

J. F. ROSS.
HARNESS FOR CARRYING CEMENT BAGS.
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1,129,732.

Patented Feb. 23, 1915.

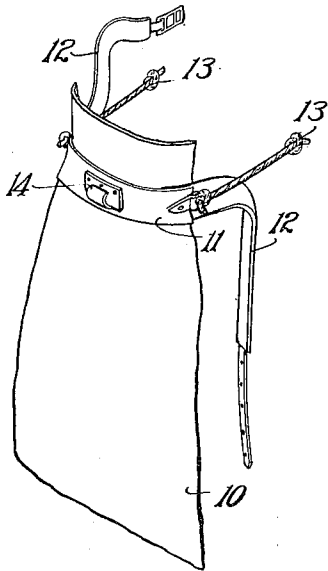


FIG. 2

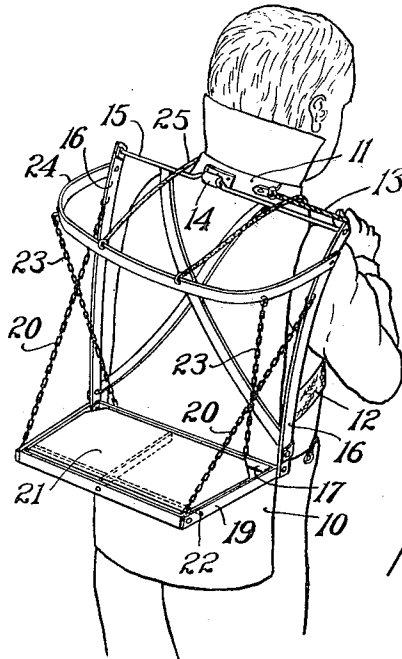


FIG. 1

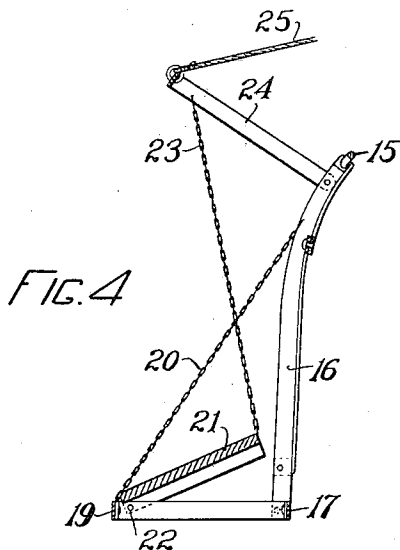


FIG. 4

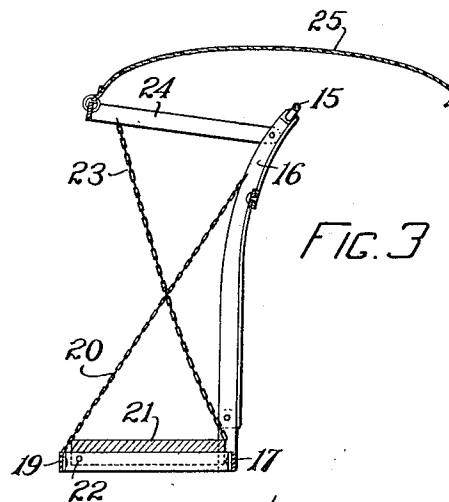


FIG. 3

WITNESSES

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HARNESS FOR CARRYING CEMENT-BAGS.

1,129,732.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JOSEPH F. ROSS, a citizen of the United States, residing at Ipswich, in the county of Essex and State of Massachusetts, have invented new and useful Improvements in Harness for Carrying Cement-Bags, of which the following is a specification.

This invention relates to improvements in harness for carrying bags of cement and the like impalpable powders. The Portland cement used in building operations is frequently packed in cloth bags, and usually has to be carried by laborers from the car or boat in which it is shipped to the temporary shelter where it is kept by the builder until needed for use. This work is extremely disagreeable, and is also dangerous to health because the fine powder which sifts out from the bags gets into the workmen's clothes, ears, eyes and lungs.

It is the object of the present invention to provide means for men to carry such bags conveniently and quickly without the handling of the bags that causes the clouds of dust; and to do so by means adapted to either cloth or paper bags, and which permits the laborer to get and to put down his load without the employment of more labor to assist him than is now required without such harness. These objects of the invention, and the other advantages incidental to the apparatus embodying the invention which is herein to be described, are attained by the apparatus shown in the accompanying drawings, in which:

Figure 1 is a perspective view of the apparatus in position for use; Fig. 2 is a view in perspective of the cape portion of the apparatus; Fig. 3 is a side elevation in section on a medial vertical line through the remaining portion of the apparatus, showing it in position for holding a bag; and Fig. 4 is a side elevation similarly in section showing the same part of the apparatus in position to receive or to discharge a bag.

Referring to the drawings the apparatus is seen to be separable into two parts, viz., a light flexible cloth cape, having a shoulder piece and straps so that it is adapted to fit over the back and shoulders of a laborer, and to be held there conveniently; and a bag holder, readily separable therefrom, which is conveniently made of metal. The cape consists of a piece of tight woven cloth

10 having a collar which may be of leather 11 adapted to fit around the neck and over the coat collar of the wearer, the cape hanging over his shoulders and back to keep the bag and the dust that emanates from it out of contact with his clothing. This may be fixed in position by two straps 12 which pass across the breast and fasten behind the back; but for holding the same when the load is on it, two short rope handles 13 are provided, one attached at each forward edge of the collar. A hook 14 suitably fastened to the back of the collar is adapted to engage and hold the bag support now to be described.

In its preferred form the bag support comprises a frame having a top rod 15 that extends horizontally across the wearer's shoulders with a central loop or offset portion that engages the hook 14. From the ends of this hang side rods 16, the bottoms of which are joined by the horizontal rod 17. To maintain this frame in shape and at the same time to support the whole comfortably on the wearer's back, flat rods crossing each obliquely, as illustrated in Fig. 1, may be added. At the bottom of the rod 17 is pivoted a frame 19 extending backward approximately horizontally when the wearer is standing upright. The outer end of this is held by stays 20 attached well up on side rods 16. Within this horizontal frame is a movable ledge 21, made of wood, netting, canvas or other suitable material. In the drawing this is represented as made of wood and is supported at its outer edge by a pivotal bearing 22 on frame 19 about which it may swing from the position illustrated in Fig. 1 when its inner or forward edge is pulled upward by the stays 23 which engage it. The upper ends of these stays 23 are attached to a bail 24 which is pivoted at the top of side rods 16 and extends backward horizontally, when the parts are in their normal position at rest and the wearer is standing upright. The bail thus encircles the upper part of any bag that is resting on the ledge 21. As this bail is pivoted at the top of side rods 16, and as the stays 23 are attached a little distance out from the pivot, the swinging of the bail upward about its pivots draws upward on the stays 23 at the same time that the bail moves upward from its bag encircling position. Thus the inner edge of ledge 21, next the wearer's back is

lifted; and this tends to dump from the ledge any bag which is resting thereon. For raising this bail a cord 25, may extend forward over the wearer's shoulders, preferably in the form of a loop attached on each side of the center.

The operation of the device is as follows: A laborer equipped with the harness backs up to the door of the freight car to receive a bag of cement on his back in the manner customary when no harness is used. As he does so he draws forward on the cord 25 thus pulling the bail 24 upward and forward away from the ledge 21 leaving ample space for an attendant in the car to set the bag on the ledge. He then lets go the cord 25, and, grasping the hand ropes 14 and leaning forward so that the weight of the bag comes on his back, proceeds to his destination. In this action the release of cord 25 lets the bail 24 swing backward and downward, being drawn both by its own weight and by the weight of the bag of cement which is then resting on the raised ledge 21. In its descent this bail swings over to the outside of the bag of cement, the ledge 21 settles down to a position substantially at right angles to the wearer's back, and, as the man leans over, the weight comes upon his shoulders and back in a convenient position for carriage. The result is that by the simple operation described the bag is inclosed in the harness, resting on its bottom firmly instead of being suspended from the top, and is prevented from falling off by the bail which holds its top and by the chains 23 and 20 which are stretched at its side. Upon arrival at destination the workman pulls the cord 25. This raises the bail and at the same time automatically tips the ledge 21 and dumps the bag off. It will be seen, therefore, that the operation of the device requires no assistance from the attendant in the car, except to place the bag upon its ledge; that the bag is settled and fastened in place by a simple act of the man who is to carry it; and that the releasing of the bag is another simple act and requires no attendant. While the bag is being carried, its weight acting through the ledge 21 draws the bail 24 downward so that it presses against the bag and holds the upper portion of the bag frictionally and thus prevents it from swaying or slipping sidewise. This bail is preferably a flat metal strap, because of the stiffness of metal, so that when the bail is raised, by pulling at the points where the cords 25 are attached, all parts of the bail are lifted together instead of some remaining engaged or sunk into the bag, as may happen if a rope bail be used. The side stays 20, 23, are conveniently made of inexpensive punched chain, because such is both flexible and inextensible. The bottom frame 19 is pivoted to the upright frame in

order to make the harness collapsible for convenience in transportation or storage when not in use; and the stays 20 are flexible for the same reason.

In the drawing the protective cloth is represented with its dimensions somewhat abbreviated in order not to cover other parts that need to be seen, for clearness of illustration, but it is obvious that this may be made of any desired dimensions, and that other variations may be made from the precise form illustrated, without departing from the scope of the invention.

I claim:

1. A harness for carrying bags and the like including in combination a ledge extending backward from the wearer's back; means permitting said ledge to be tipped backward to dump a bag resting thereon; a bail extending backward from the upper part of the wearer's back, adapted to encircle the upper part of said bag and to swing upward therefrom; means holding said ledge and bail in position and ties connecting together those parts of the bail and the ledge which move upward together.

2. A harness for carrying bags and the like including in combination a ledge extending backward from the wearer's back; a bail extending backward from the upper part of the wearer's back, and adapted to encircle the upper part of said bag, and means extending from the bail forward of the wearer for lifting said bail.

3. A harness for carrying bags or the like including in combination a ledge extending backward from the wearer's back; means to hold in position a bag resting on said ledge; and means extending forward of the wearer adapted to change the angle of said ledge with respect to the remainder of the harness to dump a bag resting thereon.

4. A harness for carrying bags or the like including in combination a protective cape adapted to fit on a man's back; a stout collar therefor; a support depending from the collar over the cape and adapted to hold a bag; and means extending over the wearer's shoulders forward from the collar, adapted to be grasped by the hands to maintain said collar and bag support in place.

5. A harness for carrying bags or the like including in combination a protective cape adapted to fit on a man's back; a stout collar therefor; a ledge extending backward from the cape; means to support the ledge from said collar; means to tip the ledge backward to dump a bag resting thereon; and handles extending forward from the collar.

6. A harness for carrying bags or the like including in combination a ledge extending backward from the wearer's back, a pivotal support therefor at its outer edge,

and means adapted to be actuated by the wearer to lift the inner edge of the ledge, thereby tipping it backward.

7. A harness for carrying bags or the like including in combination a ledge extending backward from the wearer's back, a pivotal support therefor at its outer edge, and means adapted to be actuated by the wearer to lift the inner edge of the ledge, thereby tipping it backward, a bail set at a distance above the ledge, extending backward and pivotally supported at its inner ends; and ties connecting the bail and ledge, whereby the outer edge of the bail and the inner edge of the ledge move up and down together.

8. A harness for carrying bags or the like including in combination a frame extending parallel to the wearer's back; a ledge and a bail extending backward from the bottom and top respectively of the frame, each being pivotally connected to the frame to fold the apparatus; and means adapted to be grasped by the hands of the wearer to tip the ledge backward to dump a bag therefrom.

9. A harness for carrying bags or the like including in combination a frame extending parallel to the wearer's back; a ledge and a bail extending backward from and pivotally connected to the bottom and top respectively of the frame, to fold the apparatus; means adapted to be grasped by the hands of the wearer to tip the ledge backward to dump a bag therefrom; and

flexible ties at the sides of the frame controlling the position of the ledge.

10. A harness for carrying bags or the like including in combination a fabric adapted to extend downward from the level of a man's collar; a ledge projecting backward from the lower part of the fabric and adapted to underlie and uphold a bag resting loosely upon it; ties connected to the fabric near the level of the collar and extending forward for the man to hold the harness in place; and ties extending backward and downward to the sides of the ledge to support the projecting part of the ledge.

11. A harness for carrying bags or the like including in combination an approximately impervious flexible fabric adapted to extend upward and downward from the level of a man's collar; a projection backward at the lower part of the fabric and adapted to underlie and uphold a bag resting loosely upon it; ties connected to the fabric near the level of the collar and extending forward for the man to hold the harness in place; and ties extending backward and downward to the sides of said projection to support it at a distance behind the man's back.

Signed by me at Boston, Mass., this 31st day of August, 1912.

JOSEPH F. ROSS.

Witnesses:

MARY A. O'BRIEN,
JOSEPH T. BRENNAN.

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