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C. L. ELDH

2,666,595

LINOLEUM ROLL LIFT

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2 Sheets-Sheet 1

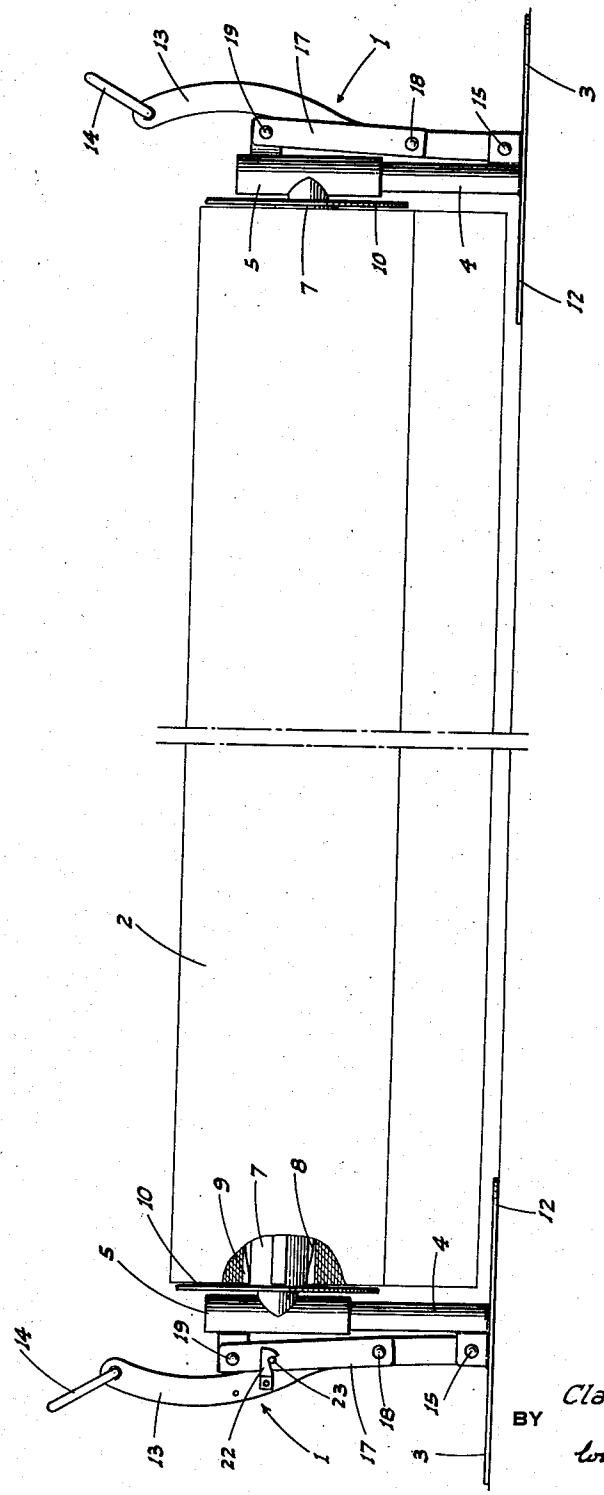


Fig. 1

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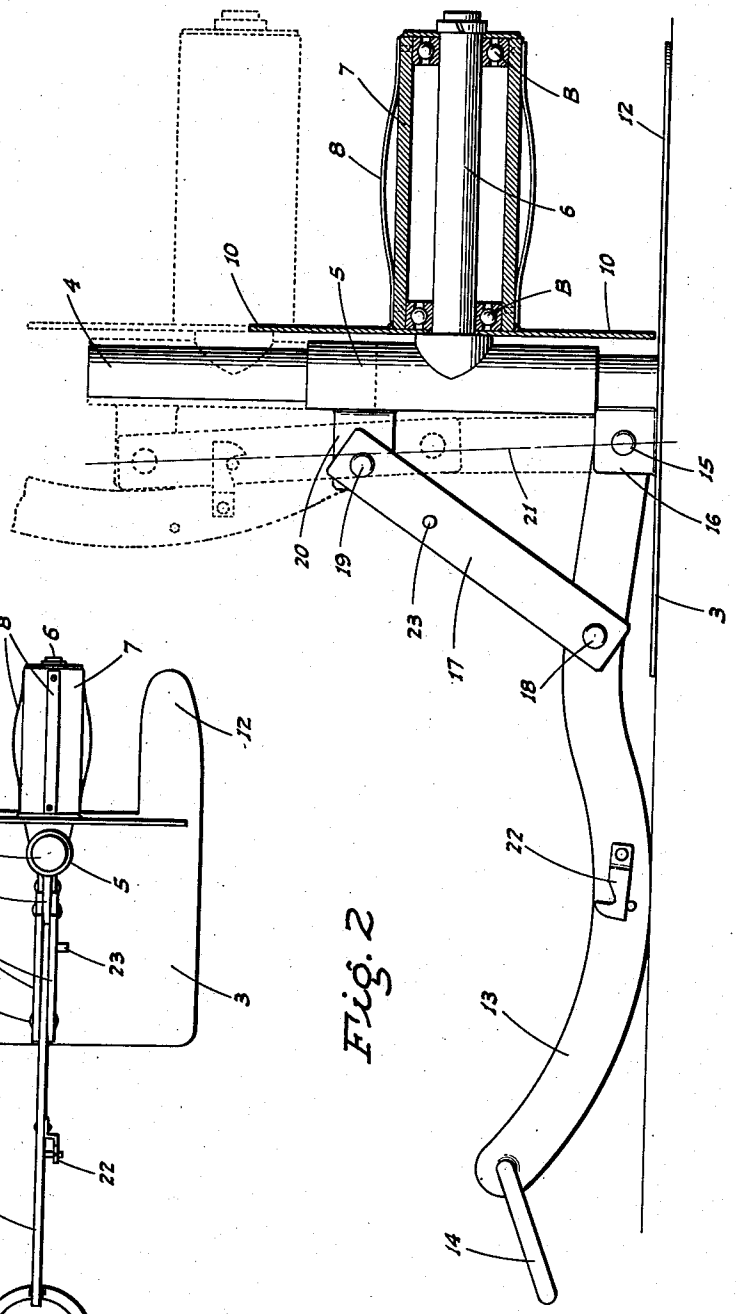


Fig. 2

Fig. 3

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LINOLEUM ROLL LIFT

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3 Claims. (Cl. 242—55.2)

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This invention relates to a device for use in linoleum dispensing or display establishments; my principal object being to provide a device, for the purpose, by means of which a roll of heavy linoleum may be easily lifted from the floor, and then unrolled to display the pattern to a prospective customer or for cutting off any desired amount from the roll; the latter being then rolled up again, if necessary, before being again lowered to the floor and released from the device.

The device comprises a pair of separate identical units, each adapted to engage and lift one end of the roll, and a further object of the invention being to arrange each unit so that, while capable of lifting only one end of a roll, both units may, in turn, be handled by a single operator to lift the roll at both ends so as to be clear of and parallel to the floor.

Still another object of the invention is to provide a linoleum roll lift which is practical, reliable, and durable, and one which is exceedingly effective for the purpose for which it is designed.

These objects are accomplished by means of such structure and relative arrangement of parts as will fully appear by a perusal of the following specification and claims.

In the drawings:

Fig. 1 is a front elevation of the device as supporting a lifted roll.

Fig. 2 is a longitudinal enlarged elevation of one unit of the device with the roll-supporting spindle, and the actuating handle thereof in lowered position.

Fig. 3 is a top plan view of said unit in the position of Fig. 2 but on a reduced scale.

Referring now more particularly to the characters of reference on the drawings, the device comprises a pair of roll lifting units 1 separate from and identical to each other and adapted to together support and lift a roll 2 of linoleum therebetween, as shown in Fig. 1.

Each unit comprises a base plate 3 having a rigid post 4 upstanding therefrom centrally between its side edges and intermediate its ends.

Slidable on the post is a sleeve 5 from one side of which a spindle 6 projects radially. Freely turnable on the spindle, and mounted on ball bearings B, is a cylindrical sleeve 7 on which a number of circumferentially spaced and outwardly projecting leaf springs 8 are secured at their ends. The springs are bowed so as to have the greatest extent of projection centrally of the ends of sleeve 7, as shown in Fig. 2, and the diameter between opposed springs is such that they

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will frictionally bind against the wall of the central opening 9 in roll 2 when sleeve 7 is projected into said opening (see Fig. 1). At its end nearest sleeve 5, sleeve 7 is provided with an enlarged roll limiting or locating disc 10, rigid with sleeve 7.

The sleeve 5, when in its lowest position on the post 4, is disposed so that disc 10 just clears the base plate 3, and the sleeve 5 is at a level such that it may enter the opening 9 in a roll 2 resting on the floor on which base 3 is disposed. The portion of the base under the sleeve 7 is cut away, as shown at 11, so as to provide laterally spaced feet 12 which rest on the floor to the side of the portion thereof on which the bottom of roll 2 rests, so that the plate 3 may be slid along the floor until the adjacent end of roll 2 abuts the disc 10, while providing such support for the roll lifting unit as will tend to prevent upsetting of the unit when supporting the load.

In order to lift the sleeve 7 from said lowest position, a hand lever 13, provided with a rigid grip 14 at its outer end, projects from the base of post 4 in a direction parallel to, but away from, sleeve 7, being pivoted adjacent the post and base on a cross pivot 15 mounted in rigid ears 16 straddling the lever. A pair of links 17 straddle the lever a short distance from pivot 15 and are pivoted at their lower end on said lever, as at 18. The links extend upwardly at an angle when the lever is lowered, and are pivoted at their upper end, as at 19, on an ear 20 projecting from the adjacent side of sleeve 5 near the top thereof.

When the lever is lifted, the sleeve 5, through the links 17, is lifted also; the pivot 18 of said links being beyond a dead center line 21 drawn through pivots 15 and 19 when the lever is lifted to its upward limit (against ear 20) and the sleeves 5 and 7 are correspondingly raised as high as possible, as indicated in Fig. 2 and shown in Fig. 1.

The sleeve is thus automatically prevented from undesired lowering movement, but to assure the sleeve being held in such raised position, a notched latch bar 22 is mounted on the lever in position to engage over a pin 23 on one of links 17 when the handle is in such fully raised position.

In operation, the units 1 are initially placed at the ends of the roll 2 to be lifted, with their sleeves 7 in lowered position.

If two operators are employed, both units 1 may be simultaneously engaged with the ends of the roll 2, and the respective handles manip-

ulated relatively simultaneously to raise both ends of roll 2 at the same time.

If one operator is employed, either unit 1 is first engaged with one end of the roll 2, and the roll is lifted at said end by manipulation of lever 13. This places the roll 2 at an angle to the floor, and to the axis of sleeve 7, but because of the curving springs 8, which are the roll engaging members, said roll can assume an angular position without binding on the sleeve 7 or tending to bend and possibly fracture. After the one end of the roll has been lifted, the operator similarly manipulates the other unit 1 to lift the other end of the roll.

As an alternative the springs 8 may be omitted and the outside of sleeves 7 knurled to provide frictional engagement with the inside of the roll at the top; the sleeves being of sufficiently lesser diameter than the central opening in the roll to permit of initial canting of the latter as aforesaid.

From the foregoing description it will be readily seen that there has been produced such a device as substantially fulfills the objects of the invention, as set forth herein.

While this specification sets forth in detail the present and preferred construction of the device, still in practice such deviations from such detail may be resorted to as do not form a departure from the spirit of the invention, as defined by the appended claims.

Having thus described the invention, the following is claimed as new and useful, and upon which Letters Patent is desired:

1. A linoleum roll lift comprising a pair of separate units adapted to be disposed at opposite ends of the roll, each unit comprising a base plate, a post upstanding from the plate, a sleeve slidable on the post, a horizontal-axis rotary member projecting from and movable with the sleeve and adapted for engagement in one end of the axial opening of a roll, a hand lever pivoted at one end on the base plate adjacent the post, an upstanding link between and pivoted at its ends on the lever intermediate its ends and the sleeve, said link being disposed at an upward angle toward the sleeve when the lever is in a lowered position and the sleeve is in a lowered position on the post, and so that the lever when swung up on its pivot will lift the sleeve and roll supporting member; the link and the portion of the lever between the base pivot and the point of pivotal connection of the link therewith being substantially alined and vertical when the sleeve is fully lifted, and releasable latch means between the lever and link operable when said lever portion and the link are in such substantially vertical position.

2. A device as in claim 1, in which the pivot of the link on the lever is beyond a dead center position relative to a line drawn through the base pivot of the lever and the pivot of the link on the sleeve when the lever portion and link are in said substantially vertical position.

3. A device as in claim 1, in which the lever projects from the base in a plane parallel to but in a direction away from the rotary member.

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