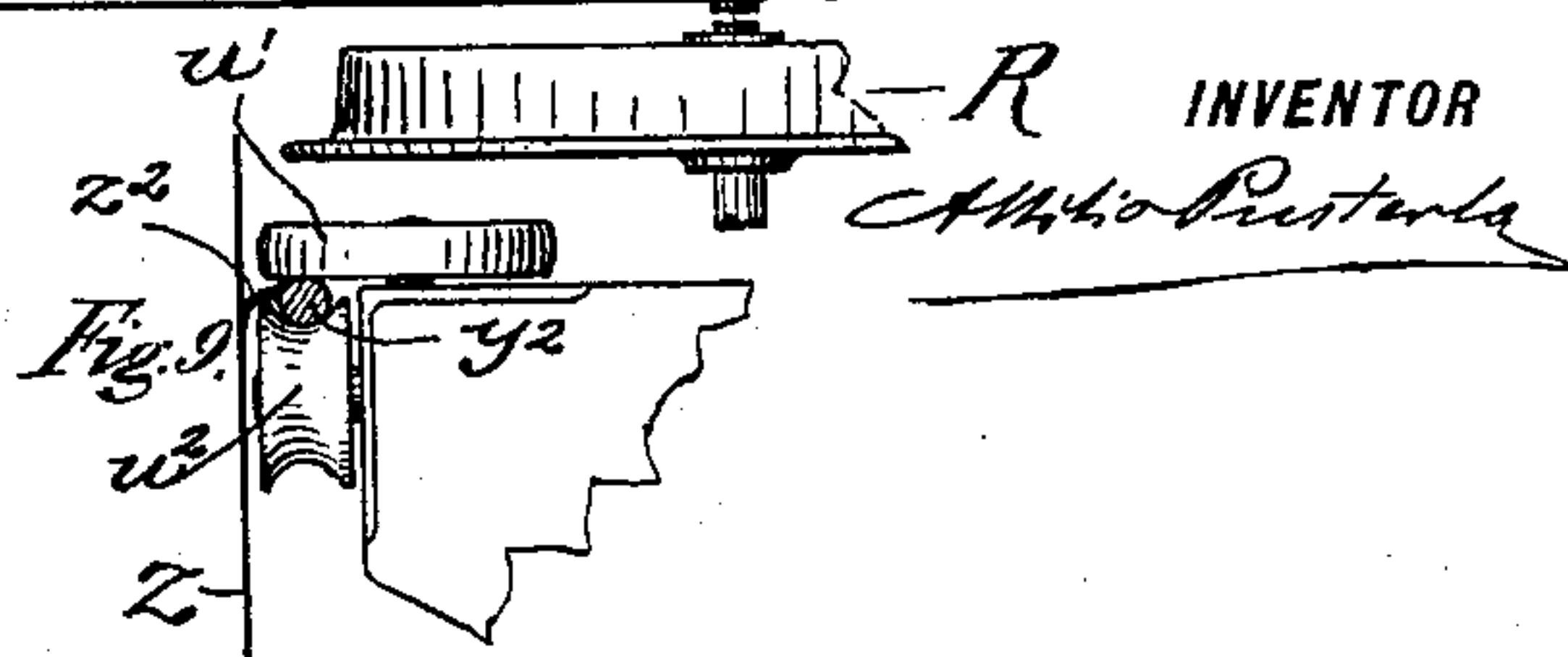
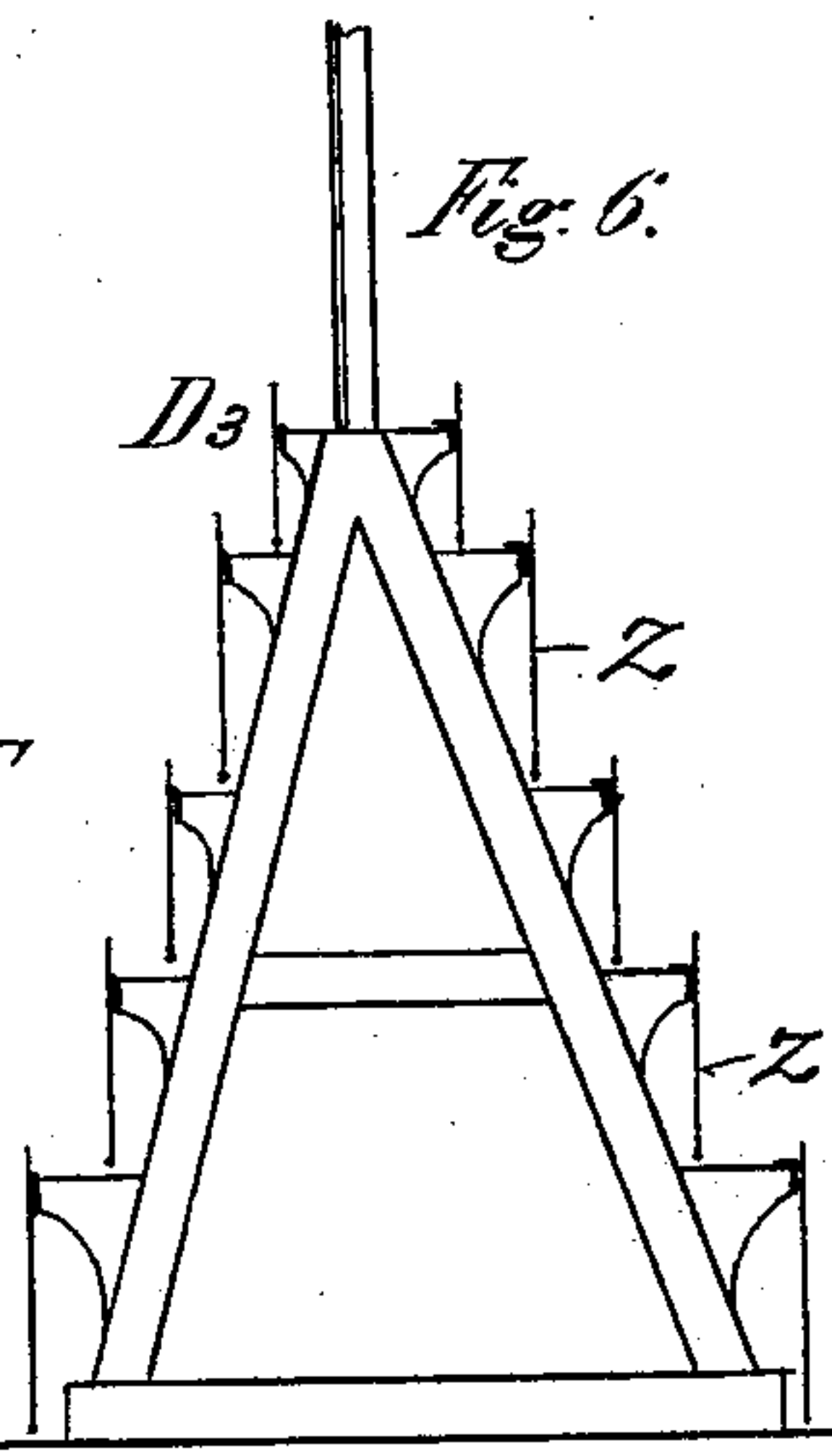
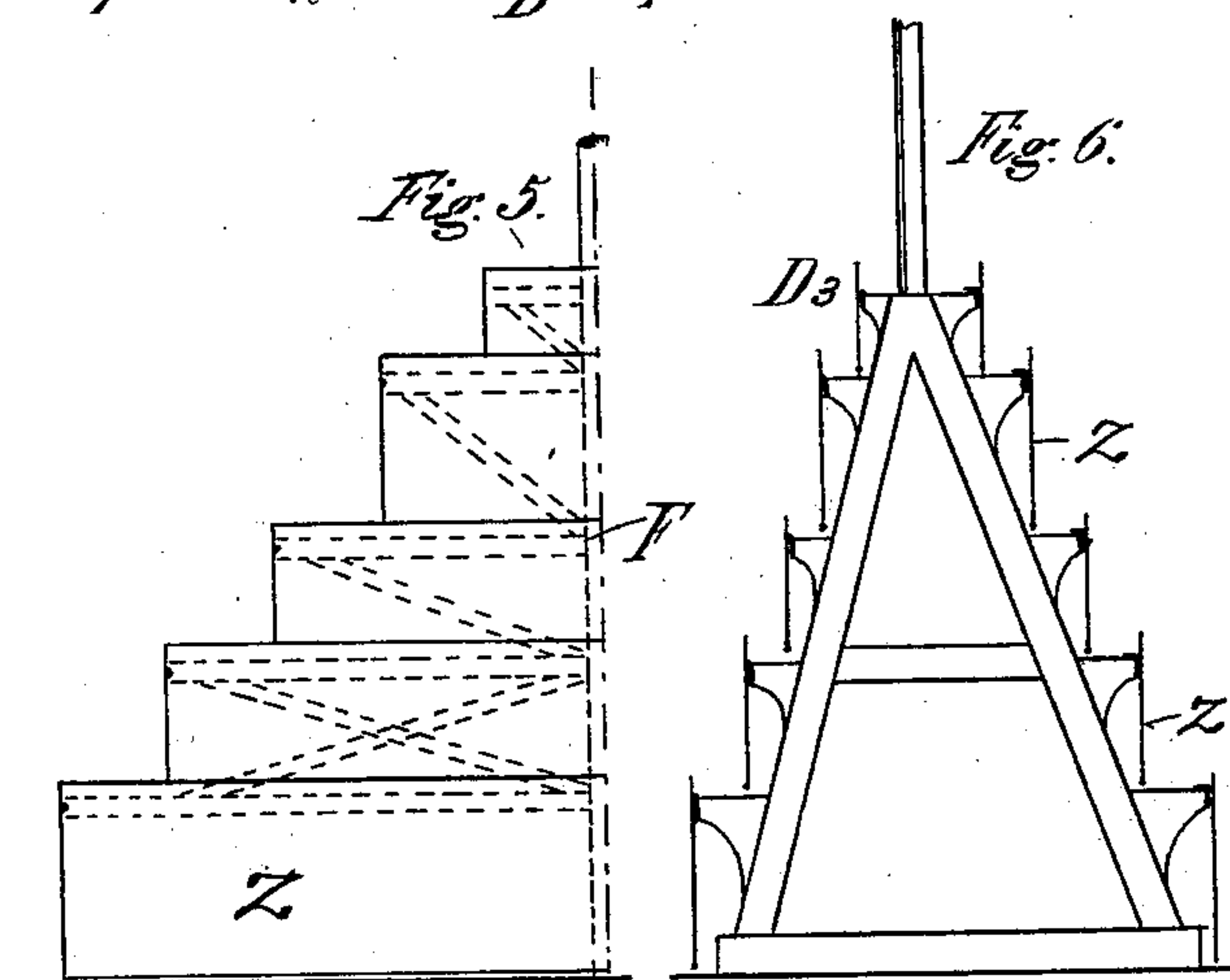
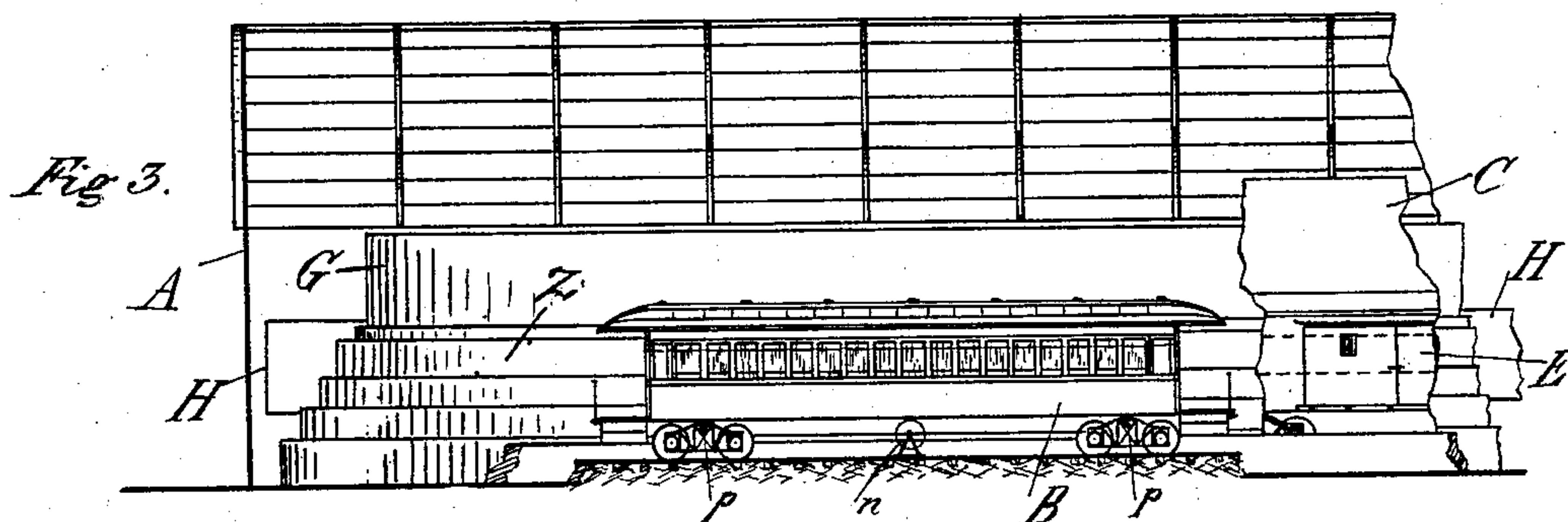
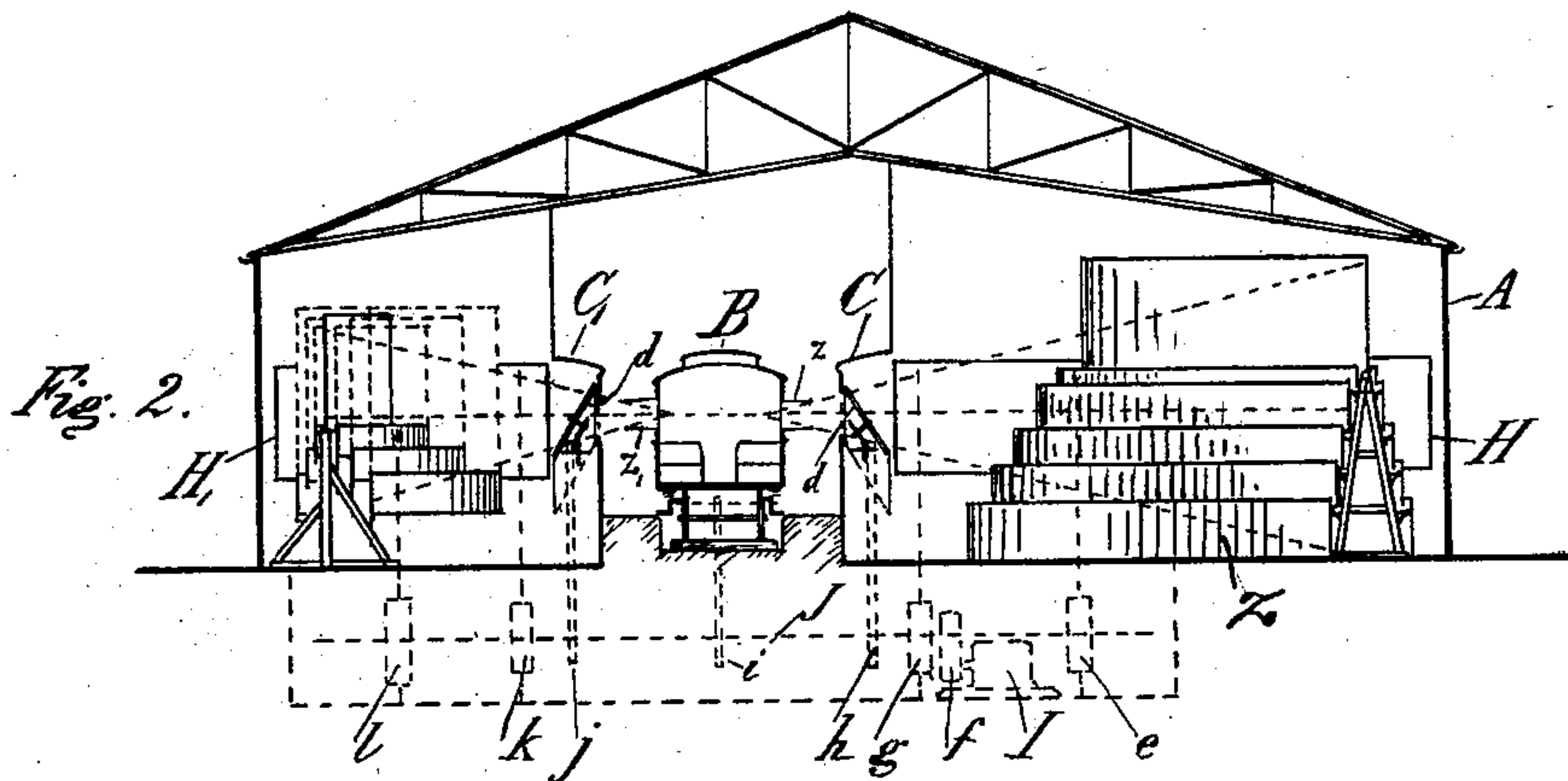
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(No Model.)

**5 Sheets—Sheet 2.**



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No. 608,413.

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5 Sheets—Sheet 3.

Fig. 4a

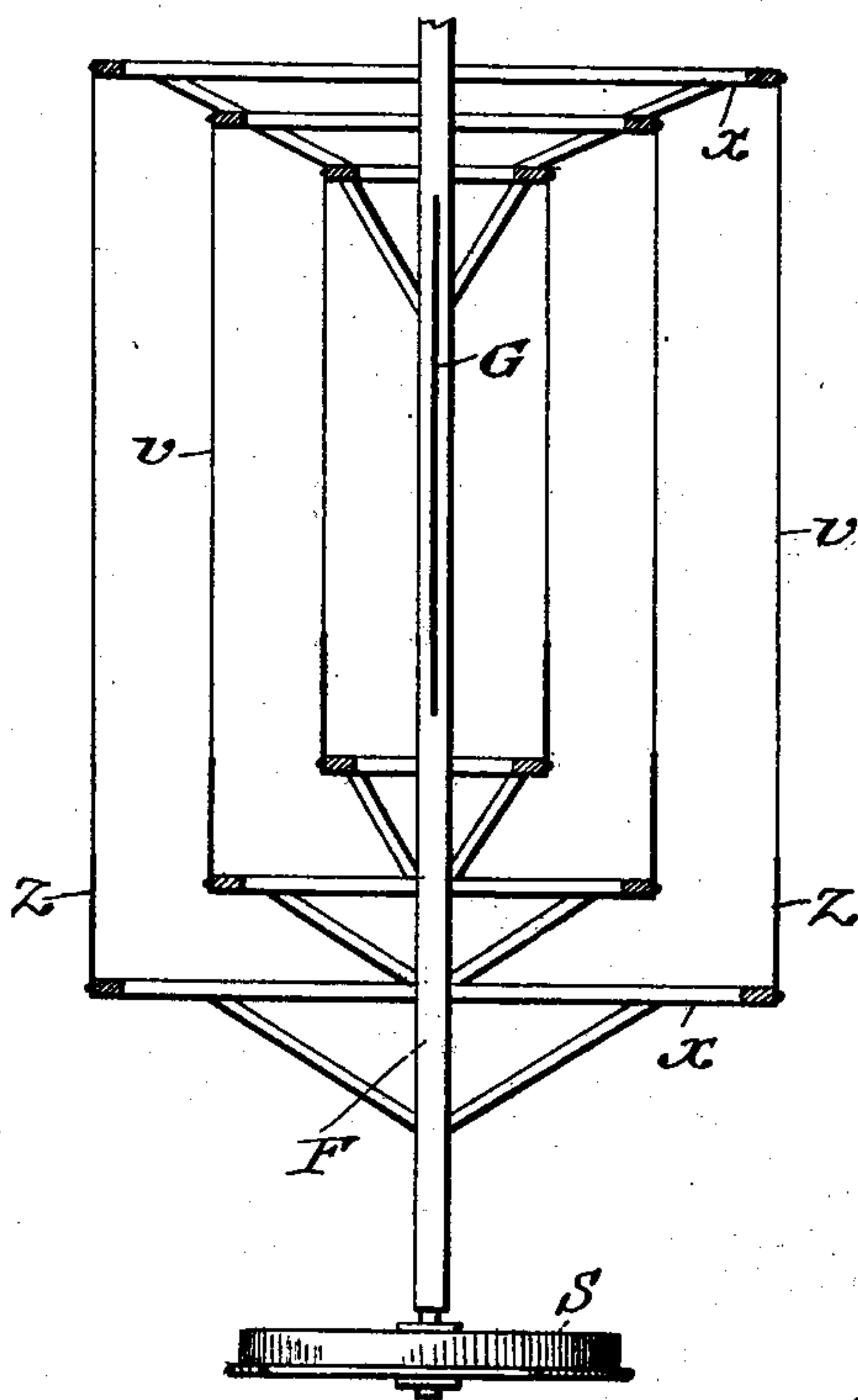


Fig. 4

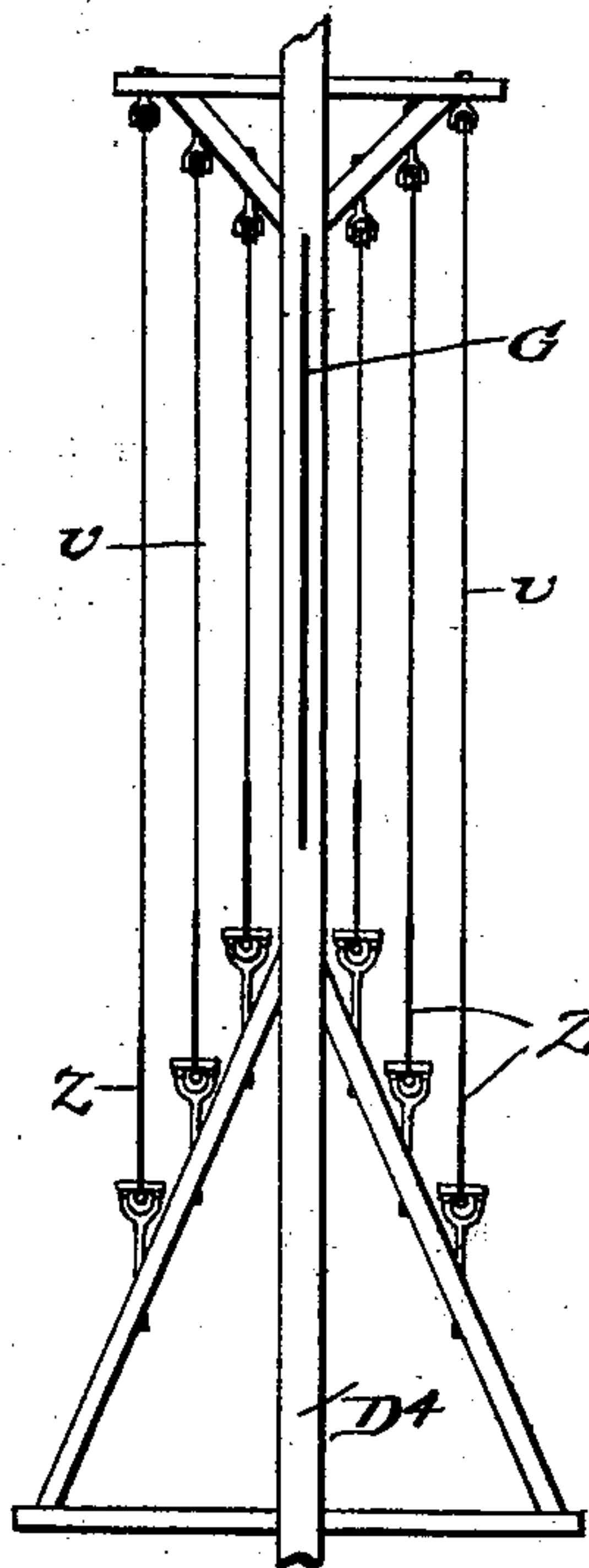


Fig. 7.

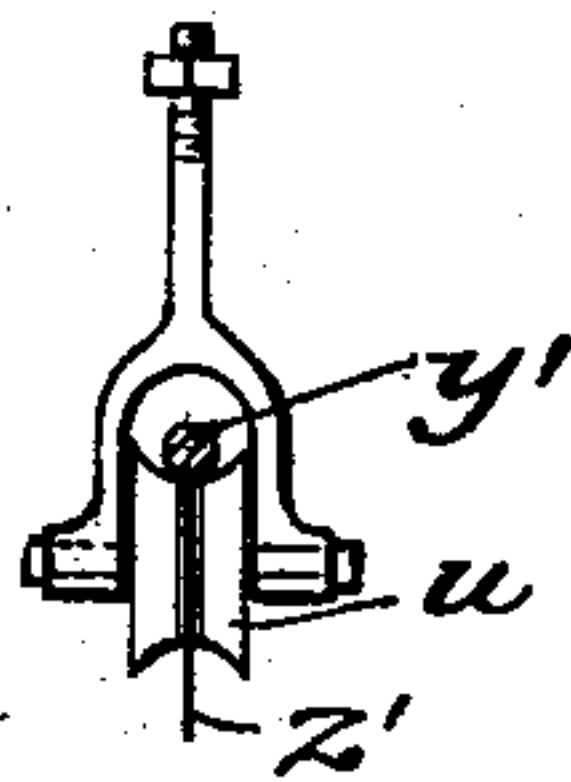
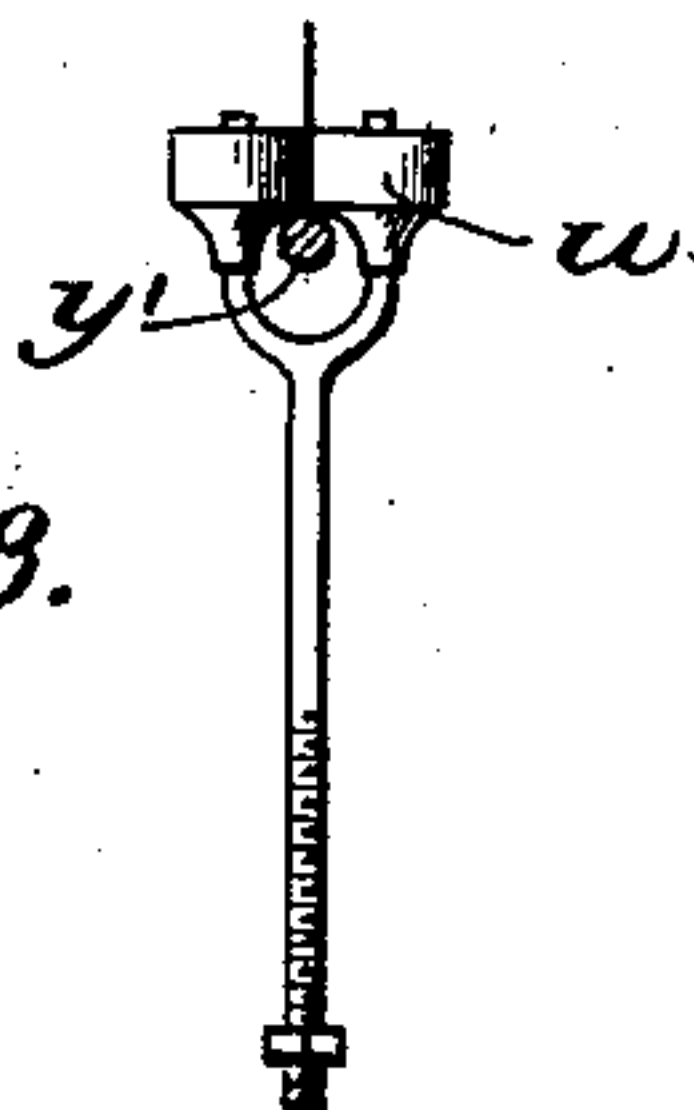


Fig. 8.



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5 Sheets—Sheet 4.

Fig. 10.

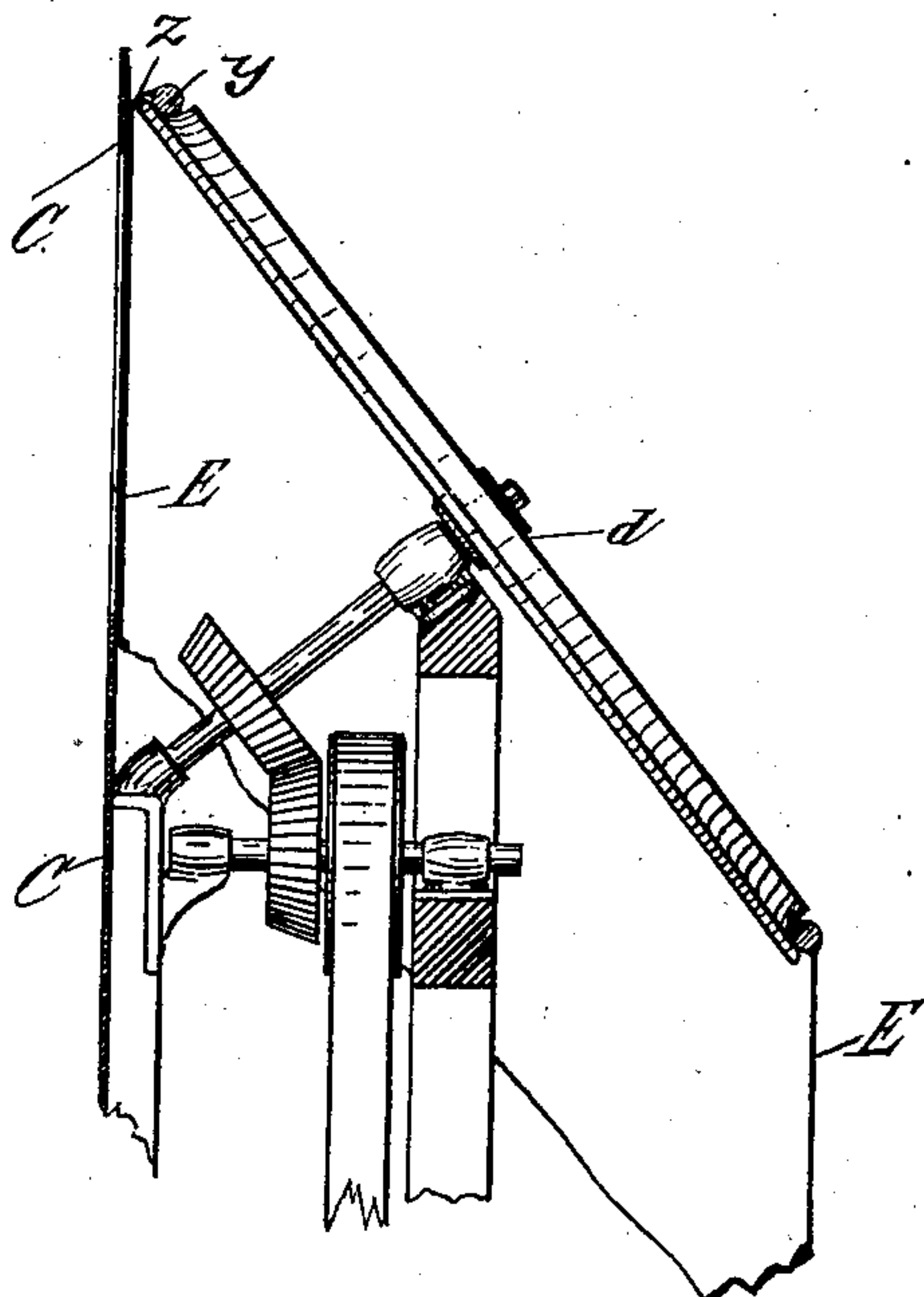


Fig. 11.

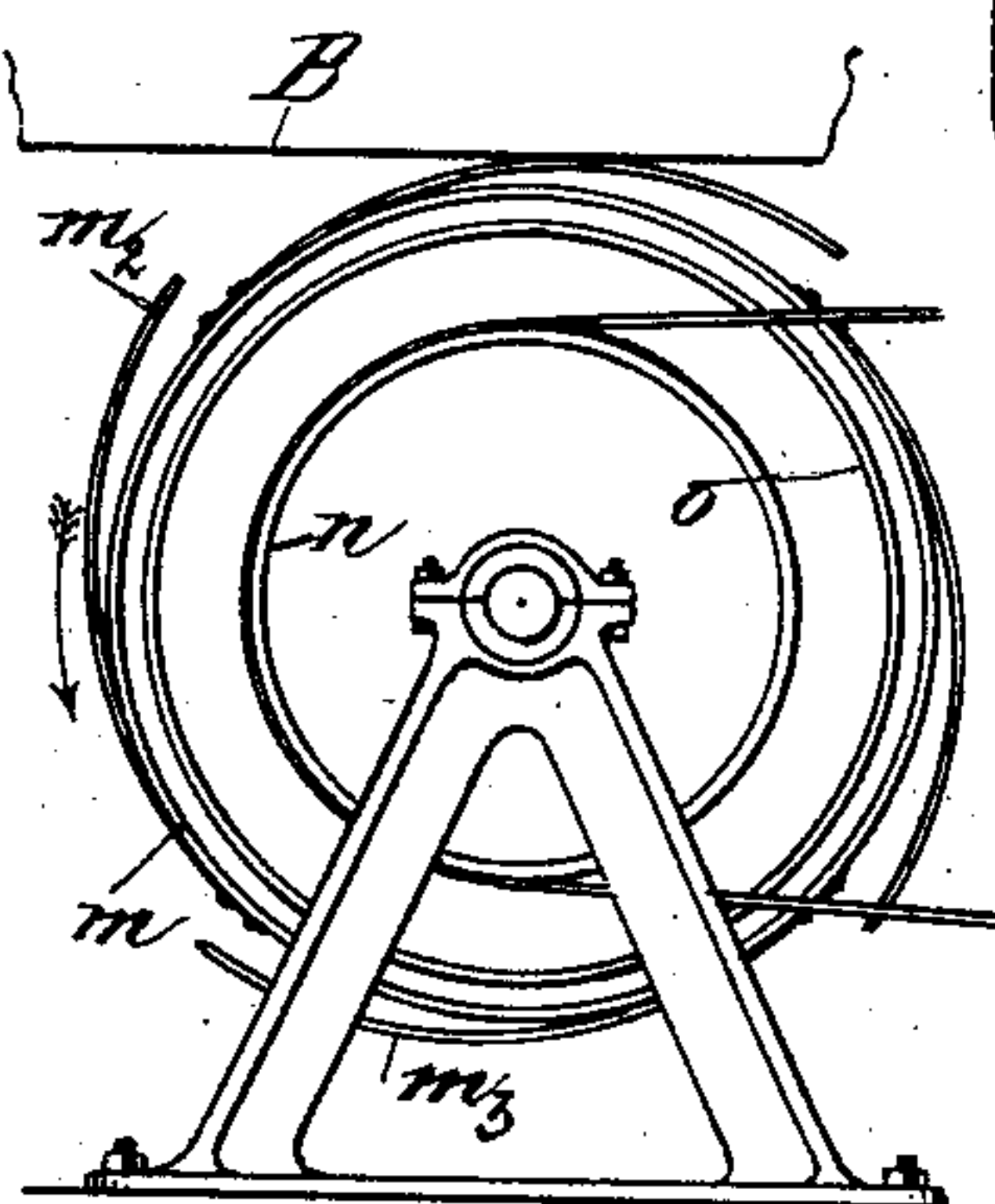


Fig. 12.

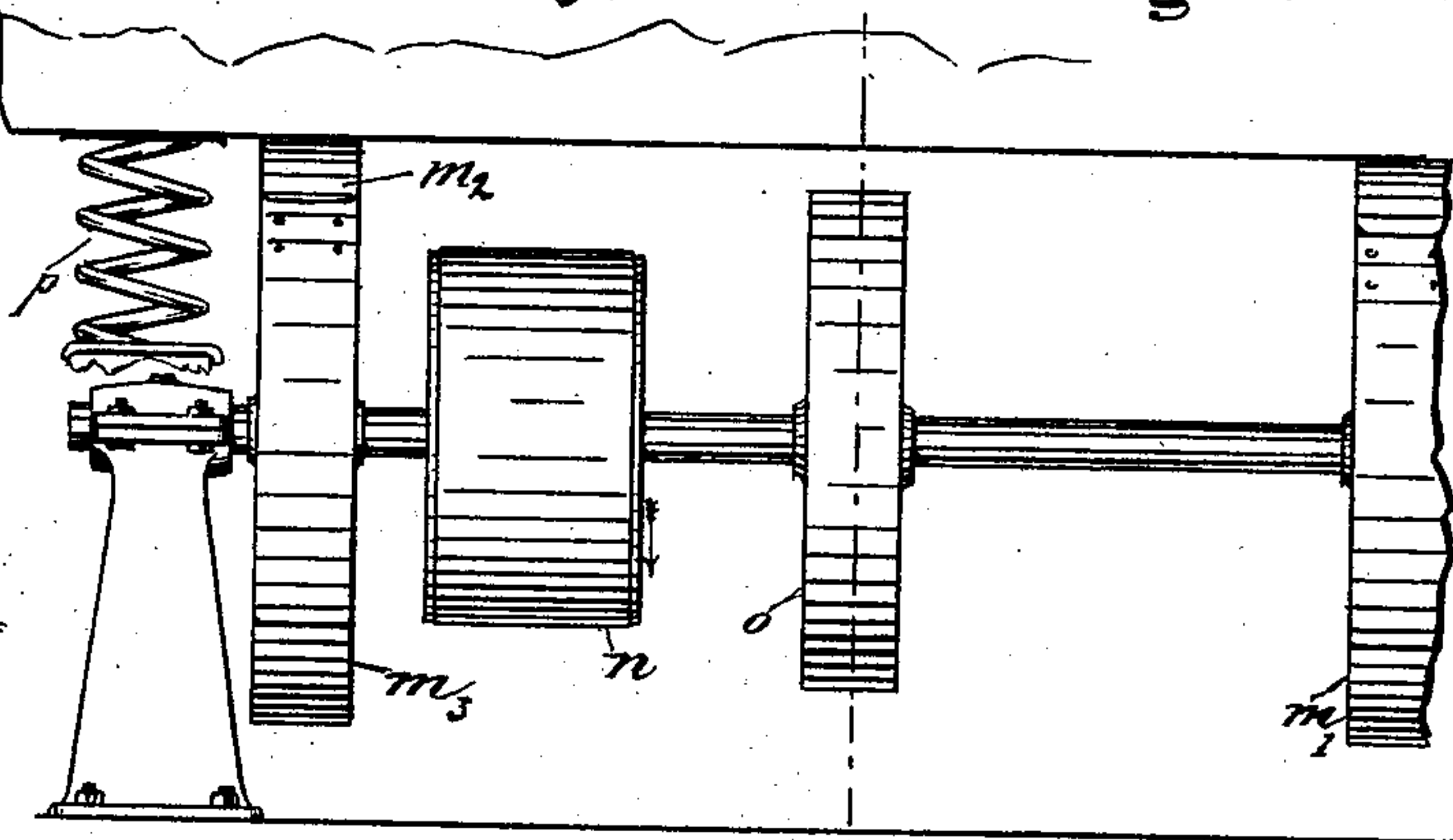
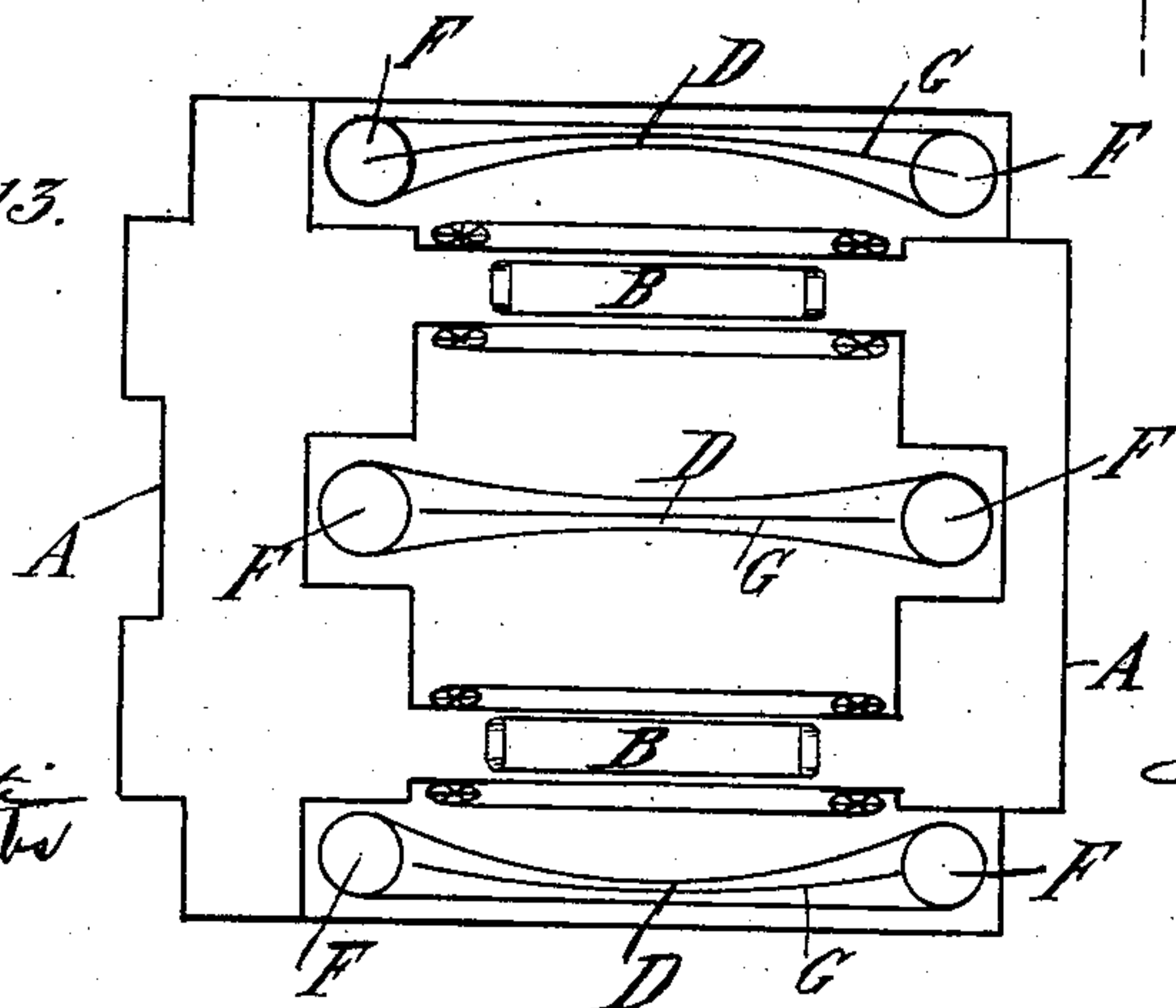


Fig. 13.



WITNESSES

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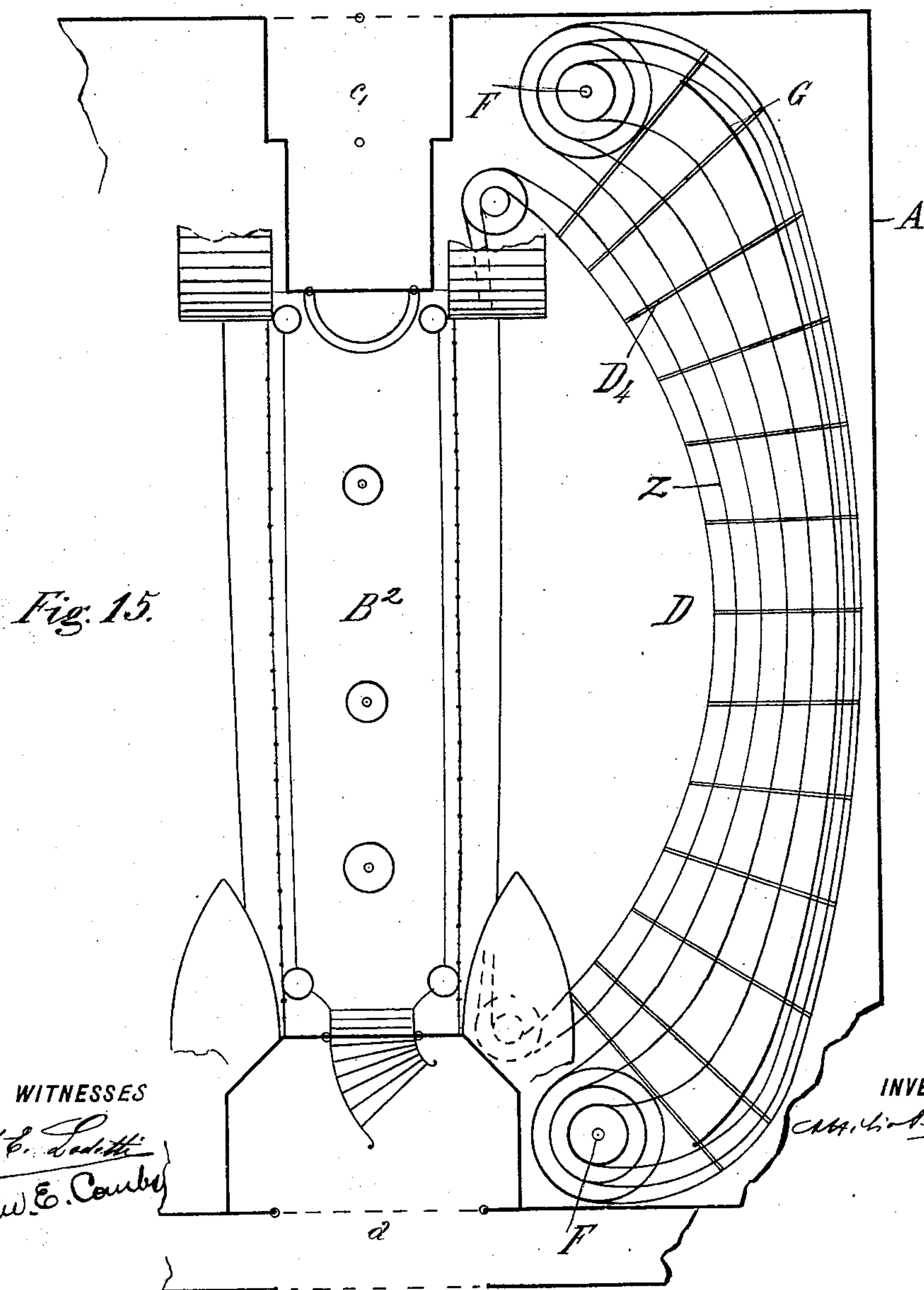
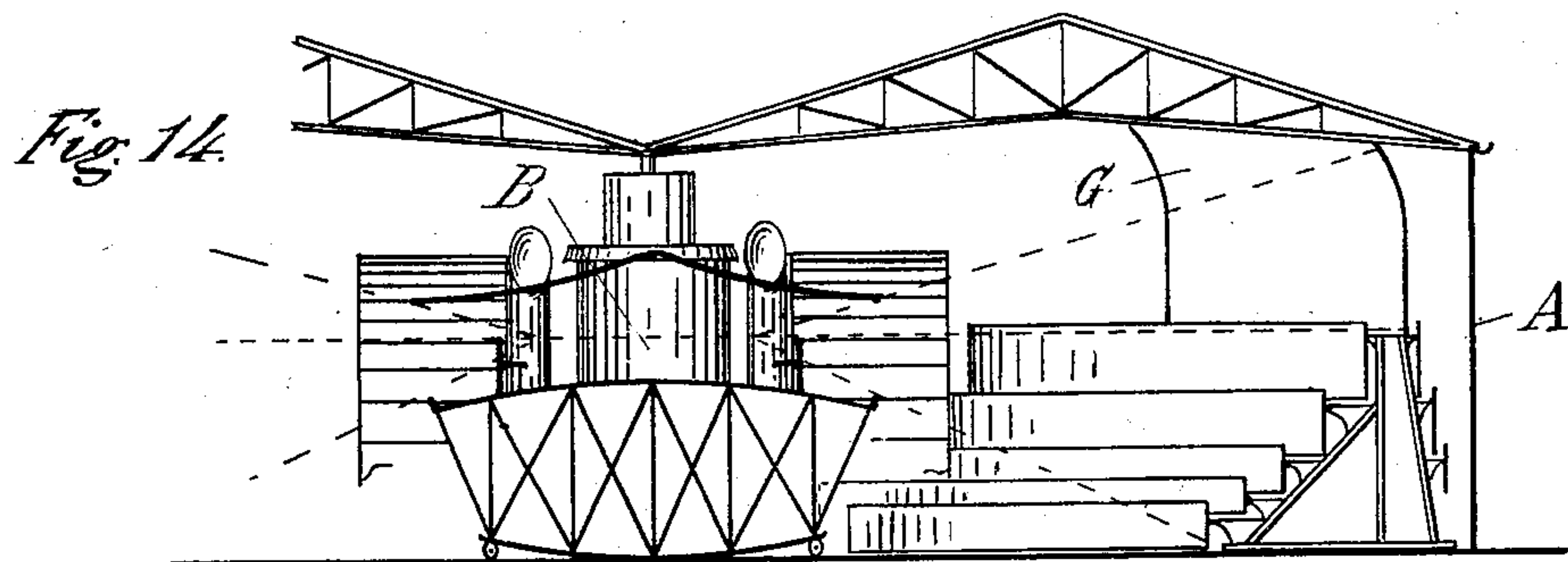
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ILLUSION APPARATUS.

(Application filed June 11, 1897.)

(No Model.)

5 Sheets—Sheet 5.



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# UNITED STATES PATENT OFFICE.

ATTILIO PUSTERLA, OF NEW YORK, N. Y.

## ILLUSION APPARATUS.

SPECIFICATION forming part of Letters Patent No. 608,413, dated August 2, 1898.

Application filed June 11, 1897. Serial No. 640,395. (No model.)

*To all whom it may concern:*

Be it known that I, ATTILIO PUSTERLA, a subject of the King of Italy, and a resident of New York city, in the county and State of New York, have invented certain new and useful Improvements in Illusion Apparatus, of which the following is a full, clear, and exact specification.

My invention relates to illusion apparatus, particularly of that kind in which the spectators are made to receive the impression of traveling by land or water.

The object of my invention is to provide improvements in devices of the above-indicated class whereby the effect will be rendered more natural and the illusion more complete than hitherto. For this purpose I construct the apparatus with certain novel features, as will appear from the description following hereinafter and particularly from the appended claims.

Reference is to be had to the accompanying drawings, in which—

Figure 1 is a plan of an improved apparatus constructed according to my invention to produce the illusion of traveling by railway. Fig. 2 is a cross-sectional elevation of the same on line 2 2 of Fig. 1. Fig. 3 is a longitudinal sectional elevation of one end of the apparatus. Figs. 4 and 4<sup>a</sup> are partial cross-sectional elevations taken, respectively, on lines 2 4 and 4<sup>a</sup> 4<sup>a</sup> of Fig. 1. Figs. 5 and 6 are partial sectional elevations on lines 5 5 and 6 2, respectively, of Fig. 1. Figs. 7 and 8 are cross-sectional details of the construction shown in Fig. 4. Fig. 9 is a similar detail of the construction shown in Fig. 6. Fig. 10 is a detail of the mechanism for moving a screen or curtain. Figs. 11 and 12 are respectively a front view and a side view of a mechanism for imparting a bumping or jolting motion to the cars. Fig. 13 is a plan of another form of the apparatus, and Figs. 14 and 15 are a cross-section and a plan of an apparatus serving to produce the illusion of travel by sea.

Similar letters refer to similar parts throughout the several views.

The apparatus is inclosed within the structure A, the entrance and waiting-room *d* imitating a railroad-station. Spectators from

the waiting-room are admitted to the train B B' by the ground-glass doors *b* and iron fence *c*.

The train B B', real or imitated, is stationary on a track between the diaphragms or partitions C C', representing other trains or the station-walls. The diaphragms C C' are provided with a longitudinal opening in front of the car's rows of windows, and the movable screens or curtains E E', carried by hooks *z*, secured to cables *y*, Fig. 10, running over the inclined wheels *d d' d<sup>2</sup> d<sup>3</sup>*, intercept or admit the view of the diverging panoramic sections D D', which are moved by the vertical shafts and horizontal grooved pulleys F F' F<sup>2</sup> F<sup>3</sup> at the two extremities and between them supported and guided by the little pulleys and hangers, Figs. 7, 8, and 9, attached to the stands D<sup>3</sup> D<sup>4</sup>.

Each of the sections D D' consists of a plurality of strips Z projecting to different heights to form the stepwise arrangement illustrated by Figs. 2 to 6. The strips pass over disks *x* of different diameters at the ends of the apparatus, said disks being secured upon shafts F F' F<sup>2</sup> F<sup>3</sup>, carrying pulleys R S for rotating them. The stands or posts D<sup>3</sup> D<sup>4</sup> are located between the disks *x*, and the stands D<sup>4</sup> carry spaced pulleys *u*, arranged in pairs and receiving between them hooks *z'*, secured to cables *y'*, which run on said pulleys. These hooks carry the strips forming the section D of the panoramic scenery, it being understood from Figs. 2, 4, and 4<sup>a</sup> that these strips do not extend to the upper hooks, but are connected thereto by strings *v*, invisible to the spectators. The stands D<sup>3</sup> carry vertical pulleys *u'* and horizontal pulleys *u<sup>2</sup>*, Fig. 9, receiving between them the cables *y<sup>2</sup>*, to which the strips Z of the scenery are secured by means of hooks *z<sup>2</sup>*. As will be apparent from Figs. 1 and 15, the distance between the strips Z gradually increases from the center toward the disks *x*—that is, said strips diverge toward the ends of the apparatus. By this construction I obtain a better effect of objects receding into the distance.

The construction shown in Figs. 4, 4<sup>a</sup>, 7, and 8 and that represented in Figs. 5, 6, and 9 are interchangeable.



That part of the panoramic views which reproduces the sky G is shown stationary in the drawings.

5 Near to the spectators is the scenery II II', which represents fences, bushes, field-gates, &c., at about the natural size and moves at a greater speed than the other sections.

10 Outside of the cars and attached to them are the blinds  $z z'$ , one above and the other below the windows and extending to the full length of the cars. They are folded up closely to the car-body and are opened and stretched out when the passengers are at their places to concentrate the attention upon the moving  
15 panorama.

From the outside or from a motor I in the building the motive power can be obtained to drive by the shaft J and pulleys  $c f g h i j k l$  all the mechanism F F' T U S R  $d d^2 n$ ,  
20 which actuates all the panoramic views and the other parts of the illusion apparatus.

The car-body B is a little raised from the trucks and is supported by the springs  $p$ , Fig. 12. Between the trucks is placed a counter-shaft, which receives motion from the main  
25 shaft J by the pulleys  $i$  and  $n$  and carries an unbalanced fly-wheel  $o$ , which when rapidly rotating shakes the bearings and everything connected to it. By the friction-pulleys  $m$   
30  $m'$ , provided with springs  $m^2 m^3$  at the periphery and running against the car-body B, the vibrations are transmitted to it and the noise produced.

When the spectators are all inside of the  
35 coaches and the departure-signal is given, the blind  $z$  is let down and the other,  $z'$ , is raised. Both assume such a position as to include in the lines of view only the movable screens E E' of the diaphragms C C'. Everything is  
40 then put in motion, very slow at first, but gradually up to the speed more convenient to give the wanted illusion. The movable screens E E' having opened longitudinally the view to the observing eyes and the cars  
45 beginning to vibrate, the passengers have the impression of having left the station and running at full speed in the open country. Toward the arrival the speed is slowed down,  
50 the curtains or screens E E' return from the opposite way to intercept the view, everything comes to a standstill, and the impression is given of having entered another station. The blinds  $z z'$  are folded up and the passengers alight from the back.

55 In Fig. 13 I have illustrated an arrangement which is somewhat a duplication of that shown in Fig. 1, except that a single central section of moving scenery D is made to serve for both cars B, so that there are three moving sections of scenery. The construction and operation of said sections and the other moving parts of the apparatus are exactly the same as hereinbefore described.

The construction represented in Figs. 14

and 15 differs from those mentioned above 65 only by the substitution of a steamer B<sup>2</sup> for the cars B B'. The entrance is at  $a$  and the exit at  $c'$ , or vice versa.

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

1. In an illusion apparatus, moving scenery consisting of a plurality of movable sections or strips projecting one above the other and extending in the same direction, said strips converging toward the center of the apparatus, substantially as described. 75

2. An illusion apparatus, comprising a suitable stand for the spectators, moving scenery consisting of a plurality of sections or strips projecting one above the other and arranged  
80 at different distances from said stand, said strips converging at their central portions, and means for moving said strips at different rates of speed, substantially as described.

3. An illusion apparatus, comprising scenery sections or strips whose adjacent runs are adapted to travel in the same direction, and supports for keeping the central portions of adjacent runs of different strips closer together than the outer portions of the same  
90 strips, substantially as described.

4. In an illusion apparatus, moving scenery consisting of a plurality of sections or strips, supporting pulleys or disks of different diameters over which pass the said strips, intermediate supports for the strips said supports having their supporting-points for adjacent runs of different strips closer together than the peripheries of the supporting-disks engaging such strips, causing the adjacent  
100 runs of different strips to diverge from the intermediate supports toward said disks, and means for imparting a traveling motion to the strips, substantially as described.

5. The combination of the scenery sections or strips, concentric pulleys or disks of different diameters over which pass said strips, intermediate supports having individual supporting devices for the central portions of the said strips, and means for moving the  
110 strips, substantially as described.

6. The combination of the scenery sections or strips, concentric pulleys or disks of different diameters over which pass said strips, intermediate supports having a double set of  
115 individual supporting devices, one set for each run of the said strips, and means for moving the strips, substantially as described.

7. In an illusion apparatus, a spectators' stand, a shaft located adjacent thereto and a series of springs arranged to rotate with said shaft and to engage the stand, substantially as described. 120

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