

No. 689,601.

Patented Dec. 24, 1901.

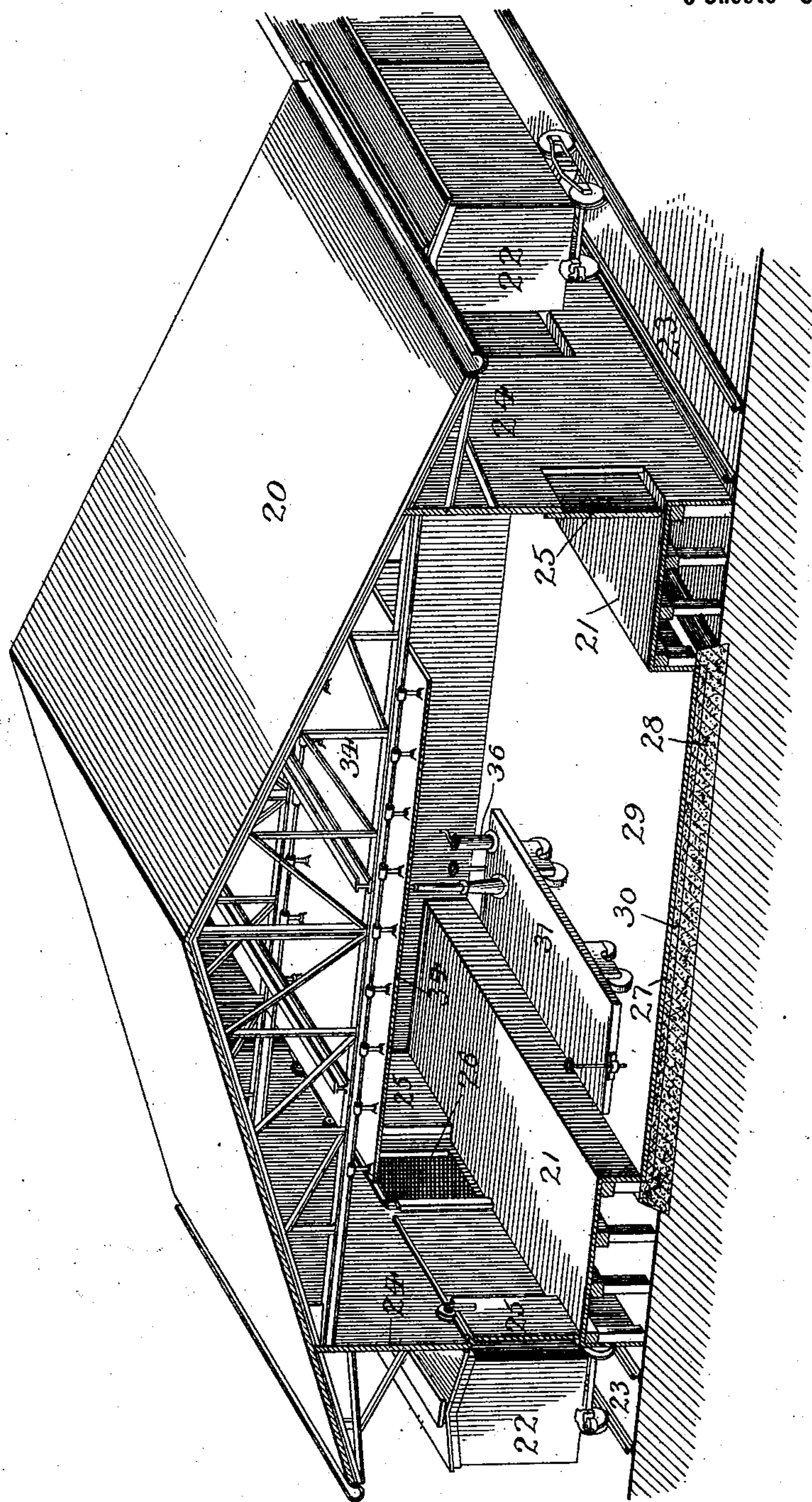
A. W. SWANITZ.
MERCHANDISE TRANSFER APPARATUS.

(Application filed Mar. 14, 1901.)

(No Model.)

6 Sheets—Sheet 1.

Fig. 1.



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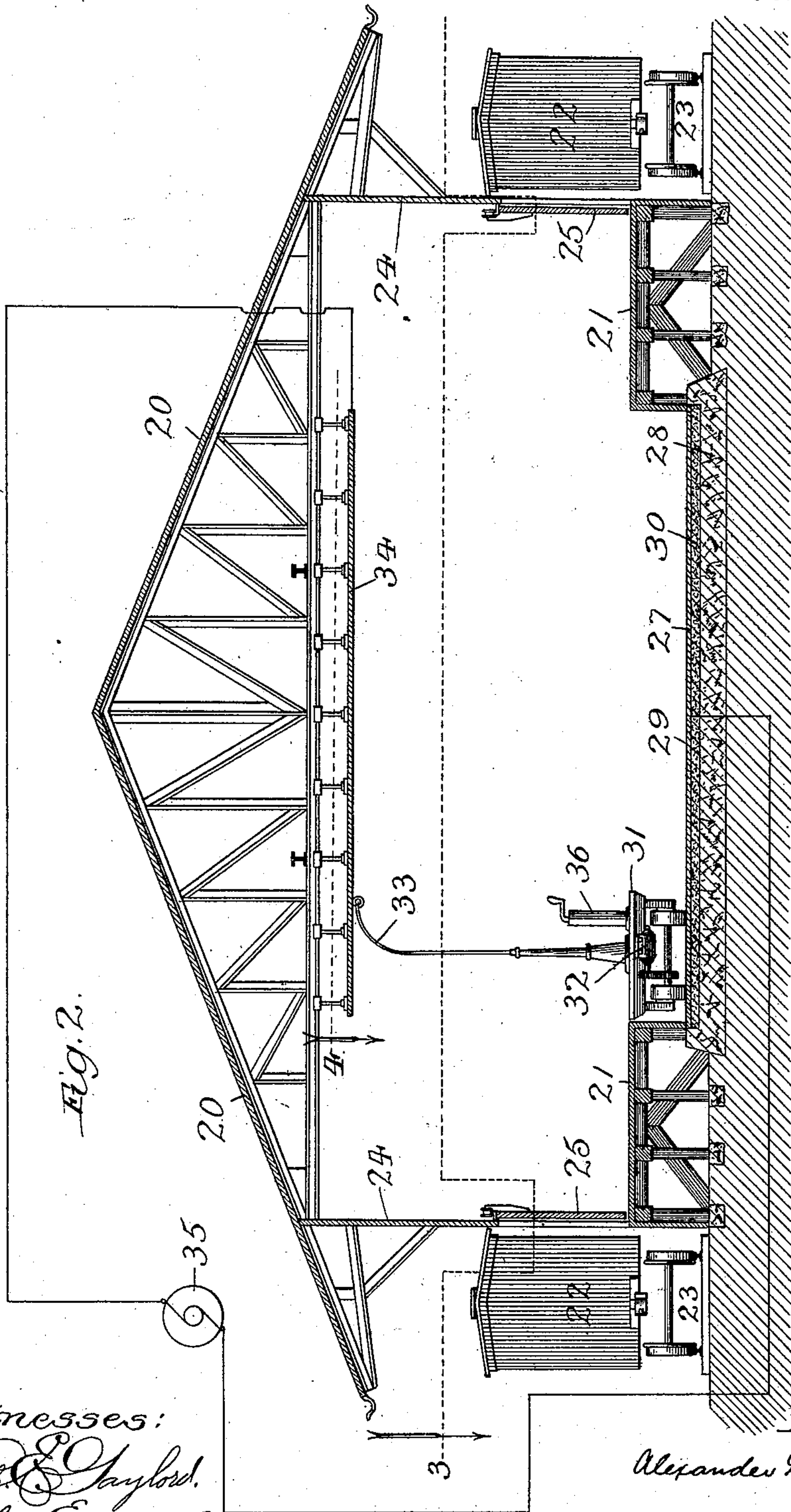
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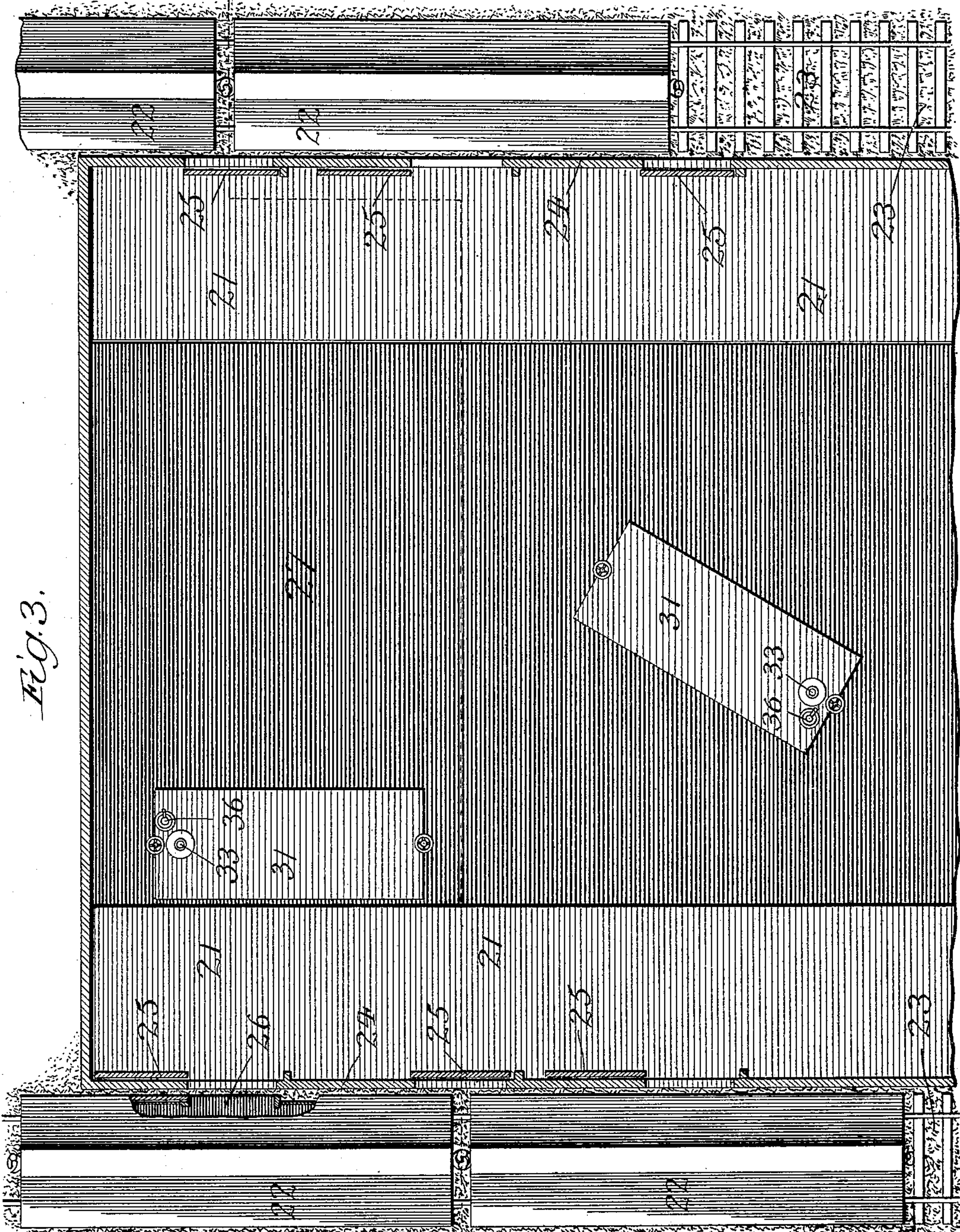


Fig. 3.

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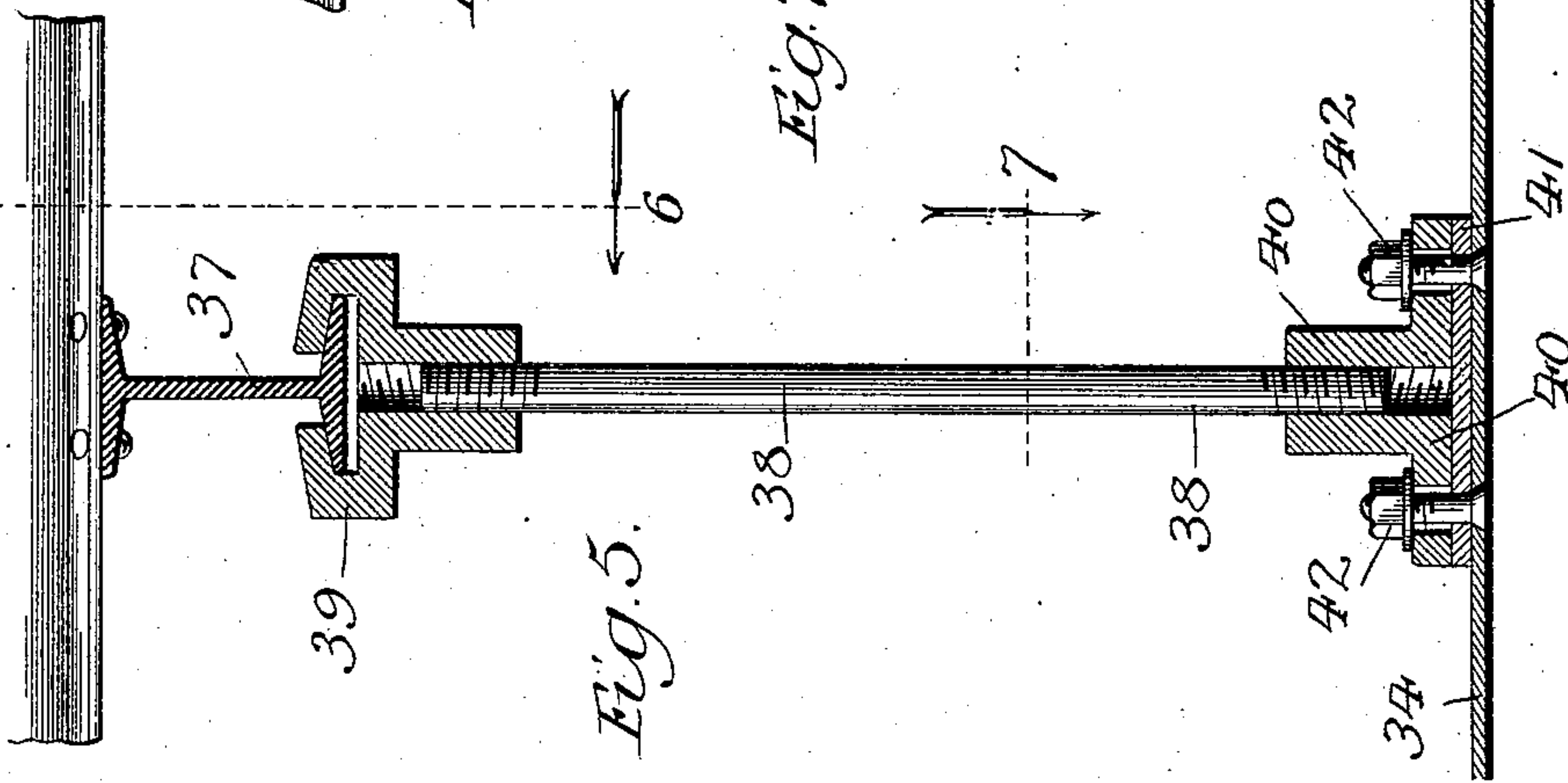
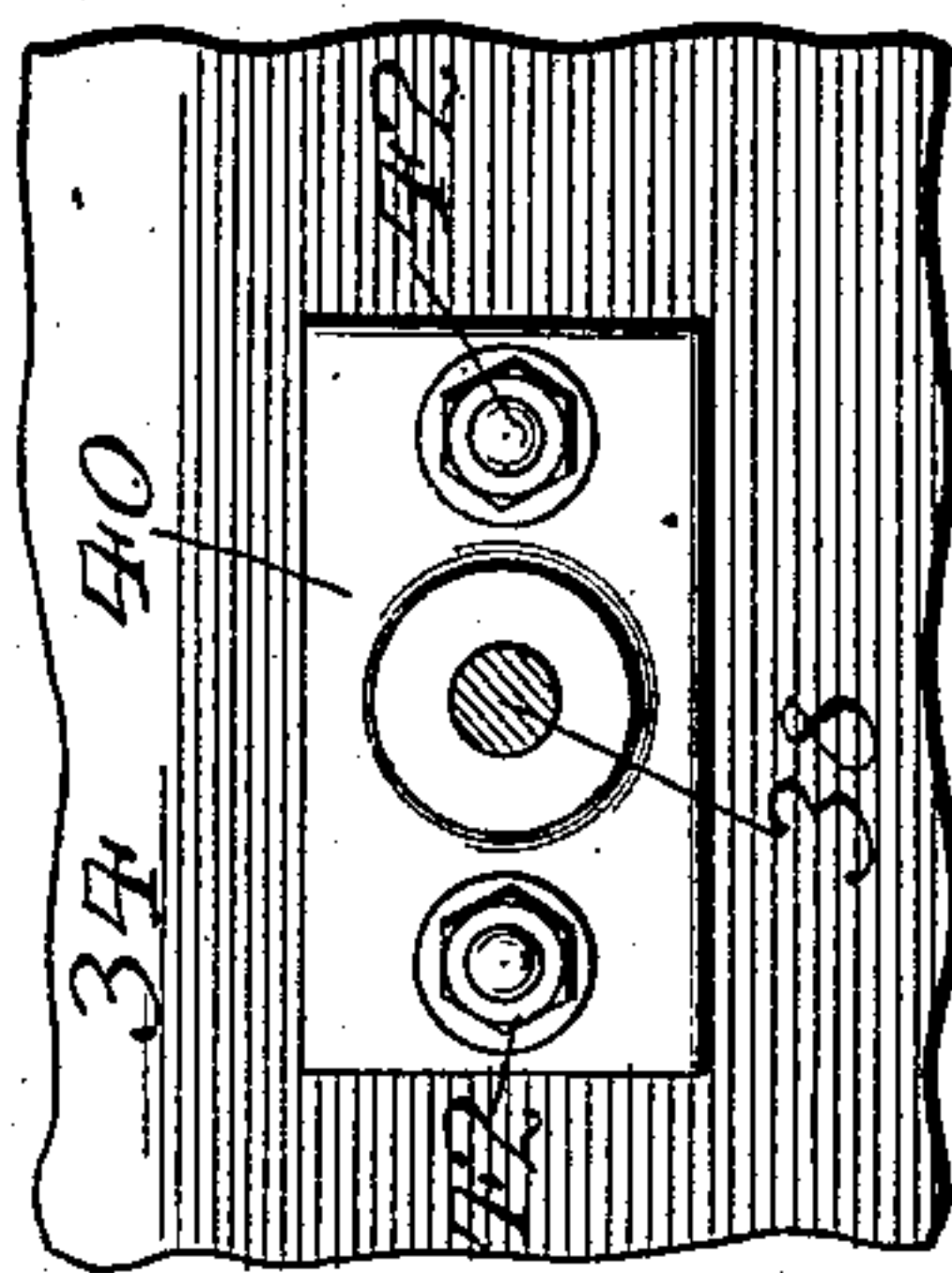
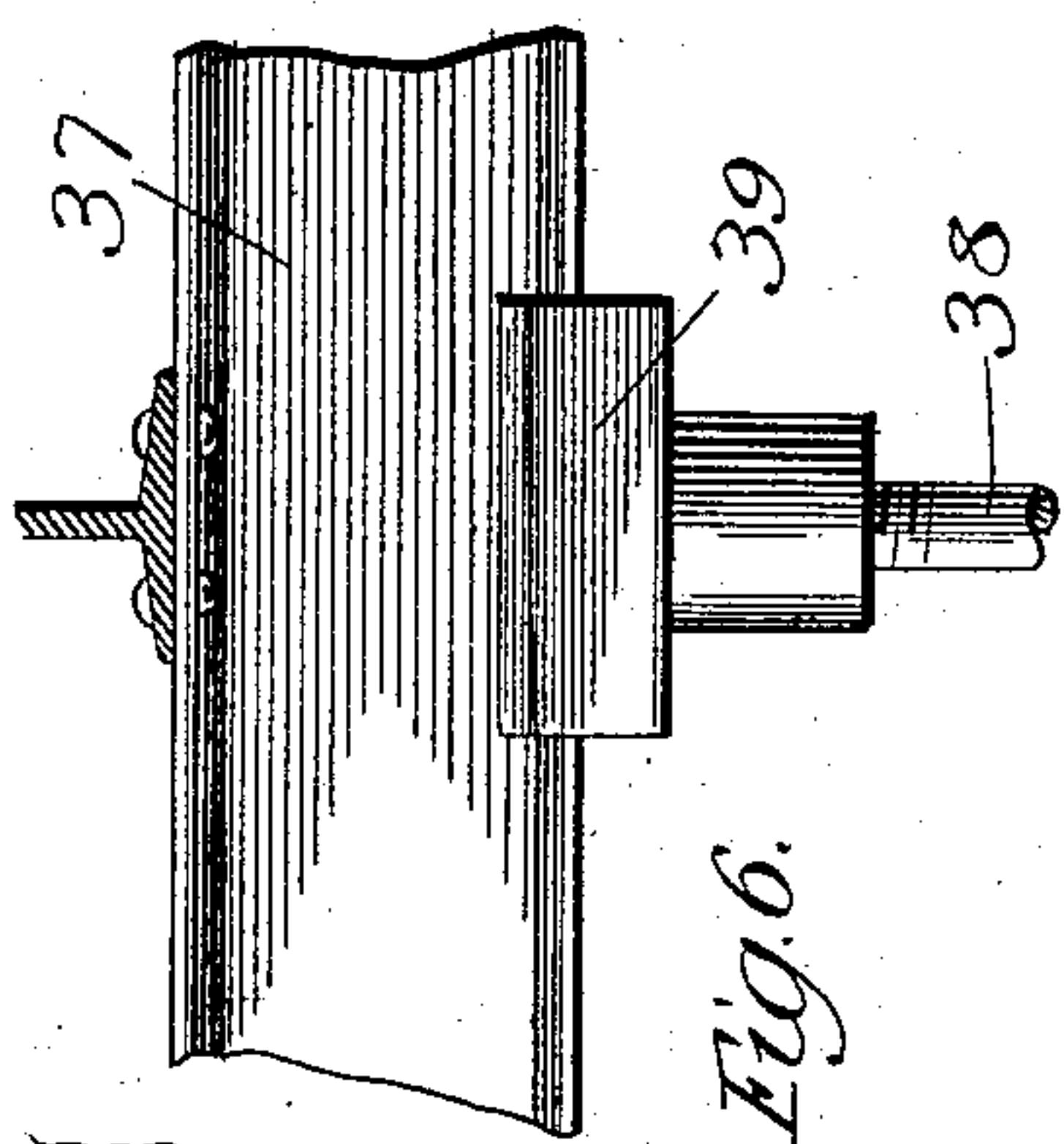
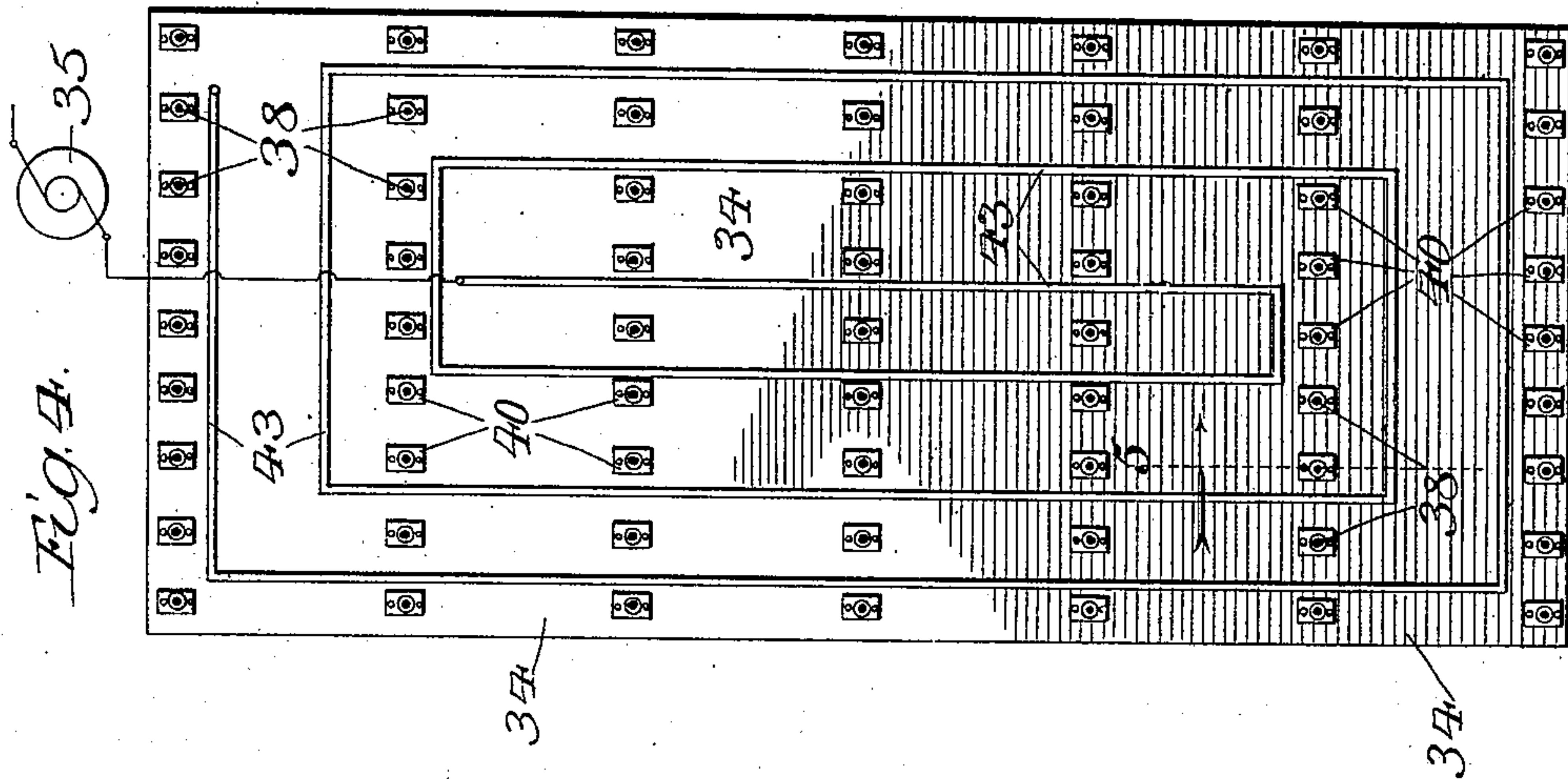
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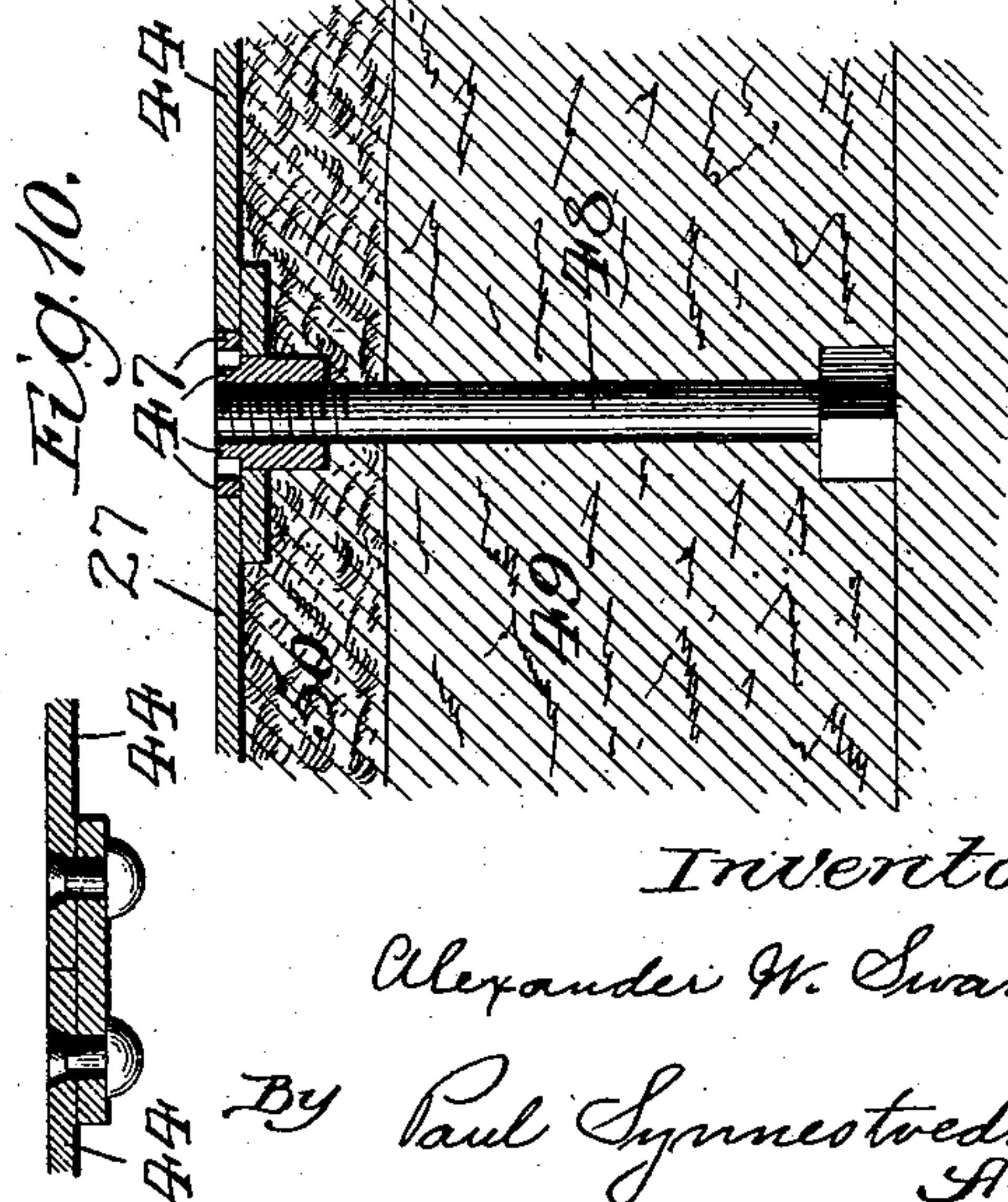
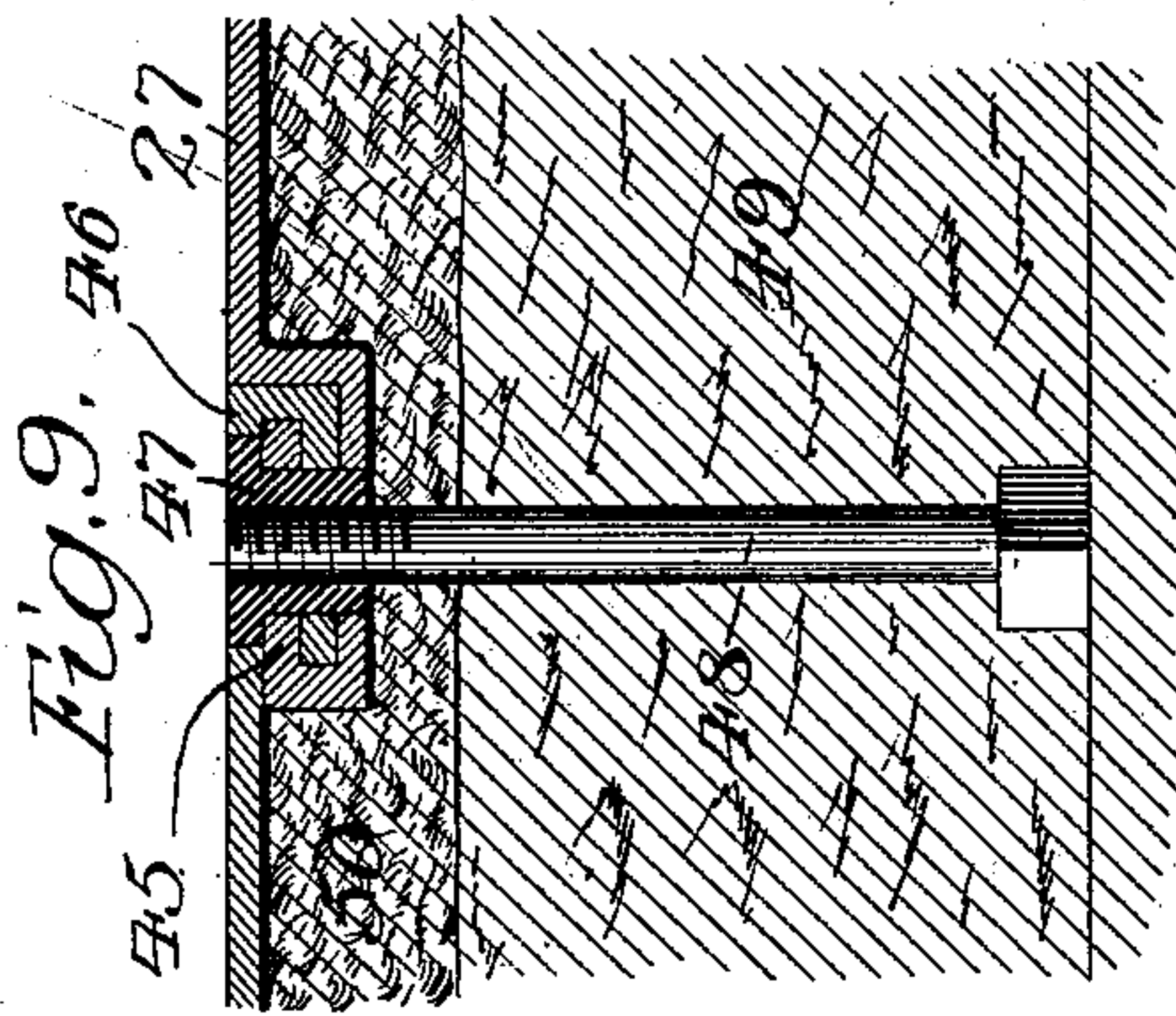
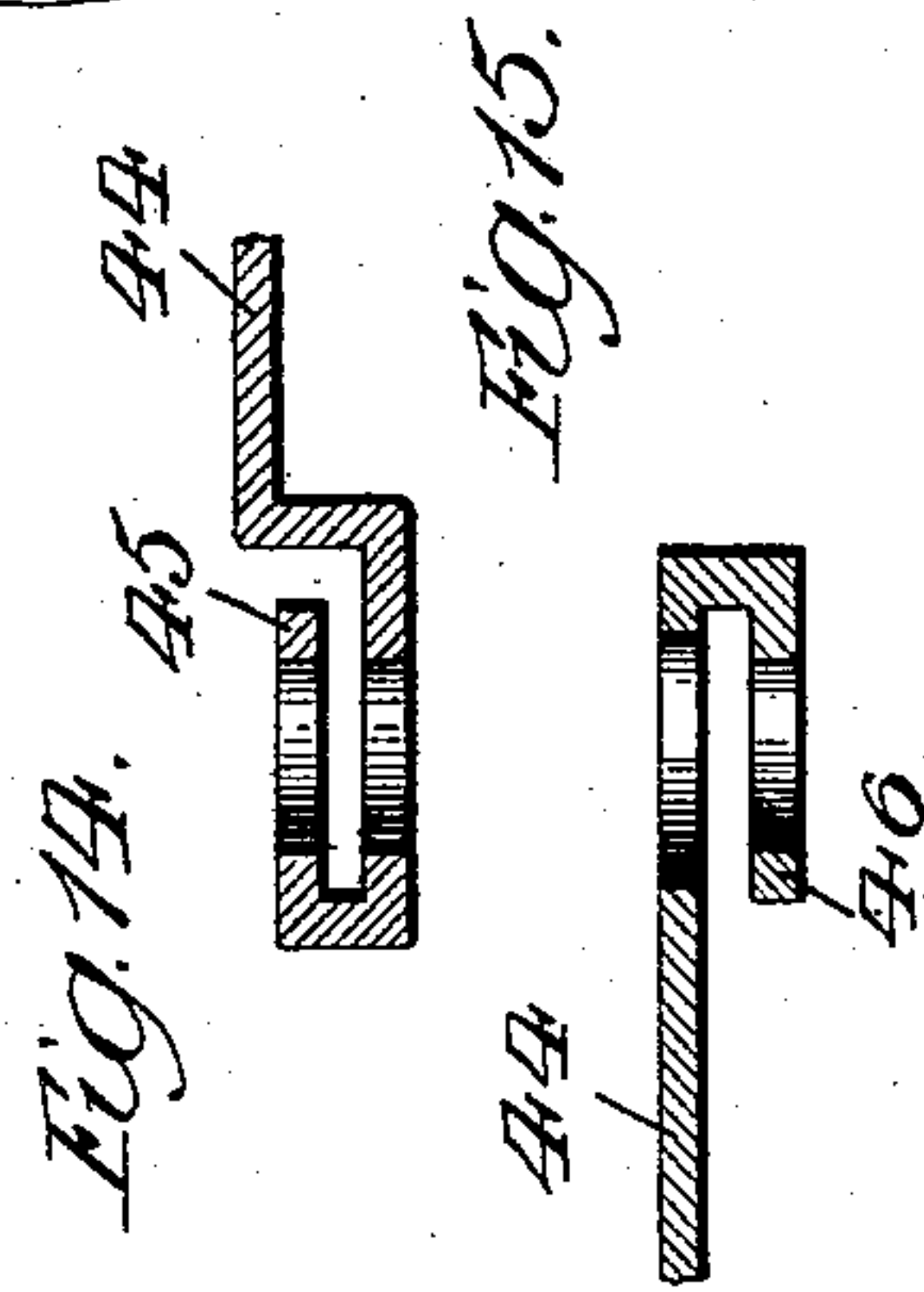
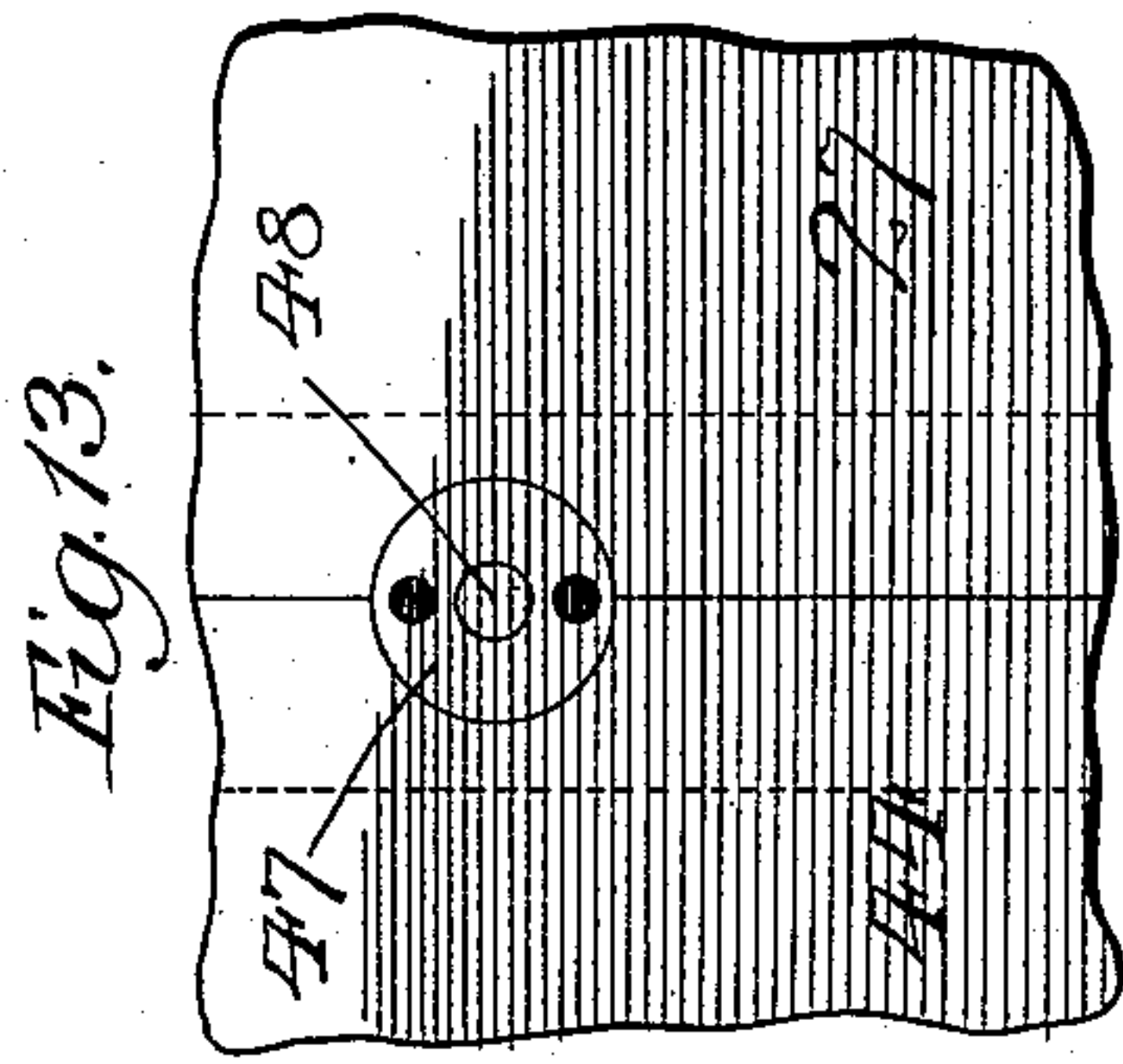
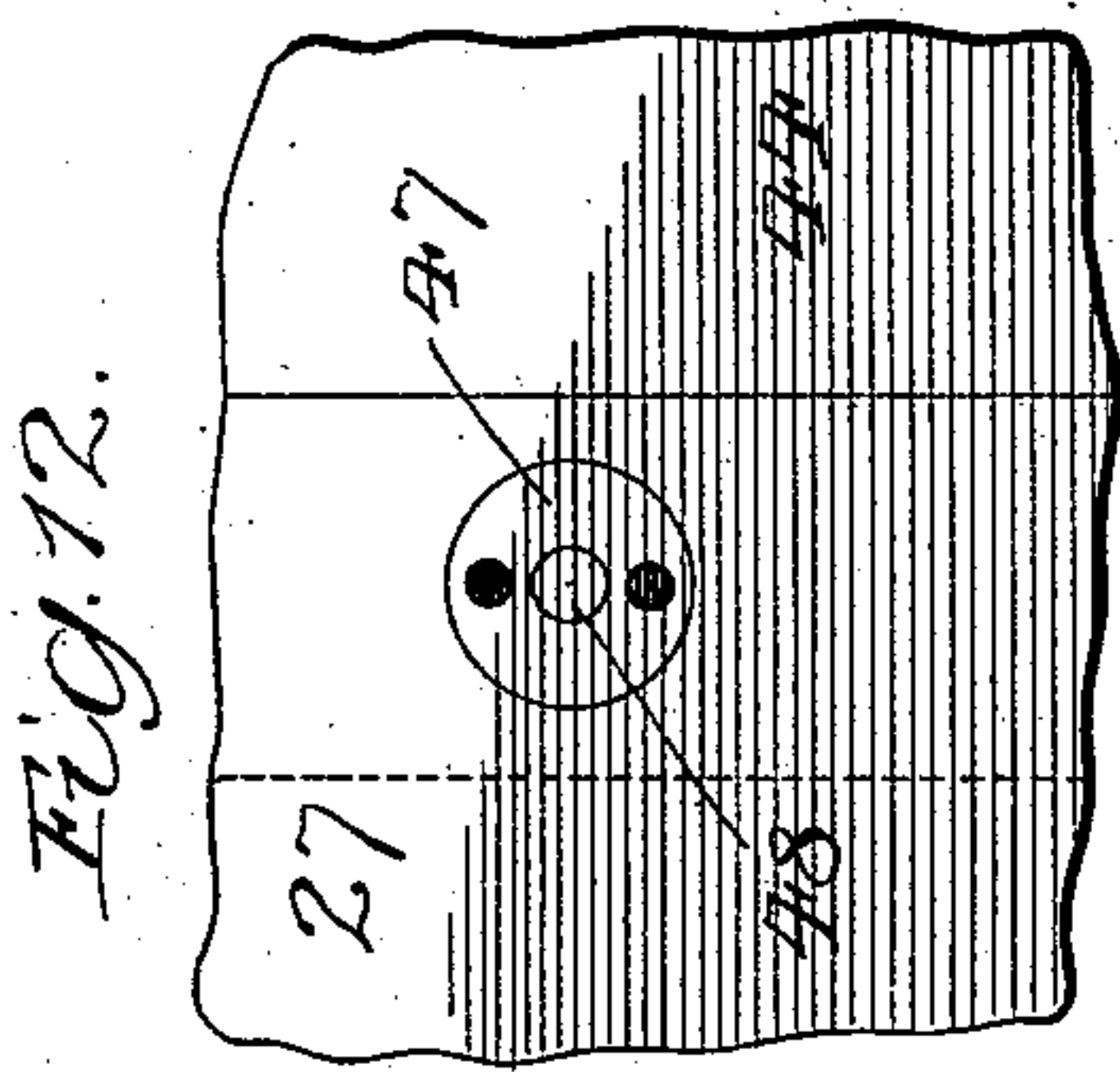
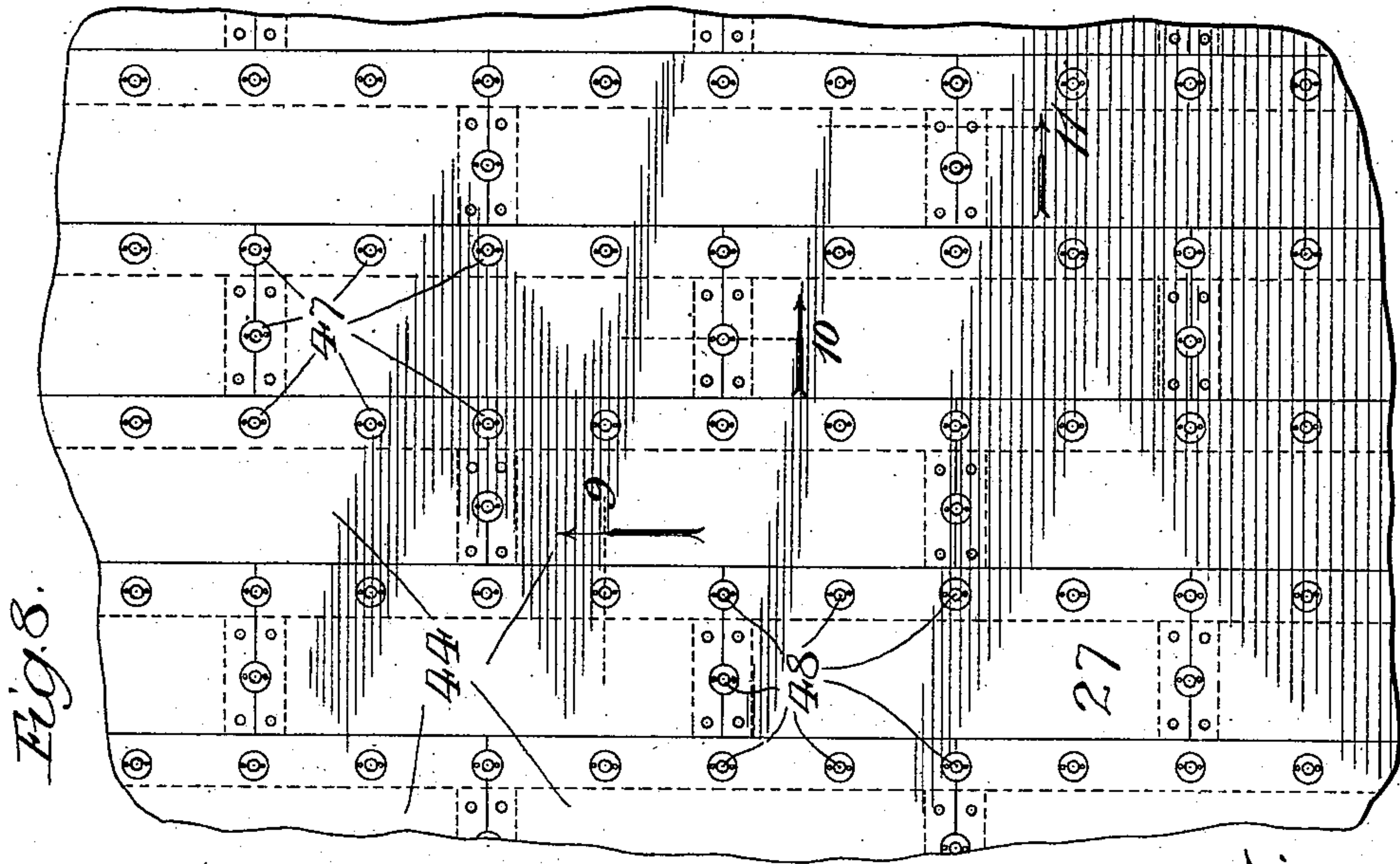
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(Application filed Mar. 14, 1901.)

(No Model.)

6 Sheets—Sheet 5.



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MERCHANDISE TRANSFER APPARATUS.

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(No Model.)

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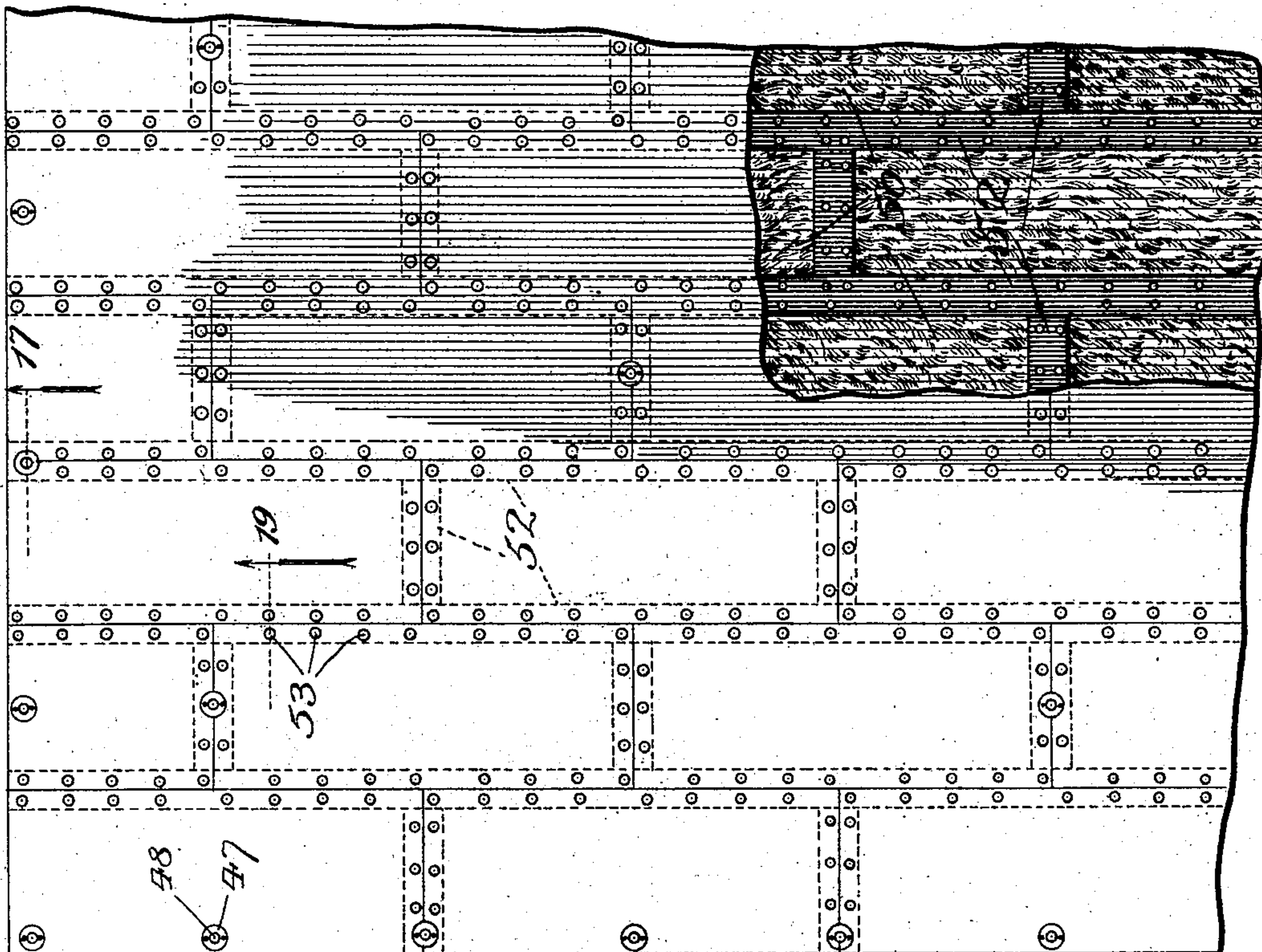
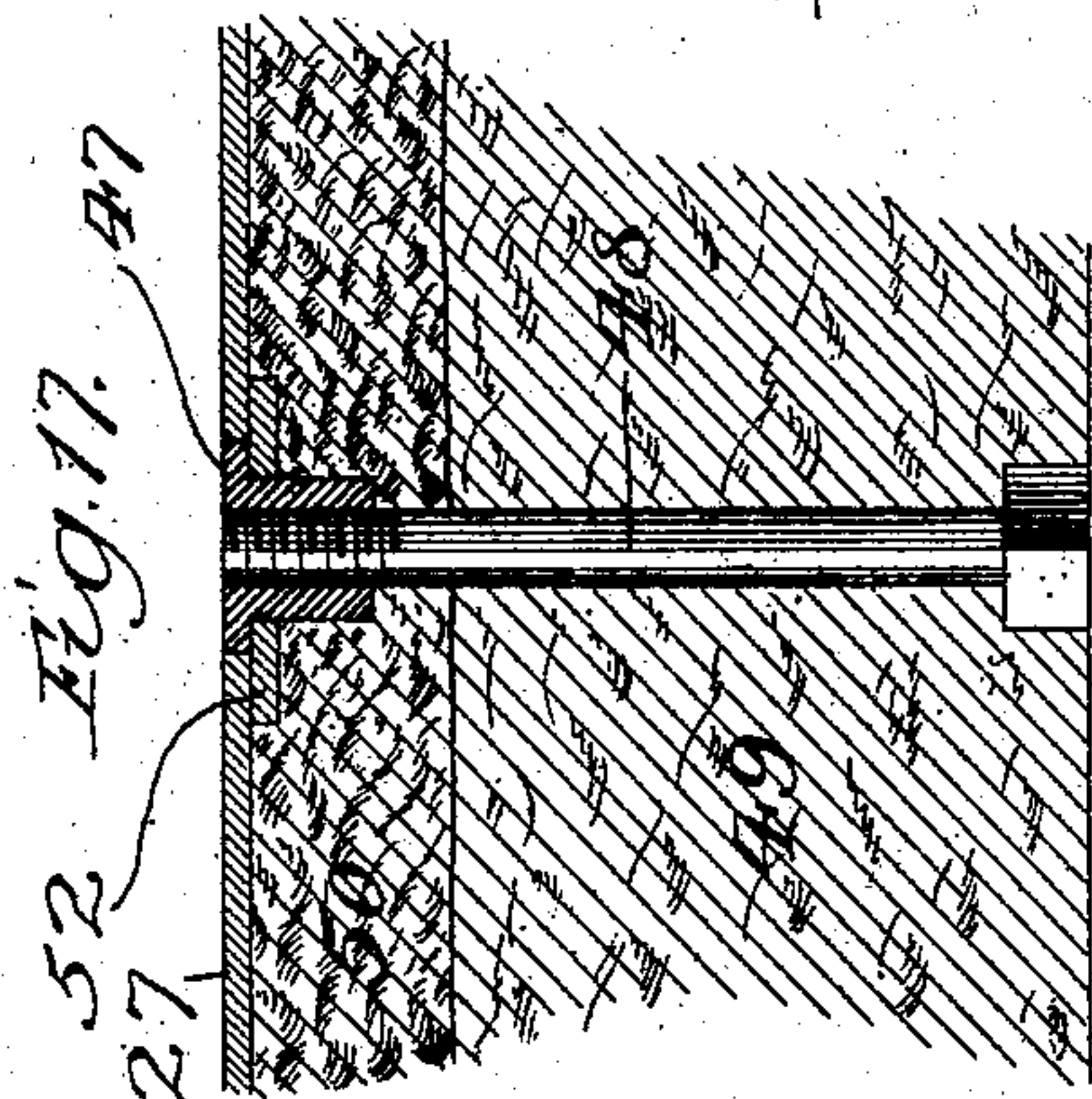


Fig. 16.



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Fig. 18.

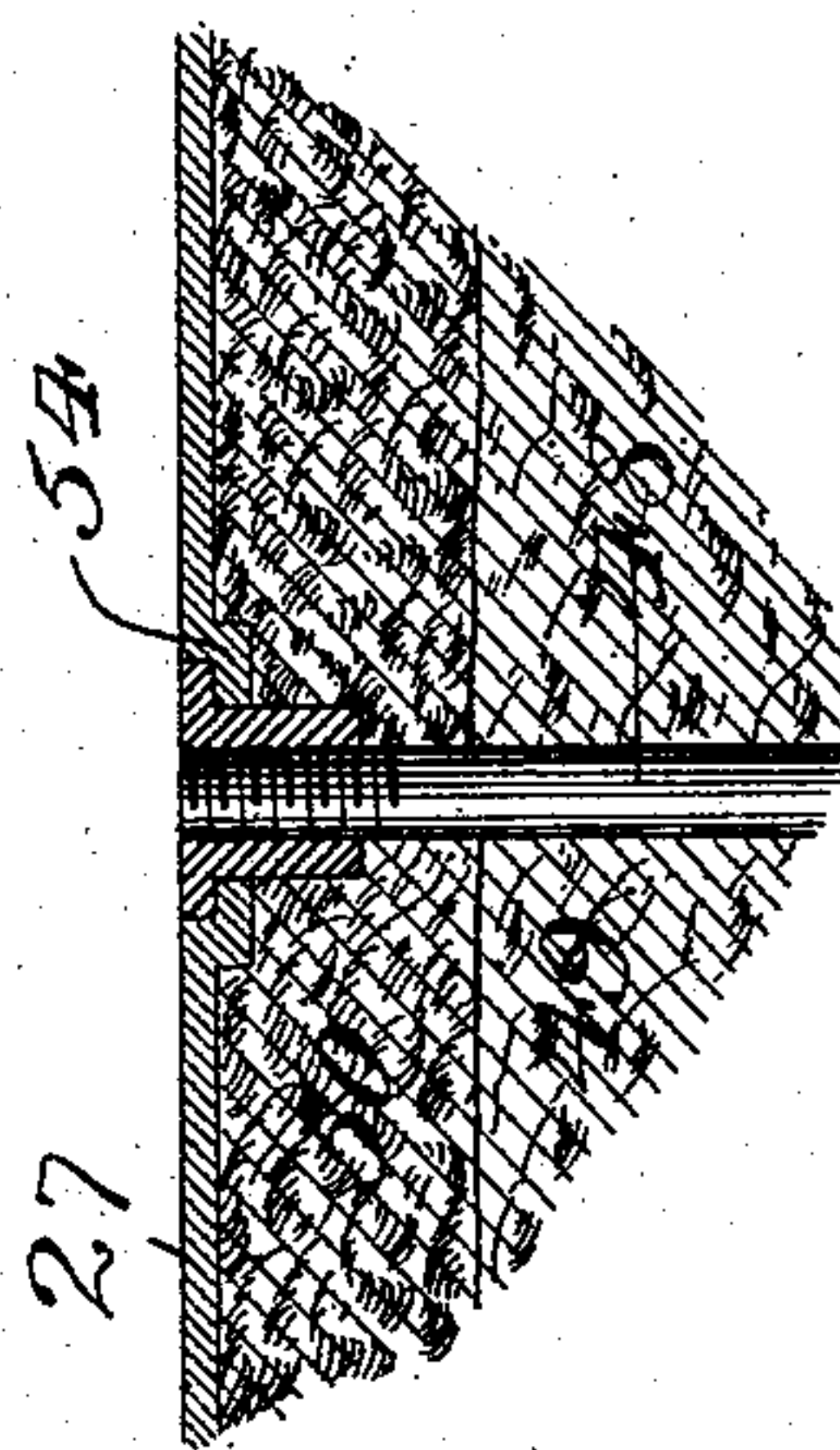
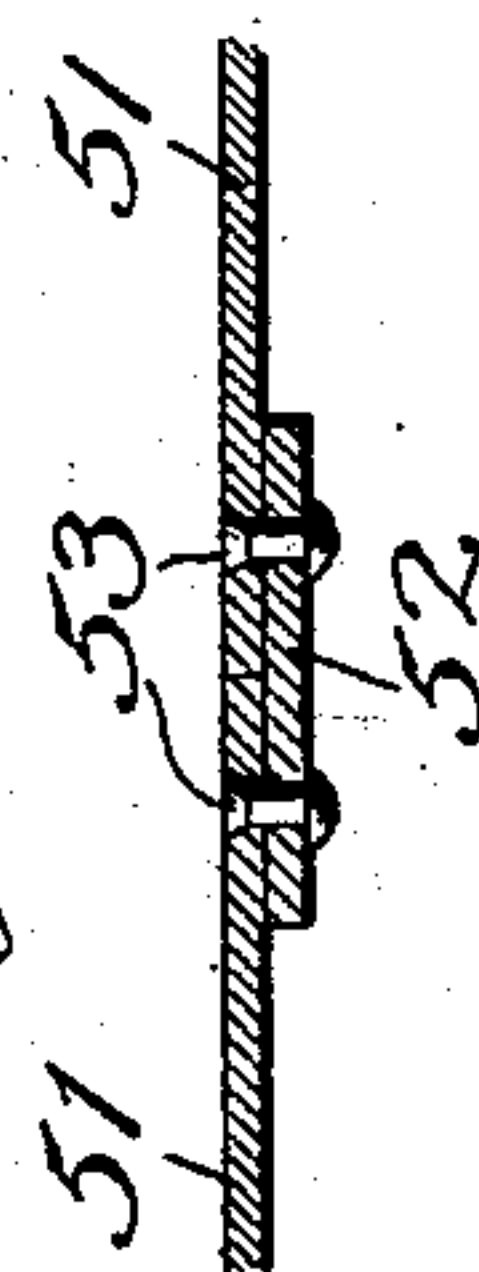


Fig. 19.



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UNITED STATES PATENT OFFICE.

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MERCHANDISE-TRANSFER APPARATUS.

SPECIFICATION forming part of Letters Patent No. 689,601, dated December 24, 1901.

Application filed March 14, 1901. Serial No. 51,219. (No model.)

To all whom it may concern:

Be it known that I, ALEXANDER WILLIAM SWANITZ, a citizen of the United States, residing in Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Merchandise-Transfer Apparatus, of which the following, taken in connection with the accompanying drawings, is a specification.

My invention is intended to facilitate the transfer of all kinds of merchandise from one place to another, particularly where transshipment is required—as, for example, in a railroad freight-house where goods coming in on one line in broken car-lots have to be assorted and transferred to cars of another line to be further transported to their destination. Heretofore this work has in practice been all done by hand, aided by wagons and the ordinary form of hand-truck. The peculiar conditions and requirements of this work have heretofore proven an obstacle to the introduction of labor-saving appliances to facilitate the movement of the merchandise from place to place. In transfer freight-houses as ordinarily constructed there is a platform with a track on each side, upon which are placed cars containing broken car-lots requiring transfer from car to car, and the goods to be transferred have been carried by hand or upon hand-trucks from one car to the proper car on the other side or at a different point along the platform. The expense of this method of handling goods exceeds beyond all reason the expense incurred in transporting the cars for many miles across country.

In the transfer of some kinds of merchandise devices have heretofore been used resembling somewhat the transfer-table employed in many car and locomotive shops, the said transfer-table comprising substantially a carriage designed to hold the article to be transferred, said carriage being mounted upon rails extending longitudinally between two adjacent shops or buildings containing a series of stalls or places for receiving the transferred object, the object being placed upon the transfer-table at one place and the table run along on the longitudinal rails to another position, at which the object is then

removed. In the operation of this class of device it is apparent that it is not possible to use but a single transfer table or device, because it must run along fixed lines of movement, and no provision can be made for permitting any other table, should it be employed, to cross the path of movement of the first table.

The first of the objects of my present invention is to provide mechanism such that electrical power appliances of different kinds can be conveniently and economically utilized in the work above described.

Another object of my invention is the provision of electrical merchandise-transfer apparatus which can be operated with a maximum degree of facility and a minimum of expense.

The above and all such other objects as may hereinafter appear I obtain by means of the construction which I have illustrated in the preferred form in the accompanying drawings, in which—

Figure 1 is a perspective view of a part of a freight-house designed especially for the transfer of broken car lots of merchandise, the said house being provided with my improvements. Fig. 2 is a sectional elevation of said freight-house, taken on the line 2 2 of Fig. 3. Fig. 3 is a plan section through one end of the freight-house, taken on the line 3 3 of Fig. 2. Fig. 4 is a plan view showing a trolley-plate employed by me in conjunction with my invention, the supports whereof are shown in section, taken on the line 4 4 of Fig. 2. Fig. 5 shows a detail of the supporting mechanism for carrying the trolley-plate. Fig. 6 is another view of a similar detail, taken on the line 6 6 of Fig. 5. Fig. 7 is a plan view of a part of the mechanism shown in Fig. 5. Fig. 8 is a plan view of a portion of a traction-floor which constitutes an important part of my invention. Fig. 9 is a detail showing the construction of the floor in section. Fig. 10 is another detail showing another part of the floor construction. Fig. 11 is another detail showing the method of joining certain of the plates used in the traction-floor. Fig. 12 is a plan view of one of the floor details somewhat enlarged. Fig. 13 is another plan view of like kind. Fig. 14 is a detail showing the

formation of one of the edges of the surface plates used in Figs. 8 to 13, inclusive. Fig. 15 is a detail of the edge of the adjacent plate designed to fit into the edge of the plate shown in Fig. 14. Fig. 16 is a plan view of my improved traction-floor, the construction of which differs from that shown in the prior figures. Fig. 17 is a detail of the construction shown in Fig. 16, giving the parts in transverse section. Fig. 18 is another detail showing one of the devices employed in the construction of my improved traction-floor; and Fig. 19 shows the preferred method which I employ for joining adjacent edges of the surfacing-sheets of the floor shown in Fig. 16, this being designed to permit the sheets to be first joined and then rolled into place like a carpet.

Referring now more particularly to Figs. 1, 2, and 3, it will be seen that in carrying out my invention, as shown in the accompanying drawings, I have provided, first, a freight house or shed 20, having within the same and at each side thereof platforms 21, the level of which is substantially the same as that of the floor of the cars 22, which are arranged to stand upon the tracks 23, immediately adjacent to the outside of the wall 24 of the freight-house. In the wall 24 are a series of doors 25, constructed as usual, to provide means opposite the doors in the cars 26 through which the goods can be taken into and brought out of the cars onto the platform.

Between the platforms 21 I provide a space of suitable width constructed with a traction-floor 27 on a lower plane than said platforms, formed with a base 28, of concrete, a wearing-face 29, of metal plates or other suitable hard wear-resisting material, and having between the concrete 28 and the wearing-face 29 a layer of elastic or semi-elastic deadening material 30, such as mineral wool or asbestos.

Upon the traction-floor 27 I provide one or more merchandise-carrying trucks 31 of a height substantially the same as that of the platform 21 and arranged to run at pleasure from any point adjacent to either of the platforms 21 to any other desired point throughout the freight-house 20, the said trucks 31 being so proportioned relative to the size of the traction-floor 27 that a plurality of trucks can be used on said traction-floor and moved about thereon in any desired direction without interfering one with another.

The trucks 31 are preferably provided with electric motors 32, supplied with current from a trolley 33, arranged to contact with a trolley-plate 34, suspended from overhead and constituting, as it were, a false ceiling above the traction-floor 27, covering practically the entire area of the latter. The trolley-plate 34 is provided with current from some suitable generator—as, for example, the dynamo indicated at 35—the return-circuit being made preferably through a ground line which the current reaches through the wheels of the

truck and the metal wearing-face of the traction-floor. The trucks may be provided with any of the ordinary forms of control device such as are usually employed, located preferably at one end, as shown at 36.

The trolley-plate 34 (see Figs. 4 to 7, inclusive) is a large flat sheet of metal sufficiently thick to afford the requisite stiffness to maintain its proper shape, suspended from the beams 37 of the building by means of rods 38, carrying screw-threaded sockets 39 and 40 at the ends thereof, and insulated from the plate 34 by means of a separating-piece of insulating material 41 and the insulated bolts 42. The suspension-rod 38 by the construction just described forms thus a means of readily adjusting the position of the trolley-plate.

Upon the back of the trolley-plate I provide ribs or reinforcements 43, at the termini whereof are connected the electric wires which supply the plate with current, these ribs serving to more evenly distribute the current to all parts of the plate. These ribs or reinforcements I make preferably of flattened shape, as shown in Fig. 5, soldered to the back of the plate and extending over the surface of the same, as shown in Fig. 4; but it is to be observed that other shapes of rib could be employed, if desired, and other arrangements thereof on the back of the trolley-plate, provided only it be so constructed as to properly distribute the current to any portion of the plate at which the trolley 33 may chance to be.

In Figs. 8 to 15 I have shown details of a construction of traction-floor in which it is designed to use cast-metal plates for the wearing-face. These plates are made in sections 44, provided upon one edge with a lip or folded part 45 of the shape shown in Fig. 14 and upon the opposite edge with a lip 46 of the shape shown in Fig. 15, these two lips being designed to engage the one within the other, as shown in Fig. 9, and to have passing through them a threaded spanner-nut 47, arranged to engage the upwardly-projecting end of a bolt 48, which is embedded in the concrete 49, as clearly shown in Fig. 9, the ends of the plates 44 being secured together, as shown in Fig. 11, and held down in position by spanner-nuts 47 engaging like bolts 48, embedded in the concrete, as shown in Fig. 10. The nuts 47 and bolts 44 are so arranged that when the floor is made perfectly true and level no projection will appear upon the upper surface thereof, the same being designed to be perfectly true and level to facilitate the movement of the trucks thereon. Between the concrete 49 and the wearing-face 27 I insert a layer of mineral wool or other like material 50 for the purpose of deadening the sound and also providing the floor with some degree of elasticity.

In Figs. 16 to 19 I have illustrated a floor construction in which sheet metal is designed to be employed instead of cast plates such as

are shown in Figs. 8 to 15. In this form of traction-floor construction the sheet-metal plates 51 are united at their adjacent edges by means of strips 52, held by rivets 53, as shown in Fig. 19, the whole being then laid down in proper position and held by means of bolts 48, the same as used in connection with the cast-iron floor, and screw-threaded spanner-nuts 47 engaging the upper ends of the bolt through the instrumentality of holes cut down through to the strip 52, as shown in Fig. 17, or countersunk holes 54, as shown in Fig. 18. In this construction, the same as in the cast-metal construction, the concrete 49 and the metal wearing-face 27 are separated by means of a deadening semi-elastic layer 50 of mineral wool or some other like material, and the current passes down to the ground through the anchor-bolts, which have their heads projecting below the concrete.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A merchandise-transfer apparatus, comprising a track, a platform adjacent thereto, a traction-floor adjacent to said platform upon the side opposite said track, a carrying-truck constructed to move upon said traction-floor from one part of said platform to another, a motor for driving said truck, a trolley for supplying current to said motor, and a trolley-plate above said traction-floor to supply current to said trolley, substantially as described.

2. A merchandise-transfer apparatus, comprising a plurality of platforms, a plane-surface traction-floor between said platforms on a plane lower than said platforms, a carrying-truck arranged upon said floor and free to move in any direction thereon from any part of either of said platforms to any other part thereof, a motor for moving said truck, a trolley for supplying current to said motor, and a trolley-plate suspended above said traction-

floor in position to supply current to said trolley, substantially as described.

3. A merchandise-transfer apparatus, comprising a track, a platform adjacent thereto, a traction-floor adjacent to said platform upon the side opposite said track, a carrying-truck constructed to move upon said traction-floor from one part of said platform to another, a motor for driving said truck, a trolley for supplying current to said motor, and a trolley-plate suspended above said traction-floor in position to supply current to said trolley, said plate being carried by insulated supports, substantially as described.

4. A traction-floor for transfer-trucks, comprising a concrete foundation, a metal wearing-face, a semi-elastic deadening material between said metal wearing-face and said concrete foundation, a truck constructed to run on said floor, a motor for moving said truck, and means for supplying said motor with electric current including said floor and electrical connections therefor, substantially as described.

5. A trolley-plate having its lower surface plane and its upper surface provided with ribs or projections, substantially as described.

6. A trolley-plate having its lower surface plane and its upper surface provided with current-carrying ribs or projections designed to distribute the current evenly over said plate, substantially as described.

7. A trolley-plate provided with a plurality of suspension devices, and means for adjusting the level of said plate, substantially as described.

8. A trolley-plate provided with a plurality of adjustable suspension devices, substantially as described.

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