J. M. BARRETT.

RAILWAY FREIGHT TRANSFER STATION.

APPLICATION FILED SEPT. 30, 1910.

976,140.

Patented Nov. 22, 1910.

3 SHEETS—SHEET 1.

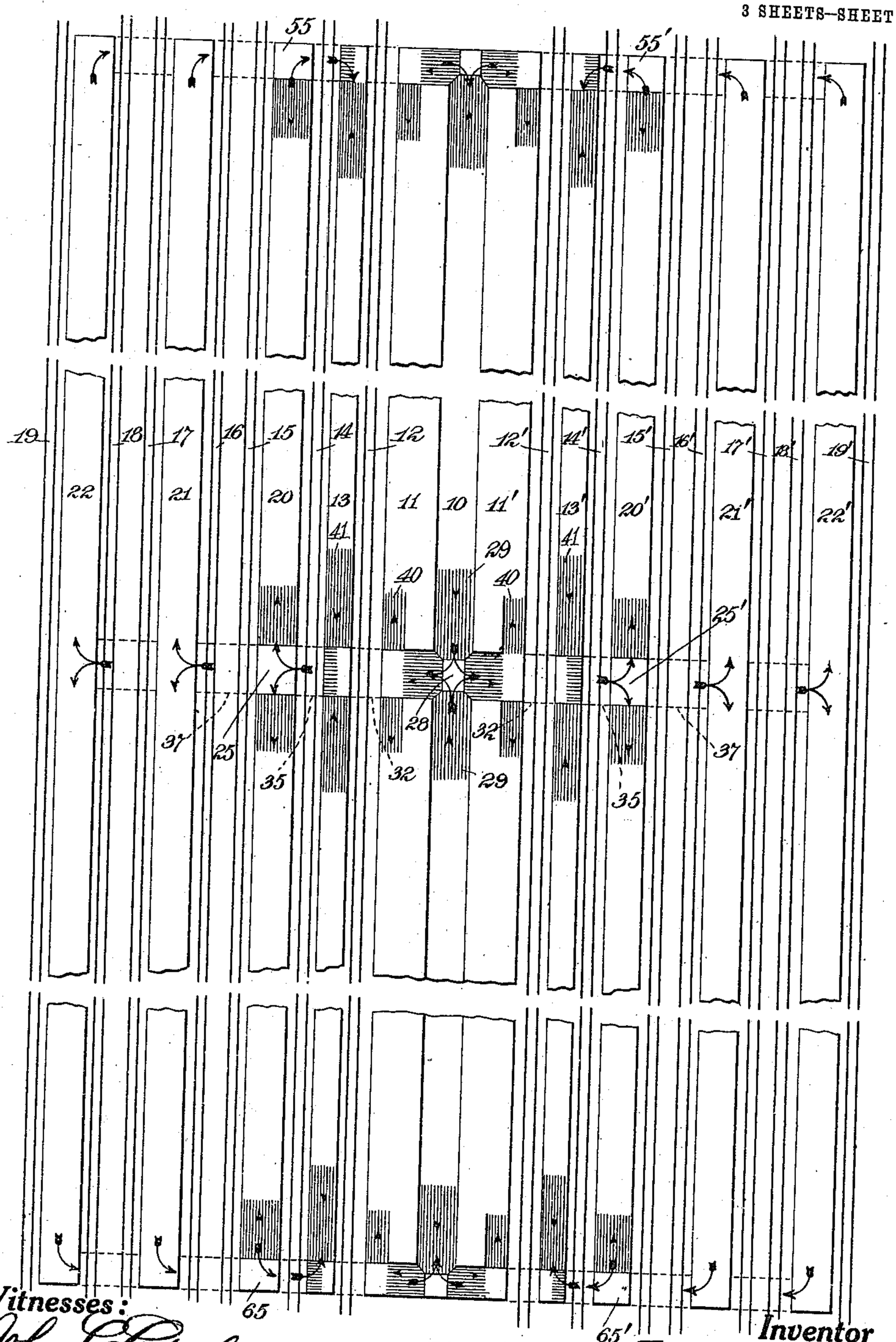

Fig. 1

Witnesses:

John L. Lotsch.

Gustav Schellack

Inventor

James M. Barrett

By Dyer & Dyer & Taylor

Attorneys.

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3 SHEETS—SHEET 2.

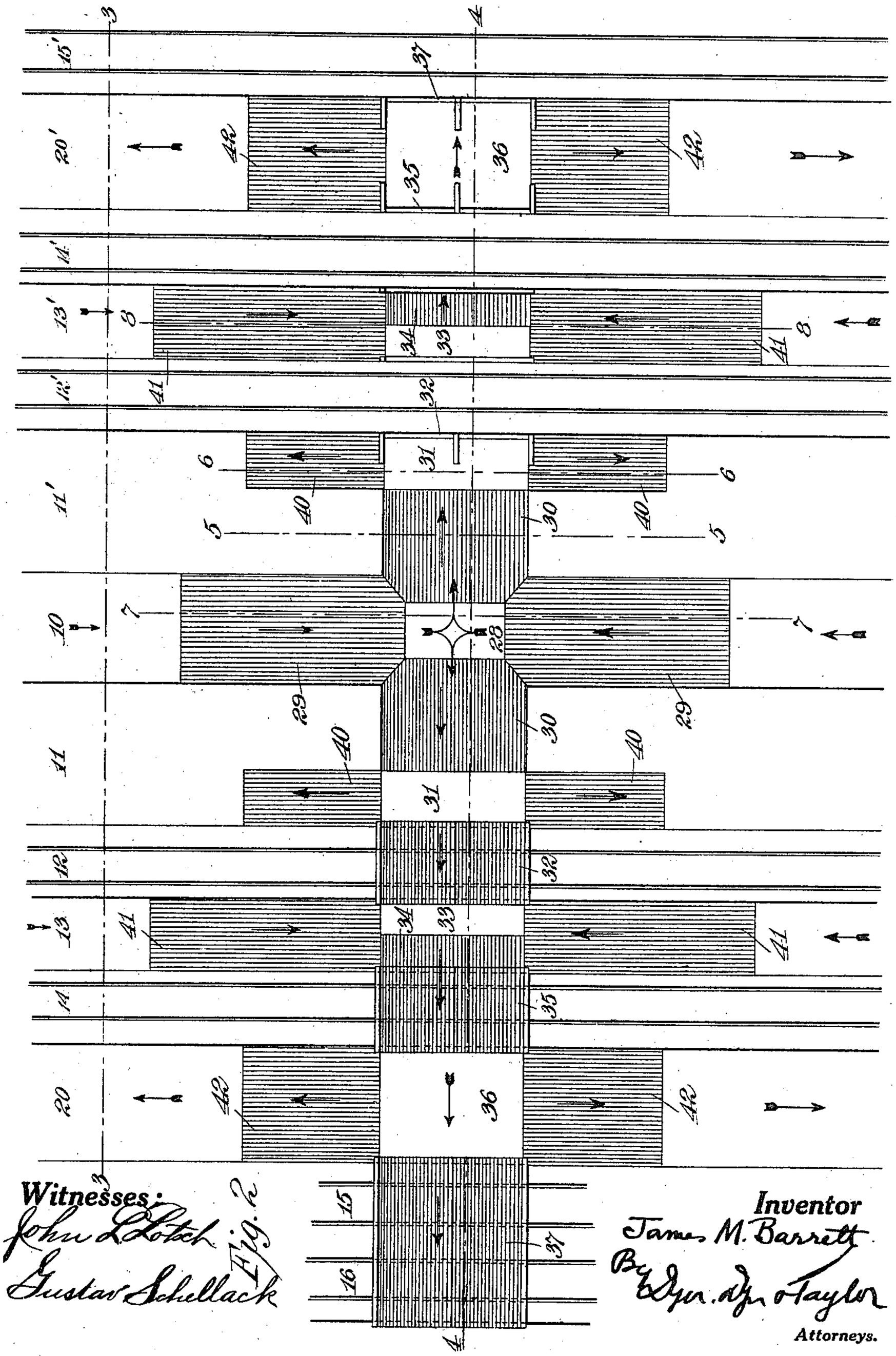

Fig. 2.

Witnesses:
John L. Lotsch.
Gustav Schellack

Inventor
James M. Barrett.
By Dyer, Dyer & Taylor
Attorneys.

J. M. BARRETT.

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3 SHEETS—SHEET 3.

Fig. 3

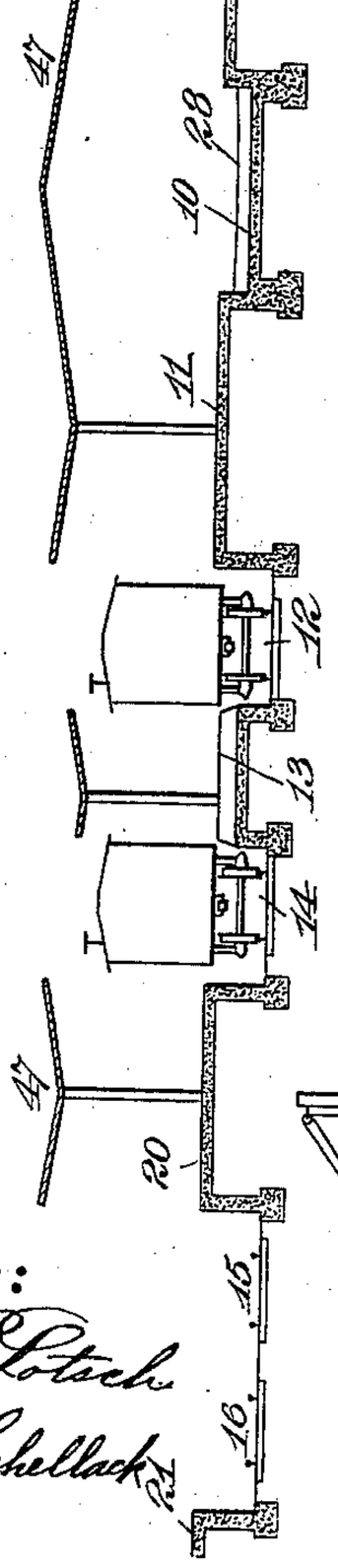

Fig. 4

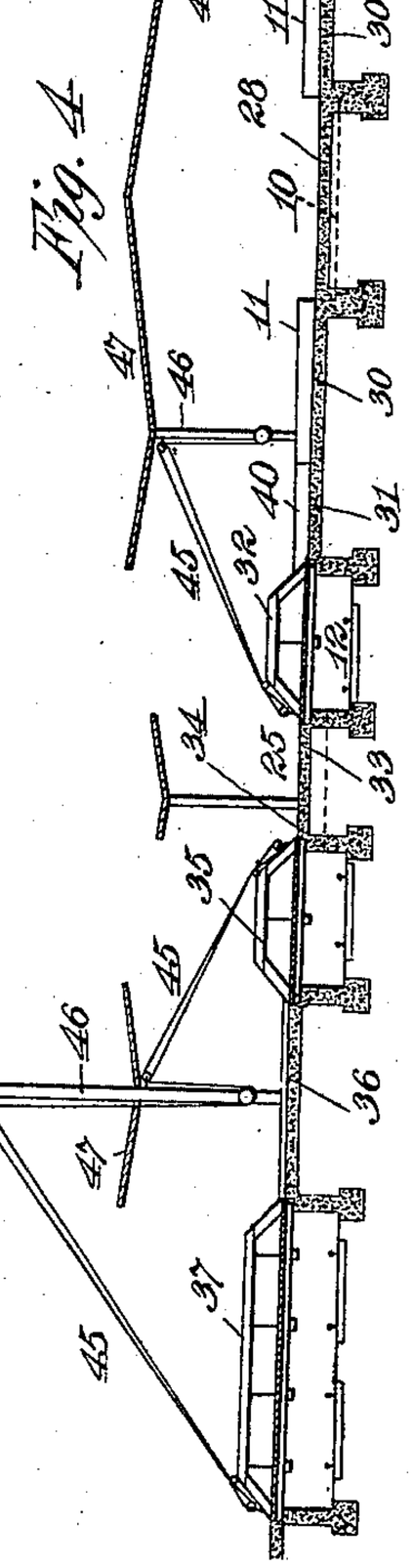

Fig. 7

Fig. 8

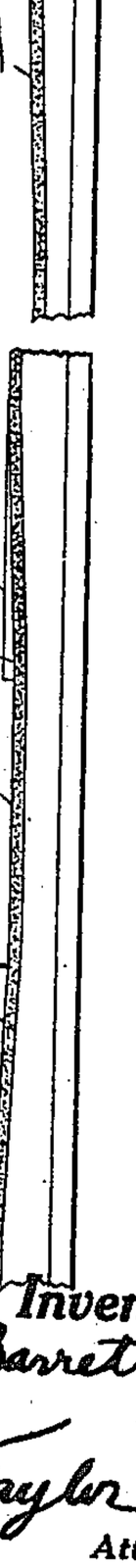

Fig. 5

Fig. 6

Witnesses:

John L. Lotsch

Gustav Schellack

Inventor:

James M. Barrett

By Dyer Dyer & Taylor

Attorneys.

UNITED STATES PATENT OFFICE.

JAMES M. BARRETT, OF JERSEY CITY, NEW JERSEY.

RAILWAY FREIGHT-TRANSFER STATION.

976,140. Specification of Letters Patent. Patented Nov. 22, 1910.

Application filed September 30, 1910. Serial No. 584,637.

To all whom it may concern:

Be it known that I, JAMES M. BARRETT, a citizen of the United States, and a resident of Jersey City, county of Hudson, State of New Jersey, have invented an Improvement in Railway Freight-Transfer Stations, of which the following is a full, clear, and exact description.

The invention relates to railway freight transfer stations, and has for its object to provide an arrangement of tracks, platforms and runways such that the loading and unloading of cars and general handling and distribution of freight is facilitated.

In most freight transfer stations now in use, a single platform is employed, upon which both incoming and outgoing freight is handled. The freight cars stand on a series of tracks parallel to the platform and freight in the cars on the outer tracks is handled through the doorways of those standing closer to the platform, by means of gangplanks thrown between car doors. This type of station has many limitations which interfere with its efficiency. Without attempting to point out all of the objections to a station of this kind, it may be mentioned that a large amount of switching is often necessary to aline the doors of cars on adjacent tracks, particularly when, as often happens, such cars are of different sizes. In stations of this kind also, during the loading of cars, those on the inner tracks often cannot be completely loaded at a certain time, because of the necessity of leaving open gangways through the doorways in order through them to reach the outer strings of cars; and under this condition the cars that require open gangways cannot be completely loaded and the freight in the ends of the cars must be graded to the floor to prevent shifting and toppling over when cars are moved. It is also obvious that the filling, closing and removal of cars on the inner tracks and adjacent to the platform is often delayed because of the slow handling of other cars, causing expense and delay in getting freight to its destination. Another objection to such stations resides in the difficulty of handling large pieces of freight due to the impracticability of utilizing power driven trucks or like labor saving devices, on account of the narrow gangways between cars and the fact that platform, gangways and car floors are all on the same level. In such stations blockades in the handling of freight are frequent.

By my invention, as hereinafter described, I avoid the objections above mentioned and provide for the sorting, distribution, loading and unloading of freight in a more expeditious and economical manner.

Referring to drawings, Figure 1 is a plan view of my new railway freight transfer station, showing the arrangement of tracks, platforms and runways which I consider most desirable. Fig. 2 is a plan view similar to Fig. 1, but on a larger scale, of the central portion of my station, illustrating particularly the central transverse runway and the inclined portions of the longitudinal runways and platforms intercepting said transverse runway. Fig. 3 is a section on the line 3—3 of Fig. 2, showing cars standing on certain of the tracks. Fig. 4 is a section on the line 4—4 of Fig. 2, illustrating the central transverse gangway and the bridges therein. Fig. 5 is a section on the line 5—5 of Fig. 2. Fig. 6 is a section on the line 6—6 of Fig. 2. Fig. 7 is a section on the line 7—7 of Fig. 2; and Fig. 8 is a section on the line 8—8 of Fig. 2.

Like characters are used throughout the several views to refer to the same parts. Unfeathered arrows are used to indicate upward inclines in portions of the runways and platforms, and feathered arrows indicate the general direction in which trucks carrying freight should move.

In the particular arrangement shown, my freight transfer station is divided longitudinally by a central depressed runway 10, on each side of which are sorting and distributing platforms 11, 11′, which slope upward slightly from their adjacent toward their outer edges. The difference in elevation between the runway 10 and the adjacent edges of platforms 11, 11′ is preferably made equal to the height of hand or power driven platform trucks, generally of the four-wheel type, upon which a considerable amount of freight can be handled at one time. On the outside of platforms 11, 11′ and adjacent thereto, are tracks 12, 12′, which are on such a level that the floors of cars on said tracks will be substantially level with the adjacent edges of platforms 11, 11′. These tracks 12, 12′ are used for cars containing incoming freight to be sorted and transferred. Adjacent to tracks 12, 12′ are

auxiliary depressed runways 13, 13′, which are on such a level that the platforms of trucks standing thereon will be level with the floors of cars on tracks 12, 12′. Keeping in mind, therefore, that the platforms 11, 11′ slope upward slightly from their inner to their outer edges, as mentioned above, it is obvious that the auxiliary runways 13, 13′ are on a slightly higher elevation than the central runway 10. Beyond the runways 13, 13′ and parallel thereto, are alternately arranged any desired number of tracks and platforms as indicated in the drawings. For the purpose of reference hereinafter, these tracks are denoted by the characters 14 to 19 and 14′ to 19′, and the platforms are denoted by 20 to 22, and 20′ to 22′.

Extending transversely from the center of the longitudinal runway 10 and across all the tracks and intercepting all the platforms, is a transverse runway, that part thereof on one side of the runway 10 being denoted in Fig. 1 by the character 25, while that on the other side is denoted by the character 25′. These parts of the transverse runway start from a small horizontal platform 28, reached from the two parts of the longitudinal runway 10 up inclines 29. From the platform 28, the runways 25 and 25′ extend in opposite directions up inclines 30, over horizontal platforms 31, up inclined bridges 32 over the tracks 12 and 12′, over horizontal platforms 33, up inclines 34, up inclined bridges 35 over the tracks 14 and 14′, over horizontal platforms 36, and up inclined bridges 37 over tracks 15, 16 and 15′, 16′ to the remaining portions of the transverse runways 25 and 25′ which are horizontal and on a level with the platforms 21, 22 and 21′, 22′, and any other platforms which may be used. From the portions of the distributing platforms 11 and 11′ on each side of the transverse runway inclines 40 extend down to the horizontal platforms 31; from the auxiliary depressed runways 13 and 13′, inclines 41 extend upwardly to the horizontal platforms 33; and from the platforms 20, 20′ inclines 42 extend downwardly to the horizontal platforms 36. Of the inclines mentioned, inclines 40 are intended for use merely by two-wheel hand trucks, while the other inclines are used as well by motor driven platform trucks. All the inclines above referred to have substantially the same easy grade and the difference in elevation between the horizontal platforms which the inclines connect is graphically shown by the length of said inclines. In order to further facilitate reading of the drawings, unfeathered arrows are applied to the various inclines to indicate the direction of upward slope. Figs. 5 to 8 will further assist to an understanding of the arrangement of the transverse runway and the inclines used in connection therewith.

The bridges 32, 35 and 37 may be of any suitable construction and may be operated in any desired manner by hand or power. As shown, they are hinged at one side and may be hoisted by means of blocks and tackle 45, which extend from the other side of bridges to uprights 46, which may form part of the shed structure 47 over the platforms and runways. The transverse runways 25 and 25′ may be duplicated at different points in the station as many times as desired, and in the arrangement shown are duplicated at each end of the station, these runways being denoted in Fig. 1 by characters 55, 55′ and 65, 65′.

The freight transfer station above described is operated as follows: Cars with incoming freight are run onto tracks 12 and 12′. The miscellaneous small freight for different points is unloaded onto the sorting platforms 11 and 11′, and after being assembled according to destination, is picked up by trucks on the runway 10. Whenever there is sufficient tonnage for one point, such freight is unloaded through the opposite car door directly onto trucks standing on auxiliary runways 13, 13′, and is carried directly to the proper outgoing car. The cars for outgoing freight are placed on tracks 14 to 19 and 14′ to 19′, and are loaded directly from platform trucks run up on the platforms adjacent the cars. Trucks should always be run upon runways and platforms in the direction indicated by the feathered arrows, which will avoid confusion, my plan providing for a constant movement in one direction over a given route, resulting in a return of the empty trucks to the starting point, viz., the central runway 10, 10′.

It is obvious with the arrangement described above, that it is never necessary to lift heavy freight from a car floor or platform up on to a truck. This will be understood when it is remembered that the power driven trucks upon which most of the freight is to be transferred are loaded only from the platforms 11 and 11′ or loaded cars on track 12 and 12′, while such trucks are standing on depressed runways 10 and 10′ or 13 and 13′, the truck floors being on a level with the platforms or car floors. The usually heavy cost of labor and devices for lifting freight is therefore eliminated. It is obvious, furthermore, that in the transfer station just described, each car can be moved immediately when it is emptied or loaded, without any limitations other than those which always exist where there is a line of cars on the same track. The releasing of empty cars and the shipping of loaded ones, is therefore greatly facilitated.

While I have shown and described one arrangement in which my invention may be embodied, I realize that many modifications

may be made without departing from the spirit of the invention, and I intend to cover all such modifications in the following claims:

1. A railway freight transfer station, comprising a central longitudinal depressed runway, platforms and tracks arranged alternately on each side of said central runway and parallel thereto and an inclined transverse runway extending across said central runway and across said tracks and up to said platforms.

2. A railway freight transfer station comprising a central longitudinal depressed runway, platforms and tracks arranged alternately on each side of said central runway and parallel thereto, a plurality of inclined transverse runways extending from said central runway in each direction over the tracks and up to said platforms.

3. A railway freight transfer station comprising a central longitudinal depressed runway, platforms and tracks arranged alternately on each side of said runway and parallel thereto, a central inclined transverse runway crossing said first mentioned runway and said tracks and leading up to said platforms and similar transverse runways at each end of the station.

4. A railway freight transfer station comprising a central longitudinal depressed runway, platforms and tracks arranged alternately on each side of said central runway and parallel thereto, and an inclined transverse runway extending across said central runway and over removable bridges across said tracks and up to said platforms.

5. A railway freight transfer station comprising a central longitudinal depressed runway, platforms and trucks arranged alternately on each side of said central runway and parallel thereto, a plurality of inclined transverse runways extending from said central runway in each direction over bridges across said tracks and up to said platforms, certain of which platforms have inclined portions at their ends leading to said transverse runways, whereby trucks may run from said central longitudinal runway to said platforms on easy grades.

6. A railway freight transfer station comprising a central longitudinal depressed runway, a sorting platform on each side thereof, sloping toward the central runway, a track for incoming freight adjacent each of said platforms, an auxiliary longitudinal depressed runway adjacent each of the said tracks, alternate tracks and platforms arranged adjacent to each of said auxiliary runways, and inclined transverse runways extending from said central longitudinal runway over movable bridges across all the tracks and by inclines connecting with the auxiliary runways and the platforms.

JAMES M. BARRETT.

Witnesses:
JOHN L. LOTSCH,
J. F. COLEMAN.