

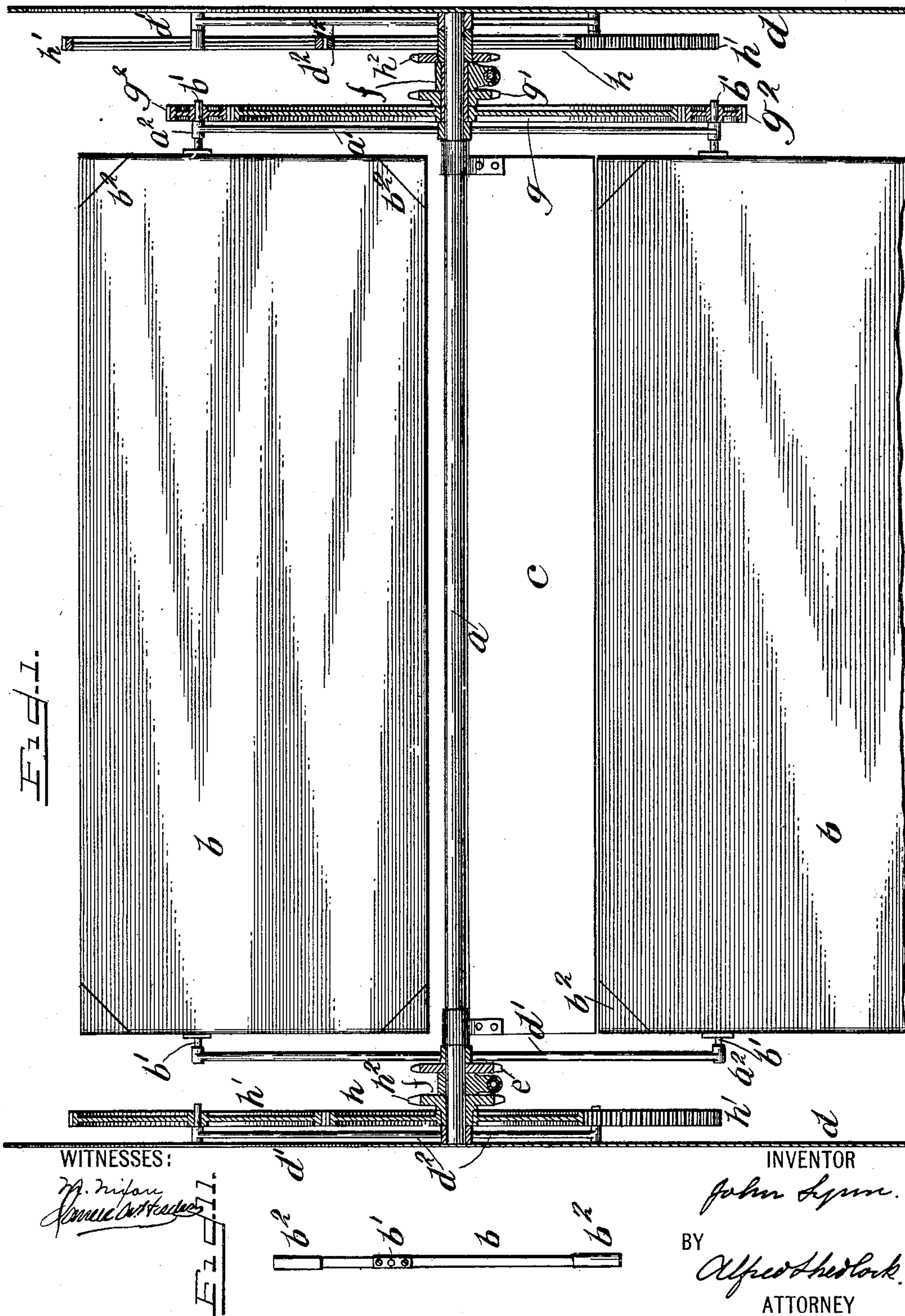
No. 712,694.

Patented Nov. 4, 1902.

J. LYNN.  
ADVERTISING APPARATUS.  
(Application filed June 12, 1902.)

(No Model.)

4 Sheets—Sheet 1.



No. 712,694.

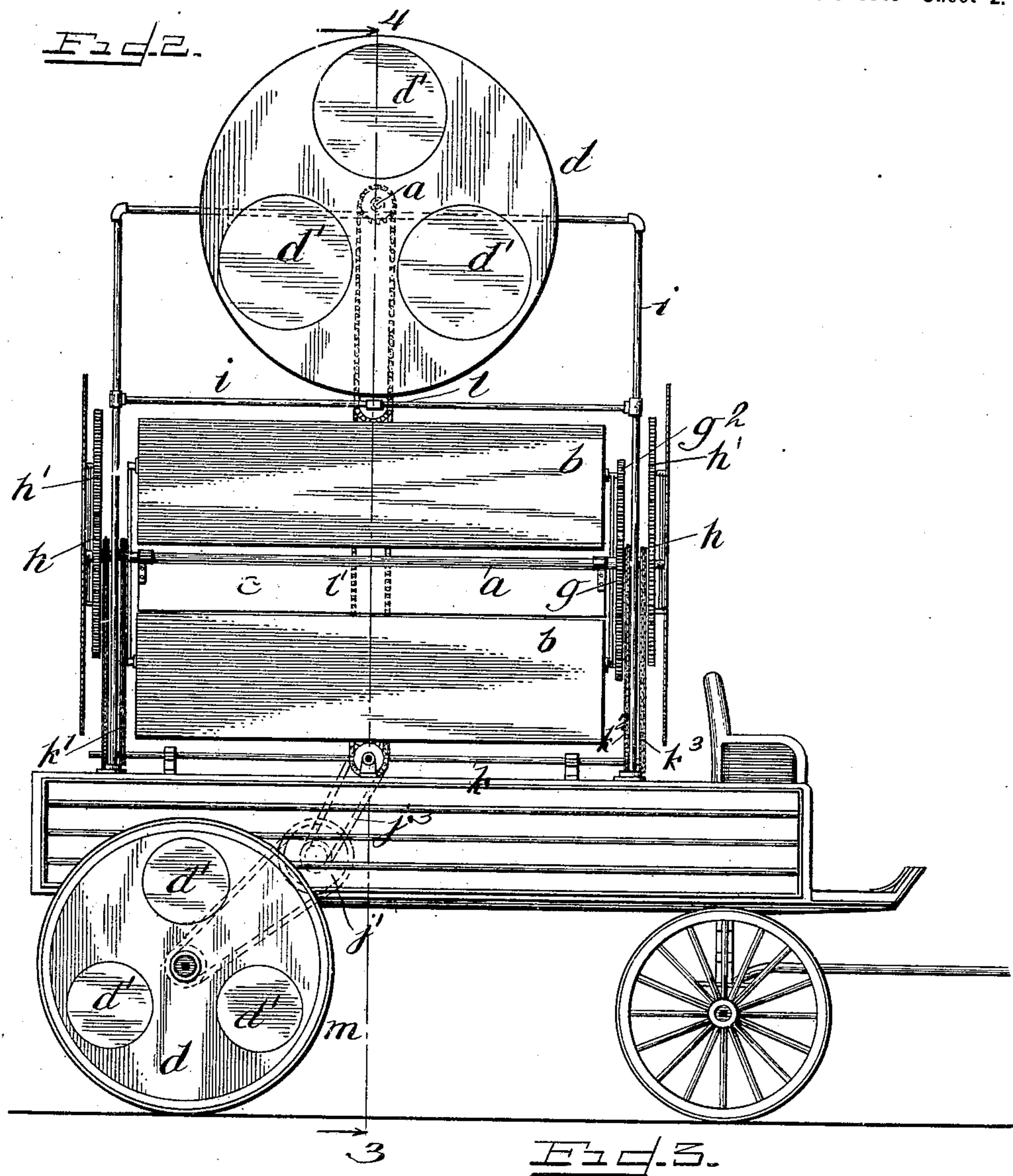
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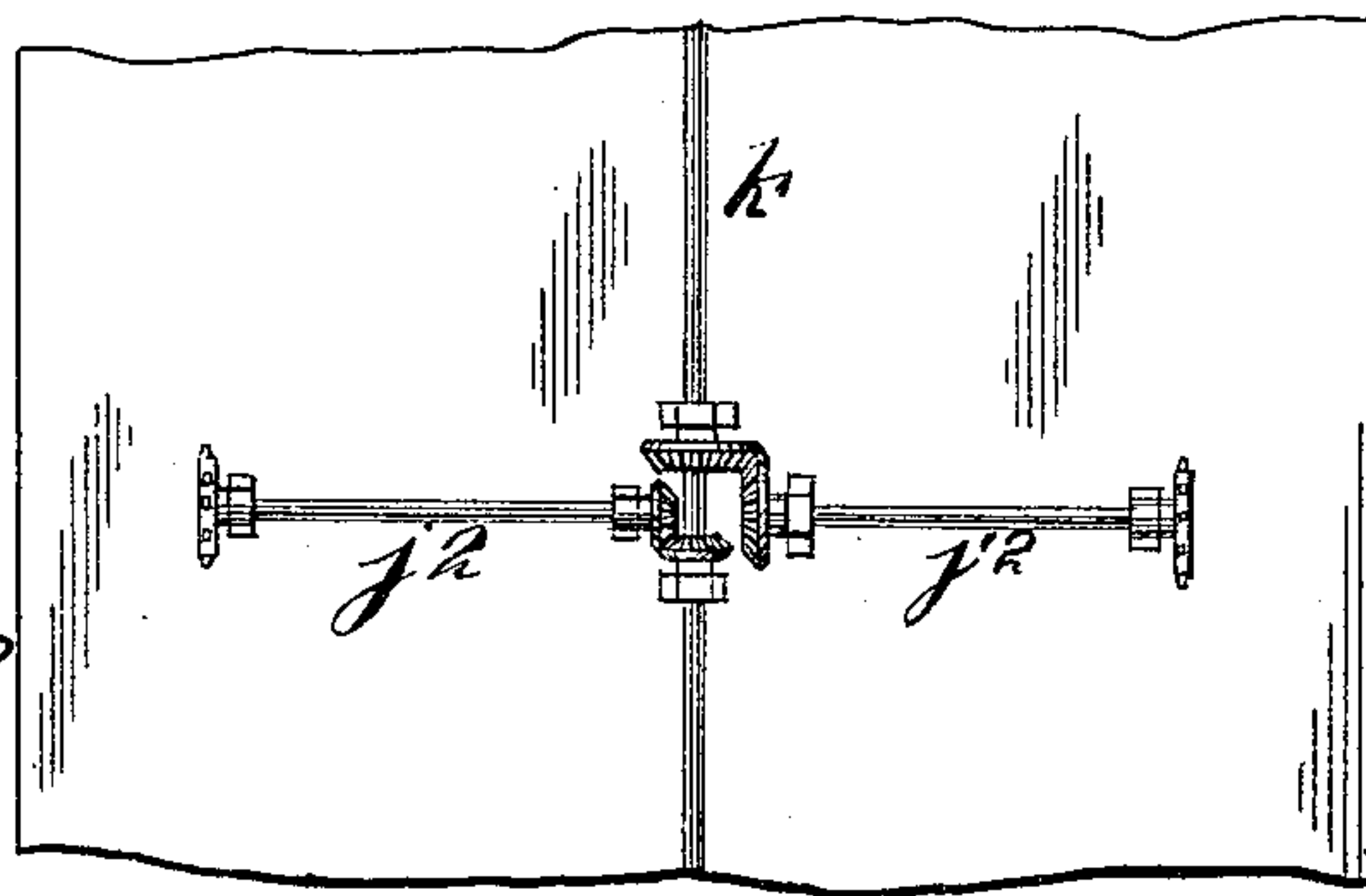
(No Model.)

4 Sheets—Sheet 2.



WITNESSES:

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*James A. H. Wilson*



INVENTOR

*John Lynn*

BY

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**No. 712,694.**

**Patented Nov. 4, 1902.**

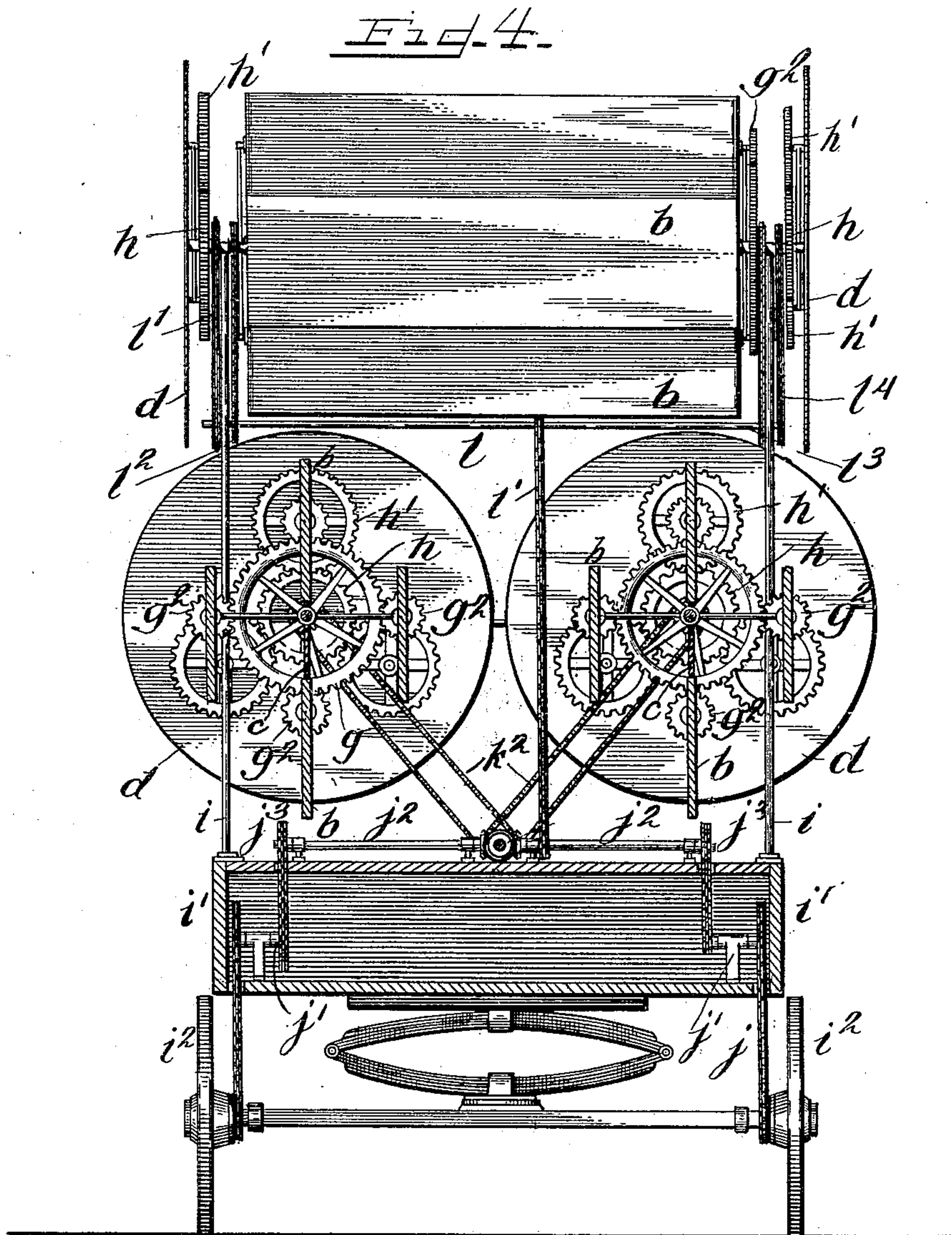
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## ADVERTISING APPARATUS.

(Application filed June 12, 1902.)

(No Model.)

4 Sheets—Sheet 3.



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My friend  
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Patented Nov. 4, 1902.

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(No Model.)

4 Sheets—Sheet 4.

Fig. 6.

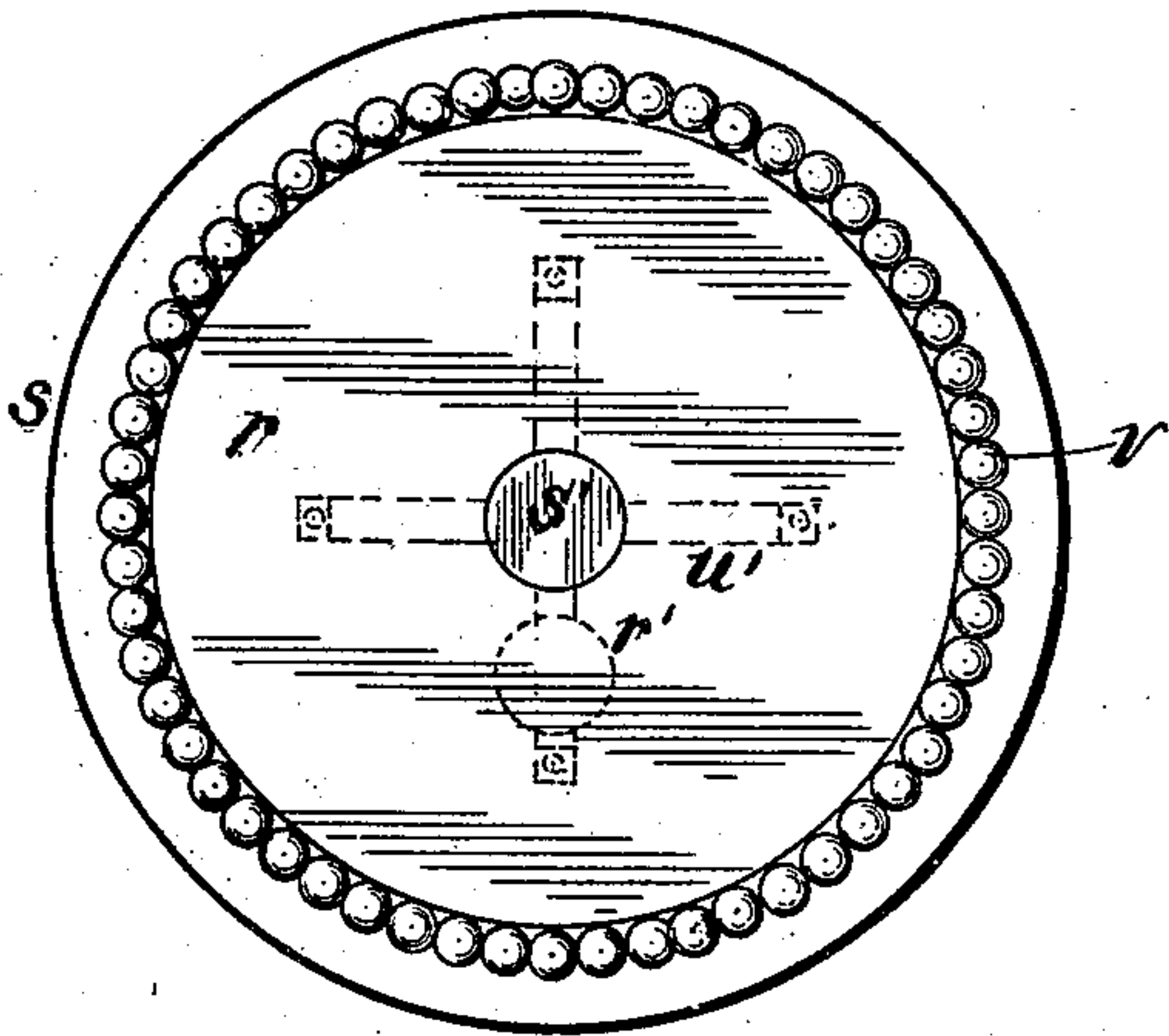


Fig. 7.

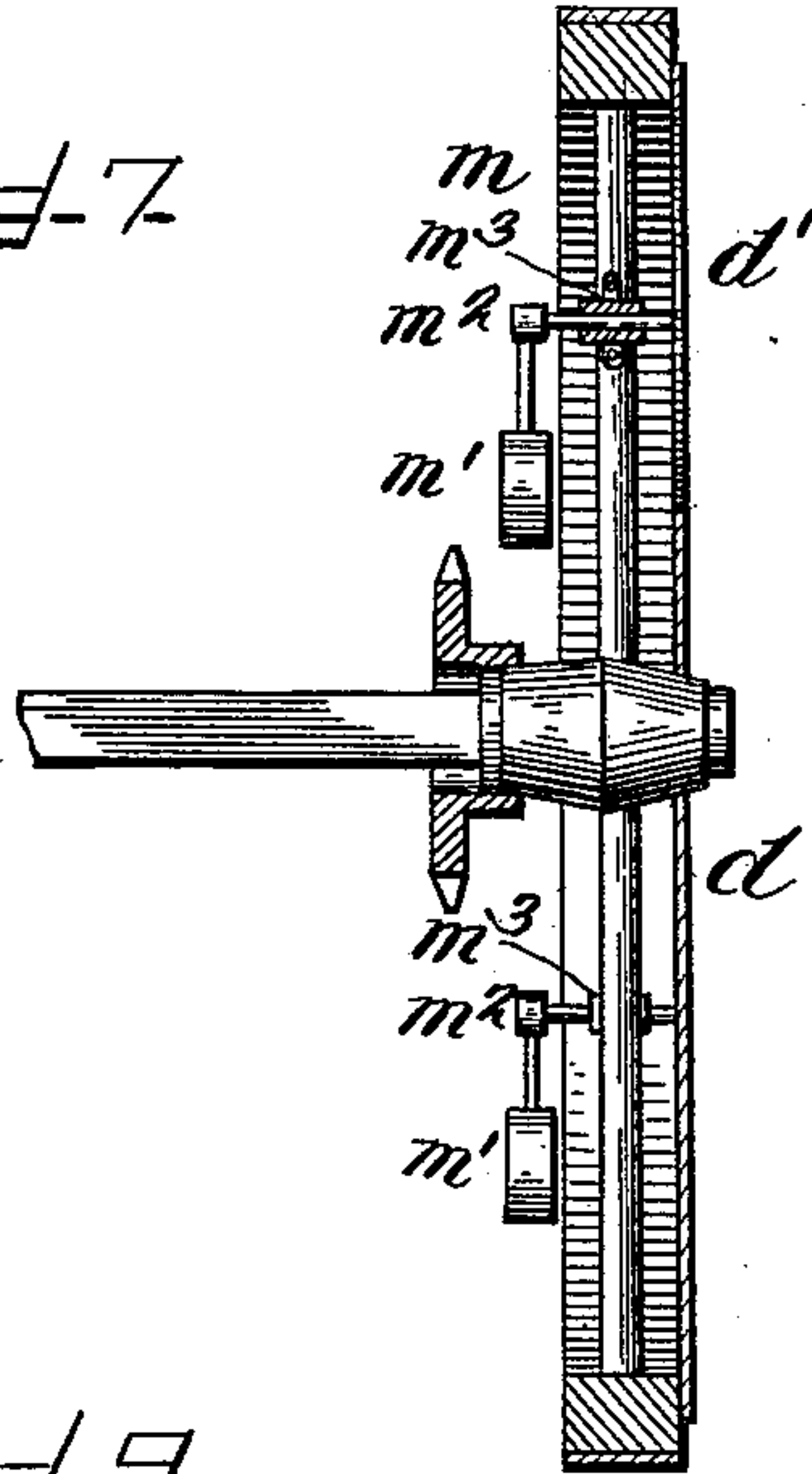


Fig. 8.

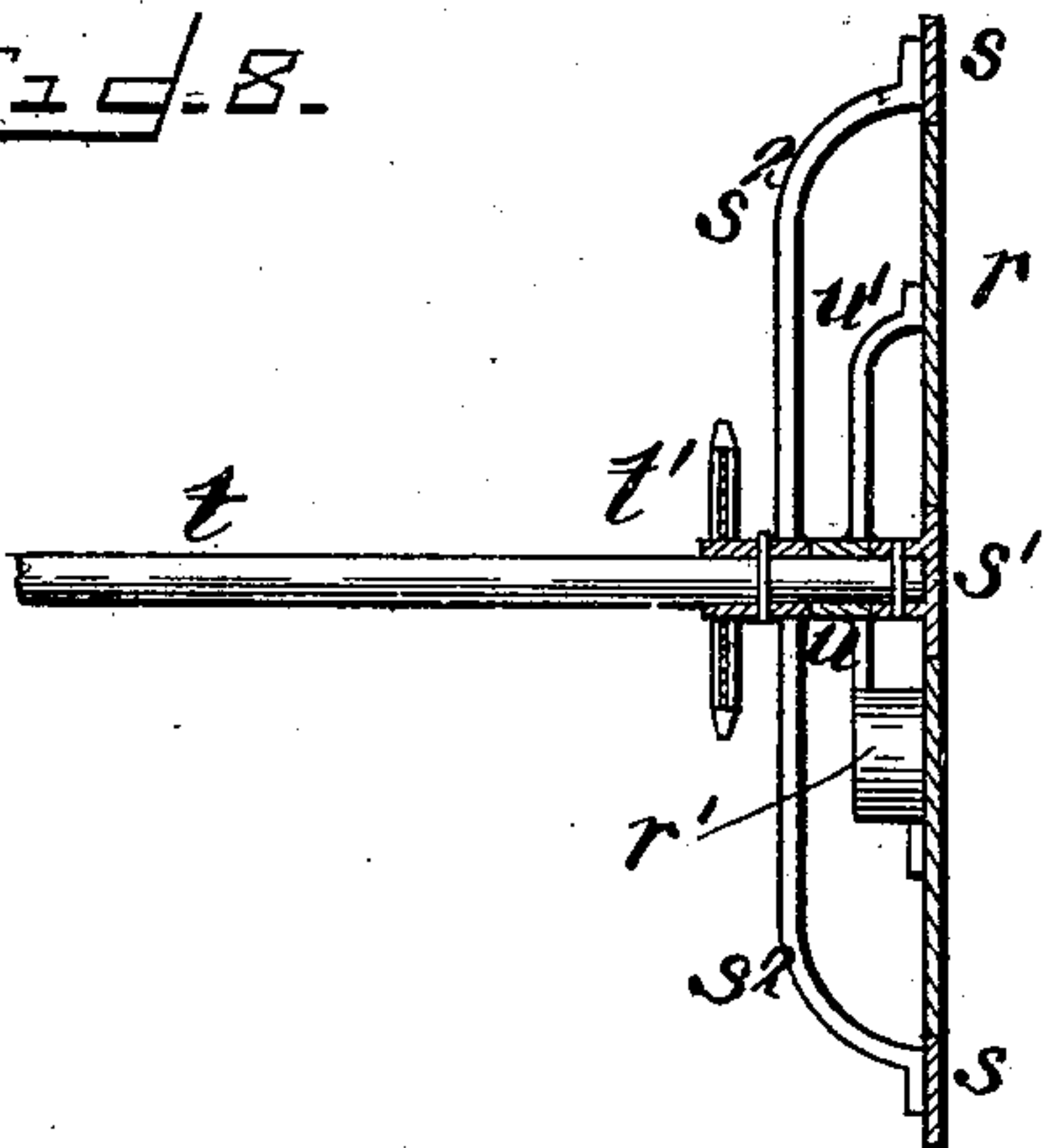


Fig. 9.

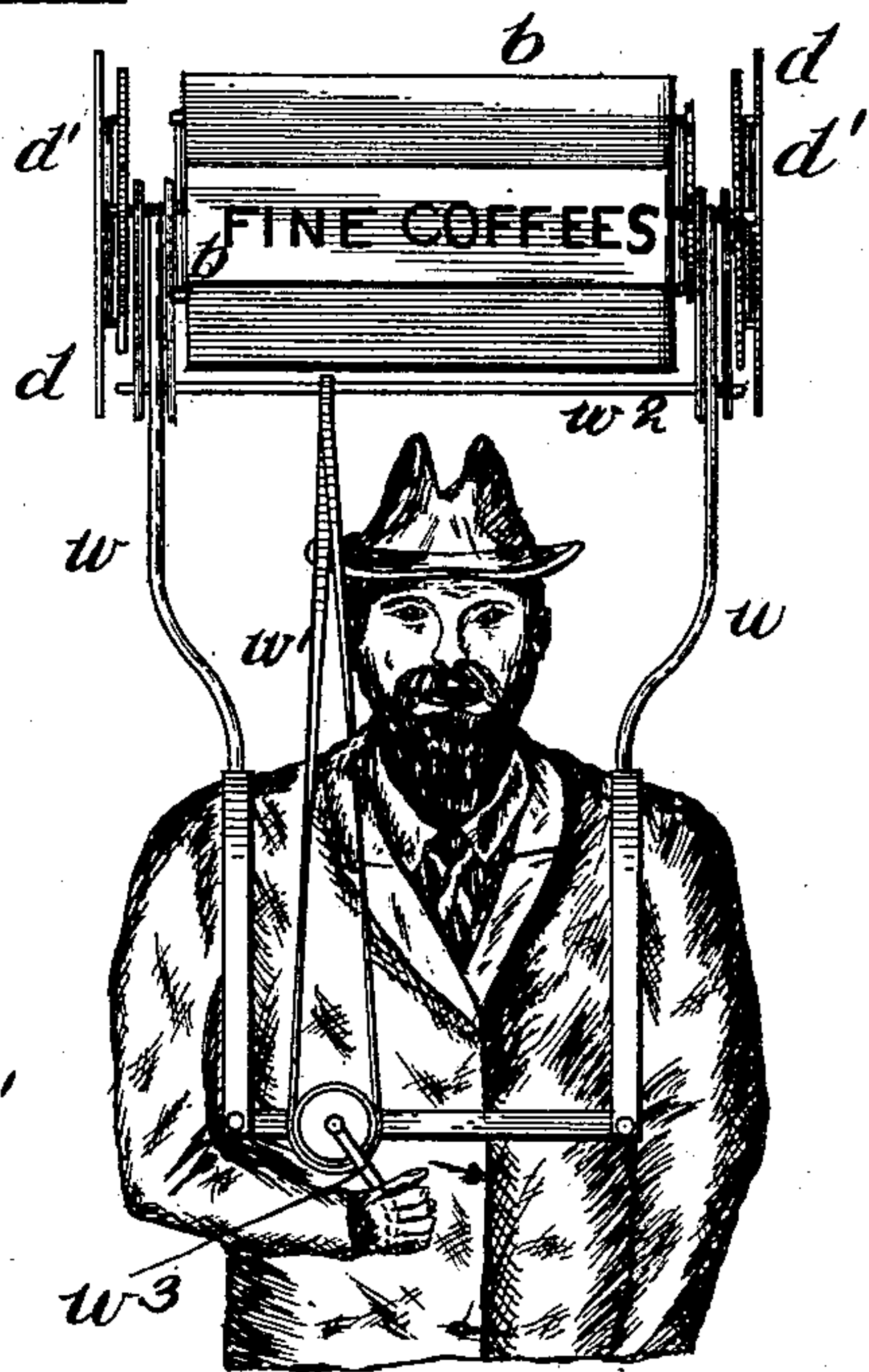
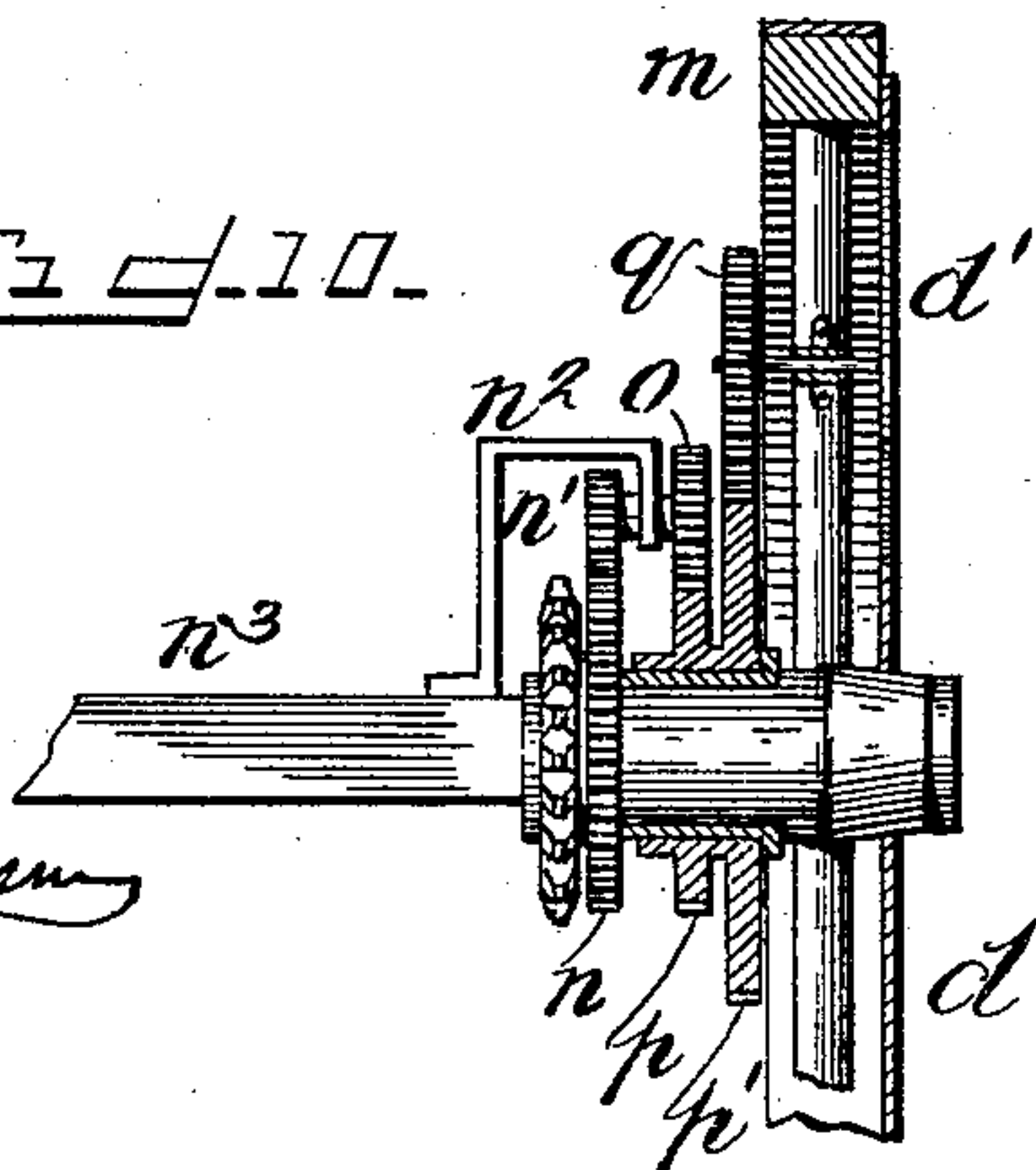


Fig. 10.



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# UNITED STATES PATENT OFFICE.

JOHN LYNN, OF NEW YORK, N. Y.

## ADVERTISING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 712,694, dated November 4, 1902.

Application filed June 12, 1902. Serial No. 111,235. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN LYNN, a citizen of the United States, and a resident of New York, county and State of New York, have invented Improvements in Advertising Apparatus, of which the following is a specification.

The aim of this invention is the production of an advertising apparatus provided with moving display-surfaces that will be unobstructed and at all times exposed and be caused to maintain normal positions as they change their locations. To this end I provide a main shaft adapted from any suitable source of power to be continuously rotated and mount between arms carried thereby a series of sign or display boards so controlled by mechanism, preferably of a positive character, that they are prevented from rocking as they are carried around by said arms. To produce the best and most efficient results from a practical advertising standpoint, it is desirable in an apparatus of this character to employ a limited number of such display-boards, so that the least interference will be had by the obstruction of the vision, the one by the other, as they move around the main shaft into positions to expose the devices and advertising matter on their two sides. To prevent the inner faces of the boards—that is, their surfaces which face the main shaft—from being seen through gaps or openings which occur between the edges of the display-boards during some portions of their travel around the main shaft, it is proposed to employ an eclipsing-plate that will be carried by and depend from the main shaft in such manner as to be in the path or range of vision through such gaps or openings. This effectually obliterates the designs or matter on the inner sides of the boards on the opposite sides of the apparatus which would tend to confusion in reading the matter on the active sides of the boards.

The invention also includes circular advertising-plates, caused to rotate around a common axis and provided and controlled by means preferably of a positive character and similar to the means for controlling the movements of the sign or display boards. Such circular plates are well adapted to be carried by disks secured to the ends of the main shaft and outside of the frame by which said shaft and other parts of the apparatus are

supported, so that all of them will at all times be fully and without obstruction exposed to view.

These features with others and details of construction will now be fully described, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a longitudinal view of the main features, partly in section, showing pivoted sign-boards or display-surfaces, end disks, and circular sign or display devices, and connecting-gear. Fig. 2 is a side elevation of a wagon carrying three apparatus as shown in Fig. 1, two longitudinally and one transversely arranged thereon; also, illustrates one of the wagon-wheels provided with circular sign devices. Fig. 3 is a plan view of part of driving-gear. Fig. 4 is a transverse view of Fig. 2, showing the lower longitudinal apparatuses in section on line 4 4, Fig. 2; Fig. 5, a transverse section of one of the apparatuses, showing inner face of end disk and circular sign devices, said devices being shown provided with pendent weights to hold them vertically; also, shows more fully a center board pivotally connected to the main shaft to eclipse the inner sides of sign-boards. Fig. 6 illustrates an end or side disk with one circular sign device held in vertical position by a counterweight. Fig. 7 illustrates a running or carrying wheel of a vehicle in cross-section provided with circular sign devices. Fig. 8 is a vertical section of Fig. 6. Fig. 9 illustrates an advertising apparatus made according to my invention for use as a shoulder advertising-sign, operated manually by the carrier. Fig. 10 represents a part sectional view of a wheel provided with circular sign devices and gearing for maintaining said sign devices in vertical positions as said wheel revolves; and Fig. 11 is an end elevation of one of the longitudinal sign or display boards, showing its trunnion or journal by which it is held and carried by one of the arms of the main shaft.

In its simplest form my invention is illustrated in Fig. 5, in which the supporting-frame and driving mechanism are omitted. The main shaft *a* carries two sets of radial arms *a'* *a'*, equidistantly spaced, provided at the ends with bearings *a<sup>2</sup>* *a<sup>2</sup>*, which support



by their journals the sign or display boards  $b\ b$ . The two sets of arms and the manner in which the boards  $b\ b$  are suspended between them are clearly shown in the adaptation of my invention illustrated in Fig. 1. The journals  $b'\ b'$  of said sign or display boards extend from the ends thereof intermediate the top and bottom edges and nearest to the top edge, so that said boards will hang vertically in all positions they assume as they are carried around by the arms  $a'\ a'$  of the shaft  $a$ . In the operation of the apparatus it is contemplated to impart a continuous rotary motion to the shaft  $a$ . The sign or display boards  $b\ b$  are thus continually changing their positions, and they are so arranged and limited as to number that their exposed surfaces provided with the advertising matter at the two sides of the apparatus will be fully seen. As it is proposed to leave all parts of the apparatus exposed, so as to be attractive and to produce good effects, it is desirable to prevent the surfaces of the boards  $b\ b$  which face toward the main shaft  $a$  being seen. An eclipsing board or plate  $c$  is attached to and depends from the shaft  $a$ , so as to close the space or opening at the central part of the apparatus, through which space parts of the inner surfaces of said boards would be seen by gaps occurring between the edges of the boards on the opposite side of the apparatus during certain intervals of their revolution around the main shaft. To utilize all sides of the apparatus for effective advertising purposes, a disk  $d$  is secured to each end of the shaft  $a$  and rotated therewith, and in circular openings in these disks are located circular sign or display plates  $d'\ d'$ , which are arranged to rotate on their central bearings carried by the arms  $d^2\ d^2$  relatively to the disks, but are held from actual rotation, so that the advertising matters on them will constantly maintain correct positions. This is accomplished in the simple embodiment of my invention shown in Fig. 5 by the counterweights  $d^3\ d^3$ . This adaptation of my invention may be employed when the apparatus is fixedly located and not subjected to drafts or motion that would disturb or tend to rock the advertising boards and plates on their axes. When the apparatus is to be used as a portable device, then it is proposed to positively control the advertising boards and plates as they are carried around the main shaft. Suitable means for such purpose will now be described.

The system of gearing devised by me for holding positively the display boards and plates in vertical positions is clearly shown in Figs. 1, 2, and 4, more particularly in Fig. 1, which is a part sectional view of a complete apparatus, three such apparatuses being shown in Figs. 2 and 4, the corresponding parts of which are similarly lettered. To the main shaft  $a$  are rigidly secured the two sets of arms  $a'\ a'$ , which carry between them

the sign or display boards  $b\ b$  and the end disks  $d\ d$ , and the arms  $d^2\ d^2$ , which carry the sign or display plates  $d'\ d'$ . The number of arms  $a'$  in each of the sets of arms are shown limited to four, as I find that with this number of sign or display boards the best results and effects are attained, and the number of circular sign or display plates  $d'$  carried around with the disks  $d\ d$  is three; but these display-boards and circular plates may be changed, according to the required sizes of display-surfaces and so as to be within the limit of the number of boards that can be used to give the desired effects intended. To provide a ready means for changing the display matter on the boards  $b\ b$ , they are provided with corner pieces or pockets  $b^2\ b^2$ , as shown in Figs. 1 and 11, by which the sheets, printed or otherwise, provided with the advertisements may be held on said boards by their corners being caused to enter said pockets. The main shaft  $a$  may be rotated from any suitable source of power, a sprocket-wheel  $e$ , with which a traveling chain may engage, being shown secured to the shaft, said shaft being held and rotated in bearings  $f\ f$ , forming part of the frame of the apparatus. Mounted on the shaft  $a$ , but free to rotate thereon, is a gear-wheel  $g$ , having secured to it a sprocket-wheel  $g'$ , and this wheel  $g$  meshes into wheels  $g^2\ g^2$ , secured to the journals  $b'\ b'$  of the boards  $b\ b$ . The ratio of these gears in what may be called a "sun-and-planet system" is such and the speed at which the gear  $g$  is driven by its sprocket will bear such relation to the speed of rotation of the main shaft  $a$  that said boards will be always held in vertical positions in all parts of their revolutions around the shaft  $a$ . Similarly arranged and operated system of gearing are here employed for preventing the circular plates  $d'\ d'$  from actual rotation as they revolve with the disks  $d\ d$  around the axis of the main shaft, these gears comprising wheels  $h\ h$ , also carried by but running freely on the shaft  $a$ , which mesh into gears  $h'\ h'$ , attached to the shafts of the circular plates  $d'\ d'$ , which are free to rotate in the bearings on the ends of the arms  $d^2\ d^2$ , sprocket-wheels  $h^2\ h^2$  being secured to the wheels  $h\ h$  for imparting motion thereto from traveling chains.

This advertising apparatus is adapted for portable purposes and may be arranged in any manner and in any number desired. In Figs. 2 and 4 three are shown applied to a wagon, two arranged longitudinally thereon and one above them athwart the wagon. Each of their main shafts  $a$  is journaled in bearings of the frame  $i$ , which is so formed and made as light as possible as to leave the fields of vision of the display-boards  $b$  unobstructed and attached to the body  $i'$  of the wagon in a suitable manner. The motion of one of the wheels  $i^2$ , or two, if desired and as shown in the drawings, during transition of the wagon is utilized to impart rotation to the main shafts of the apparatus. A suit-



able plan may consist of chains  $j j$ , running over sprockets on the hubs of the wheels to counter-shafts  $j' j'$ , which impart motion to the transverse shafts  $j^2 j^2$  through the medium of sprockets and chains  $j^3 j^3$ . These shafts by miter-gears impart motion to the shaft  $k$ , from which chains  $k' k'$  convey motion to the sprockets  $e e$  of the main shafts of the longitudinally-arranged apparatuses, chains  $k^2 k^2$  to the sprockets  $g' g'$  of the controlling-gear of the display-boards  $b b$ , and chains  $k^3 k^3$  to the sprockets of the controlling-gear  $h^2 h^2$  of the circular display-plates. All of these chains are driven by suitably-arranged and properly-proportioned sprocket-wheels secured to the shaft  $k$ , it being understood that the sizes of the various driving parts and of the gears in the sun-and-planet systems may be varied as desired to produce the results of maintaining the sign or display devices in correct positions.

The means shown for imparting motion to the various parts of the apparatus located transversely on the wagon and above the other apparatus comprises a shaft  $l$ , having suitable bearings in the frame  $i$  and driven from one of the transverse shafts  $j^2$  by the chain  $l'$ , which runs over a sprocket-wheel on said shaft. From other sprocket-wheels on this shaft  $l$  a chain  $l^2$  communicates motion to the sprocket  $e$  of the main shaft of the apparatus. A chain  $l^3$  connects with sprocket  $g'$  of the controlling devices of the boards  $b b$ , and a chain  $l^4$  connects with sprockets  $h^2 h^2$  of the controlling devices of the circular plates  $d' d'$ .

The rotating disk  $d$ , with the circular sign or display plates  $d' d'$ , is adapted to be applied to any part of an apparatus or article that is caused to be rotated, and in Fig. 2 one of the wheels  $m$  of the wagon is shown provided with such display device. The circular plates  $d' d'$ , carried by the wheel  $m$ , may be prevented from actual rotation by means of counterweights  $m' m'$ , as shown at Fig. 7, which is a vertical section of the wheel, on the hub of which is secured a sprocket-wheel for operating the driving-chain  $j$  of apparatuses carried by the wagon. These counterweights  $m' m'$  are on pendent arms connected to the short shafts  $m^2 m^2$  of the circular plates  $d' d'$ , which shafts are fitted to rotate in bearings  $m^3 m^3$ , attached to the spokes of the wheel  $m$ , said weights remaining always below the axes of the circular plates  $d' d'$ . As the wheel  $m$  rotates the circular plates  $d' d'$  will thereby be restrained from rotating as they travel around with the wheel. If thought advisable, the circular plates  $d' d'$  of the revolving disk of this part of my invention when applied to the wheels of a vehicle may be positively controlled, so that the reading or other advertising matter on them will always be in correct position, and a suitable mechanism therefor is illustrated at Fig. 10. This mechanism consists of a gear-wheel  $n$ , secured to the hub of wheel and which meshes

into a pinion  $n'$  on a short counter-shaft carried in a bearing of the bracket-piece  $n^2$ , secured to the axle  $n^3$ , on which the wheel  $m$  revolves, a gear or pinion  $o$ , secured to the counter-shaft and rotating with the pinion  $n'$ , and intermediate gears  $p$  and  $p'$ , connected together and fitted to rotate on the hub of the gear-wheel  $n$ . The gear-wheel  $p$  meshes into the pinion  $o$  and the gear-wheel  $p'$  of the circular plates  $d' d'$ . Only one of the circular plates is here shown, it being understood that any desired number may be located in the disk  $d$ , carried by the wheel  $m$ , each having a controlling-gear arranged to mesh into the gear-wheel  $p'$ .

At Figs. 6 and 8 are shown a front view and a vertical section, respectively, of another form of circular display devices in which the advertisement is carried on an annular plate  $r$ , surrounded by a ring  $s$  and having a disk  $s'$  at its center, both of which are caused to rotate while the annular display-plate  $r$  is held stationary. This is accomplished by the ring  $s$  being carried by arms  $s^2$ , extending from a hub secured to a shaft  $t$ , which may be rotated by a chain arranged to run over a sprocket-wheel  $t'$ , the disk  $s'$  being secured to the end of the shaft  $t$ . Between the hub of the arms  $s^2$  and the disk  $s'$  is fitted freely a hub  $u$ , from which extends arms  $u'$ , to the ends of which the annular plate  $r$  is secured, and to hold said plate stationary and allow the shaft  $t$  to rotate in the hub  $u$  a weight  $r'$  is attached to one of the arms  $u'$ , which is connected to the lower part of and at the back of the annular plate  $r$ . The ring  $s$  may be decorated in any desired manner—pleasing and illusive effects which may be produced by marking or placing a series of devices—as, for instance, representations of balls  $v v$ , as shown, which as said ring is rotated will have the effect or appearance of self or individual rotation as they move around the edge of the stationary annular plate  $r$ .

Advertising apparatus made according to this invention may be used and applied in various ways, one of which, besides those previously referred to, is represented in Fig. 9, in which one of the apparatuses is shown as a shoulder advertising device, it being carried by a frame  $w$ , formed to fit on and be strapped to the shoulders of a person, the lower front part of the frame having thereon a sprocket-wheel or pulley, from which extends a chain or band  $w'$ , arranged to work over and rotate a pulley secured to the shaft  $w^2$ , from which the various parts of the apparatus are operated in the manner before described. A crank-handle  $w^3$  is attached to the driving-sprocket or pulley to be manipulated by the bearer of the apparatus.

I claim as my invention—

1. In an advertising apparatus, in combination, a shaft carrying two sets of arms; sign or display boards arranged between and supported by bearings at the ends of the arms in



such number and manner as to be fully exposed; means for continually rotating the shaft; and means for maintaining the display-boards in vertical positions as they are caused  
5 to revolve around the shaft; and a board or plate carried by the shaft and adapted to be held vertically between the display-boards so as to close the fields of vision between the edges of said display-boards.

20 2. In an advertising apparatus, in combination, a shaft carrying two sets of arms; sign or display boards arranged between and supported by bearings at the ends of the arms in such number and manner as to be fully exposed; means for continually rotating the  
15 shaft; and positive actuating means for causing the display-boards to turn in their bearings proportionately to the rotation of the bearings around the shaft, thus maintaining  
20 the display-boards in vertical positions as they are caused to revolve around the shaft.

3. In an advertising apparatus, in combination, a shaft carrying two sets of arms; sign or display boards arranged between and supported by bearings at the ends of the arms;  
25 means for continually rotating the shaft; disks secured to the ends of the shaft and having circular openings; circular sign or display plates located in the openings and carried around with the disks; means for holding the display-boards and the vertical diameters of the circular disks in vertical positions as they revolve around the arms of the shaft.

35 4. In an advertising apparatus, in combination, a shaft carrying two sets of arms; sign or display boards arranged between and supported by bearings at the ends of the arms in such number and manner as to be fully exposed; a central gear-wheel fitted on the shaft;  
40 gear-wheels on the journals of the display-boards meshing with the central gear-wheel; means for rotating the shaft and the central gear so that said display-boards will be caused  
45 to maintain vertical positions as they are carried around the axis of the shaft.

5. In an advertising apparatus, in combination, a disk arranged to rotate on a horizontal axis and having circular openings; circular sign or display plates located in said openings and adapted to rotate therein; means for rotating the disk; and means for causing said circular plates to turn in their bearings as the disk is rotated proportionately to the angular  
55 displacement of the bearings, so that no actual rotation of the disk occurs.

6. In an advertising apparatus, in combination, a shaft carrying two sets of arms; a frame provided with bearings in which the shaft rotates; sign or display boards arranged between and supported by bearings at the ends of the arms; means for continually rotating the shaft; disks secured to the ends of the shaft located outside of the frame and having circular openings; circular sign or display plates located in the openings and carried around with the disks; means for holding the display-boards and the vertical diameters of the circular disks in vertical positions as they revolve around the arms of the shaft.

7. In an advertising apparatus, in combination, a shaft carrying two sets of arms; sign or display boards arranged between and supported by bearings at the ends of the arms in such number and manner as to be fully exposed; a central gear-wheel fitted on the shaft; gear-wheels on the journals of the display-boards meshing with the central gear-wheel; a sprocket-wheel secured to the shaft, and a driving-sprocket and chain therefor; and a sprocket-wheel secured to the central gear-wheel, and a driving-sprocket and chain therefor.

8. In an advertising apparatus, in combination, a shaft carrying two sets of arms; a frame provided with bearings in which the shaft rotates; sign or display boards arranged between and supported by bearings at the ends of the arms; means for continually rotating the shaft; disks secured to the ends of the shaft located outside of the frame and having circular openings; circular sign or display plates located in the openings and carried around with the disks; a central controlling gear-wheel fitted to rotate on the shaft; gear-wheels on the journals of the display-boards meshing into the central gear-wheels; similar controlling gear-wheels and meshing gears or pinions on the shafts of the circular display-plates; sprocket-wheels, one secured to the shaft, and one to each of the central controlling gear-wheels; and a driving-shaft provided with sprockets, and chains connecting them to the sprocket-wheels of the apparatus.

9. An advertising means comprising three apparatuses of the character herein described; a wagon carrying a frame in which they are mounted, two longitudinally and one transversely arranged thereon, a transverse shaft on the wagon; connecting driving means between this shaft and a wheel of the wagon; a longitudinal shaft driven from the transverse shaft; and connecting driving means between these shafts and the advertising apparatuses.

In testimony whereof I have hereunto subscribed my name this 11th day of June, 1902.

JOHN LYNN.

Witnesses:

M. TURNER,  
M. NIXON.