

No. 840,996.

PATENTED JAN. 8, 1907.

W. R. DENNIS.  
PACKAGE HANDLING DEVICE.

APPLICATION FILED JAN. 16, 1906.

2 SHEETS—SHEET 1.

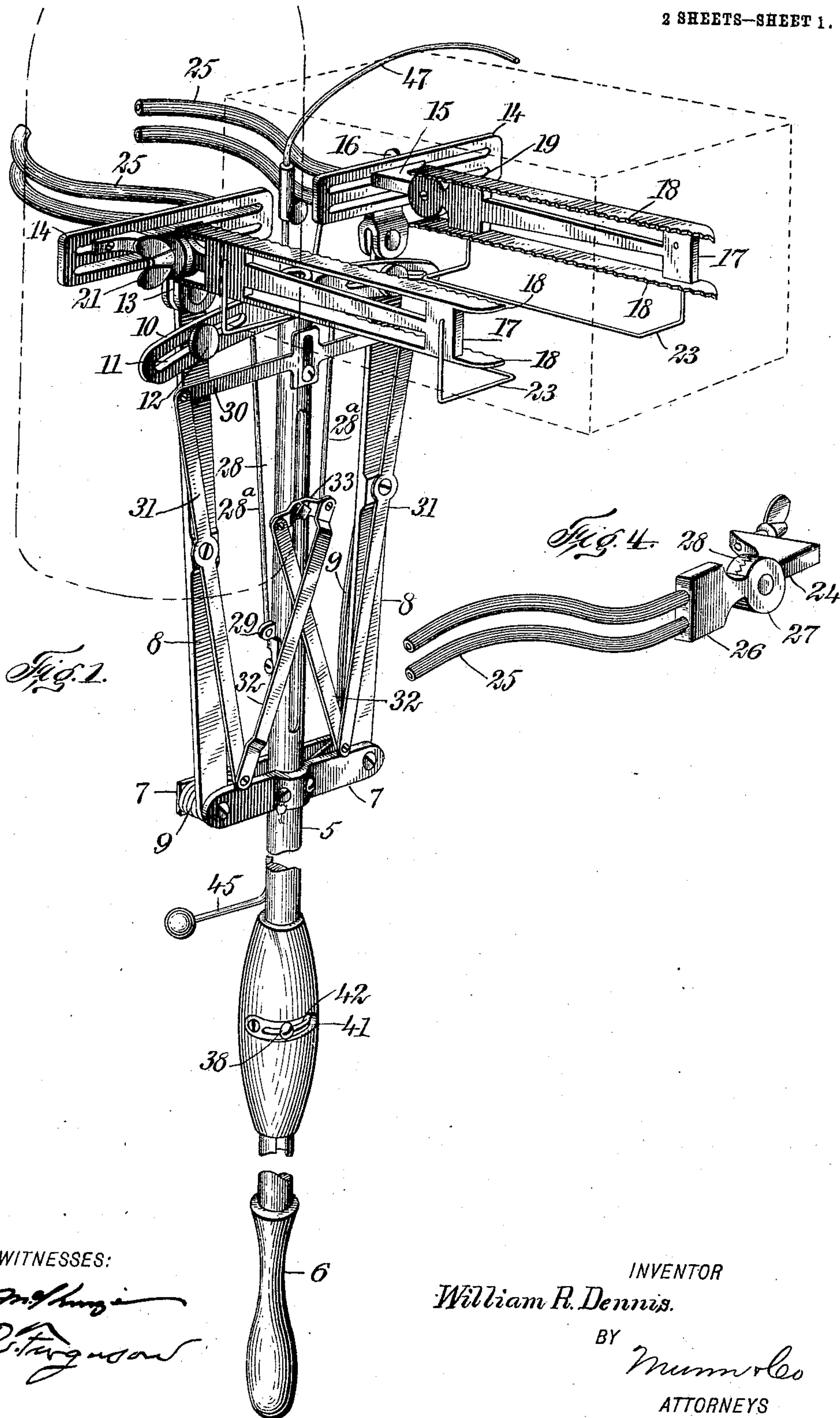


Fig. 1.

Fig. 4.

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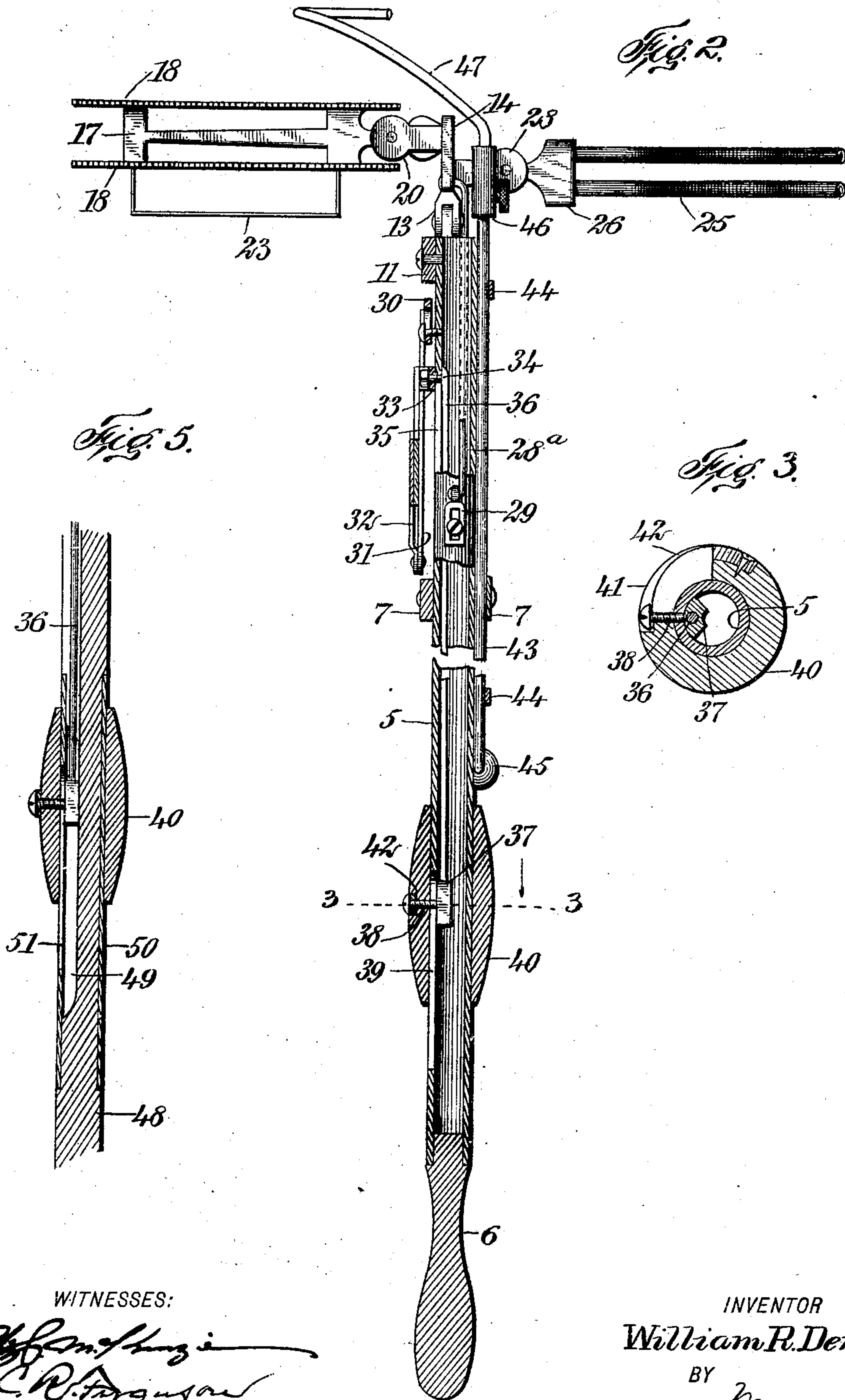
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# UNITED STATES PATENT OFFICE.

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## PACKAGE-HANDLING DEVICE.

No. 840,996.

Specification of Letters Patent.

Patented Jan. 8, 1907.

Application filed January 16, 1906. Serial No. 296,283.

*To all whom it may concern:*

Be it known that I, WILLIAM R. DENNIS, a citizen of the United States, and a resident of Denver, in the county of Denver and State of Colorado, have invented a new and Improved Package-Handling Device, of which the following is a full, clear, and exact description.

This invention relates to improvements in devices for handling shelf goods of the usual classes sold in stores, the object being to provide a device for this purpose somewhat similar to that shown in the patent granted to me under date of June 27, 1905, No. 793,512, but having additional structural features that may be considered in the light of improvements.

I will describe a package-handling device embodying my invention, and then point out the novel features in the appended claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a perspective view of a package-handling device embodying my invention. Fig. 2 is a longitudinal section thereof. Fig. 3 is a section on the line 3-3 of Fig. 2. Fig. 4 is a perspective view of one of the gripping arms or jaws employed, and Fig. 5 shows a modification in the staff or handle.

In Figs. 1 and 2 the staff or handle 5 consists of tubular metal, and at its lower end it is provided with a handpiece 6. Attached to the staff 5 are cross-plates 7, between the ends of which vertically-disposed arms 8 are pivoted. These arms 8 are swung inward, carrying the gripping devices therewith, by means of spring-rods 9, coiled around the pivots of the arms and engaging at their upper ends with said arms, as clearly indicated in Fig. 1.

Secured to the staff 5, near its upper end, is a cross head or plate 10, provided with slots 11 for receiving guide-screws 12, which engage in the upper portions of the arms 8, and above this cross-head 10 the arms have pivotal connection with lugs 13, depending from slotted plates 14, which project at right angles to the staff. Each plate 14, it will be noted, is provided with two parallel slots, one slot being designed to receive brackets 15, which are adjustable in the slots and held as adjusted by means of set-screws 16, and mounted to swing on these brackets 15 are

gripping-jaws for engaging with boxes or similar packages. Each gripping-jaw consists of an arm 17, having inwardly - extended flanges 18 at its upper and lower edges, these flanges being toothed. To permit the gripping devices 17 to be adjusted and held at any desired angle with relation to the staff, the said arms are connected to the brackets by means of clutch members 19 on the arms engaging with clutch members 20 on the brackets, and they are held as adjusted by means of set-screws 21.

When the device is used for shifting or moving pasteboard boxes or the like that might be broken by pressure of the jaws 17, I provide said jaws with wire hangers 23, which extend below the plane of the jaws and practically form platforms upon which a box or package may rest. Adjustable in the other slots of the plates 14 are brackets 24, which support gripping arms or jaws extended in an opposite direction from the jaws 17. These jaws consist of pairs of curved wires 25, which preferably will be covered with rubber tubing or the like to prevent possible damage to bottles or other glassware. These wires are extended from blocks 26, which have clutch connections 27 with clutch members 28 on the brackets. Therefore these curved clutch-arms may be arranged at any angle with relation to the staff as described in connection with the jaws or arms 17.

From the inner ends of the plates 14 rods 28<sup>a</sup> extend downward to pivotal connection with blocks 29, adjustable on the staff, and by these rods the plates 24, carrying the jaws, will be held at all times in parallelism as they move outward or inward. A cross-bar 30, attached to the staff 5, near its upper end, by means of a screw passing through a slot at the central portion of said bar into the staff, has its ends pivotally connected with bars 31, mounted to swing on the arms 8, as clearly indicated in Fig. 1. The lower ends of these bars 31 have pivotal connection with links 32, the upper ends of said links being pivoted to a cross-head 33 on the staff. From the cross-head 33 a pin 34 passes through a slot 35, formed lengthwise in the staff 5, and the said pin at its inner end connects with an operating-rod 36 within the staff, the lower end of said rod having connection with a block 37, from which a pin 38 extends outwardly through a slot 39 in the staff, and this



pin also passes through a slot formed in a sleeve 40, movable lengthwise of the staff and also having a slight rotary movement thereon. The sleeve 40, is provided with a circumferentially-disposed slot 41, and secured to the outer side of the sleeve at the opposite side of the slot 41 are eccentrics or cam-plates 42, with which the head of the screw 38 engages. By rotating the sleeve 40 the cams 42 will serve as a locking means by engaging with the head of the screw to hold the jaws at any desired opening or to clamp the same tightly against articles to be moved or shifted.

In connection with the device I provide means for discharging a box that may be resting on the upper side of the box or package to be removed. This device consists of a draw-rod 43, slidable in keepers 44 and having a crank-handle 45 at its lower end. Detachably connected to the upper end of the rod 43 by means of a coupling 46 is an eccentrically-curved head-rod 47, designed to be engaged with a box or package designed to be slid off from the one underneath it—that is, obviously by rotating the arm 43 the head portion 47 will also be rotated to move the box or package.

While I have heretofore described a tubular metal staff, it is obvious that a staff of wood may be employed, as indicated at 48 in Fig. 5. This staff 48 is provided with a longitudinal channel 49 at one side, in which the block 37 and the rod 36 are movable. Surrounding the staff 48 at the point with which the sleeve 40 engages is a sleeve 50, having a slot 51, through which the pin 38 passes.

In the operation by moving the sleeve 40 downward on the staff the jaws will be caused to spread apart so that they may be engaged with a box, package, or the like. Then upon releasing the sleeve the springs 9 will move the jaws toward each other to engage with a box, package, or the like. In shifting paper or pasteboard boxes, as before mentioned, it is not desirable that the jaws shall clamp closely against the same while the paper or pasteboard box is resting on the hangers 23. To provide for this, the sleeve 40 may be rotated so that the cam mechanism will lock the jaws at a suitable distance apart.

By making the jaws adjustable as to angle with relation to the staff it is obvious that the device may be conveniently arranged for a person standing at a distance or on shelving or the like.

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

1. A package-handling device comprising a staff, a plate attached to the upper portion of the staff and having arc slots, arms pivotally connected to devices at the lower portion of the staff, pins or screws extended from said arms through said slots, plates having pivotal connection with the upper ends of

said arms, jaws carried by said plates, and means for moving the jaws toward and from each other.

2. A package-handling device comprising a staff, a cross-plate attached to the staff, spring-pressed arms having pivotal connection with said plate and extended upward therefrom, slotted plates having pivotal connection with the upper ends of the arms, a guide device for the outward and inward movement of the arms, brackets adjustable in the slots of the slotted plates, and jaws adjustable on said brackets.

3. A package-handling device comprising a staff, a cross-plate thereon, arms pivoted to said cross-plate, springs for moving said arms toward each other, means for moving the arms from each other, slotted plates pivotally connected to the upper ends of the arms, jaws adjustable on said slotted plates, the said jaws comprising arm portions having toothed flanges, and other clamping-arms in the form of curved wires adjustable on said slotted plates and extended in an opposite direction from the first-named jaws.

4. A package-handling device comprising a staff of tubular metal, the said staff being provided with longitudinal slots, a cross-head attached to the staff, arms pivoted to the cross-plate and extended upwardly therefrom, jaws carried by said arms, a cross-bar connected to the staff, rods pivoted to said arms and also pivoted to said cross-bar, a cross-head, link connections between said cross-head and the lower ends of said rods, a draw-rod having a portion extended through one of the slots in the staff and connecting the said cross-head, a block with which the lower end of said rod connects, a pin extended outward from said block through a section or lower slot, and a sleeve movable lengthwise of the staff and with which said pin connects.

5. A package-handling device comprising a staff, arms mounted to swing toward and from each other on said staff, horizontally-disposed slotted plates pivotally connected to the upper ends of said arms, swinging rod connections between the inner ends of said slotted plates and the staff, means for operating the arms, and jaws carried by said slotted plates.

6. A package-handling device comprising a staff, upwardly-extended arms having swinging connection with said staff, slotted plates mounted on the upper ends of the arms, brackets adjustable in the slots of said plates, clamping-jaws, clutch connections between said jaws and brackets, and means for operating the arms to move the jaws toward and from each other.

7. A package-handling device comprising a staff, arms mounted to swing on the staff, means for causing the swinging movements, jaws carried by the arms, and a hanger car-



ried by each jaw and adapted to engage the under side of a package.

8. A package-handling device comprising a staff, a cross-plate thereon, jaw-carrying arms mounted to swing on said plate, a cross-bar arranged on the staff, rods pivoted to said arms and also pivoted at their upper ends to said cross-bar, the said cross-plate being provided with upper and lower slots, a cross-head, link connections between said cross-head and said rods, a pin extended from the cross-head through the upper wall, a rod extended downward from said pin and within the staff, a block with which the lower end of the rod connects, a pin extended from said block through the lower slot of the staff, a sleeve having a circumferentially-disposed slot through which said pin passes, and eccentric or cam plates arranged at opposite sides of said slot and with which the head of the pin engages.

9. A package-handling device comprising a staff, clamping-jaws carried by the staff, and a rod having rotary connection with the staff, the upper end or head of said rod being curved.

10. A package-handling device comprising

a staff, arms having swinging relation to said staff, two pairs of clamping-jaws carried by the arms, the jaws of one pair extending in an opposite direction from the jaws of the other pair, keepers on the staff, a rod mounted to rotate in said keepers and having a handle at its lower portion, and a curved head detachably connected to the upper end of said rod.

11. A package-handling device comprising a staff, arms having swinging relation to said staff, means for causing the swinging movements of the arms, plates pivotally connected to the upper ends of the arms, each plate being provided with longitudinal slots, one slot above the other, brackets adjustable in the upper slots, jaws carried by and adjustable on said brackets, brackets adjustable in the lower slots, and jaws carried by and adjustable on said last-named brackets.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WM. R. DENNIS.

Witnesses:

W. H. LEMMON,  
L. D. PERRY.