W. V. ELLIS.

REST AND LIFTING LEVER.

APPLICATION FILED DEC. 14, 1908.

**1,018,655.**

Patented Feb. 27, 1912.

3 SHEETS—SHEET 1.

FIG. 1.

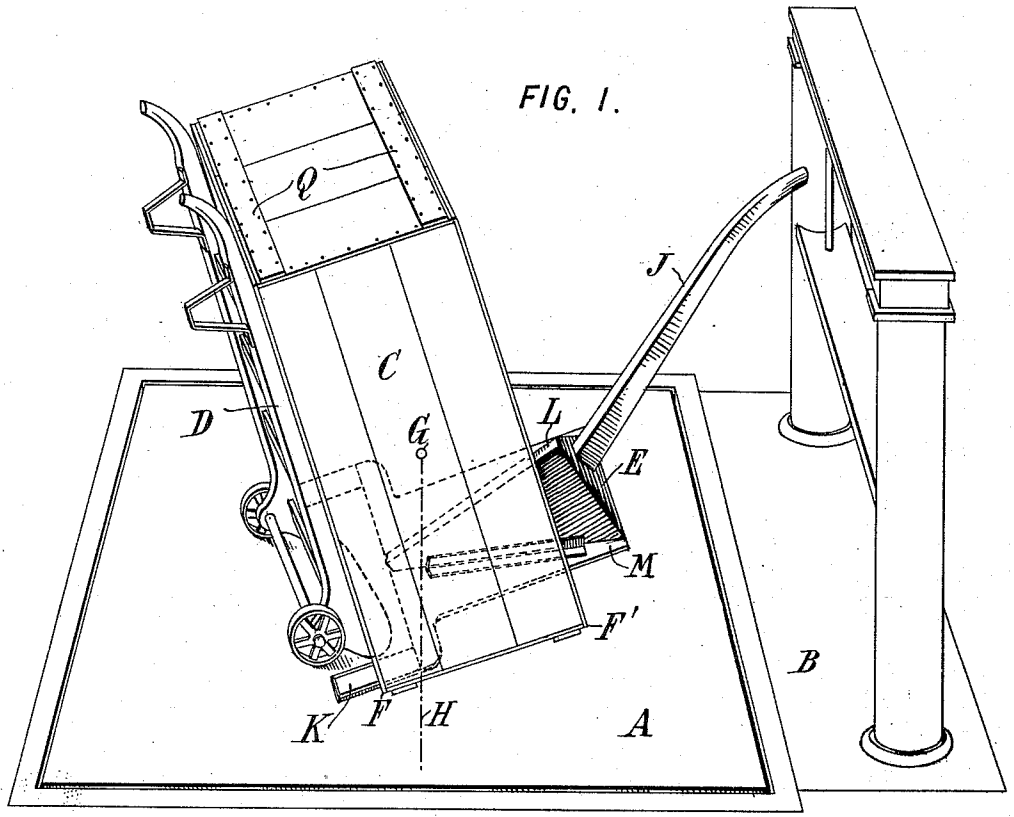
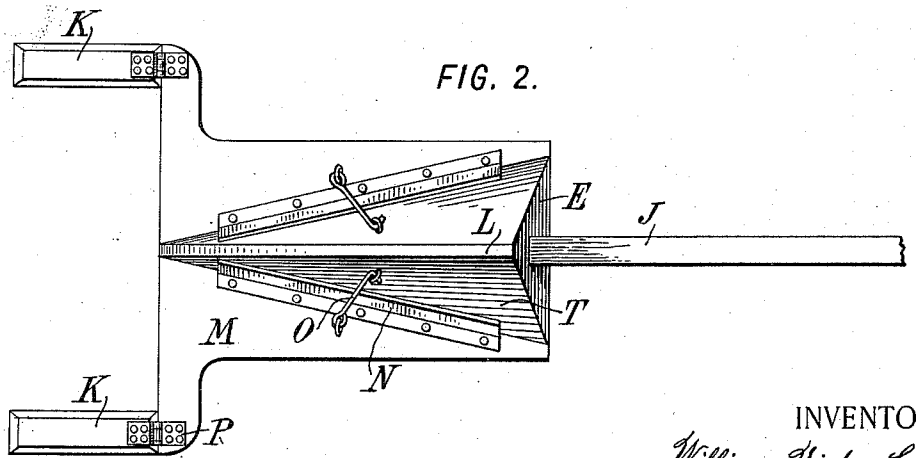



FIG. 2.

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3 SHEETS—SHEET 2.

FIG. 3.

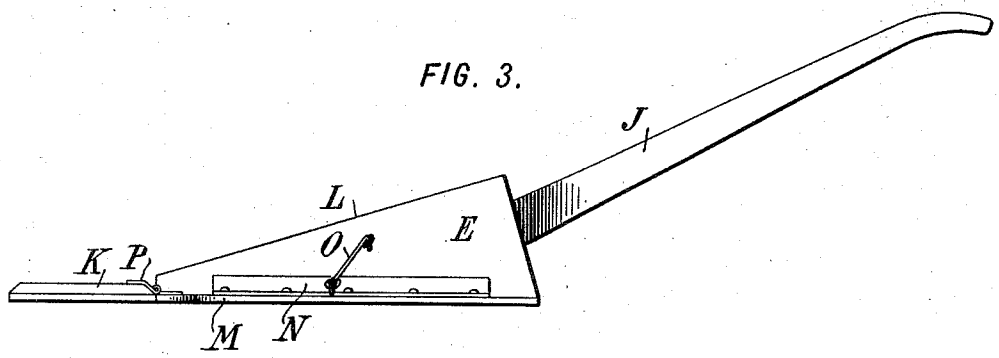



FIG. 4.

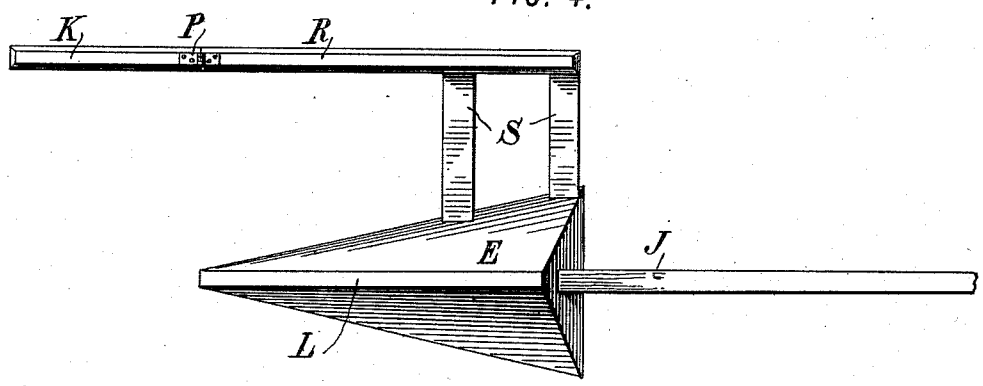
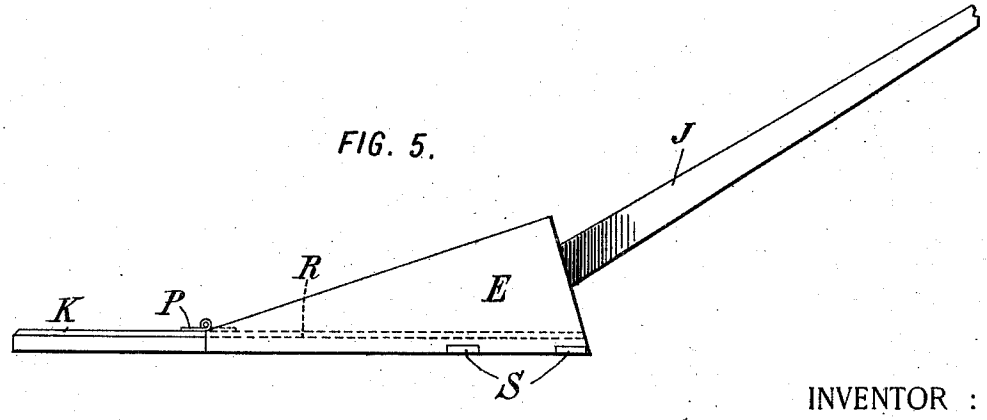



FIG. 5.

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3 SHEETS—SHEET 3.

FIG. 6.

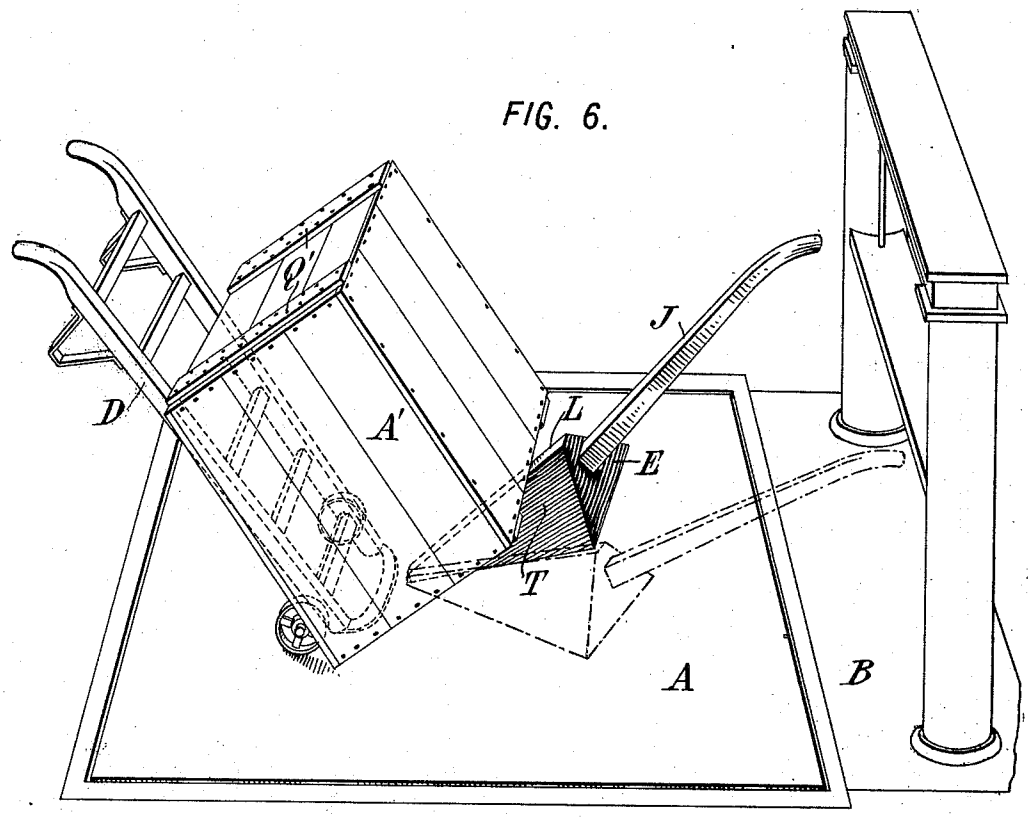
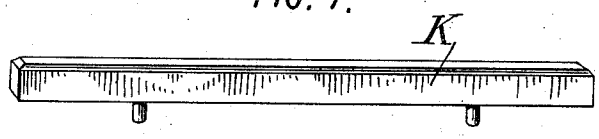



FIG. 7.

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# UNITED STATES PATENT OFFICE.

WILLIAM VIRTUS ELLIS, OF HUNTINGDON, PENNSYLVANIA, ASSIGNOR, BY MESNE ASSIGNMENTS, TO J. C. BLAIR SPECIALTY COMPANY, OF HUNTINGDON, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA.

## REST AND LIFTING-LEVER.

1,018,655. Specification of Letters Patent. Patented Feb. 27, 1912.

Application filed December 14, 1908. Serial No. 467,482.

*To all whom it may concern:*

Be it known that I, WILLIAM VIRTUS ELLIS, a citizen of the United States, residing at Huntingdon, in the county of Huntingdon and State of Pennsylvania, have invented certain new and useful Improvements in Rests and Lifting-Levers, of which the following is a specification.

My invention aims to provide an improved rest and lifting lever and parts thereof for facilitating the trucking and handling of goods.

When cases or bundles or other shipments of goods are taken from cars or elsewhere to scales to be weighed, they are deposited thereon with a shock that is hard on the scales, and particularly hard on the trucker. In taking up such a case of goods on to the truck from the scales or elsewhere, the trucker usually pulls the goods or case by means of a hook to the truck, and tilts it up thereon. In many cases this requires a great muscular strain. When the cases are of short dimensions and yet heavy, the difficulties are decidedly emphasized.

The device of the present invention in its most complete form serves to relieve the shock of throwing the case of goods off the truck and to facilitate the replacing of the case on the truck, saving wear and tear on the scales, the case, and the goods, and especially on the trucker.

The device is extremely handy and economical of time and labor.

The accompanying drawings illustrate embodiments of the invention.

Figure 1 is a perspective view of the same in use upon a weighing scale. Fig. 2 is a plan of the same, separate from the scales. Fig. 3 is a side elevation thereof. Figs. 4 and 5 are respectively a plan and a side elevation of another embodiment of the invention. Fig. 6 is a perspective view of another embodiment of the invention in use. Fig. 7 shows a device which may be used in connection with that of Fig. 6.

Referring to the embodiments of the invention illustrated, A is the platform of a weighing scales in connection with which the use of the rest and jack is illustrated, and B is the stationary base of the scales upon which the weighing operator stands. The case C is brought on to the weighing platform upon a truck D of the usual or any suitable type. Ordinarily the case is dumped on to the platform, standing on one of its heads, in a vertical position. According to this invention, however, a device E is provided which preferably rests flat on the floor as shown and upon which the forward edge of the head of the case opposite the truck rests, so that the case does not come down flat upon its head with the usual jar, but is stopped in a position inclined backwardly toward the truck. The first point of support as the case is unloaded is the rear edge F of the head of the case. The device E is placed in such a position that the case will be tilted about the edge F until its center of gravity (indicated roughly at G) is clearly beyond the line of support F, so that the case shall be in stable equilibrium, as indicated by the vertical dotted line H falling beyond the supporting edge F. The case is swung over far enough to be perfectly sure of its stability, but no farther than is necessary, so as to facilitate replacing it on the truck. The truckman will very readily gage the distance with sufficient accuracy for practical purposes.

The supporting device E is preferably provided with a handle J extending within reach of the weigh-man so that he may shift the supporting device about on the platform to any desired point, and especially to enable him to replace the case or to assist the trucker in replacing the case on the truck. In weighing the goods it is of course only necessary to take the total weight of the support and connected parts, together with that of the case, and to deduct the weight of the support and connected parts to secure the net weight of the case. This deduction of course may be effected either mentally or automatically by the weighing machine where the latter has two scale beams upon one of which the support and connected parts may be balanced, the case being then weighed by the other scale beam, showing its net weight. After weighing, the truckman has simply to shove the nose of the truck under the rear edge F of the case. The weigh-man by a very slight exercise of muscular power may lift the handle J sufficiently to overbalance the case backward upon the truck. The truckman may of course assist this operation, but ordinarily it will be unnecessary. Because of the ob-

lique position of the case with its center of gravity G not far beyond its pivotal point F, there is very little lifting effort to be effected, the action being more in the nature of a horizontal movement about the pivotal line F, so that it is remarkably easy, requiring little or no exertion.

An accessory which is especially useful with cases whose height is much greater than their breadth, and wherever the trucker has to insert the nose of the truck under a cleat on the end of the box, is shown in Fig. 1, consisting of a bar K located at the right and a similar bar located at the left of the truck (or of the position which the truck is intended to assume). Preferably a pair of such laterally offset bars K is used, as shown in Fig. 1, and they are hinged to the supporting device E. Now when the case is deposited on a platform its edge F rests on the bars K and its forward edge F′ rests on the supporting device E as before. This facilitates the withdrawal and reinsertion of the nose of the truck by maintaining a space under the rear edge F of the head of the case into which the nose can be introduced.

The details of design and construction of the supporting device E, the handle J, and the bar or bars K, may be varied widely without departing from the invention. The preferred construction is as shown in Fig. 1. In this construction the handle J which with the support E constitutes in effect a lever, is connected to the rear face of the support E at a point below its upper edge L. This has an advantage in permitting an extra-long case to project over the rear face of the support beyond the end of the upper edge L of the support.

Preferably the bar or bars K are united to the support E and to the jack or handle J in the manner shown in Figs. 2 and 3, in which the bars are made separately portable and separable from or attachable to the support by having their forward ends pivoted upon a plate M which is provided with overhanging angles N on its face fitting the base of the support E. Latches O or other suitable means may be used to fasten the support E upon the plate M. Thus the support E and the bars K and the other parts may be fastened and used together, or they may be separated and either used without the other. When the parts are used in combination the hinges P come in line with the point of the support E about which the lever turns in replacing the load on the truck. The bars remain stationary therefore while the lever does its work.

Where the end of a case is quite long in one direction as compared with the other, and the battens or cleats Q extend the long way of the head of the box as shown in Fig. 1, the bars K are particularly useful. It will be observed that the position of most stable equilibrium of the case on the truck is with the cleats extending across the truck rather than up and down. The load should be as low and flat as possible, rather than high and narrow. Consequently in such cases it is impracticable to use the cleats Q on the head of the case for maintaining a space into which the nose of the truck can be thrust, and the bars K are used for this purpose. In ordinary square-headed or other small cases, however, it is easy for the trucker to pick up the case in any position, and he will be able to provide a space for the nose of the truck by arranging the cleats Q′ at the right- and left-hand sides as shown in the case of A′, Fig. 6. In such cases it is unnecessary to use spacing bars K. The supporting device E and the handle J alone are used. In Fig. 1 the case is shown at rest on the scales and support. In Fig. 6 the position of rest of the support is shown in dotted lines, and the support and lever are shown in full lines lifted to the position necessary to throw the case A′ back upon the truck D or to receive the case gently from the truck. Instead of the connection of the bars K in the manner shown in Figs. 1, 2 and 3, a single bar (Fig. 7) may be used, and such a single bar or a pair of bars may be separate from the support and may be doweled into the scales to hold them in position. Or it may be fastened to the support E in a variety of ways other than that already described. For example, in Figs. 4 and 5 a single bar K is shown connected by a hinge P to a second bar R which is connected by lateral arms S permanently to the support E.

The support, which I denominate as a whole by the letter E, may be made of various designs, but is preferably of approximately tetrahedral shape with its upper face or edge L sufficiently broad to give a good bearing and to be durable. The rear face E is inclined backwardly, and the sides T are inclined outwardly at a substantial angle so as to give a broad base and sufficient strength with as little bulk and weight as possible. The pointed end affords an opportunity for supporting a case with a very narrow space between the battens. This pointed shape is important, as it is desirable in some cases to insert the support for a considerable distance, and if the battens are close together the narrow pointed support will accommodate itself to the space provided. The inclination of the upper edge L is also a feature of advantage in adapting the support for use with cases of different proportions. Some cases should be tilted more than others, and the forward edges of such cases should rest at higher points on the edge L. If, for example, a case be not very deep, it must stand in a nearly vertical

position, and its forward edge cannot be placed very high up on the edge L of the support. A deeper case, however, can be tilted more, and can rest farther up on the edge L of the support. The edge L of the support and the tops of the bars K may be shod with metal to increase their durability, and various other changes in detail and in the arrangement and combination of the parts may be made without departing from the invention. Pivoted members such as K which carry the rear edge of the head of the case have also the advantage, regardless of their lateral positions, of holding the support or lever against backward movement when it is turned upward to lift the forward edge of the case.

What I claim is:—

1. A device for receiving cases of goods from trucks, consisting of a support having an upper edge elevated above the floor upon which the cases are to be dumped, and adapted to receive the forward edge of the head of a case while the rear edge of the latter rests upon said floor, so as to hold the case in an oblique position in which it can be easily replaced upon a truck, in combination with a laterally offset spacing bar adapted to support the rear edge of the head of the case above the floor, so as to form a space under said edge for the nose of the truck.

2. A device for receiving cases of goods from trucks, consisting of a support having an upper edge elevated above the floor upon which the cases are to be dumped, and adapted to receive the forward edge of the head of a case while the rear edge of the latter rests upon said floor, so as to hold the case in an oblique position in which it can be easily replaced upon a truck, in combination with a laterally offset spacing bar adapted to support the rear edge of the head of the case above the floor, so as to form a space under said edge for the nose of the truck, said support being provided with a handle for lifting it to tilt the case backward about its rear edge.

3. A device for receiving cases of goods from trucks, consisting of a support having an upper edge elevated above the floor upon which the cases are to be dumped, and adapted to receive the forward edge of the head of a case while the rear edge of the latter rests upon said floor, so as to hold the case in an oblique position in which it can be easily replaced upon a truck, in combination with a laterally offset spacing bar adapted to support the rear edge of the head of the case above the floor, so as to form a space under said edge for the nose of the truck, said support being provided with a handle for lifting it to tilt the case backward about its rear edge, and means for pivotally connecting said bar with said support along a line coinciding with the nose of said support.

4. A device for receiving cases of goods from trucks, consisting of a support having an upper edge elevated above the floor upon which the cases are to be dumped, and adapted to receive the forward edge of the head of a case while the rear edge of the latter rests upon said floor, so as to hold the case in an oblique position in which it can be easily replaced upon a truck, in combination with a pair of bars K and means for attaching the same to said support, said support being provided with a handle for lifting its rear end in order to tilt a case backward about its rear edge.

5. In combination, a support E provided with a handle J at its rear, a pair of bars K, a plate M to which said bars are pivoted, and means for attaching said support E to said plate with its point in line with the hinges of said bars K.

6. A device for receiving cases of goods from trucks, consisting of a support having an upper edge elevated above the floor upon which the cases are to be dumped, and adapted to receive the forward edge of the head of a case while the rear edge of the latter rests upon said floor, so as to hold the case in an oblique position in which it can be easily replaced upon a truck, said support having a pointed end whereby the support may be accommodated between battens close together on the end of a case.

7. A device for receiving cases of goods from trucks, consisting of a support having an upper edge elevated above the floor upon which the cases are to be dumped, and adapted to receive the forward edge of the head of a case while the rear edge of the latter rests upon said floor, so as to hold the case in an oblique position in which it can be easily replaced upon a truck, said support having a narrow upper edge and sloping sides and a broad base.

8. A device for receiving cases of goods from trucks, consisting of a support having an upper edge elevated above the floor upon which the cases are to be dumped, and adapted to receive the forward edge of the head of a case while the rear edge of the latter rests upon said floor, so as to hold the case in an oblique position in which it can be easily replaced upon a truck, said support having a pointed nose, a narrow upper edge, sloping sides, and a broad base.

9. A device for receiving cases of goods from trucks, consisting of a support having an upper edge elevated above the floor upon which the cases are to be dumped, and adapted to receive the forward edge of the head of a case while the rear edge of the latter rests upon said floor, so as to hold the case in an oblique position in which it can be easily replaced upon a truck, said sup-

port being provided with a handle for lifting said support to tilt the case back about the rear edge of its head, said handle being extended rearwardly from the rear face of said support at a point below the upper edge of the support so as not to interfere with cases projecting beyond said rear face.

10. In combination, a support E having a broad base, a pointed nose, a narrow upper edge, sloping sides, a sloping rear face, and a handle J extending rearward from said rear face at a point below the upper edge.

11. A device of the class described adapted to rest flat upon a floor and to support cases of goods in a backwardly inclined position so that they may be received from a truck without serious shock, said supporting means being provided with a handle extending rearwardly and upwardly at a fixed angle therefrom by which it can be shifted to a point suited to the dimensions of the case and by which it can be lifted to tilt the case backward on to a truck.

In witness whereof, I have hereunto signed my name in the presence of two subscribing witnesses.

WILLIAM VIRTUS ELLIS.

Witnesses:
WILLIAM A. MAGUIRE,
SAMUEL R. SHINGLER.