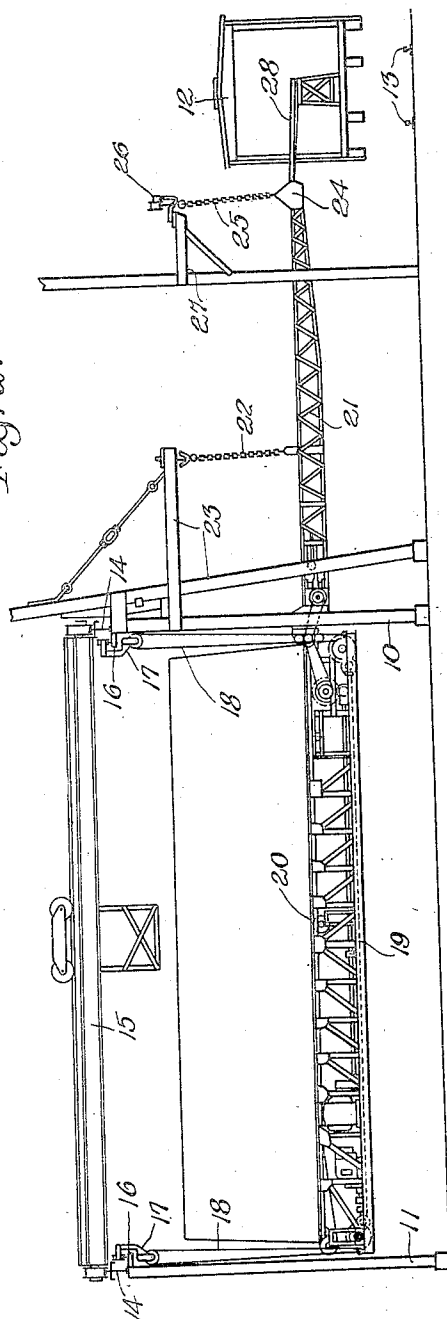


W. W. WALLACE.
PLURAL BELT CONVEYER.
APPLICATION FILED MAR. 1, 1912.

Patented Nov. 12, 1912.
3 SHEETS-SHEET 1.

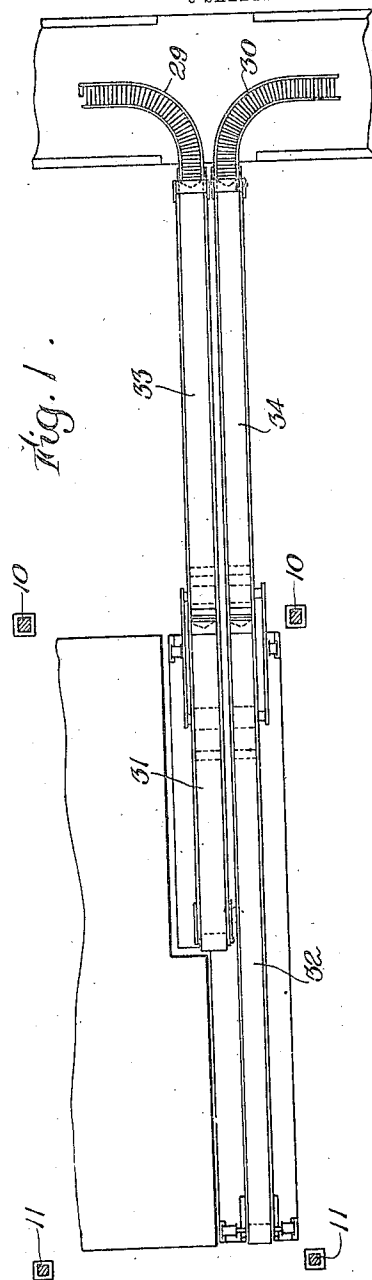
1,044,428.

Fig. 2.



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R. G. Hersey

Fig. 1.



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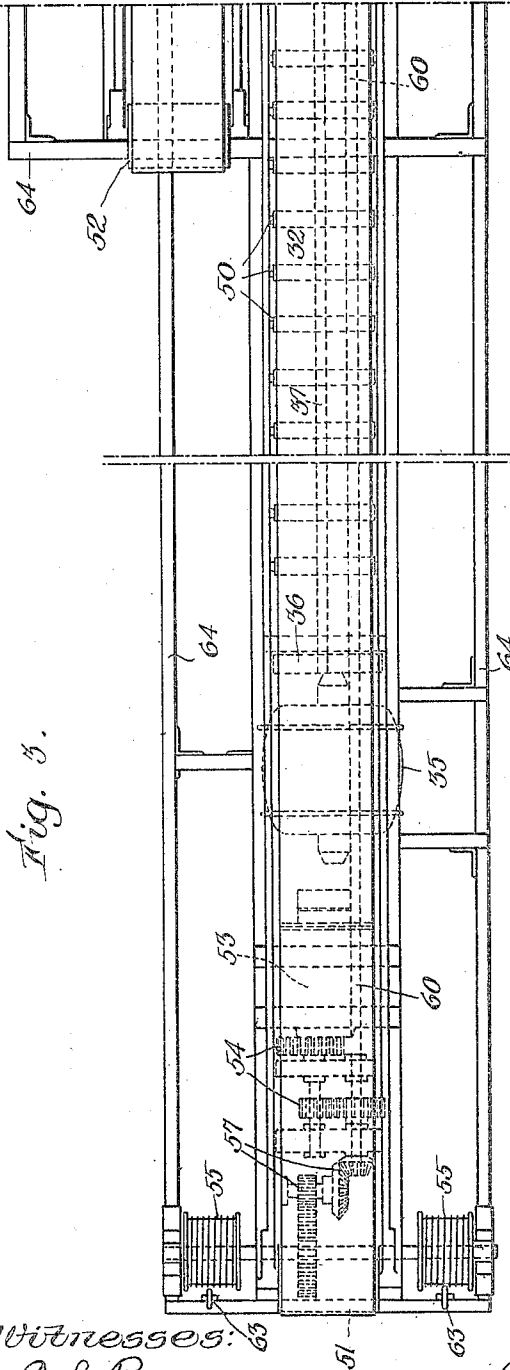


Fig. 3.

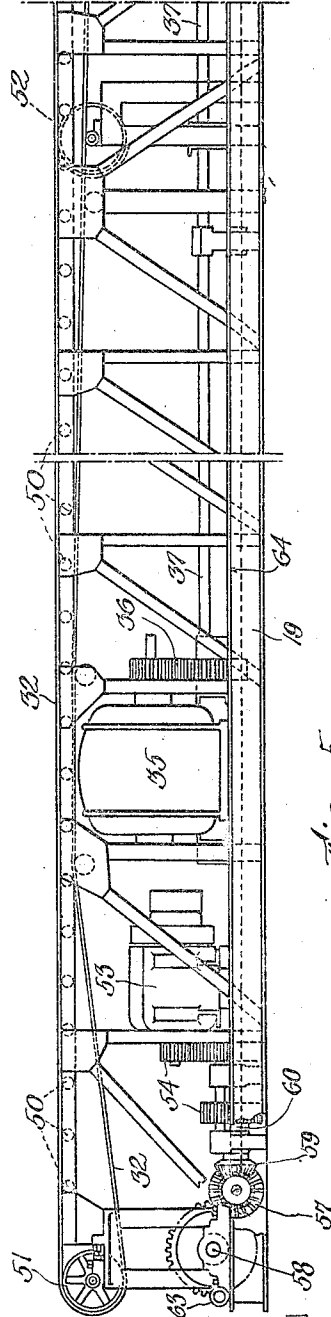


Fig. 5.

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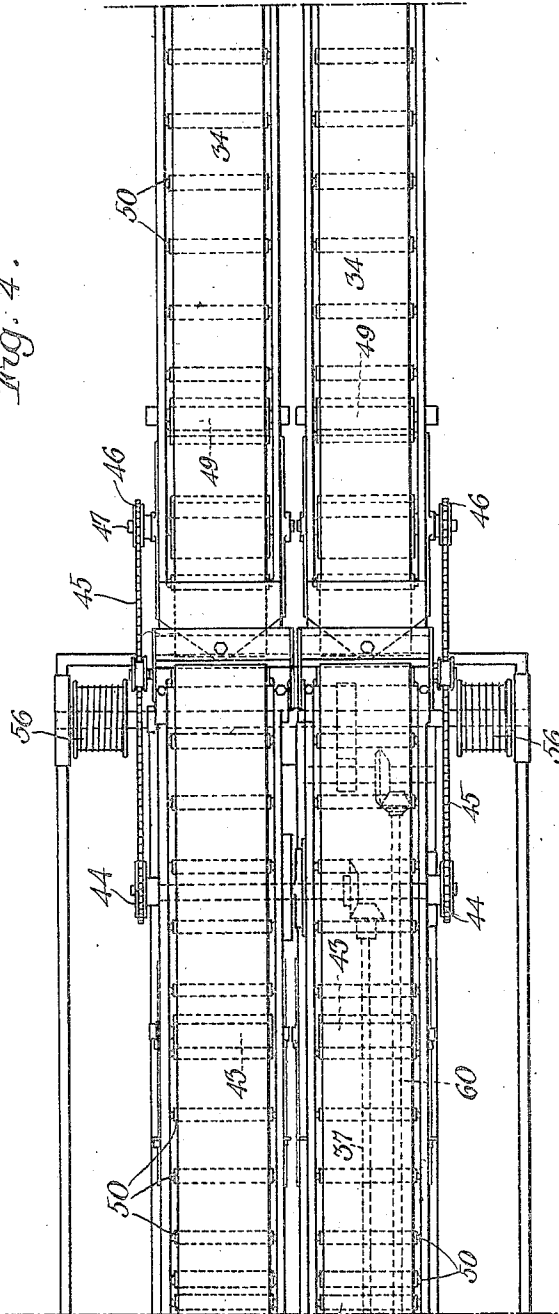
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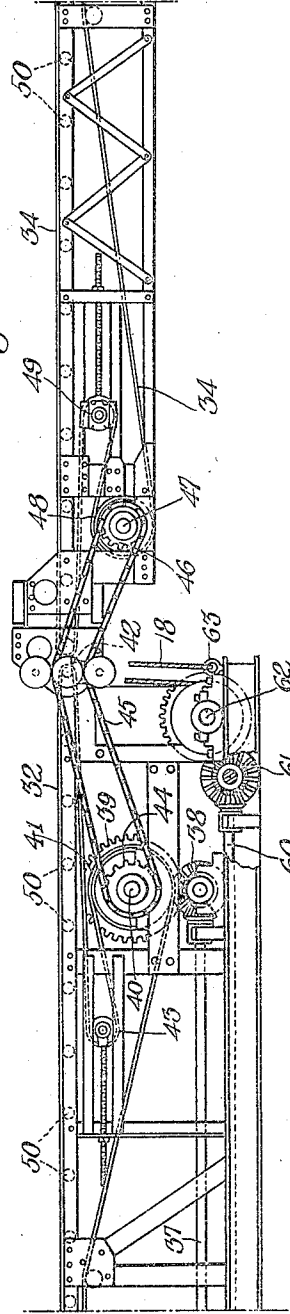
3 SHEETS-SHEET 3.

Fig. 4.



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Fig. 6.



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UNITED STATES PATENT OFFICE.

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PLURAL-BELT CONVEYER.

1,044,428.

Specification of Letters Patent.

Patented Nov. 12, 1912.

Application filed March 1, 1912. Serial No. 680,867.

To all whom it may concern:

Be it known that I, WILLIAM W. WALLACE, a citizen of the United States, and resident of Chicago, county of Cook, State of Illinois, have invented an Improvement in Plural-Belt Conveyers, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

This invention relates to apparatus for transferring material, especially for loading cars or like carriers, and, while having other and more general fields of usefulness, is well adapted for the handling of bricks or like articles, and more particularly for the loading of bricks from a kiln or other storage space into railroad cars, the present illustrative embodiment being shown as for this use.

The principal objects of the invention are to provide a conveyer system adapted to have different portions thereof loaded simultaneously from different portions of the kiln or other storage space, and in conjunction therewith in the more complete embodiment herein shown, to provide a conveyer arrangement adapted to load into both ends of a car at once.

The above, and other objects of the invention, will be better understood from the following detailed description, taken in connection with the accompanying drawings, and will be thereafter pointed out in the appended claims.

Referring to the drawings, Figure 1 is a diagrammatic plan view, showing the general organization of my improved mechanism; Fig. 2 is a corresponding diagrammatic side view; Figs. 3 and 4 are complementary views which, taken together, constitute a plan of the receiving portion of the improved machine; and Figs. 5 and 6 are complementary views which, taken together, constitute a side elevation corresponding to the plan of Figs. 3 and 4.

In the illustrative embodiment of the invention shown, the conveyer system is arranged to be loaded from a kiln space extending between series of posts 10, 10 and 11, 11 at opposite sides thereof, only two of such posts at either side being shown, and the conveyer is arranged to deliver the bricks to cars, one of which is designated 12 on a track 13, which may extend along in

general parallelism with the kiln. Trackways 14 are shown mounted on the tops of the posts 10, 11 for movement of a crane 15 over the kiln space, and, in the practice of the present invention, another trackway 16 is also carried at the upper parts of these posts, and with this trackway are engaged depending roller supports 17, carrying rollers over which are looped cables 18 supporting the ends of a bridge support 19, which carries the receiving portion of the conveyer system, this portion being thus adjustable through the length of the kiln by the traveling of the supports 17 along the trackway 16, and vertically through the height of the kiln by manipulation of the supporting cables 18, as later described. The receiving portion of the conveyer, designated generally 20, which is carried by the bridge support 19, delivers to an intermediate conveyer portion, which is carried by a framework 21, having its end which connects with the conveyer portion 20, supported at a like elevation in receiving relation thereto by any suitable means, shown as a chain 22, depending from a bracket and standard support 23. The delivery end of this intermediate conveyer portion is supported at a normally fixed elevation on a rest 24 held at the proper elevation for gravity delivery into a car by a chain or cable 25, mounted for movement as seen at 26 along a trackway, having a column support as at 27. The gravity conveyer from the point 24 into the car is indicated at 28, this consisting preferably of two oppositely branching portions 29, 30 leading to the opposite ends of the car, and each of said portions having a separate conveyer belt supply connection to be described.

The receiving conveyer portion 20 is formed of a plurality, shown as two, conveyer belts 31, 32 arranged side by side, the belt 32 extending entirely across the kiln space, and the belt 31 extending approximately half way across. The belt 31 is shown as delivering through an intermediate conveyer portion 33 to the gravity conveyer branch 29 leading into one end of the car, and the belt 32 delivering through the intermediate conveyer portion 34 to the branch 30, leading to the other end of the car. This arrangement enables the belt 32 to be loaded from the bricks at the side of the kiln farthest from the car, while the

belt 31 is being loaded by other operatives from the portion of the kiln nearer the car, both belts thus being adapted to carry full loads to simultaneously fill both ends of the car. This arrangement not only enables cars to be loaded from all parts of the kiln space much more rapidly than heretofore, but it also enables the work to be more easily and conveniently performed, since the bridge support 19 can be adjusted to bring both the belt portions 31, 32 up close to the bricks which are to be loaded next thereon, without requiring the bricks for loading the belt 32 to be lifted over the belt 31, which difficult and laborious proceeding would be necessary if the belt 31 extended all the way across the kiln.

Any desired mechanism may be arranged to impart power impulse to the belt portions 31, 32, 33, 34, and to adjust the support 19 through the kiln space. As shown, the means for driving the conveyer belts consists in a motor 35 mounted on the bridge support 19, and connected by gearing 36 to a shaft 37 extending to near the forward end of the platform and connected by beveled gearing 38 and spur gearing 39 to a shaft 40, on which is fixed a drum 41, having portions around which the belts 31, 32 are looped, these belts extending around rollers 42 at the inner end of the top of the bridge support, and having suitable tension devices 43. The shaft 40 also has fixed thereon sprockets 44 at either end driving sprocket chains 45, which pass around sprocket wheels 46 on a shaft 47, to which are fixed drum portions 48. The intermediate belt portions 33, 34 are looped around these drum portions with suitable take-up devices 49; it will be understood that these belt portions are supported at their ends, and also at intervals along their operative reaches on rollers 50, as is usual in such belt conveyers. The outer extremities of the operative reaches of loading belts 31, 32 pass around drums 51, 52, suitably journaled on the bridge support. A second motor 53 is mounted on the support 19 and is connected by reducing gearing 54 to winding drums 55, 56 at the opposite ends of the bridge support, the connection to drums 55 being through gearing 57 to a shaft 58 on which said drums are fixed, and the connection to drums 56 being through beveled gearing 59 fixed to a long shaft 60 extending the length of the bridge support and connected by gearing 61 with a shaft 62 on which said drums are fixed. The cables 18 may have one end thereof fixed to the bridge support, as at 63, and thence extend up over the roller supports 17 and down around the respective winding drums. The bridge support may be provided with a platform framing 64 extending alongside the loading belt portions 31, 32

at a suitable distance below the same, calculated for convenience of the operatives in standing thereon for the loading operation.

While the belt arrangement of my improved mechanism, with one belt extending partly across the kiln, and another extending entirely across, has special coöperation with the oppositely extending conveyer branches 29, 30 leading to the opposite ends of the car, whereby a double force of men can be employed both in the kiln for loading and in the car for piling the bricks therein, and while I desire to cover this combination both broadly and specifically, it will be understood that my improved belt arrangement is not limited to use with the oppositely extending delivery branches or with any separated delivery branches, and I therefore desire to cover such belt arrangement *per se*. It is also to be understood that various of the details of construction may be modified without departing from the essentials of the invention, and I therefore do not desire to be limited in these, or in any other particulars, except as set forth in the appended claims.

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

1. An apparatus of the kind described, comprising a loading conveyer portion formed of plural parts arranged alongside one another with one part extending only part way across the space from which the load is to be taken, and another part extending a substantially greater distance across said space, and means permitting adjustment of said conveyer portion laterally through the space from which the load is to be taken, with said plural parts maintained in relative operative position.

2. A conveyer system, having plural parts arranged alongside one another, one of said parts extending partly across a kiln space, and another part extending substantially entirely across said space, and means permitting said plural parts to be adjustably held in any desired part of said kiln space.

3. A conveyer system, having plural endless belts arranged alongside one another, with means for driving the same, one of said belts extending partly across a kiln space, and another belt extending substantially entirely across said space, and means permitting the adjustment of said belts horizontally and vertically through the kiln space, while preserving their relative operative positions.

4. A conveyer system, comprising a support extending across one dimension of a kiln space and mounted for adjustment through the other two dimensions thereof, conveyer mechanism formed in plural parts mounted on said support, one of said parts extending only to an intermediate point of

said kiln space, and another part extending substantially entirely across said space, and a subsequent conveyer portion arranged to receive material delivered by said plural parts.

5 5. A conveyer system, comprising plural conveyer parts arranged alongside each other, one of said parts being substantially shorter than the other for the purpose
10 stated, and subsequent conveyer portions in connection therewith having oppositely extending branches for delivery to different parts of a space to be loaded.

15 6. A conveyer system formed in two parts arranged alongside each other, one of said parts extending only to an intermediate point of a space to be loaded, and the other part extending substantially entirely across said space, and separated conveyer portions
20 connected with said respective parts having oppositely extending branches leading to different parts of a space to be loaded.

7. An apparatus of the kind described, comprising a support extending horizontally across one dimension of a kiln space and adjustable horizontally and vertically through the other dimensions thereof, two belts extending alongside each other, one to a point intermediate the length of said support and the other substantially the full length thereof, and subsequent conveyer portions in connection with said belts respectively having oppositely branching ex-

35 tremities leading to different parts of a space to be loaded.

8. A conveyer system, comprising plural conveyer portions arranged alongside one another, one portion extending partly across one dimension of a kiln space, and the other extending substantially entirely across said dimension, means for adjusting said portions through the other two dimensions of the kiln space, and subsequent conveying means mounted in permanent receiving relation to said portions throughout the
40 adjustments thereof.

9. A conveyer system, comprising a support extending across one dimension of a kiln space and mounted for adjustment through the other two dimensions thereof, two loading conveyer parts arranged alongside each other, one extending from one side of said support partly across the same and the other extending substantially the full length thereof, and subsequent conveyer
50 parts, each in permanent receiving relation to one of said loading parts, and having oppositely extending delivery branches leading to different parts of a space to be loaded.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

WILLIAM W. WALLACE.

Witnesses:

A. POHLE,
EDWARD COX.