No. 715,435. Patented Dec. 9, 1902.

A. W. SWANITZ.

MERCHANDISE TRANSFER APPARATUS.

(Application filed Nov. 15, 1900.)

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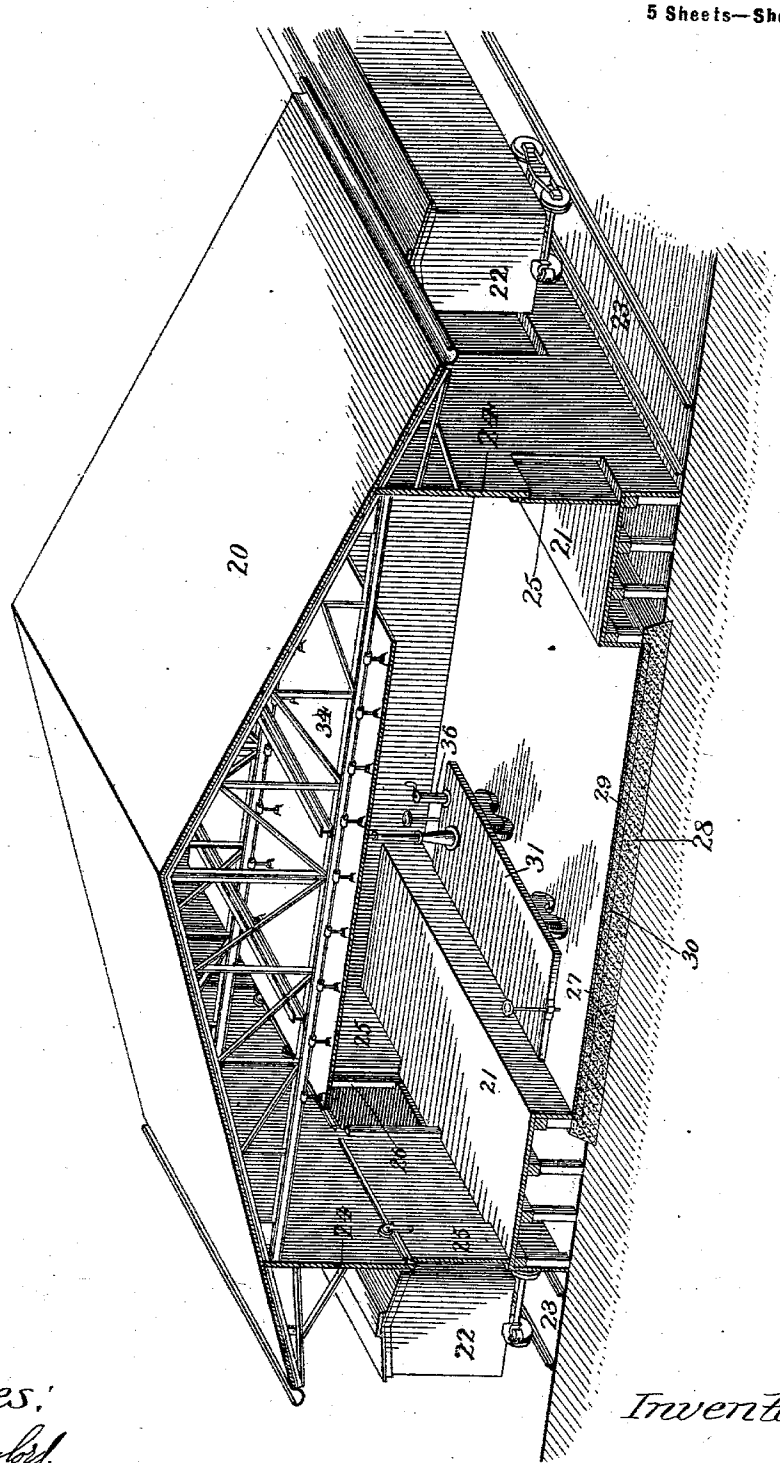


Fig. 1.

Witnesses:
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John Enders Jr.

Inventor:
Alexander W. Swanitz
By Paul Synnestvedt Atty.

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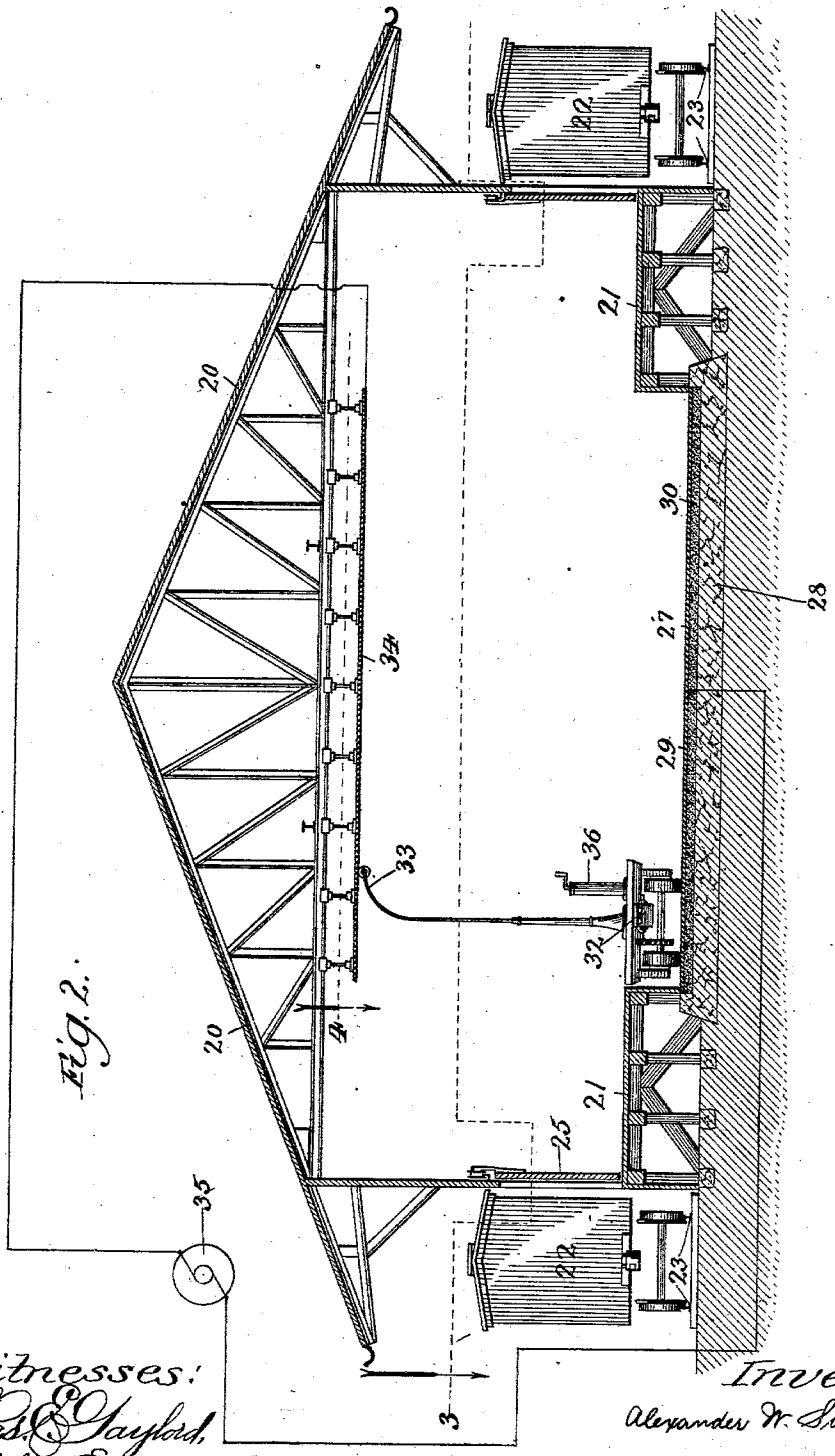


Fig. 2.

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Atty

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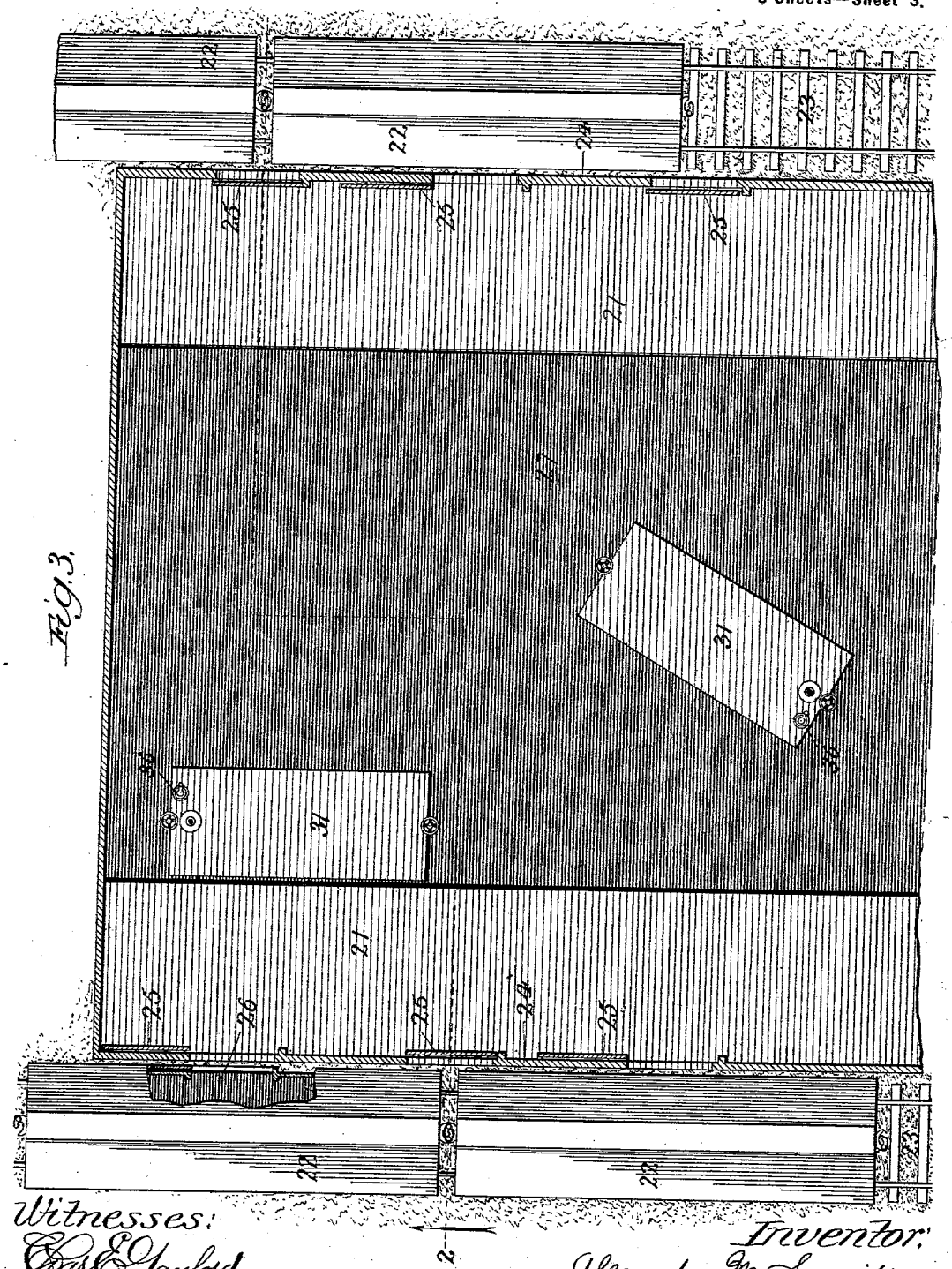


Fig. 3.

Witnesses:
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(No Model.) 5 Sheets—Sheet 4.

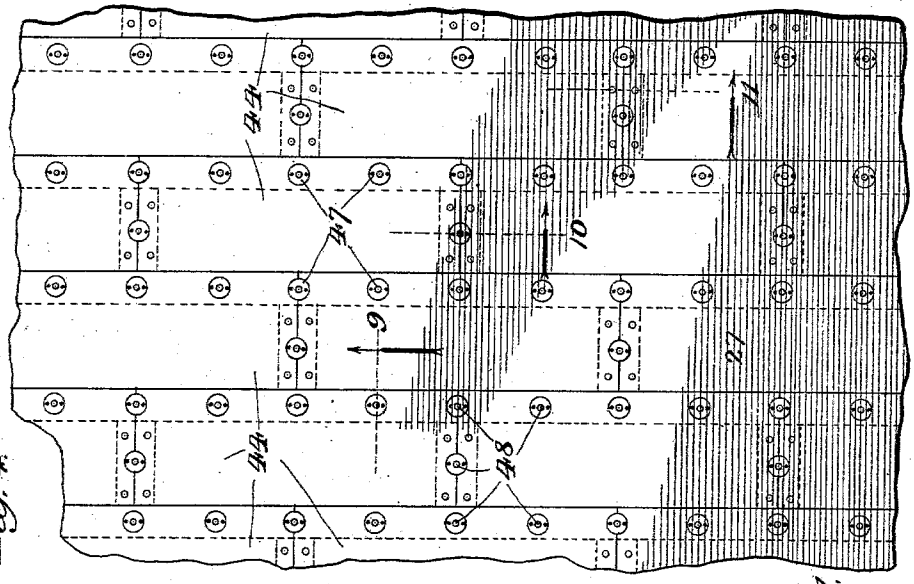


Fig. 4.

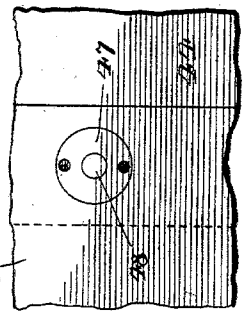


Fig. 8.

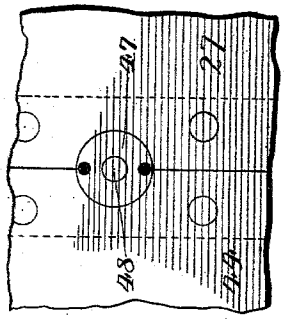


Fig. 9.

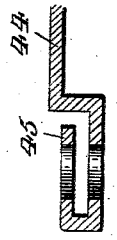


Fig. 11.

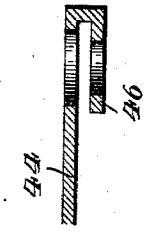


Fig. 10.

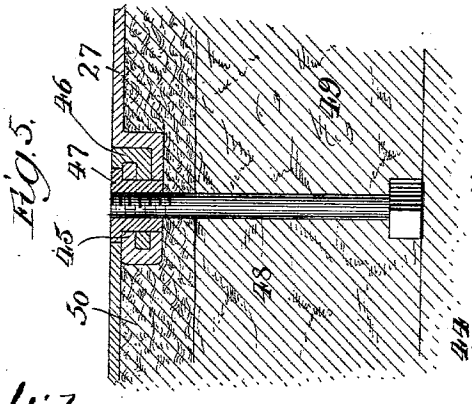


Fig. 5.

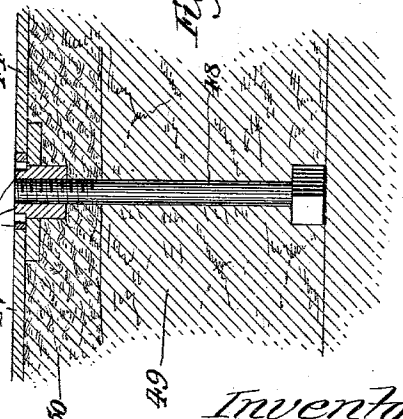


Fig. 6.

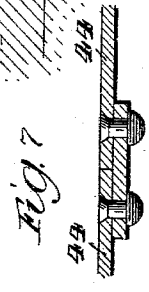


Fig. 7.

Witnesses:
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No. 715,435. Patented Dec. 9, 1902.

A. W. SWANITZ.

MERCHANDISE TRANSFER APPARATUS.

(Application filed Nov. 15, 1900.)

(No Model.) 5 Sheets—Sheet 5.

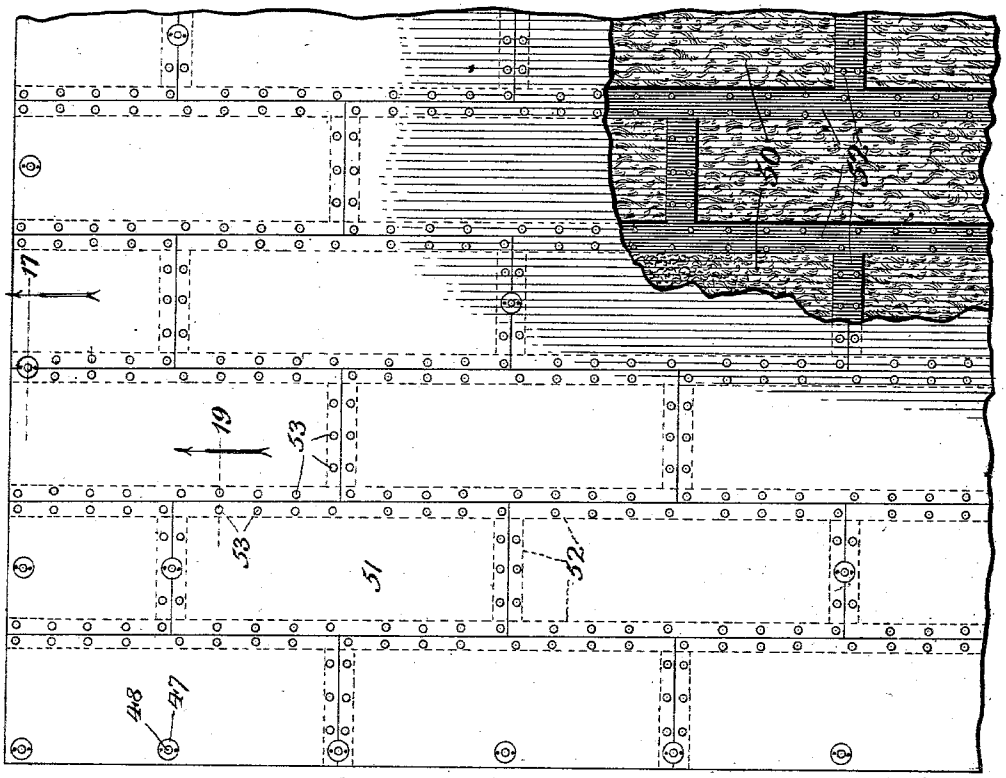


Fig. 12.

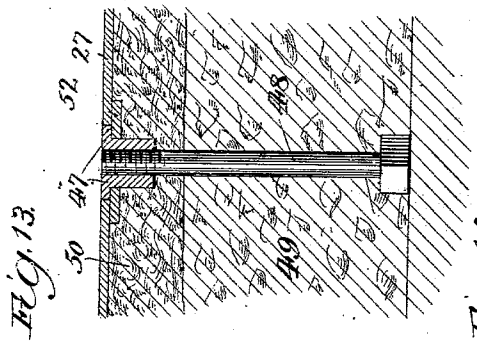


Fig. 13.

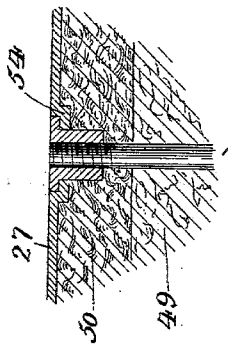


Fig. 14.

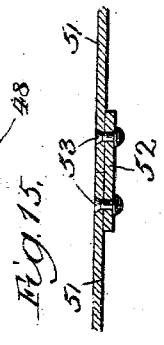


Fig. 15.

Witnesses:
Chas. E. Gaylord.
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Inventor:
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By Paul Synnestvedt
Atty.

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UNITED STATES PATENT OFFICE.

ALEXANDER WILLIAM SWANITZ, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE SWANITZ COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF DELAWARE.

MERCHANDISE-TRANSFER APPARATUS.

SPECIFICATION forming part of Letters Patent No. 715,435, dated December 9, 1902.

Application filed November 15, 1900. Serial No. 36,580. (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. Hertofore 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 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 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 of a portion of a traction-floor, which constitutes an important part of my invention. Fig. 5 is a detail showing the construction of the floor in section. Fig. 6 is another detail showing another part of the floor construction. Fig. 7 is another detail showing the method of joining certain of the plates used in the traction-floor. Fig. 8 is a plan view of one of the floor details, somewhat enlarged. Fig. 9 is another plan view of like kind. Fig. 10 is a detail showing the formation of one of the edges of the surface-plates used in Figs. 4 to 9, inclusive. Fig. 11 is a detail of the edge of the adjacent plate designed to fit into the edge of the plate shown in Fig. 10. Fig. 12 is a plan view of my improved traction-floor, the construction of which differs from that shown in the prior figures. Fig. 13 is a detail of the construction shown in Fig. 12,

giving the parts in transverse section. Fig. 14 is another detail showing one of the devices employed in the construction of my improved traction-floor; and Fig. 15 shows the preferred method which I employ for joining adjacent edges of the surfacing-sheets of the floor shown in Fig. 12, 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 platforms. Between the platforms 21 I provide a space of suitable width constructed with a traction-floor 27 on a lower plane than said platform, 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 asbesbos. Upon the traction-floor 27 I provide one or more merchandise-carrying trucks 31 of a height substantially the same as that of the platforms 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 is a large flat sheet of metal sufficiently thick to afford the requisite stiffness to maintain its proper shape suspended from the beams of the building. It is evident that any particular construction of this electrical connection or any other preferred means of supplying power may be used. I have fully set forth and claim the electrical apparatus which I prefer for this purpose in my Patent No. 689,601, issued to me December 24, 1901.

In Figs. 4 to 11 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. 10, and upon the opposite edge with a lip 46, of the shape shown in Fig. 11, these two lips being designed to engage the one within the other, as shown in Fig. 5, 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. 5, the ends of the plates 44 being secured together, as shown in Fig. 7, and held down in position by spanner-nuts 47 engaging like bolts 48, embedded in the concrete, as shown in Fig. 6. 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. 12 to 15 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. 4 to 11. 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. 15, 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. 13, or countersunk holes 54, as shown in Fig. 14. 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 plurality of platforms, a plain surface traction-floor between said platforms, a plurality of motor-driven trucks mounted upon said floor and movable thereon in any direction from any part of either of said plat-

forms to any other part thereof without interference the one with another, substantially as described.

2. A merchandise-transfer apparatus comprising a track adapted to hold cars carrying merchandise to be transferred, a traction-floor, a plurality of motor-driven vehicles mounted upon said traction-floor and constructed to move thereon from one part thereof to another, said floor being constructed so as to permit said motor-driven vehicles to pass one another upon said traction-floor without interference the one with another, and a protective covering extending over said traction-floor and track, substantially as described.

3. A merchandise-transfer apparatus having a traction-floor, comprising a concrete foundation, a metal wearing-surface, and a layer of semi-elastic deadening material between said metal wearing-face and said concrete foundation, substantially as described.

4. A traction-floor for transfer-trucks, comprising a concrete foundation, a metal wearing-face, a layer of semi-elastic deadening material between said metal wearing-face and said concrete foundation, said metal wearing-face being constructed of a plurality of metal sheets joined at their edges, and means for anchoring said sheets to said concrete foundation, substantially as described.

5. A traction-floor for transfer-trucks, comprising a concrete foundation, a metal wearing-face, a layer of semi-elastic deadening material between said metal wearing-face and said concrete foundation, said metal wearing-face being constructed of a plurality of metal sheets joined at their edges, and means for anchoring said sheets to said concrete foundation, said anchoring means, as well as said means for joining the edges, being constructed without projections upon the upper surface of said wearing-face, substantially as described.

In testimony whereof I have hereunto signed my name in the presence of the subscribed witnesses.

ALEXANDER WILLIAM SWANITZ.

Witnesses:
PAUL SYNNESTVEDT,
PAUL CARPENTER.