

B. D. CURTIS.
BUNK CAR.

APPLICATION FILED JUNE 27, 1904.

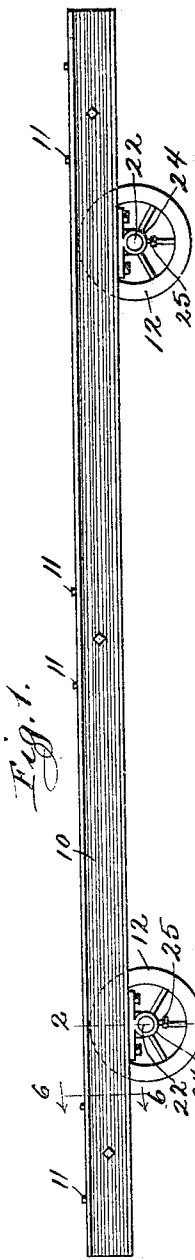


Fig. 1.

Fig. 5.
Fig. 4.

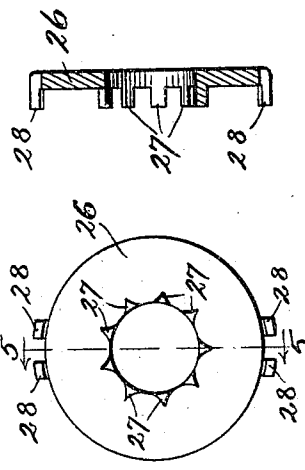


Fig. 3.

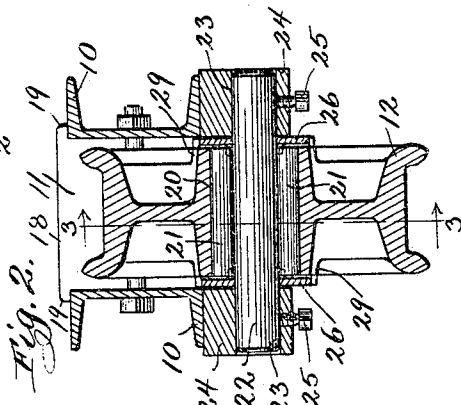
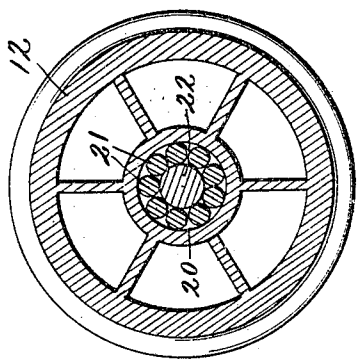


Fig. 2.

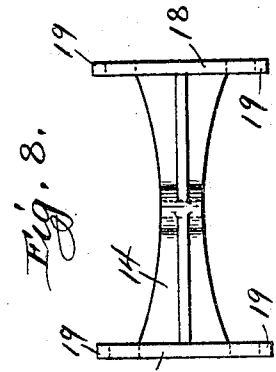


Fig. 8.

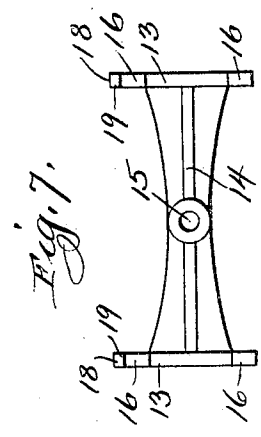


Fig. 7.

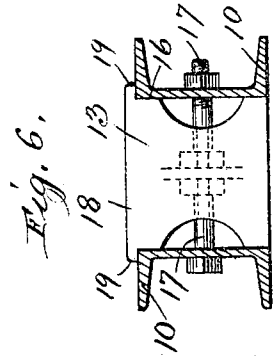


Fig. 6.

Witnesses:
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UNITED STATES PATENT OFFICE.

BENJAMIN D. CURTIS, OF CHICAGO, ILLINOIS.

BUNK-CAR.

No. 801,771.

Specification of Letters Patent.

Patented Oct. 10, 1905.

Application filed June 27, 1904. Serial No. 214,435.

To all whom it may concern:

Be it known that I, BENJAMIN D. CURTIS, a citizen of the United States, and a resident of Chicago, in the county of Cook and State of Illinois, have invented a new and useful Bunk-Car, of which the following is a specification.

My invention relates to bunk-cars in which the wheels are provided with roller-bearings and the frame is made interchangeable for end or cross piling of lumber; and the objects of my improvements are, first, to provide extended bearings on the supporting-beams to enable the use of large wheels and small beams; second, to facilitate the positioning and spacing of the rolls in the bearing; third, to make an interchangeable spreader capable of being used for either end or cross piling; fourth, to afford a cheap, strong, and durable construction, and other objects which will become apparent from the description to follow.

The bunk-car forming the subject of my invention is constructed of two channel-irons arranged parallel on edge with the channel portions facing outward, spreaders bolted between the same and wheels mounted on roller-bearings between said channel-irons. The spreaders between the channel-irons are made to fit in either of two positions. In one position the spreaders present a pair of flanges, usually six inches apart, above the upper surface of the channel-irons, between which flanges a timber rests upon said channel-irons in end piling. When the spreaders are inverted—*i. e.*, placed upside down—the flanges extend below the lower face of the channel-irons, and nothing whatever extends above the upper surface of the channel-irons. This is the position of the spreaders for cross piling.

Another feature of my invention is to utilize a narrower channel-iron than has heretofore been used by providing extending bearings on the under side of the channel-irons for the pivotal shafts of the wheels. These extending bearings or brackets are bolted or otherwise secured to the bottom flanges of the channel-irons. The lowering of the pivotal shaft in this way affords the advantage of using a wheel of larger diameter, which is desirable.

The wheels are mounted to rotate on rolls about the pivotal shafts, and washers are interposed between the bearings and the wheel-hub, which are provided with small lateral extensions to lie between the ends of the rolls to keep them separated, and thus reduce the friction.

I have illustrated my invention in the accompanying sheet of drawings, in which—

Figure 1 is a side elevation of a car embodying my invention. Fig. 2 is a cross-section of the same on line 2 2 of Fig. 1. Fig. 3 is a section on line 3 3 of Fig. 2. Fig. 4 is a face view of a washer forming a part of my invention. Fig. 5 is a section of the same on line 5 5 of Fig. 4. Fig. 6 is a cross-section on line 6 6 of Fig. 1. Fig. 7 is a side elevation of a spreader forming a part of my invention, and Fig. 8 is a plan view of the same.

Similar reference characters refer to similar parts throughout the several views.

The body of the car is made of two U-shaped channel-bars 10, the parts corresponding with the bottom of the U facing each other, and are held apart a certain distance by the spreader 11. One or more wheels 12 are pivoted between the channels 10, upon which the car is supported and travels.

The general arrangement and construction of the parts thus far described are old, and I do not make claim to the same generally, but to the particular construction of a reversible spreader, the particular construction of the wheel-mounting, and the particular construction of the roller-bearing as applied to bunk-cars.

The spreaders 11 consist of the substantially rectangular end plates 13, connected by the web portion 14, which is provided with the centrally-located bolt-hole 15. The two opposite edges 16 of the plates 13 are held in juxtaposition with the channel-bars 10 by a bolt 17, passing through the hole 15 and through concentric holes provided in said channel-bars 10, which is provided with a head on one end and the usual nut on the remaining end. One of the remaining edges of each plate 13 is extended a short distance beyond the plane of the edge of the channel-bars 10, as shown at 18. These edges 18 also extend slightly beyond the edges 16, so as to form lugs 19, which rest on the edges of the channel-bars 10 and retain the spreader 13 in proper position. The holes in the channel-bars 10 through which the bolt 17 passes are placed equal distances from the edges of the channel-bars, so that the lugs 19 will fit against either edge of said channel-bars. In the drawings the edges 18 are shown as extending above the channel-bars 10 to assist in holding the cross-timbers (not shown) in position. When it is desired not to use any cross-timbers and to pile the lumber directly onto the

channel-irons 10, the nuts on the bolts 17 are loosened, the spreaders 13 inverted, and the nuts replaced. It will be seen that the spreaders are thus made interchangeable—*i. e.*, they can be used to construct a car for end piling of lumber or for cross piling.

The advantage of having the spreaders interchangeable is threefold: First, only one pattern is necessary for either style of car; second, the owner can change the style of car at will, and, third, all mistakes are avoided when ordering extra spreaders.

Each wheel 12 is provided with a large bore 20, into which are fitted the rollers 21 around the shaft 22 to serve as a roller-bearing for said wheel 12. The shaft 22 on either side of the wheel extends into holes or sockets 23, provided in the brackets 24, secured to the lower side of the channel-bars 10 by bolts or rivets. The shaft 22 is held from rotation and in proper position by the set-screws 25, provided in the brackets 24. Heretofore it was found necessary to employ unnecessarily wide and expensive channel-irons to accommodate the desired size of wheel. It will be noted that the top of the wheel must be below the level of the top surface of the channel-irons.

By my invention of placing the brackets 24 on the under side of the channel-bars 10 it is possible to use narrower and cheaper channel-irons and larger wheels than have been heretofore used, thus making a cheaper and easier-running car.

To keep the rollers 21 in longitudinal alignment, I provide a washer 26, loosely mounted on the shaft 22 on either side of the wheel 12, the rollers 21 being of the same length as the hub of wheel 12. The washers 26 are also provided with the lateral-extending lugs 27, arranged in a circle about the shaft 22, lying between the ends of the rollers 21 to keep them separated from one another. To keep the two washers 26 rotating together and prevent the rollers from getting out of alignment with the shaft 22, I provide a pair of lugs 28 on the washers 26, which straddle a lug 29 on a rotating member, preferably the wheel 12.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. In a bunk-car, two channel-bars, a

spreader and a bolt securing said spreader between said two channel-bars; said spreader provided with a pair of lugs extending above the edge of said channels between which a lumber-supporting beam is held from slipping and capable of being secured upside down so no part of said spreader extends above said channel-bars and permits of cross piling of lumber on the car.

2. In a bunk-car the combination of, two channel-bars provided with upper and lower horizontally-extending flanges, brackets provided with concentric openings secured to the said lower flanges, a shaft in said openings held from rotation by a set-screw and a wheel mounted to rotate on said shaft between said channel-bars.

3. In a bunk-car, two bars provided on their lower edges with horizontally-extending flanges, brackets provided with concentric openings secured to said horizontally-extending flanges, a shaft in said openings secured against rotation, a plurality of rollers mounted to roll about said shaft, within a wheel, washers mounted on said shaft on either side of said wheel provided with lateral-extending triangular lugs between the ends of and separating said rollers, and means operatively connected with said washers comprising a rotatable member for causing the simultaneous rotation of said washers at a speed equal to the speed of said rollers.

4. In a bunk-car, two channel-bars, two brackets secured to the lower flange of each channel-bar, two wheels mounted on shafts secured in said brackets, and two spreaders secured between said channel-bars; said spreaders provided with stop-shoulders to prevent a lumber-supporting beam from slipping above said channel-bars and capable of being secured upside down to have no part extending above the edges of said channel-bars and permit the cross piling of lumber on the car.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 22d day of June, 1904, at Chicago, Illinois.

BENJAMIN D. CURTIS.

Witnesses:

M. L. BROWER,
R. J. JACKER.