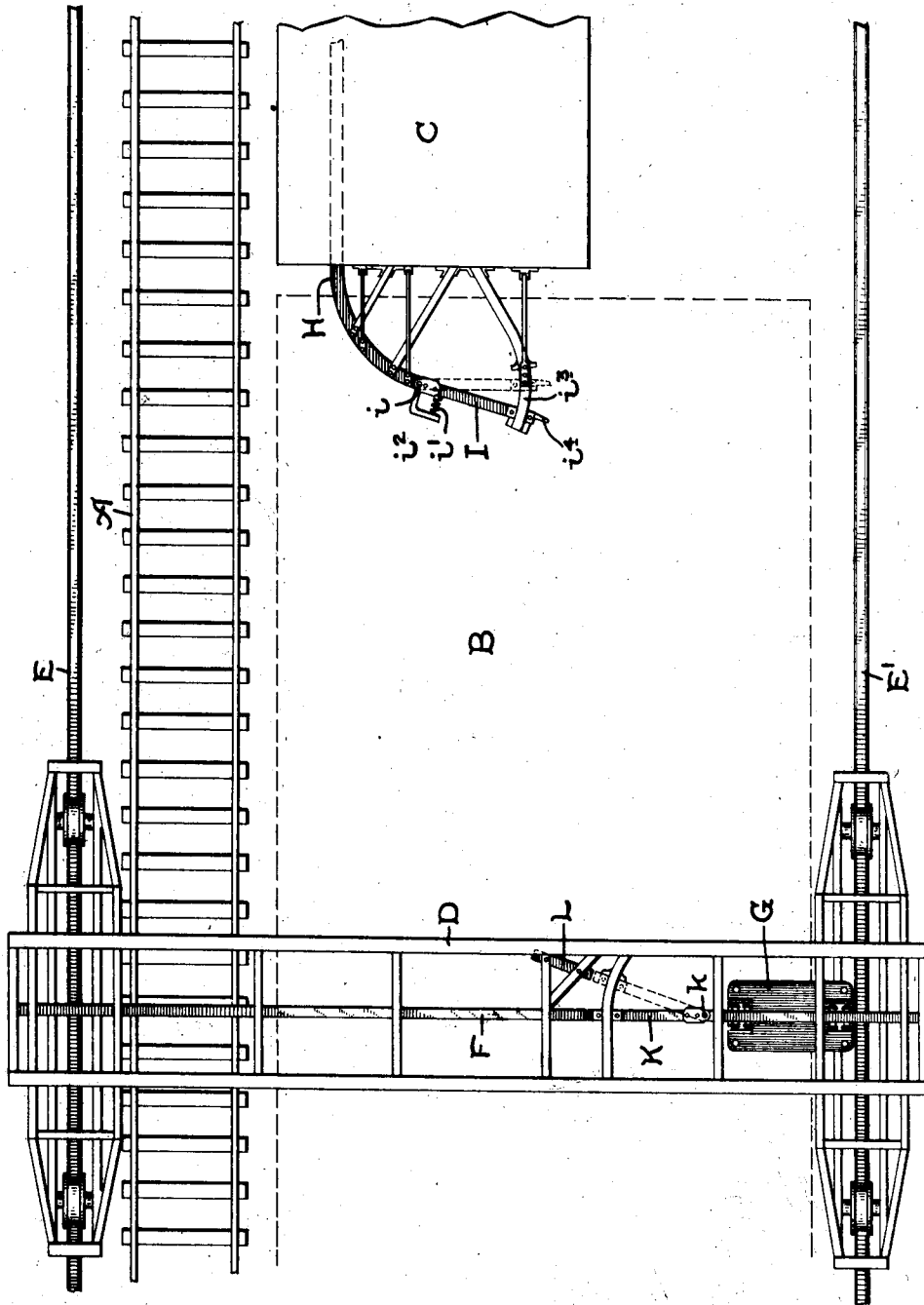


S. H. LIBBY.
CONVEYER SYSTEM.
APPLICATION FILED OCT. 21, 1909.

947,200.

Patented Jan. 18, 1910.



WITNESSES:

Marcus L. Byng.
J. Ellis Elm.

INVENTOR.

SAM H. LIBBY

BY *Albert B. Davis*
ATTY.

UNITED STATES PATENT OFFICE.

SAM H. LIBBY, OF EAST ORANGE, NEW JERSEY, ASSIGNOR TO SPRAGUE ELECTRIC COMPANY, A CORPORATION OF NEW JERSEY.

CONVEYER SYSTEM.

947,200.

Specification of Letters Patent.

Patented Jan. 18, 1910.

Application filed October 21, 1909. Serial No. 523,779.

To all whom it may concern:

Be it known that I, SAM H. LIBBY, a citizen of the United States, residing at East Orange, county of Essex, State of New Jersey, have invented certain new and useful Improvements in Conveyer Systems, of which the following is a specification.

My invention relates to conveyer systems and particularly to those systems in which a carrier travels upon a suspended track. Such systems are extensively used for the handling of material such as ore, coal, gravel, sand, etc., and my invention is particularly intended for use in such connection, although it will be obvious that it is not limited to this use.

In conveyer systems of the general type above mentioned so-called "gauntree" cranes are often employed. These cranes consist in general of a bridge built of structural steel arranged for travel upon two tracks which extend transversely to the bridge and, therefore, transversely to the track carried by the latter upon which a carrier is arranged to travel. This bridge generally moves over the area in which material is to be distributed and the carrier never leaves the bridge track.

It is an object of my invention to provide means whereby the carrier can not only be operated upon the bridge, but can also be run off the bridge on to a fixed track leading to an area not covered by the movement of the bridge.

One particular feature of my invention is the means whereby the connection between the bridge track and the fixed track can be made without requiring the operator to bring the bridge accurately to a definite point, thereby preventing loss of time in operation which would naturally result if exact alinement between the bridge track and the fixed track were necessary.

To the above end, I provide in a conveyer system having a traveling bridge carrying a track upon which a carrier operates and having a fixed track upon which it is desired to at times run the carrier, a yielding section of track serving as a connection between the bridge track and the fixed track.

My invention will be fully understood from the following description taken in connection with the accompanying drawing in

which one embodiment of said invention is illustrated in plan view in a more or less diagrammatic manner.

Referring to the drawing, let us assume that A is a railroad track upon which coal, or other material, is received at a manufacturing plant. Let us also assume that B is an area used for the storage of the coal or other material which is taken from this area as needed and is used in the boiler house or other building C. A gauntree crane, or traveling bridge, diagrammatically indicated in plan view at D, travels upon tracks E and E', said bridge being arranged as shown to move over the storage area B and that portion of the railroad track A adjacent to said area. Upon the bridge D is a track F upon which a carrier G travels, said carrier being provided with a grab bucket, or other hoist, of any suitable form. In the arrangement shown it is assumed that the operator is carried in a cage on the carrier G and is able from this position to control the movement of the bridge D upon the tracks E and E', the travel of the carrier G upon its track, the hoisting and lowering of the bucket, and, in fact, the whole operation of the conveyer system. The various movements of the system may be controlled by electric motors in any suitable and well-known way which, since it forms no part of my invention, has not been illustrated in the drawing and need not be described.

Supported within the building C is a fixed track H, the end of which extends out of said building and over one end of the area B, as shown. In the particular arrangement shown, the end of the track H is curved and is provided with a pivoted section I, pivoted at *i* and biased to the position shown in full lines by a spring *s*, connected between a fixed bracket *b* and the pivoted section I as shown. The pivoted section I at its outer end may be slidingly supported by a bracket *a* in any suitable manner. In the particular system shown, the track F carried by the bridge D is provided with a switch member K, pivoted at *k*, which can be thrown by the operator either to the position shown in full lines, in which it is in alinement with the straight track F, or to the position shown in dotted lines, in which said switch member K is in alinement with a short section

of track L arranged as shown. Such switch devices and the means for operating them are well-known in this art and need not be described. The outer end of the section of track L is so arranged that, when the bridge D is near that end of its travel toward the building C, said end will engage with the free end of the pivoted track member I and will allow the carrier to be run from the section L on to the section I and thence to the track H. It will be obvious that with the arrangement shown it will not be necessary for the operator to move the bridge D to any exact position but only to an approximately certain position, say within two or three feet, in order to effect a connection between the track F carried by the bridge D and the fixed track H. The ends of the switch member K, the section of track L, and the pivoted section I should, of course, be provided with the usual devices which prevent the carrier from being run off the ends of these parts of the track unless they are in correct alinement with the cooperating parts. Since these devices form no part of my invention they have not been illustrated.

The operation of my conveyer system will be apparent from the foregoing. The operator can at will run the carrier either back and forth on the track F on the bridge D, or from said track F to the fixed track H in building C, thereby permitting the area B and the building C to be served by the same carrier.

It will, of course, be understood that the system can be modified in many ways, for example, by omitting the switch member K and a portion of the track L and arranging one end of the track F to engage directly with the pivoted member I. It will be clear also that any number of fixed tracks may be provided to which the operator can run the carrier. I do not, therefore, in the following claims intend to limit myself to the particular construction and arrangement shown, but on the contrary aim to cover all modifications which come within the scope of my invention.

What I claim as new and desire to secure by Letters Patent of the United States, is,—

1. In combination, a traveling bridge, a track carried thereby, a carrier arranged for travel on said track, a fixed track, and a yielding section of track serving as a connection between said bridge track and said

fixed track when said bridge is approximately in a certain position.

2. In combination, a traveling bridge, a track carried thereby, a carrier arranged for travel on said track, a fixed track, and a pivoted section of track having a limited movement and biased in a certain direction serving as a connection between said bridge and said fixed track when said bridge is approximately in a certain position.

3. In combination, a traveling bridge, a track carried thereby, a carrier arranged for travel on said track, a fixed track, and a section of track pivotally secured to the end of said fixed track, the free end of which pivoted section is adapted for engagement with a portion of said bridge track whereby when the bridge is approximately in a certain position said carrier can be run from said bridge track to said fixed track and vice versa.

4. In combination, a traveling bridge, a track carried thereby, a carrier arranged for travel on said track, a fixed track, a section of track pivotally secured at one end to the end of said fixed track, means for biasing said pivoted section toward said bridge, and a portion of track carried by said bridge and adapted to engage with the end of said pivoted section whereby when the bridge is approximately in a certain position the carrier can be run from said bridge track on to said fixed track and vice versa.

5. In combination, a traveling bridge, a track carried thereby, a carrier arranged for travel on said track, a fixed track pivotally secured at one end to the end of said fixed track, a section of track carried by said bridge and adapted to engage with the end of said pivoted section, a switch adapted to be thrown into alinement either with the main track of said bridge or the section of track which engages with the end of the pivoted section, whereby when the bridge is approximately in a certain position the carrier can be run from said main bridge track over said switch, and said section of track on to said pivoted section and thence on to said fixed track and vice versa.

In witness whereof, I have hereunto set my hand this nineteenth day of October, 1909.

SAM H. LIBBY.

Witnesses:

D. L. B. PETERSON,
LOUIS BANGERT.