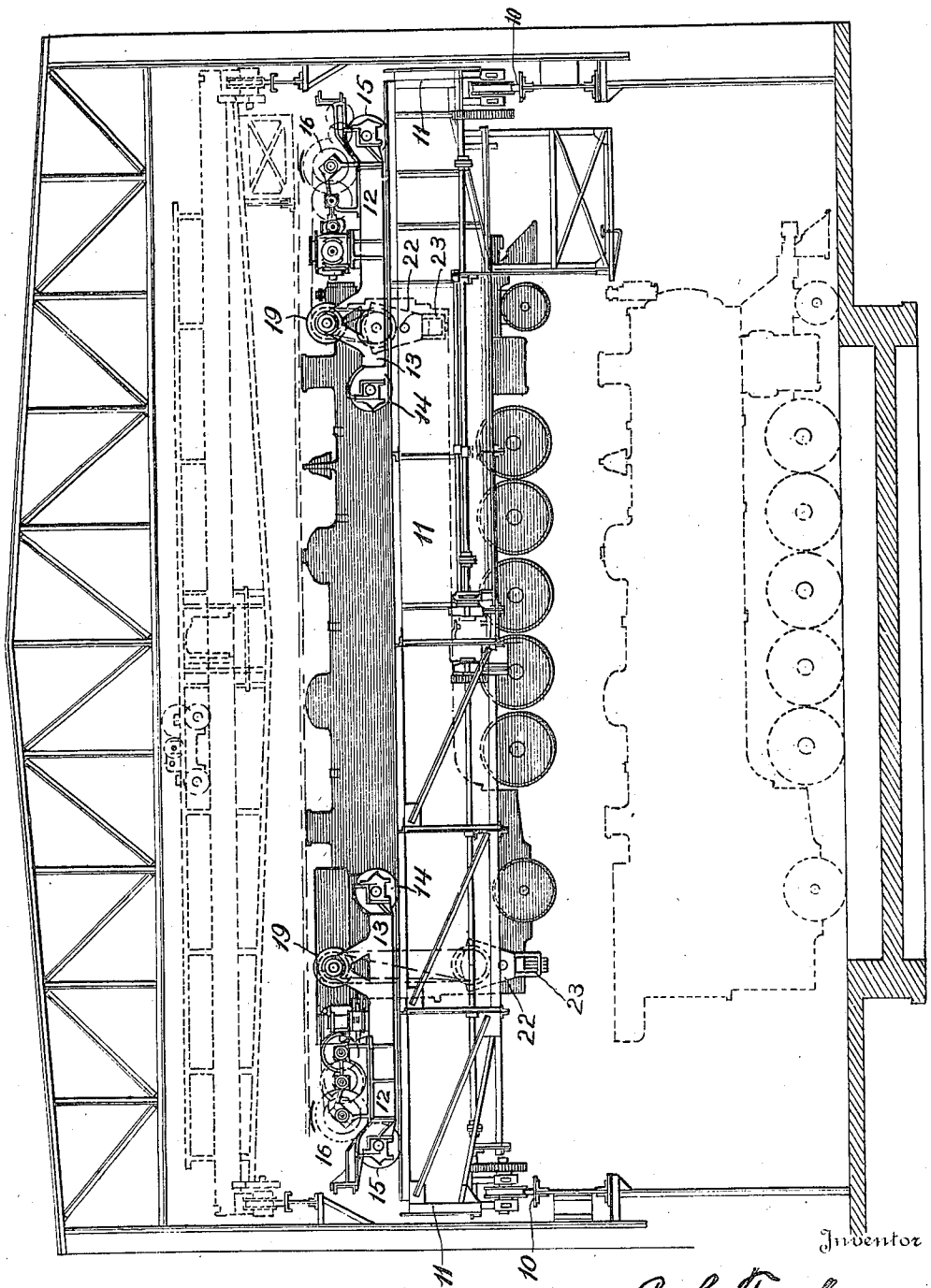
Sept. 25, 1923. 1,469,123

C. L. TAYLOR

OVERHEAD CRANE

Filed Sept. 1, 1921 3 Sheets-Sheet 1



Inventor

C. L. Taylor

By Seymour & Bright

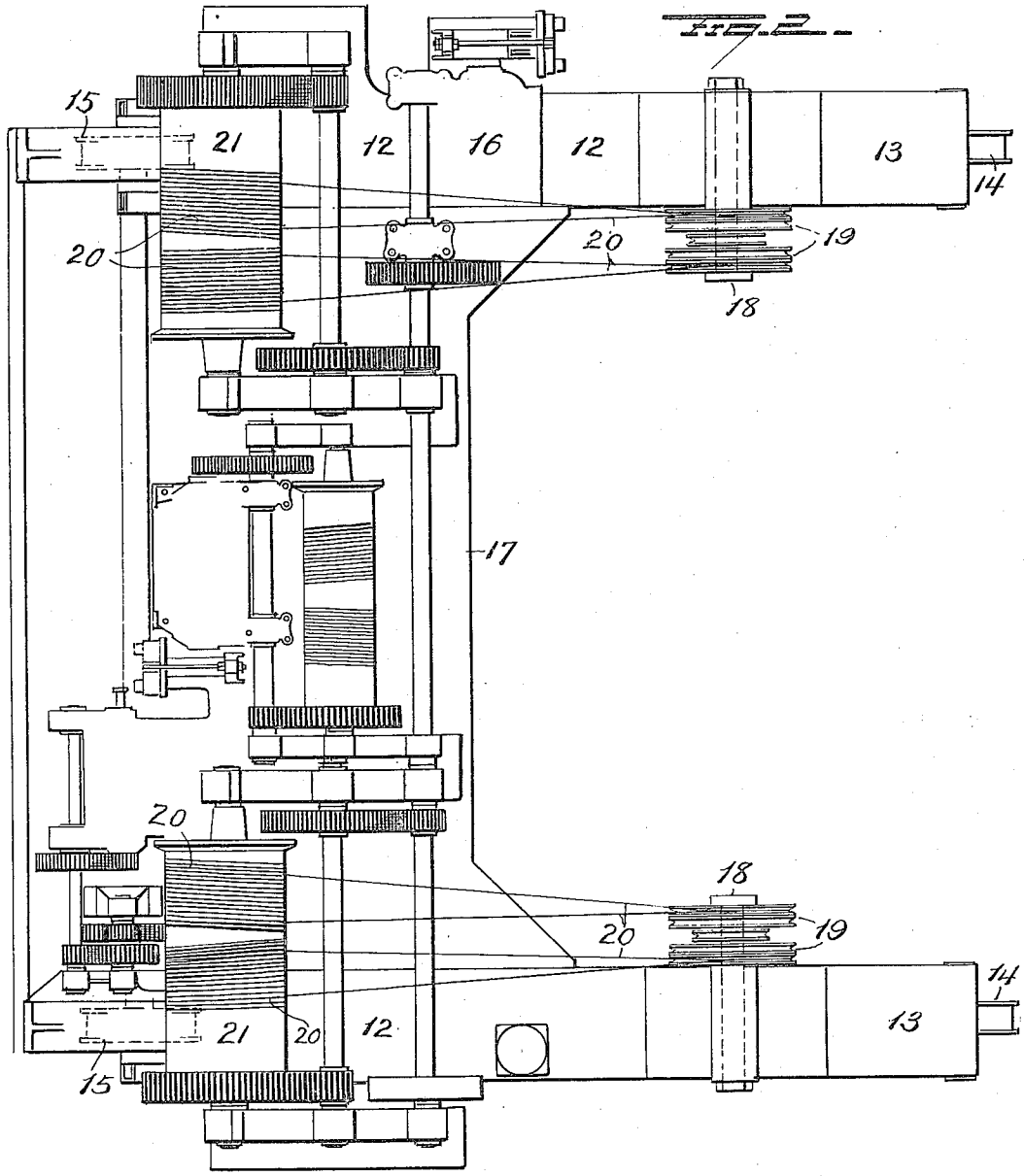
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OVERHEAD CRANE

Filed Sept. 1, 1921 3 Sheets-Sheet 2



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OVERHEAD CRANE

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Fig. 3.

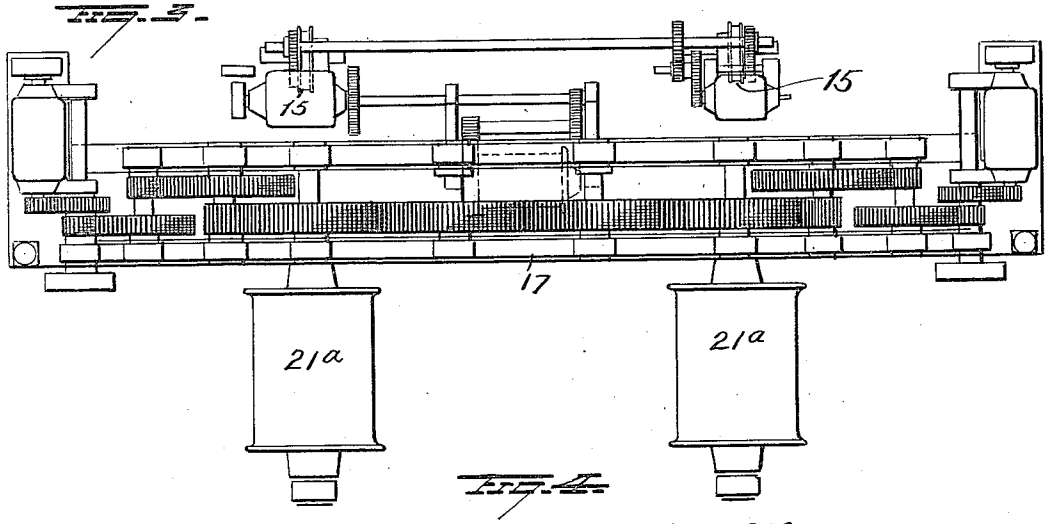


Fig. 4.

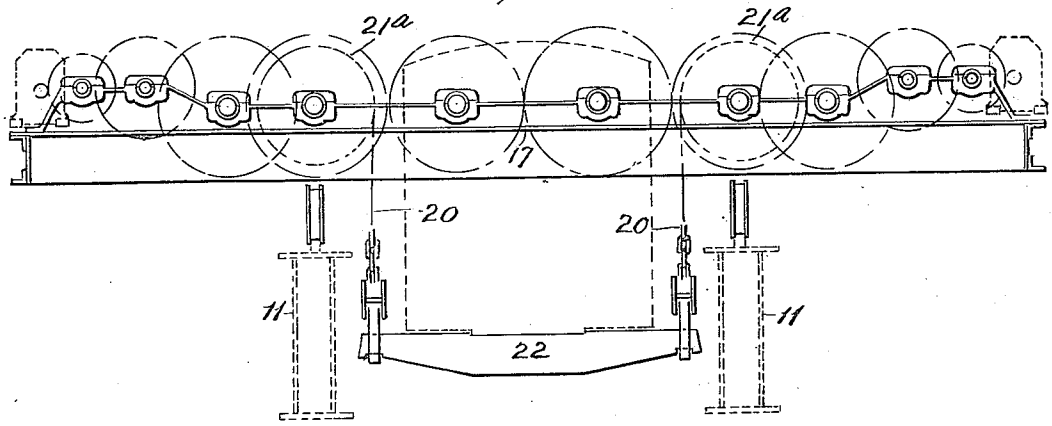
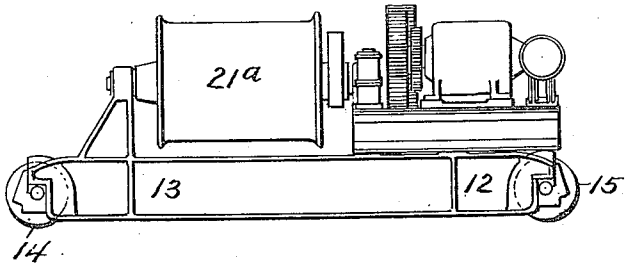


Fig. 5.



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Patented Sept. 25, 1923. 1,469,123

UNITED STATES PATENT OFFICE.

CLARENCE L. TAYLOR, OF ALLIANCE, OHIO, ASSIGNOR TO THE MORGAN ENGINEERING COMPANY, OF ALLIANCE, OHIO.

OVERHEAD CRANE.

Application filed September 1, 1921. Serial No. 497,568.

To all whom it may concern:

Be it known that I, CLARENCE L. TAYLOR, a citizen of the United States, and a resident of Alliance, in the county of Stark and State of Ohio, have invented certain new and useful Improvements in Overhead Cranes; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in overhead cranes adapted particularly for transferring locomotives or other vehicles from one portion of an erecting or repair shop to another, the construction being such that the load may be lifted from one track up between the crane girders of a crane so as to pass over the top of a locomotive or car standing on another track.

In the accompanying drawings, Figure 1 is a view in side elevation of a crane showing diagrammatically a locomotive suspended therefrom; Figure 2 is a view in plan of one of the trolleys, and Figures 3, 4 and 5 are views respectively in plan, end and side elevation of a modified form of trolley.

The transfer of a locomotive or car from one track to another in a shop is effected by a traveling crane or cranes mounted on runways above and transversely to a plurality of parallel tracks on the floor of the shop.

As the locomotive must in may instances be carried over the top of another locomotive, it must be lifted high enough to clear such standing locomotive, and must also be suspended entirely below the trolleys of the crane, hence the height of the latter is necessarily in excess of twice the height of the locomotive in order to permit a locomotive to be lifted and moved laterally over a standing locomotive.

In many shops the height of a runway for the crane, and the crane thereon, is not sufficient to provide for such lift and the object of my invention is to provide trolleys so constructed that the locomotive may be lifted well up between the crane girders with the top of the locomotive in a plane above the trolley, thus materially reducing the height of the clearance space above the standing locomotive, and correspondingly reducing the height of the shop in which the transfer crane is located.

10 represents the runways of a crane 11, and 12, two trolleys mounted to travel lengthwise the crane. The girders of the crane are mounted on end carriages in the usual and well known manner, and are separated a distance greater than the width of a locomotive so that the gap or space between the crane girders will be ample to receive a locomotive between them. This crane is mounted to travel transversely of the floor tracks in the shop, and the trolleys are adapted to travel lengthwise the bridge. The crane bridge is provided with the usual transversing motor and gearing, and the trolleys, as shown in Figure 2, are provided with inwardly projecting extension members 13 the said extension members being located immediately over the bridge girders and provided at their free ends with flanged track wheels 14, which, with the track wheels 15 at the outer ends of the trolleys support the latter on the bridge. These trolleys, as before explained are adapted to traverse the bridge lengthwise the latter, and the inwardly projecting extension members of the trolleys, and the sheaves 19 to be hereinafter referred to, are separated sufficiently to receive the locomotive cab, or front end of the locomotive between them, thus permitting the latter to be elevated between and project above the crane girders as clearly shown in Figure 1.

The end members or extensions 13 of the trolleys project inwardly or toward each other, so that the extension members of one trolley receive the cab end of the locomotive between them, and the extension members on the other or companion trolley receive the front end of the locomotive between them.

Each trolley is provided with a traversing motor and a main hoist motor 16 connected by gearing with the two hoist drums 21. The gearing employed is immaterial, as my invention relates to the trolleys open at their inner or adjacent ends to permit the top of the cab and front end of the locomotive to be elevated above the plane of the tops of the trolleys.

In the construction shown in Figure 2 the extension member 13 of the trolleys 12 are provided intermediate their free inner ends and the inner edges 17 of the bodies of the trolleys, with the inwardly projecting stub axles 18, carrying the sheaves 19, around which the hoist cables or chains 20 which are secured to and wound on the hoist drums 21, pass. Each cable carries a pulley block 22 having a hook or stirrup adapted to engage one end of a beam 23 one of which supports the front end of the locomotive and the other the rear end. Instead however of having sheaves mounted on stub axles 18 as shown in Figures 1 and 2, the hoist drums 21^a may be mounted directly on the end extensions 13 of the trolley and the hoist ropes pass directly from the drums down to the beams 23, the drums overhanging the end extensions 13 of the trolley sufficiently for the cable or chain to wind or unwind freely without contacting with the latter.

The advantages of the invention will be apparent to those familiar with the art, as the cranes thus constructed can be erected in old buildings in which the height is insufficient to provide for shifting a locomotive suspended below the crane, and in the construction of new buildings the cost of construction and maintenance will be correspondingly reduced.

It is evident that many slight changes might be resorted to in the relative arrangement of parts shown and described without departing from the spirit and scope of my invention hence I would have it understood that I do not wish to confine myself to the exact construction shown and described but,

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

1. A traveling crane comprising a bridge, the girders of which are separated sufficiently to receive the part to be lifted, and a trolley provided with hoist cables and with end extensions, the latter being provided with hoist cable supporting means journalled thereon whereby the article may be lifted between crane bridge girders and also between the end extensions of the trolley.

2. A traveling crane comprising a bridge, the girders of which are separated sufficiently to receive the part to be lifted, and two trolleys each provided with inwardly projecting end extensions the latter also being separated, and hoist cable supporting means journalled on said end extensions.

3. A traveling crane comprising a bridge, the girders of which are separated to receive the load to be lifted, and two trolleys each provided with inwardly projecting end extensions the latter being located over the bridge girders and disconnected at their free ends, hoist cable supporting means and means journalled on said extensions adjacent the free ends of the latter and over which the hoist cables pass carried by said end extensions.

4. A traveling crane comprising a bridge, the girders of which are separated to receive the load to be lifted between them, and two trolleys each provided with inwardly projecting end extensions the latter being approximately in the plane of the bridge girders and means journalled to said extensions, and hoist cables carried by the trolleys and supported by said journalled means.

5. A traveling crane comprising a bridge, the girders of which are separated to receive the load to be lifted between them, and two trolleys each having two inwardly projecting end extensions disconnected at their free ends, the said end extensions being located over the bridge girders and each supported by a track wheel, means journalled on each extension intermediate the body of the trolley and the track wheels carrying the said extensions and hoist cables supported by and passing over said journalled means for lifting the locomotive.

6. In a mechanism of the class described, a pair of crane girders separated wide enough so that a locomotive to be lifted may pass up between them, a trolley bridging the space between and adapted to travel along said girders, all parts of said trolley adjacent to the center of the girder being separated so as to allow parts used in the lifting of the locomotive to pass up between them, and a load lifting mechanism including cables carried by the trolley and adapted to move the locomotive or attached devices up into the space between said separated parts.

7. In a mechanism of the class described, a locomotive lifting crane consisting of a pair of widely separated bridge members equipped with wheels for movement along a room, a pair of trolleys traveling on the bridge member, lengthwise thereof, the structures of the trolleys at the ends nearest the center of the bridge members being open to allow movable parts to be lifted to pass up into the general frame of the trolleys, sheaves mounted on said last mentioned ends of the trolleys, and hoisting cables driven by the lifting mechanism passing over said sheaves and adapted for attachment to the parts to be lifted, for the purpose set forth.

8. In mechanism of the class described, a railroad locomotive appliance comprising suitable crane girders rigidly spaced apart a sufficient distance so that a lifted locomotive may pass up between them and two trolleys, one for lifting each end of a locomotive, each bridging the space between, and tracking on each of said girders, load lift-

ing mechanism carried by each trolley, the trolleys being constructed to permit the upper parts of the locomotive to pass up between and above the crane girders, and cables actuated by said lifting mechanism for lifting a locomotive, for the purpose described.

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

CLARENCE L. TAYLOR.

Witnesses:
N. C. FETTERS,
D. H. ALEXANDER.