Aug. 25, 1931. J. W. LESLIE 1,820,281

SHOCK ABSORBING SUPPORT

Filed July 17, 1926

Fig. 1.

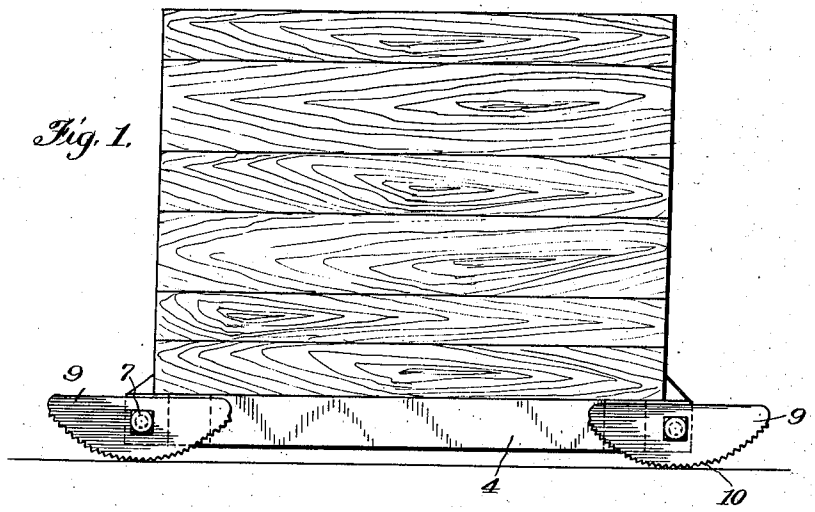


Fig. 2.

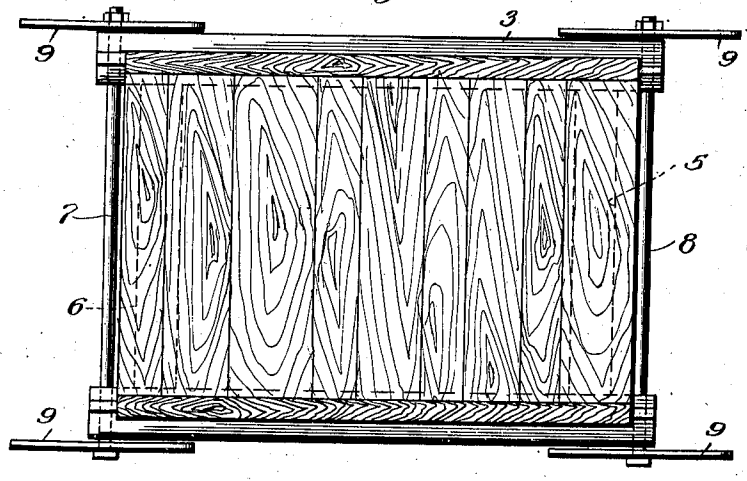


Fig. 3.

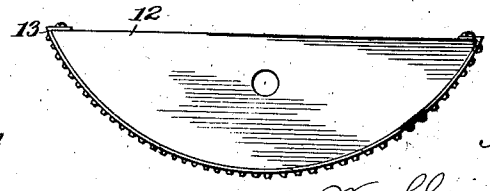




Fig. 4.

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UNITED STATES PATENT OFFICE

JOHN W. LESLIE, OF EVANSTON, ILLINOIS, ASSIGNOR, BY MESNE ASSIGNMENTS, TO SIGNODE STEEL STRAPPING COMPANY, A CORPORATION OF DELAWARE

SHOCK ABSORBING SUPPORT

Application filed July 17, 1926. Serial No. 123,245.

My invention relates to shock absorbing supports for bearing loads in carriers, such as freight cars and similar vehicles, subject to jolts from sudden starting and stopping and other causes.

It is common experience that boxes, crates and other containers and packages, when transported in vehicles such as freight cars, frequently arrive in damaged condition due to the fact that in the rough handling of the carrier the packages collide against each other and the end bulkheads with very considerable force.

One of the objects of my invention is to overcome this damage to packages during shipment.

Another object is to provide a package support by which the horizontal shocks to the carrier are dissipated without the package or support sliding along the carrier floor.

A further object is to prevent collision between parts of the load and between the carrier walls and the load without the necessity of bracing or otherwise clamping the load against shifting.

Other objects will appear from the following description, reference being had to the accompanying drawings, in which

Figure 1 is an elevation of the shock absorbing support of my invention, showing a container carried thereby;

Figure 2 is a plan view thereof;

Figure 3 is a detailed view of a modified construction of the support rocker, and

Figure 4 is a cross-section of the metallic strip employed in the modified construction shown in Figure 3.

The shock absorbing support of my invention comprises, in general, a suitable metallic or wooden frame upon which the load may rest and a plurality, preferably four, of rockers supporting this frame.

As shown in Figures 1 and 2 the frame is constructed of side timbers 3 and 4 and cross pieces 5 and 6. If desired, these timbers may be covered with a suitable flooring. Bolts 7 and 8 are fixed in the ends of the side timbers and at their ends form pivots for rockers 9. If desired, under certain circumstances, the rockers 9 may be secured to the frame by lag screws or short bolts passing through one of these side timbers only. The rockers 9 are preferably made of metallic plate of suitable thickness and their arcuate rocking surfaces are serrated as shown at 10. The rockers 9 with respect to the floor engaging surface 10 are eccentrically mounted at their pivotal points 7 and 8.

In Figure 3 I have shown a modified construction of the rockers in which the rocker proper 12 may be made of wood and a metallic strip 13 secured over its arcuate surface. The surface of the metallic strip is preferably prick-punched to form small burred projections 14 as is best shown in Figure 4. This strip forms a surface having a high co-efficient of friction and prevents relative movements between it and the floor of the car.

In operation, when the car or other carrier is suddenly jolted, the load will tend to continue to move in its former direction of motion and in thus doing, will tend to move relative to the rockers 9. However, since the rockers are in firm contact with the floor of the car, they will not slide, but instead, will pivot upon the bolts 8 and the frame and load will be raised relative to the floor of the car. In this manner the energy of momentum of the load will be used up or dissipated in raising the load from the car floor and will be lost in friction upon the subsequent damped oscillatory rocking movement of the frame and load.

While I have shown and described particular forms of my invention, it will be apparent to those skilled in the art that other modifications may be readily devised without departing from the principles of my invention. I therefore do not wish to be limited to the specific construction disclosed but what I claim as new and desire to secure by Letters Patent is defined by the following claims:

I claim:

1. A shock absorbing support for bearing loads in carriers subject to horizontal shocks, comprising a frame for carrying the load, and a series of rockers independently pivoted to the frame to take the weight of the frame and transfer it to the carrier floor, the curved floor engaging surface of each rocker being

eccentric to its pivotal connection with the frame whereby horizontal shocks in either direction cause the frame and load to pivot on the rockers and absorb power by elevating the frame and load.

2. A shock absorbing support for bearing loads in carriers subject to horizontal shocks, comprising a load carrying frame, and a series of rockers directly and independently pivotally connected to the frame and resting on the carrier floor to transfer the weight of the frame and its load to the carrier floor, the curved floor engaging surface of each rocker being eccentric with its pivotal connection with the frame so that horizontal shocks in either direction cause the rockers to turn whereby power is dissipated in the resultant lifting action upon the frame and its load.

3. A shock absorbing support for carrying loads in carriers subject to horizontal shocks, comprising a load holding frame, and a series of rockers independently pivoted to the frame and adapted to stand on the carrier floor, the curved floor contacting surface of each rocker being closest to its pivotal connection in a region intermediate the ends and farthest therefrom in the region adjacent the ends so that horizontal shocks in either direction result in turning the rockers and the power of such shocks is dissipated in raising the frame and load.

In witness whereof, I hereunto subscribe my name this 10th day of July, 1926.

JOHN W. LESLIE.