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APPLIANCE FOR HANDLING TIMBER, &c.

APPLICATION FILED APR. 16, 1918.

1,297,745.

Patented Mar. 18, 1919.

2 SHEETS—SHEET 1.

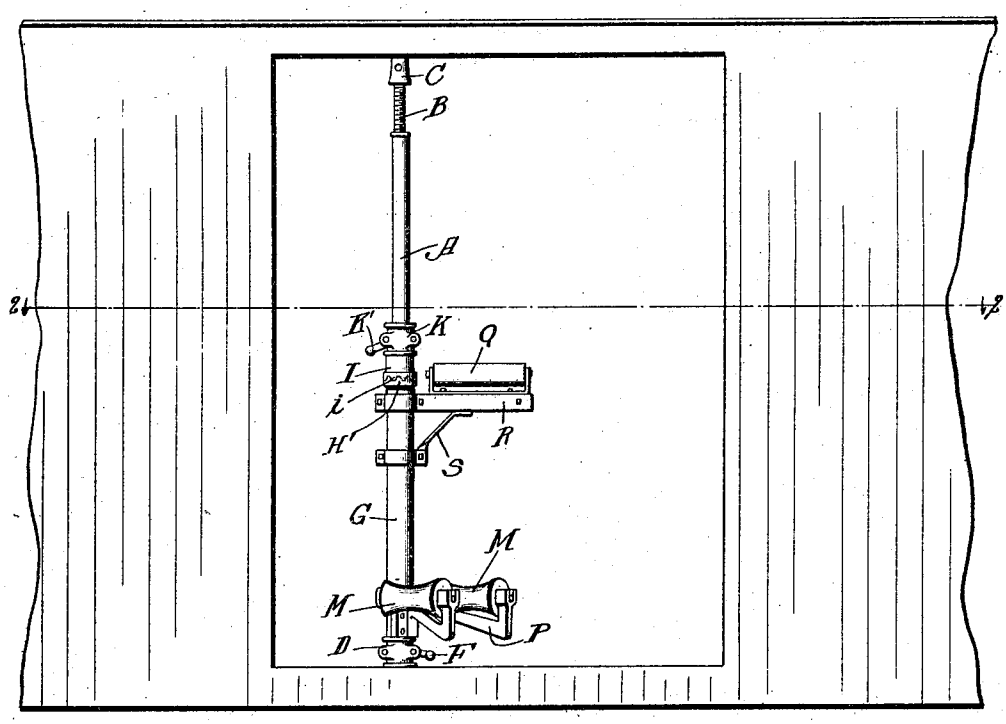
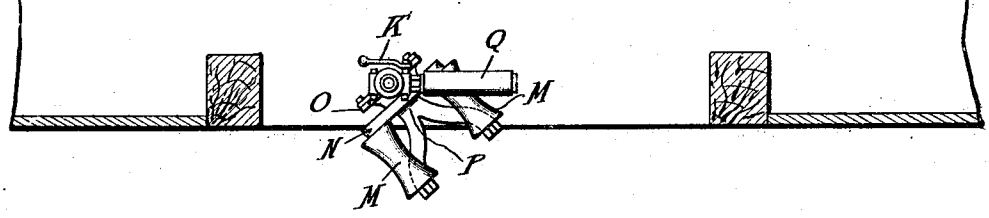


FIG. 1.

FIG. 2.



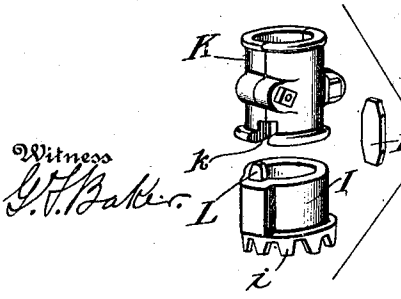


FIG. 3.

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2 SHEETS—SHEET 2.

FIG. 3.

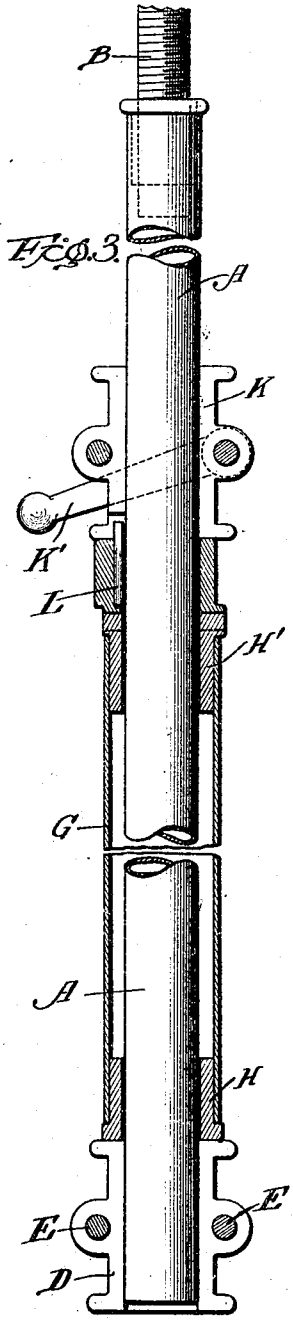


FIG. 4.

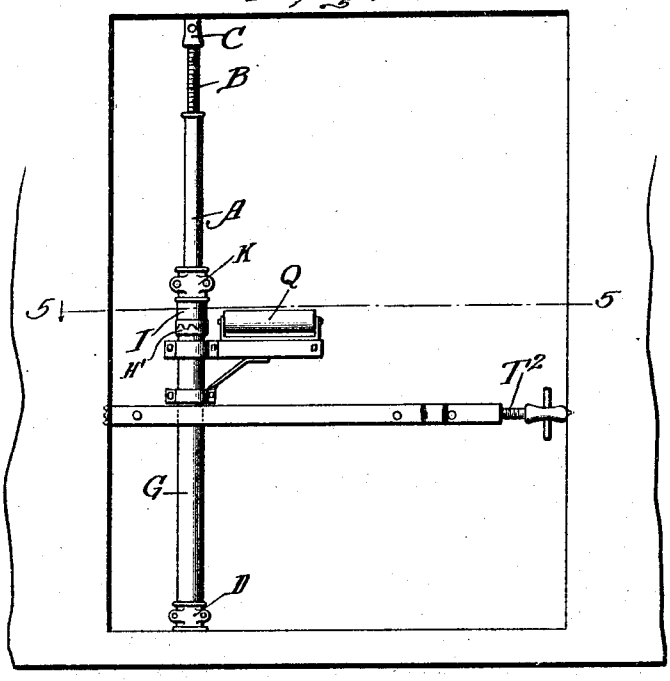


FIG. 5.

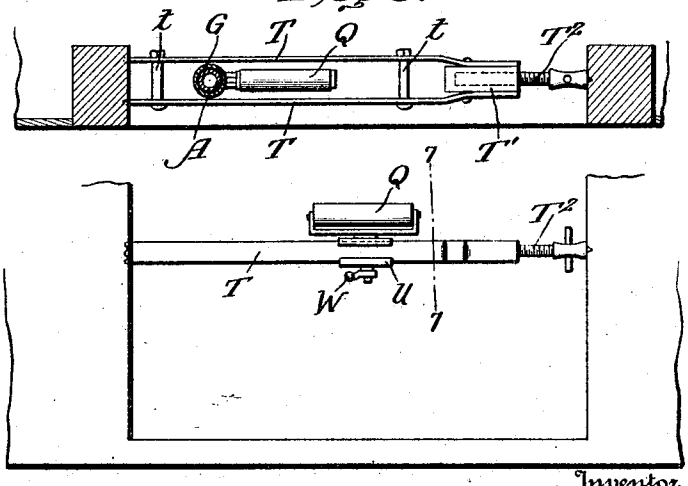


FIG. 6.

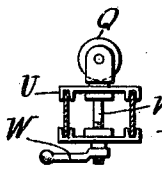


FIG. 7.

Witness

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UNITED STATES PATENT OFFICE.

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APPLIANCE FOR HANDLING TIMBER, &c.

1,297,745. Specification of Letters Patent. Patented Mar. 18, 1919.

Application filed April 16, 1918. Serial No. 228,918.

To all whom it may concern:

Be it known that I, GEORGE H. SPENCER, a citizen of the United States, and residing at Chicago, Cook county, State of Illinois, have invented certain new and useful Improvements in Appliances for Handling Timber, &c., of which the following is a specification.

The present invention relates to improvements in means for handling timber, metal beams, tubes, rods, etc., and particularly to a device adapted to be employed in loading such material into or unloading it from box cars.

The object of the invention is to provide a device or means of simple and strong construction by the assistance of which material of the character referred to can be shifted from or into a car, or onto or from a pile or stack, with a minimum amount of exertion or manual labor.

In the accompanying drawings:—

Figure 1 is a side elevation of a portion of a box car showing a device constructed in accordance with the present invention in position therein;

Fig. 2 is a plan and partial sectional view on the line 2—2 of Fig. 1;

Fig. 3 is a detail vertical sectional view, on an enlarged scale, of the device;

Fig. 4 is a view similar to Fig. 1, showing the device employed in connection with a horizontal support positioned across the door of the car;

Fig. 5 is a plan, partly in section, on the line 5—5 of Fig. 4;

Fig. 6 is an elevation of parts shown in Fig. 5 having a supporting roller mounted thereon;

Fig. 7 is a sectional view on the line 7—7 of Fig. 6;

Fig. 8 is a detail view of the means employed to prevent rotation of the material supporting roller about a vertical axis.

Referring to the drawings it will be seen that the device includes an upright or standard adapted to be firmly secured in position within the door-way of a railway box car, and a roller, over which the material to be loaded, or unloaded, can pass, mounted on said standard and adjustable thereabout as an axis.

In the particular embodiment of the invention illustrated the standard comprises a main section A, shown as being of tubular form, and a threaded member B engaging a thread within the upper end of the member A, by means of which the standard is extensible so that it may extend continuously from the floor to the top of the frame of the doorway of the car. At its upper end the extensible section B is provided with a head C adapted to be engaged by a suitable tool or bar by which the threaded section may be turned so that said head will be brought into such contact with the top of the door-way as to securely retain the standard in desired position. Any suitable foot or base may be provided for the member A, or in some instances the same may contact directly with the floor or bottom sill of the door-way. However, as shown it is preferred to employ a sectional base comprising two similar members D adapted to closely surround the lower end of the standard A, said members being connected by bolts E by means of which they may be drawn closely together so as to firmly engage the tube A and form a rigid, solid foot therefor. To permit of readily disconnecting such base or foot from the standard, one of the connecting bolts may be provided at one end with a handle F.

A sleeve G is fitted to the standard A in such a manner that, except when locked thereto by means to be hereinafter described, it may freely rotate about said standard as an axis. In the form of the device illustrated, this sleeve comprises a body portion of relatively light material having reinforcing end sections H, H′ snugly fitted therein. The lower end of said sleeve rests upon the base or foot D of the standard and the upper section H′ is projected beyond the body G and provided at its upper end with a series of notches or teeth, with which are engaged similar teeth *i* formed on a short sleeve I that loosely surrounds the standard A. To the standard A above said sleeves is clamped a collar K similar in construction to the base or foot member D provided with a handle K′, by manipulating which it may be closely clamped to the standard or loosened so as to be freely adjustable longitudinally thereof. At its lower end, said collar is provided with a notch or recess *k* and a key L is adapted to extend into said notch, and a seat formed in the sleeve I, as shown in Figs. 3 and 8. When the collar K is tightly clamped to the standard A, and

the key L positioned so as to engage the notch *k*, it will be seen that the entire sleeve hereinbefore referred to will be locked to the standard and prevented from any movement relative thereto. By operating the handle K′, however, and adjusting the collar K upward sufficient to disengage the notch in the lower end thereof from the key L, the sleeves will be released and can be readily turned about the standard as an axis to position the material supporting rollers hereinafter referred to at the desired angle relative thereto. The parts can be quickly locked in the adjusted position by moving the collar K into engagement with the key L and operating the handle or lever K′ so that said clamp is again secured to the standard.

The sleeve before referred to is provided with means for supporting the roll or rolls over which the material to be loaded into the car, or unloaded therefrom, can be readily passed.

In the drawings two forms of such roller supports are illustrated. Referring particularly to Figs. 1 and 2, it will be seen that the sleeve is provided adjacent its lower end with means for supporting two substantially horizontal parallel rollers M. The support for said rollers includes a base plate N which is formed integral with, or suitably attached to one-half of a sectional clamp O adapted to be secured, as by suitable bolts, to the lower end of the sleeve G. From the plate N extends a bifurcated arm P, the free ends of which are bent upward and formed with bearings to receive the pintles or axles of the supporting rollers M, suitable bearings for the opposite ends of said pintles being provided in the plate N. As shown, the rollers M are preferably made slightly concave in form and they are so adjusted with relation to the vertical axis of the standard A as to be equidistant therefrom so that the weight of the timber, metal bar, tube, etc., resting thereon will not produce an unequal strain on the standard. The sleeve G may also be provided with a roller Q mounted in suitable bearings on a laterally extending arm R that is provided at its inner end with means for clamping it securely to the sleeve. Preferably, as shown, the arm R is additionally supported by a brace S extending from a collar clamped about the sleeve. As shown in Fig. 1, both sets of rollers M and Q may be employed on a single standard, the lower one being used until the pile or stack within the car has reached a certain height, if the device is employed in loading, and the roller Q being used subsequently or vice versa. It will also be seen that the sleeve and rollers supported thereby may be adjusted to any desired vertical position on the standard. That is, the base member D may be adjusted vertically on the standard and secured at any height so that the sleeve resting thereon will bring the rollers into the desired horizontal plane.

A device such as hereinbefore described may be employed in connection with a stock or horizontal supporting device adapted to be positioned horizontally across the doorway. Such an arrangement is illustrated in Figs. 4 and 5. Referring to these figures, it will be seen that the stock consists of two side bars T which are connected adjacent their ends by tie bolts *t* and at one end there is secured between said bars an internally threaded block T′ with which engages a threaded stem T^2 that is provided at its outer end with a head having means for engaging one of the side chambers of the door frame. At the other end the plates or side members T are provided with teeth adapted to engage the adjacent jamb of the door-way so that the device can be firmly secured in the opening at any desired elevation from the floor. The parts T are so positioned that the standard A and sleeve G thereon can pass between them and the roller Q will be situated some distance above the stock T. Such an arrangement as shown in Figs. 4 and 5 is particularly useful in loading and unloading cars of lumber where the workman can successively withdraw from the pile or stack a series of boards, for example, and position same along the stock so that the number, size, etc., thereof can be readily computed by a tally clerk.

In some cases, the material supporting roller may be mounted directly on the stock T. Such an arrangement is shown in Fig. 6, in which it will be seen that the roller Q′ is mounted on a carriage U comprising top and bottom members engaging the plates or bars T and adapted to be held firmly at any desired position thereon by means of a threaded stem V and handle W. By this arrangement, the supporting roller can be adjusted practically throughout the width of the door-way as the connecting rods or tie members *t* are so separated that they do not interfere with the maximum movement of said roller support.

It is believed that the manner of using and many of the advantages possessed by a device constructed in accordance with the present invention will be readily understood from the foregoing description and the drawings. It will be seen that the device comprises very few parts and these are so assembled as to provide a very strong and durable structure. Owing to the fact that the material supporting roll or rolls may be adjusted about a vertical axis, the device enables workmen to readily unload long, heavy pieces of timber or metal from a car directly on to a wagon standing at the side of the car, or vice versa. Fig. 2 shows that the rollers may be turned so as to lie substan-

tially outside of the side lines of the car, or entirely within the car body, as may be required in manipulating the material to be moved.

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

1. A device for the purpose described comprising an upright or standard, a sleeve rotatably surrounding the standard and provided with means for supporting a substantially horizontally arranged roller, a collar secured to the standard beyond one end of the sleeve, and means connecting the sleeve and clamp to lock the sleeve against movement about the standard.

2. A device for the purpose described comprising an upright or standard, a sleeve rotatably surrounding the standard and provided with means for supporting a substantially horizontally arranged roller, one end of the sleeve having a plurality of teeth formed thereon, a collar secured to the standard beyond the toothed end of the sleeve, and means engaging said collar and teeth on the sleeve for preventing rotary movement of the sleeve.

3. A device for the purpose described comprising a standard, a collar surrounding the standard and adapted to be secured thereto at any desired elevation, a sleeve surrounding the standard and supported by said collar, a substantially horizontal roller carried by the sleeve and adapted to be bodily adjusted therewith about the standard, and means for locking the sleeve to the standard in any adjusted relation.

4. A device for the purpose described comprising an upright or standard and two rollers supported to turn together about the standard and extending laterally therefrom in substantially the same horizontal plane and parallel to each other, the axes of said rollers being in vertical planes on opposite sides of and substantially equi-distant from a vertical plane including the axis of the standard.

5. A device for the purpose described, comprising an upright or standard, a roller support including a base mounted to turn about the standard and two arms extending laterally from said base, and two rollers mounted in bearings in said base and arms.

6. A device for the purpose described comprising an upright or standard, a roller support including a base extending transversely beyond the standard at both ends and two diverging arms extending from said base and having their outer free ends bent upwardly, and two substantially horizontal, parallel rollers mounted in bearings formed in the upturned ends of said arms and adjacent the ends of said base.

7. A device for the purpose described comprising an upright or standard, a sleeve rotatably surrounding the standard and supporting a substantially horizontally arranged roller, one end of the sleeve being provided with a plurality of teeth, a collar secured to the standard beyond the toothed end of the sleeve by means permitting it to be adjusted longitudinally of the standard and provided with a notch or recess in its end adjacent the sleeve, a second sleeve surrounding the standard and having teeth engaging the teeth on the roller carrying sleeve, and a recess or socket in alinement with the notch or recess in the collar, and a detachable key engaging the alined recesses in the last said sleeve and collar.

In testimony whereof I affix my signature.

GEORGE H. SPENCER.

Witnesses:
WM. J. MOORE,
FRANK H. GRAHAM.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."