

No. 848,517.

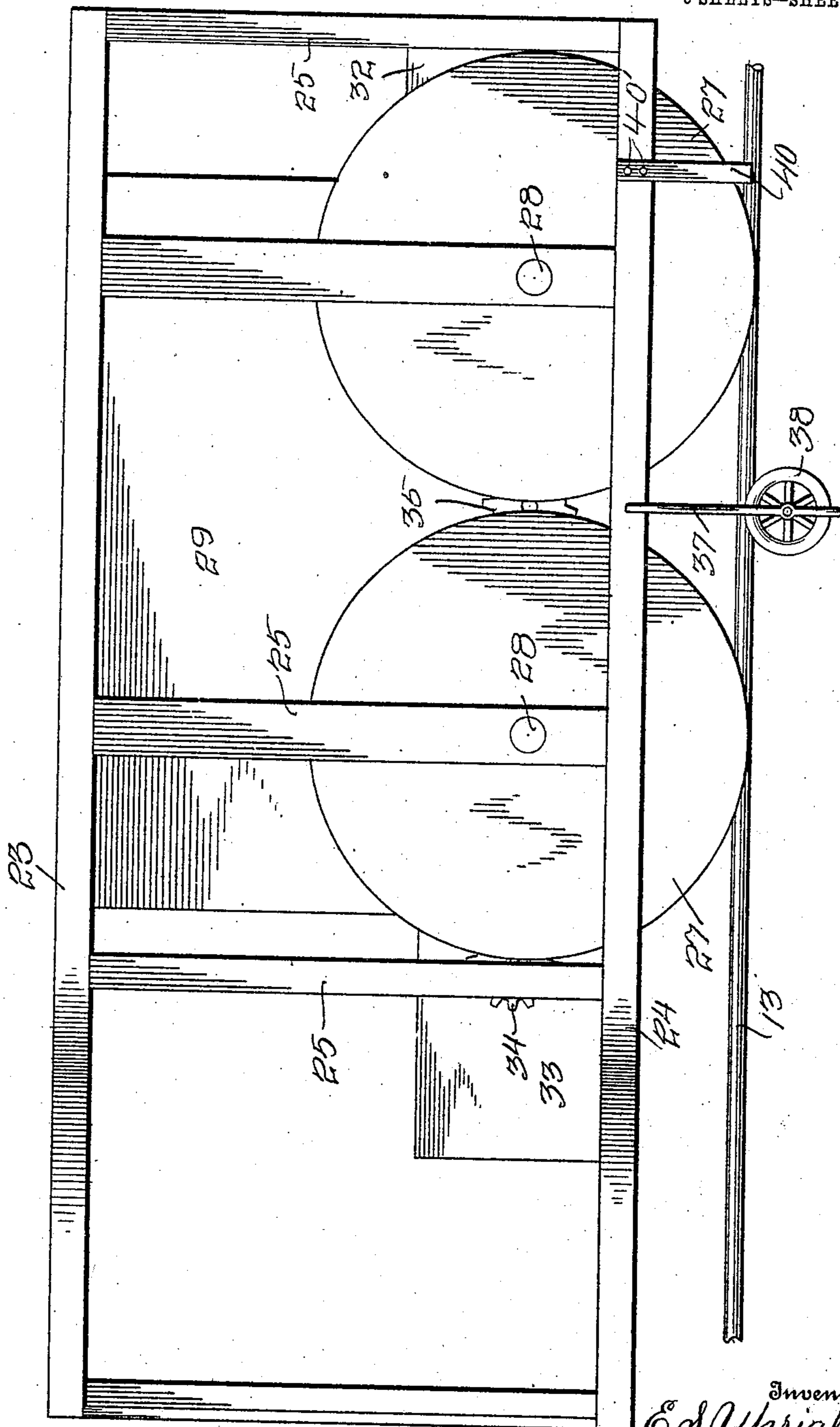
PATENTED MAR. 26, 1907.

E. S. UPRIGHT.  
MAIL TRANSPORTATION SYSTEM.

APPLICATION FILED SEPT. 20, 1906.

6 SHEETS—SHEET 1.

Fig. I.



Witnesses

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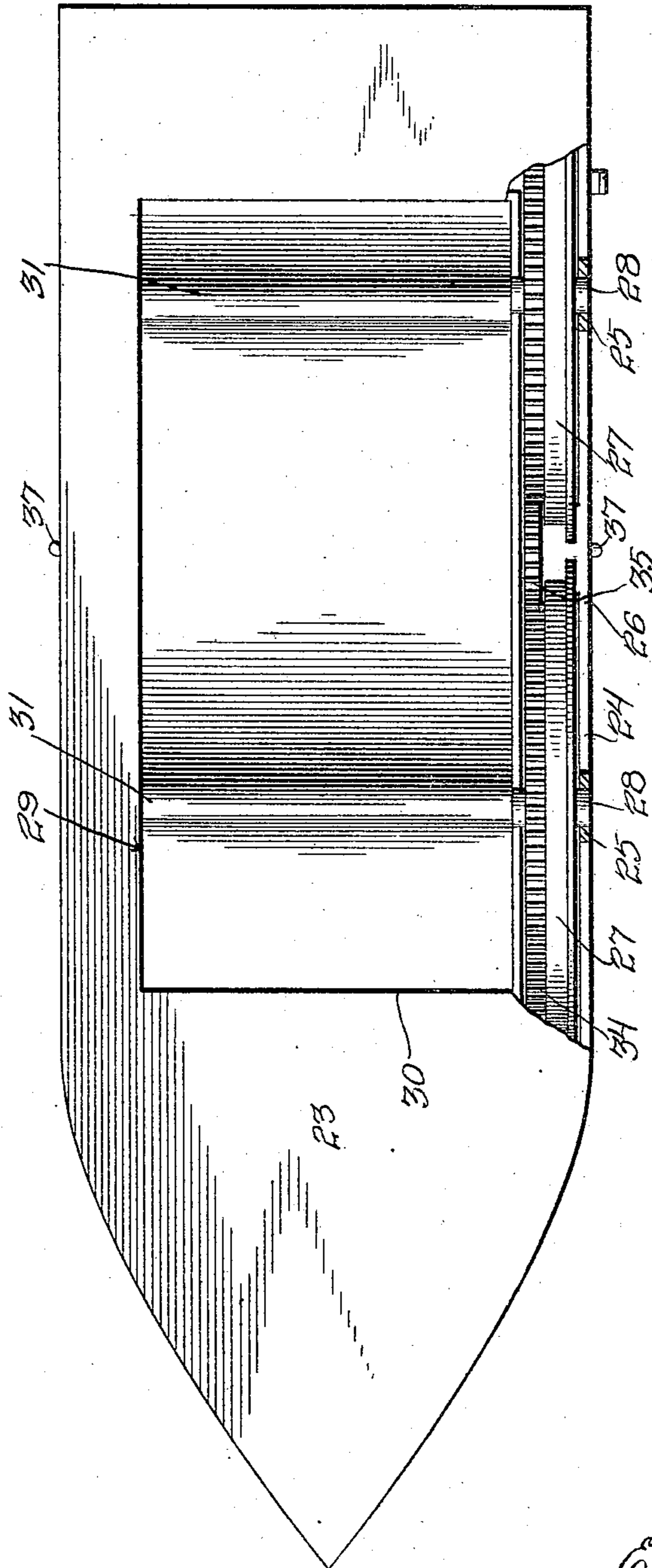
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6 SHEETS—SHEET 2.

Fig. 2.



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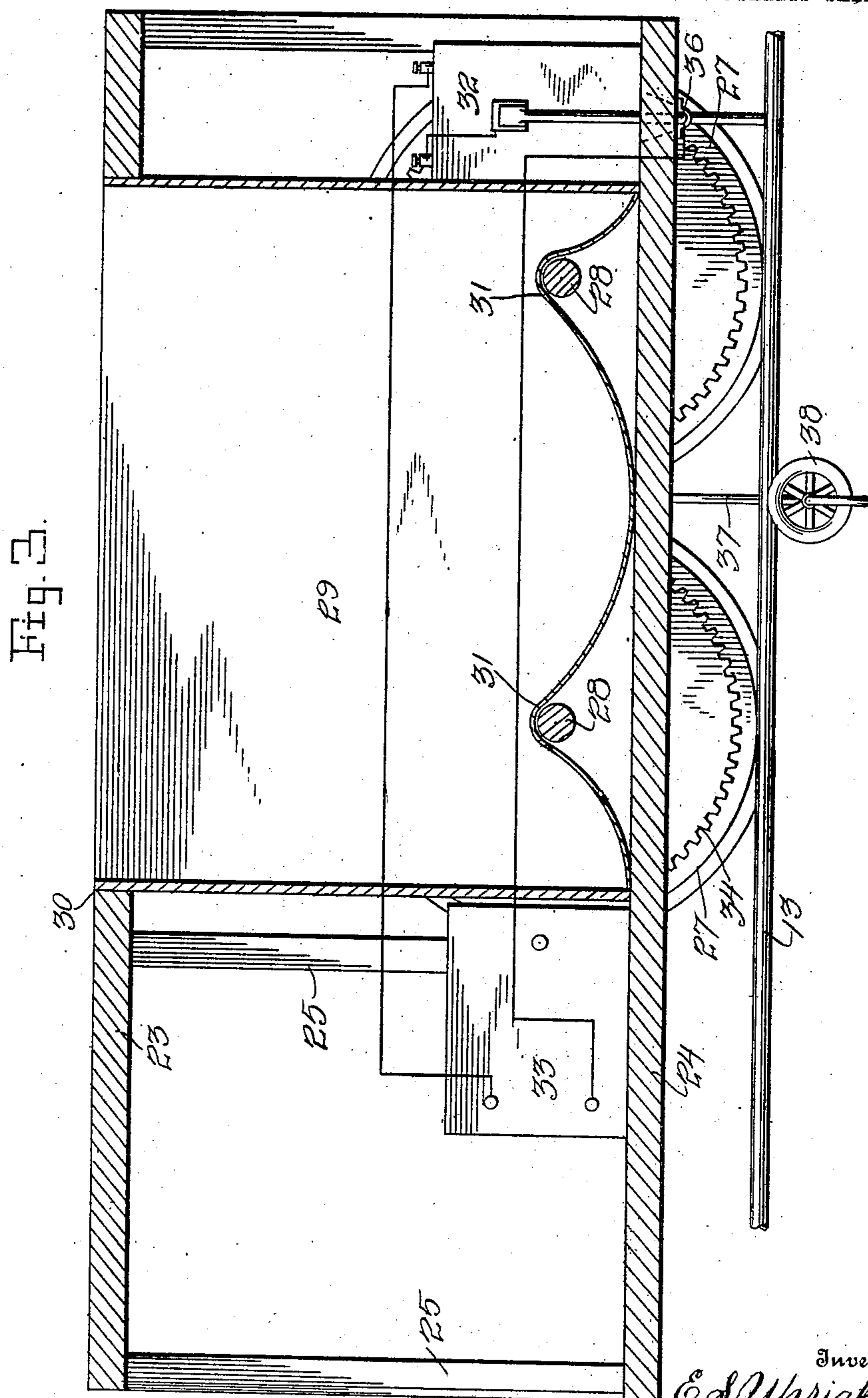
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6 SHEETS—SHEET 3.



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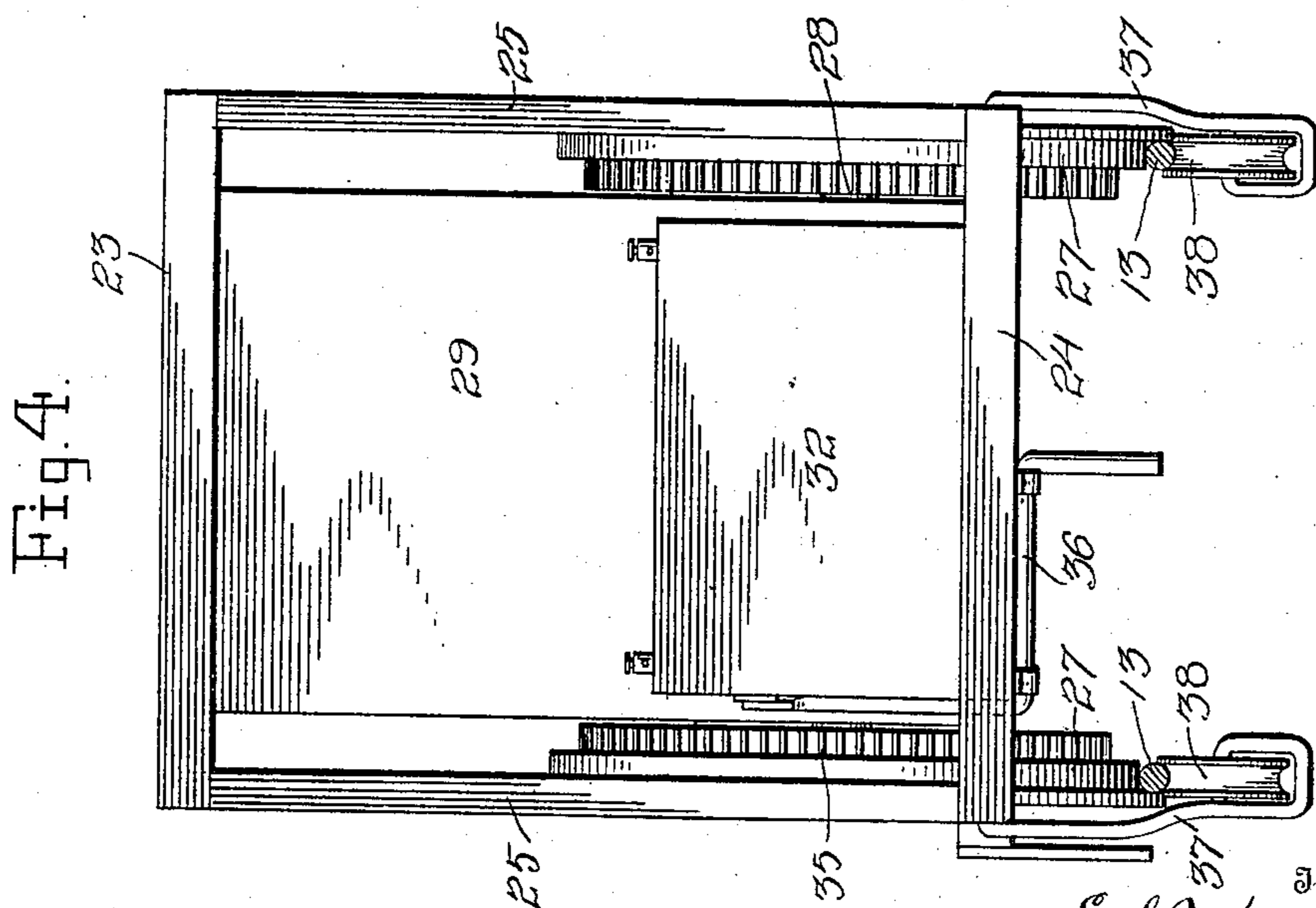
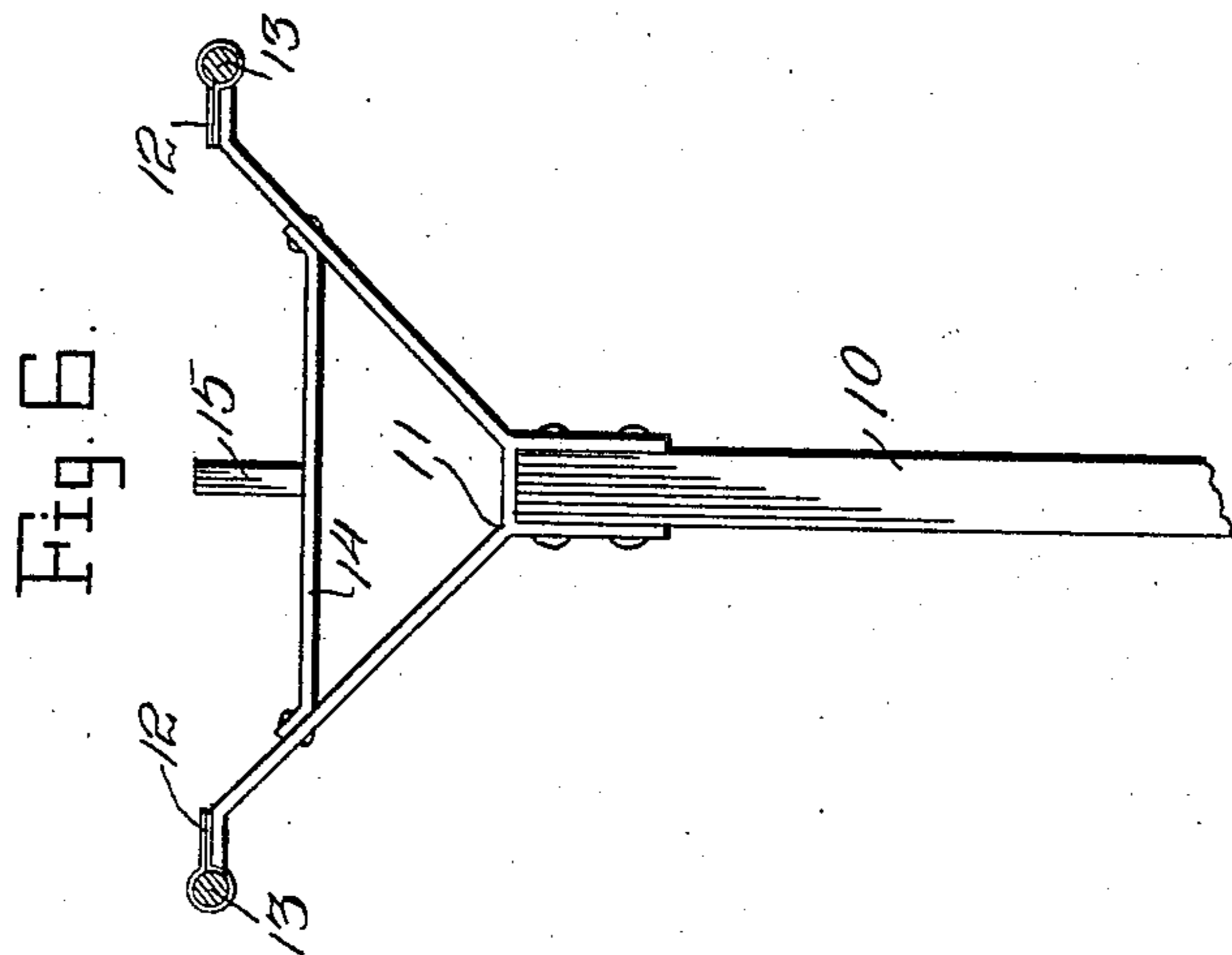
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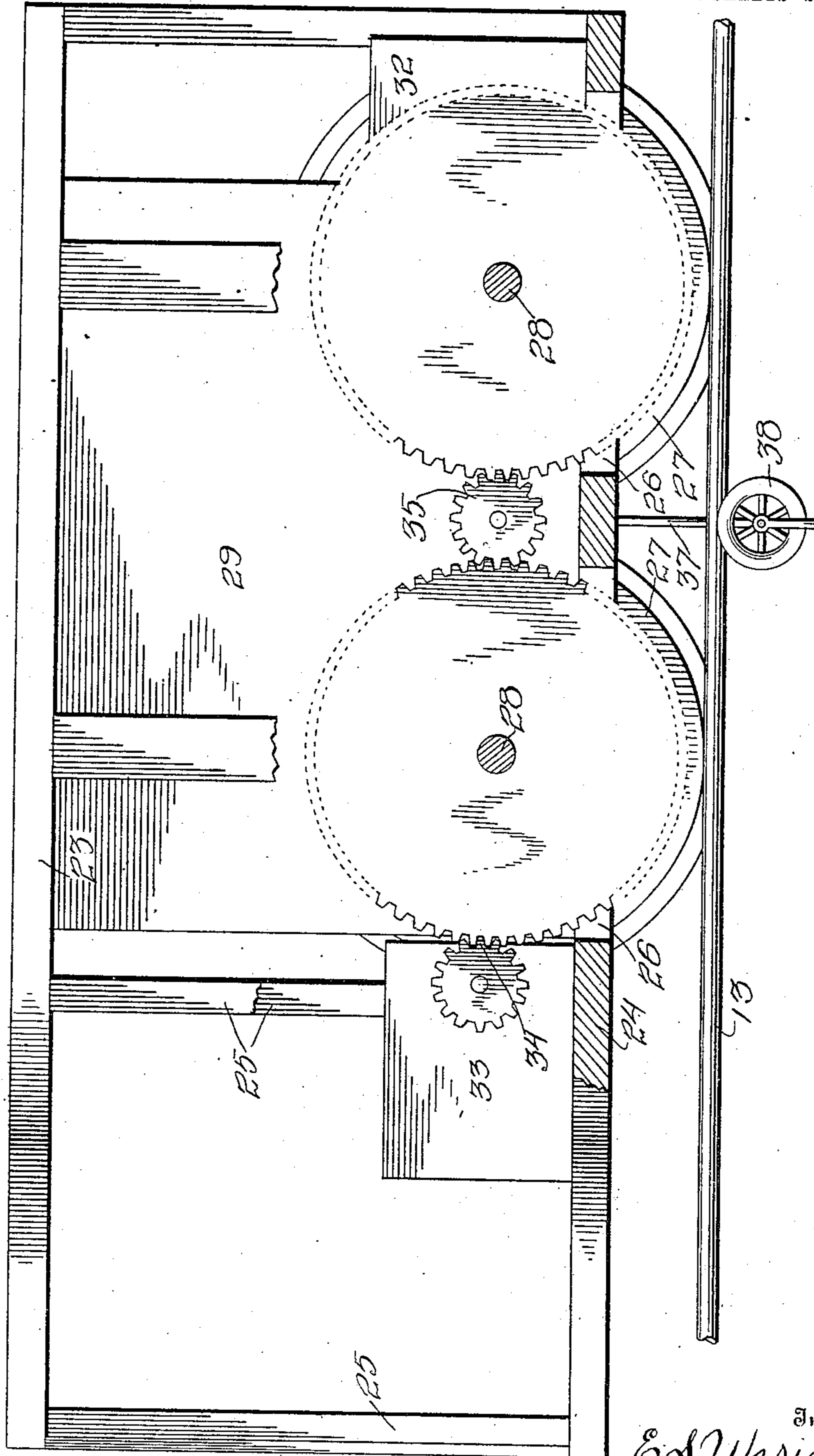
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6 SHEETS—SHEET 5.

Fig. 5.



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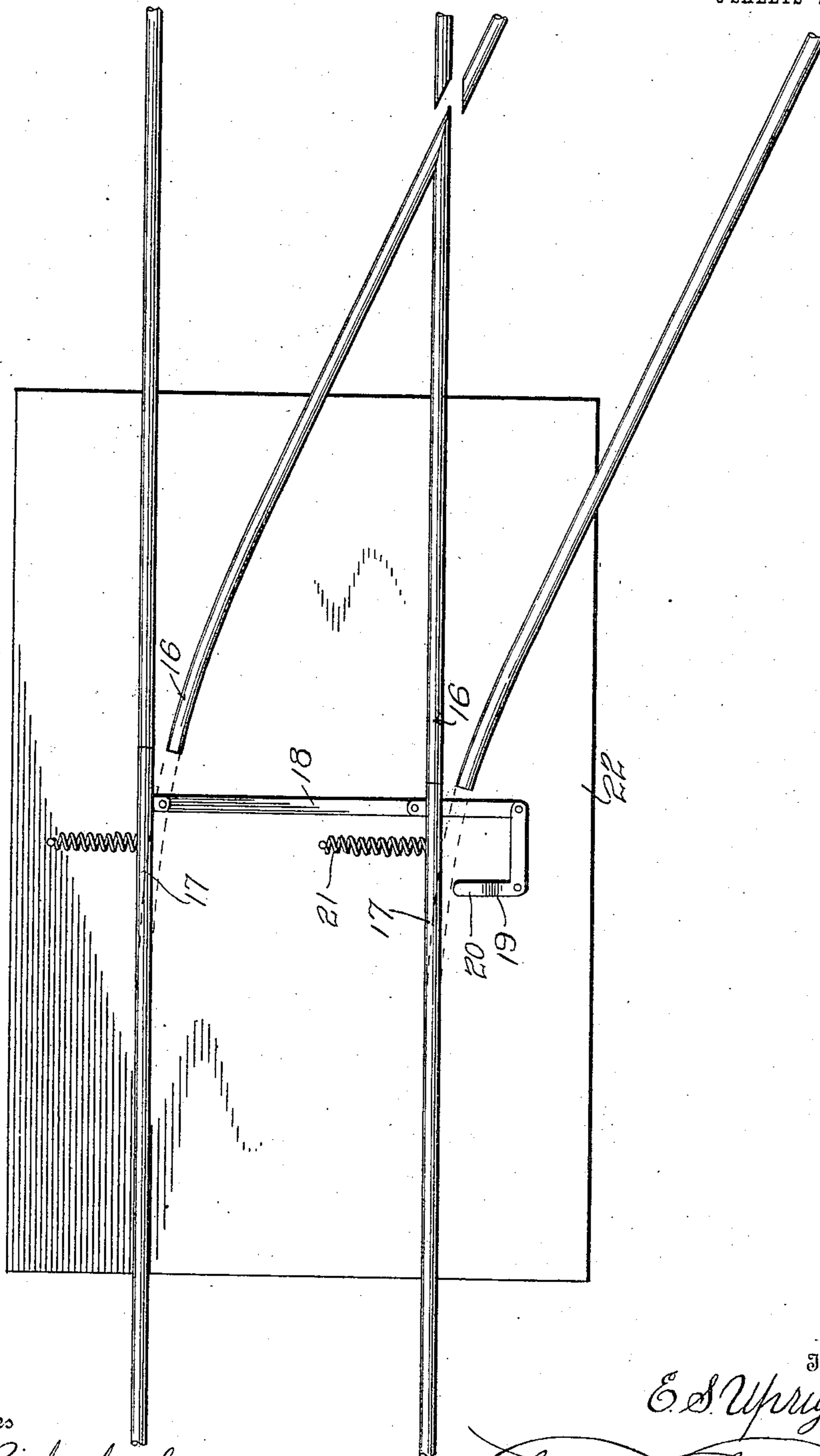
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6 SHEETS—SHEET 6.

Fig. 7.



Witnesses

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# UNITED STATES PATENT OFFICE.

ERN S. UPRIGHT, OF ORD, NEBRASKA.

## MAIL-TRANSPORTATION SYSTEM.

No. 848,517.

Specification of Letters Patent.

Patented March 26, 1907.

Application filed September 20, 1906. Serial No. 335,490.

*To all whom it may concern:*

Be it known that I, ERN S. UPRIGHT, a citizen of the United States, residing at Ord, in the county of Valley, State of Nebraska, have  
5 invented certain new and useful Improvements in Mail-Transportation Systems; 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  
10 to which it appertains to make and use the same.

This invention has reference to improvements in mail-transportation systems.

The objects of the invention are to improve  
15 the construction of the mail-carrier, and provide the same with means for effecting its automatic propulsion.

A further object consists in the formation of the tracks with switch-sections operated  
20 by a lever, and in the attachment to the carrier of a device for automatically operating the switch-lever.

With the above and other ends in view the invention comprises the construction, combination, and arrangement of parts, all as hereinafter fully described, specifically claimed, and illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of the carrier.  
30 Fig. 2 is a top plan view thereof. Fig. 3 is a longitudinal central vertical section through Fig. 2. Fig. 4 is a rear elevation of the carrier. Fig. 5 is a detail view in elevation showing the gear connection between the  
35 motor and the carrier-wheels. Fig. 6 is a detail view of one of the supporting-posts for the tracks. Fig. 7 is a diagrammatic view of the track, showing the arrangement of the switches.

40 Like parts are designated by corresponding reference-numerals in the several views.

Referring more particularly to the drawings, numeral 10 designates the supporting-posts for the tracks or traffic-wires, upon  
45 which the carrier runs. Each post has secured at its top a V-shaped bracket 11, the arms of which are bent outward horizontally at their upper ends and are provided with metal strips 12, bent to hold the tracks or  
50 wires 13 in place. The bracket-arms are strengthened by means of a transverse brace 14, which on the last pole is provided with a vertically-disposed rod 15.

As shown in Fig. 7, the carrier-tracks are  
55 provided with a pair of switch sections or tracks 16, the main track having movable

rails 17, adjacent the point of curvature of the switch-sections. The movable rails are connected by a rod 18, projecting beyond the same at one side and connected with a switch  
60 lever 19, having its front end bent inwardly toward the tracks, as at 20. The switch is normally held in closed position by means of springs 21, secured to rail-sections 17. Located beneath the main and switch tracks  
65 are metal plates 22, which form a further means of support therefor.

The carrier adapted to travel upon the tracks or wires is of cigar shape, and comprises a frame having upper and lower plates  
70 23 and 24 and vertical connecting-beams 25. The lower frame-plate 24 is provided at each side, adjacent the edges, with a pair of alining longitudinal openings 26, through which extends the lower portion of the supporting-  
75 wheels 27, which latter are mounted on transverse shafts 28, journaled in the connecting-beams 25 at some distance above the bottom plate of the frame.

Secured within the carrier-frame is a receptacle 29 for the mail or packages, the upper section 23 of the carrier being provided with an opening 30 for permitting access thereto. The bottom of the receptacle is formed with a pair of corrugations 31 of sufficient height to enable the shafts 28 to extend therebeneath.  
85

The size of the mail-receptacle 29 is so proportioned with relation to the carrier as to allow considerable free space at each end of  
90 the latter and between the outer faces of the receptacle sides and the inner faces of the wheels 27.

Located at the rear end of the carrier, upon the bottom section thereof, is a battery  
95 32, of any preferred description, connected with an electric motor 33, secured to the front end of the frame between the top and bottom plates. The armature-shaft of the motor is connected with the front shaft 28  
100 by gears 34, the rotation of said shaft being transmitted to the rear shaft 28 through gears 35. Secured to the under face of the bottom plate of the frame is a switch-rod 36, connected with the motor for throwing the  
105 connection between the same and the front shaft 28 into and out of action.

The location of the switch-rod is such that when the carrier in its travel over the tracks or traffic-wires reaches the last post said  
110 switch-rod will contact with the vertically-disposed rod 15 thereon, rod 15 tending to

trip the switch-rod, and thus throw the connection between the motor and the carrier-wheels out of action.

Located upon each side of the carrier and secured to the bottom plate 24 is a rod 37, the lower end of which is bent upon itself to form a bracket for the support of a wheel 38, said wheel being grooved at its periphery to allow it to pass along the under side of the traffic-wires.

Each of the carrier-wheels is formed on its periphery with an outward flange 39, such formation, together with the location of the wheels 38 between the wheels 28, serving to retain the carrier in place upon the traffic-wires or tracks and preventing accidental displacement thereof with respect thereto.

The carrier is further provided at one side with a depending rod 40, adjustably secured to the bottom plate by a pair of set-screws 40' and adapted to contact with the bent end 20 of the lever 19 for operating the movable rails 17.

While but one switch formation is shown in the present drawings, it is obvious that the track may have any number of switches, there being a corresponding number of switch-operating rods secured to the carrier and set or bent at an angle to engage the respective switch-rods.

In the operation of the system the carrier is loaded with the mail or packages at the central station and the motor set in action through the battery on the carrier. The carrier will then travel forwardly upon its tracks until the last post is reached, when the switch-rod 36, secured to the under face of the carrier, will contact with and be tripped by the rod 15 upon the post-bracket, thus disconnecting the motor from the carrier-wheels. This action will tend to decrease the speed of the carrier and enable the latter to travel the remaining distance of its own momentum, thus preventing injury to the carrier through a continuance of its high speed. When, however, it is intended that the carrier depart from the main tracks onto one of the switches, the rod 40 is set to contact with the bent end of the movable-rail-operating lever 19, the contact between the said rod and lever throwing the rail-sections 17 to one side and permitting the carrier to pass onto the switch-section, the movable rails being returned to their normal position by the action of their springs when the carrier has passed onto the switch-track, thus closing the switch.

When the tracks include the switch-sections, it is to be understood that the grooved wheels 38 and their supporting-rods 37 may be entirely dispensed with, or the wheels may be carried by leaf or coil springs, as preferred, to permit the wheels to pass beneath the plates 22.

It is not intended that the invention be

limited to the exact construction shown and described, as modifications and changes within its scope may obviously be made.

What is claimed is—

1. A mail-transportation system comprising traffic-wires, and means for supporting the same; a carrier adapted to travel upon said wires; means located within the carrier for automatically propelling the same; means secured to the front end of said carrier and operatively connected with said propelling means; and means secured to said traffic-wire-supporting means and adapted to automatically trip said connecting means, for throwing said propelling means out of action as the carrier passes thereover.

2. A mail-transportation system comprising traffic-wires and poles for supporting the same; a carrier adapted to travel upon said wires; a motor located within said carrier, and operatively connected with the carrier-wheels; a switch-rod operatively connected with said motor and provided with a depending end; and a rod secured between said wires for engagement with the depending end of said rod to automatically trip the latter and throw the motor out of action as the carrier passes thereover.

3. A mail-transportation system comprising poles; brackets secured to the upper portions thereof; traffic-wires secured to opposite ends of said brackets; a carrier adapted to travel upon said wires and including oppositely-flanged wheels; a battery located in the rear end of the carrier; a motor located at the front end of the carrier and driven by said battery; a gear connection between said motor and the shafts of said wheels; a depending switch operatively connected with the motor; and a rod secured to the brackets of the station-posts, between the wires, and adapted to engage and trip said switch when the carrier passes thereover, to throw the motor out of action.

4. In a mail-transportation system, including traffic-wires and means for supporting the same, a carrier adapted to travel upon said wires and comprising a cigar-shaped frame, the bottom section of said frame having a pair of alining longitudinal openings adjacent its side edges; transverse shafts journaled in the side sections of the frame; wheels mounted on opposite ends of said shafts and extending through said openings; a receptacle mounted within said frame, and having its bottom corrugated at opposite ends, to permit the passage therebeneath of said shafts; and means mounted within said frame for automatically propelling said carrier.

5. A mail-transportation system comprising main and switch tracks and poles for supporting the same; a carrier adapted for travel upon said tracks; means for automatically propelling said carrier; means connected with

said tracks for automatically throwing said propelling means out of action; means secured to said carrier for automatically opening said switches; and means for normally  
5 holding said switches in closed position.

6. A mail-transportation system comprising main and switch tracks, and supporting-poles; a carrier adapted to travel on said tracks; means located within the carrier for  
10 automatically effecting its propulsion; means secured to the carrier for automatically open-

ing said switch; means for closing said switch when the carrier has passed therebeyond; and means secured to said main track for automatically throwing said propelling means  
15 out of action.

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

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Witnesses:

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