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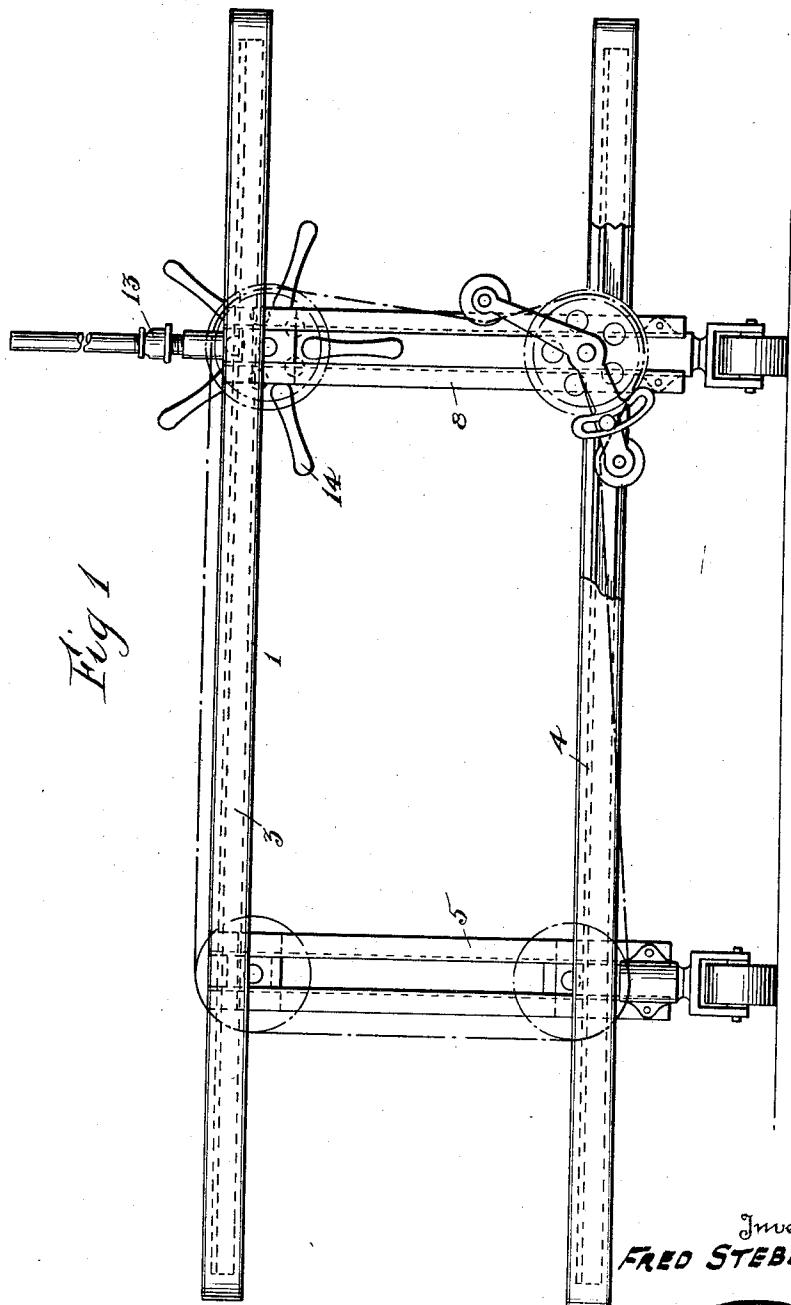
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CAR LOADING DEVICE

Filed April 27, 1931

2 Sheets-Sheet 1



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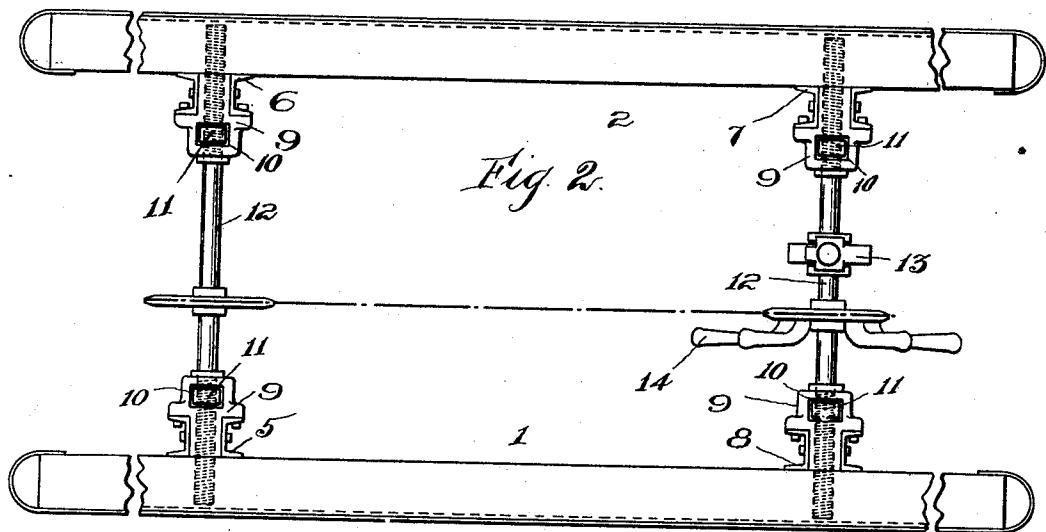
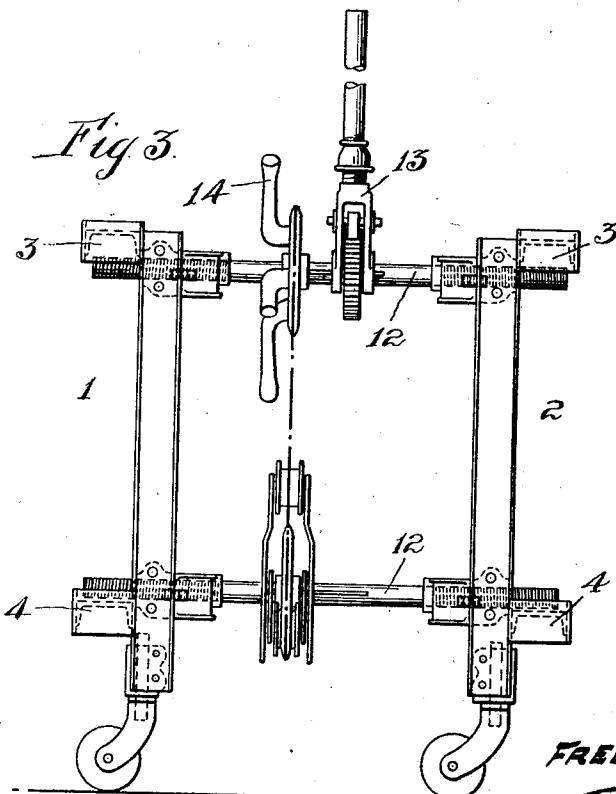


Fig. 2.



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UNITED STATES PATENT OFFICE

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CAR LOADING DEVICE

Application filed April 27, 1931. Serial No. 533,349.

This invention relates to a device for squeezing packed boxes or the like into the ends of loaded cars after the load has reached near the doorways usually located about centrally in the cars.

In the loading of cars with boxed or crated goods the boxes or crates are piled to the roof and stacked as closely together as is possible by the handlers, but they are not packed tight enough by hand stacking to prevent more or less shifting in the cars during transit due to switching and shocks received in starting and stopping, it therefore has been the practice to use a device similar to this invention to place between the opposite stacks and squeeze them tightly into the ends of the car before the load is completed adjacent the door area. This makes a well packed load that will not shift unduly during transit and enable the placing of the maximum number of boxes or crates in each car.

These devices are usually made of a combination of bars and tie members formed into somewhat of a box section to bear against the stacked boxes near the top and bottom so the pressure exerted will be substantially uniformly divided and then the pressure is applied by suitable arranged screws manipulated by hand.

In past devices the construction has been such that when great pressure is necessary to move heavily packed boxes there was more or less spring and buckling of the device with the result that the pressure was not evenly distributed and the load in consequence was not packed in the car as tightly as it should be to prevent excessive movement during transit and resulting damage to the stacked goods.

Applicant has developed a device for squeezing loads into cars that is rigidly built and that will not spring or buckle under the pressure possible to apply by hand effort, and these results are accomplished by a generally improved manner of construction and particularly by the provision of much improved pressure screws and nut and guiding devices.

The general construction of this improved device comprises a series of channel sections bolted together in such a manner to hold the main contact pressure bars in rigid posi-

tion as the power is applied to move the loads in the car, and a special provision is made for supporting the pressure screws in relatively long bearings so that the pressure bars will not tend to buckle or spring from their proper alignment as the power is applied. There is also provided a rapid means for moving the screws for quick rough adjustment and a more powerful means for manipulating the screws after the device is adjusted against the load to press it securely into the ends of the car. The device is also provided with casters to facilitate easy placement and movement during the manipulations.

It is an object of the invention to provide a device for pressing loads into cars that will have a rigid and well braced construction to prevent buckling during operation.

It is also an object of the invention to provide a car squeeze having supporting members for the pressure screws on opposite sides of the nuts to prevent springing of the screws under excessive pressure.

It is also an object of the invention to provide a device for the purpose having manual means for rapid manipulation for preliminary adjustment, and other means providing a greatly increased leverage for final adjustment and operation.

It is also an object of the invention to provide means for rendering the entire device easily portable.

With such objects in view as have been recited as well as other advantages that may be inherent in the invention, consisting in the parts and combinations constituting the same as hereinafter set forth, it is understood that some changes in arrangement of parts may be made without departing from the nature and scope of the invention, and in order to make the invention more clearly understood there are shown in the accompanying drawings a preferred manner of embodying the invention in an operable device.

Figure 1 is a side elevation of the improved device.

Figure 2 is a plan of the device.

Figure 3 is an end elevation.

The frame work of the apparatus com-

prises two main side sections represented generally by the numerals 1 and 2.

Each of the sections being exactly the same a description of one will suffice for both.

The members actually contacting with the load in the car comprise channel irons 3 and 4, tied together with the channel irons 5, 6, 7 and 8, each of the tie members are formed of two spaced channels to form a box section as the drawings clearly show, and they are in turn attached to the members 3 and 4 by welding or any other suitable means.

Arranged adjacent the channels 3 and 4 are rod guides 9 securely bolted to the box sections 5, 6, 7 and 8 in the manner well shown in Fig. 2. In each of the rod guides 9 are openings 10 for the reception and support of the nuts 11.

The pressure rods 12, of which there are four, have right and left hand threads on their ends and one of the rods is provided with ratchet device hand manipulated to give the final squeeze to the load as at 13.

On each of the rods 12 is positioned a sprocket with a continuous chain training over all of the sprockets to permit continuous and simultaneous movement to the four screws. One of the sprockets is provided with the hand bars 14 for rapid manipulation in preliminary adjustments and removal.

Applicant wishes to particularly point out that the threaded ends of the rods 12 are so well supported in the free holes in the guides 9 that there is little tendency for the device to buckle or spring away from the work when strong pressure is applied.

Fig. 2, very clearly shows how the threaded ends of the rods 12 have a close fit in the free holes through the guides 9, and also that the rods are supported on both sides of the nuts 11 whereby they are held very rigidly to their work.

An adjustable chain tightener is provided as shown in Fig. 1 for keeping the chain snugly adjusted to the sprockets so there is no lost motion to interfere with synchronous movements of the two sides of the apparatus.

In the operation of this device a car is loaded with boxes or crates until the load reaches about on a line with the side openings for the doors. This device is then rolled into the space between the loads in the car and manipulated to press the side sections against the stacked boxes and push them snugly into the ends of the car, and since the power is applied in a substantially straight line and the parts are very rigidly held, considerable pressure may be applied to the load. After this is accomplished the screws are reversed and the device is drawn away from the compressed loads in opposite ends of the car and removed and the loading completed by filling the empty space adjacent the doors.

What I claim as new and desire to secure by Letters Patent is:

1. An apparatus for squeezing loads into cars comprising rectangular sections made up of channel sections for rigidity, opposed guide members secured to the said channel sections having unthreaded bores therethrough, a series of rods having right and left hand threads on opposite ends and adapted to move freely in the unthreaded bores of said guide members, openings in said guide members at substantially right angles to said bores for supporting threaded nuts which move along said rods, means for imparting rapid rotation to said rods and other means for imparting intermittent rotation to said rods for moving said side rectangular sections toward and away from each other. 70

2. An apparatus for squeezing loads into cars comprising rectangular sections made up of channels, opposed guide members secured to said sections and having unthreaded bores therethrough, nut seats in said guide members, right and left hand threaded rods passing through nuts in said seats and through said unthreaded bores, sprockets on said threaded rods, a continuous chain connecting all of said sprockets for simultaneous movement and separate means for giving both rapid and slow movement to said screws, one of said means imparting intermittent movement thereto. 85

3. An apparatus for squeezing loads into cars comprising two rectangular sections positioned in opposed relation, means for moving said sections toward and away from each other, each section comprising an upper and lower horizontally positioned channel member, channel tie bars connecting said horizontal members and extending below the lower of said members, rollers mounted on the lower ends thereof, and guide members connected to said sections with means for guiding said moving means with separate means for imparting movement to said moving means to move said sections, one of which will impart substantially continuous movement thereto and the other will impart intermittent movement thereto. 100

4. An apparatus of the character described comprising a pair of spaced frames arranged in substantially parallel arrangement, opposed bearings secured to said frames, each of said bearings being provided with a smooth bore intersected by a chamber, spacer rods interconnecting said frames and snugly journaled in the bores of said bearings, said spacer rods having threaded portions within said bores, and nuts in said bearing chambers threaded onto the spacer rods. 115

5. An apparatus for squeezing loads into cars comprising rectangular frame sections, three or more opposed guide members secured to said frame sections and having smooth bores therethrough, rods for spacing said frame sections having right and left hand threaded ends to move freely through 125

said smooth bores in the opposed guide members, nuts associated with said rods to bear against said guide members for holding said frame sections in proper operative relation,
5 with means also associated with said rods for rotating the same for expanding or contracting said frame sections.

6. An apparatus for squeezing loads into cars or the like comprising a pair of rectangular frame sections, each frame section having four opposed bearing members with smooth bores therein, four spacer rods positioned through opposed bearing members, right and left hand threads on the said rods,
10 nuts coacting with said bearing members and said rods for causing said frame members to move toward or away from each other when the rods are turned, means for rotating said rods continuously and means for rotating
15 said rods intermittently.

7. An apparatus for squeezing loads into cars or the like comprising a pair of rectangular frame members, each frame member having four bearing blocks secured thereto and arranged
20 in opposed relation when said frame members are operatively arranged, spacer rods cooperating with said bearing blocks and having threaded ends to engage with threaded means associated with said bearing blocks, means for rotating said rods continuously to move said frame members toward or away from each other, and other means for
25 rotating said rods intermittently.

30 In testimony whereof I affix my signature.
35 FRED STEBLER.

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