

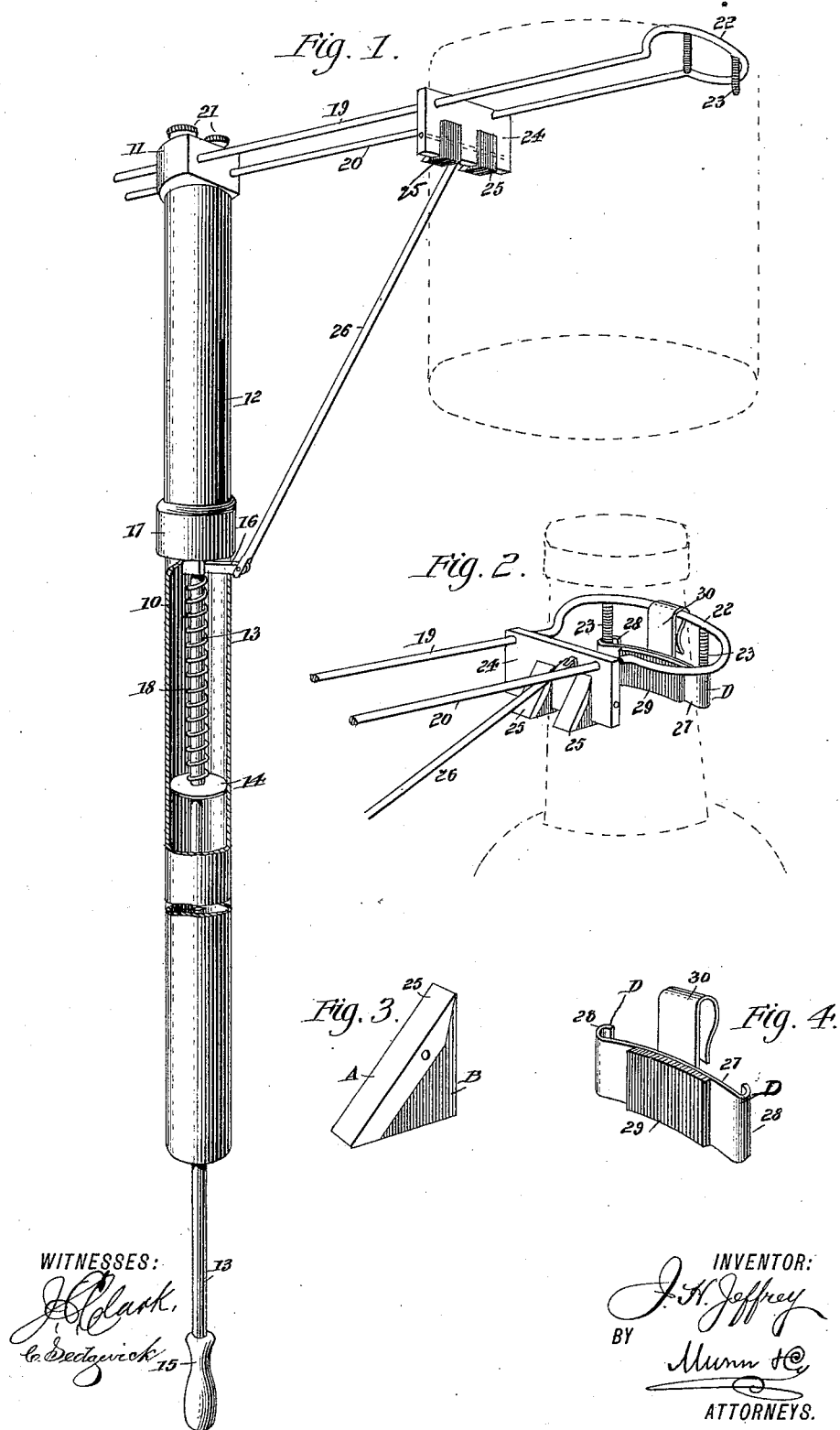
(No Model.)

J. H. JEFFREY.

DEVICE FOR LIFTING GOODS FROM SHELVES.

No. 420,725.

Patented Feb. 4, 1890.



UNITED STATES PATENT OFFICE.

JOHN H. JEFFREY, OF CRESCENT CITY, CALIFORNIA.

DEVICE FOR LIFTING GOODS FROM SHELVES.

SPECIFICATION forming part of Letters Patent No. 420,725, dated February 4, 1890.

Application filed June 13, 1889. Serial No. 314,084. (No model.)

To all whom it may concern:

Be it known I, JOHN H. JEFFREY, of Crescent city, in the county of Del Norte and State of California, have invented a new and useful Improvement in Devices for Lifting Goods from Shelves, of which the following is a full, clear, and exact description.

My invention relates to a new and useful machine, apparatus, or device, the object of which is to afford facility in lifting goods or packages of any character from shelves or high supports upon which they are placed, and which usually necessitates the use of a ladder in order to reach them.

A further object of the invention is to provide a device of this character which shall be of simple and durable construction and capable of expeditious and convenient manipulation.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully described, and pointed out in the claims.

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

Figure 1 is a perspective view of the device, the body being illustrated as partly in section, and the grip-surfaces as holding a can, which can is shown in dotted lines. Fig. 2 is a perspective view of the gripping portion of the device, illustrating an addition thereto adapted for use to clamp the neck of a bottle when a bottle is to be placed upon or taken away from a shelf. Fig. 3 is a perspective view of one of the clamping-jaws adapted for attachment to the traveling clamping-plate, and Fig. 4 is a perspective view of the attachment adapted for use in connection with a bottle.

The body of the device consists of a tube 10 or any usual form of (preferably cylindrical) tubular casing of any desired length and diameter, which casing is provided at the upper end with an attached head-block 11, and upon the inner face with a longitudinal slot 12.

Within the body of the casing 10 a rod 13 is held to slide through a disk 14, rigidly se-

cured in the body or casing, preferably at a point below the center thereof, as illustrated in Fig. 1, the said disk being apertured to admit of the passage of the rod. The rod 13 extends beyond the under or lower end of the body or casing 10, and is made to terminate, preferably, in a handle 15. To the upper end of the rod 13 a horizontal arm 16 is rigidly secured, adapted to project outward through the body-slot 12, and above the said arm and bearing thereon a sleeve 17 is held to loosely slide upon the body. The sleeve may be dispensed with, but when employed is attached to the rod 13 through the slot 12, and may be utilized to manipulate the rod instead of the handle 15.

The arm 16 is normally held in the upper portion of the body-slot 12, or essentially in contact with the upper wall of the said slot, by a spring 18, which is coiled around the rod 13, having a bearing upon an enlargement formed at the upper end and upon the disk 14, as also clearly shown in Fig. 1.

In the head-block 11 guide-rods 19 and 20 are secured to extend at a right angle from the inner face of the said block, which face is preferably flat or straight. These guide-rods may be secured in any suitable or approved manner in the head-block, and are usually attached by passing set-screws 21 through the head-block to a contact with the said rods. The outer extremities of the guide-rods are united by a bow-section 22, from which bow-section two spaced prongs 23 are downwardly and perpendicularly projected. Upon the guide-rods a clamping-plate 24 is held to slide, provided with apertures through which the guide-rods pass, and also provided, preferably in the lower edge, with two spaced recesses, in each of which recedes a clamping-jaw 25 is secured. One of the clamping-jaws 25 is illustrated in detail in Fig. 3, and in said figure is represented as triangular in general outline; but I desire it to be understood that I do not confine myself to such contour.

The clamping-jaws are usually constructed in two sections A and B, the section B being made of flexible or elastic material—such as rubber—while the section A is of metal and forms a binding-plate for the rubber section.

These jaws are pivoted in the recesses of the clamping-plate 24 in such manner that their outer face, which is of rubber, will normally project beyond the front or outer face of the plate, as illustrated in Fig. 1.

The clamping-plate 24 is united with the arm 16 of the body-rod 13 by means of a connecting-rod 26, the rod being pivoted to the plate and also to the said arm.

When a bottle or other receptacle having a neck is to be removed and placed upon a shelf, I provide an attachment consisting of an auxiliary clamping-jaw D, which jaw acts as a substitute for the prongs 23. This auxiliary jaw is illustrated in Figs. 2 and 4 and comprises a horizontal semicircular curved plate 27, having its ends bent or curled outward, as illustrated at 28 in Fig. 4.

Upon the concave face of the plate 27 a block 29, of rubber or other equivalent material, is firmly attached, and upon the convex face of the plate, at or near the center of the same, a shank or standard 30 is fastened, preferably made of spring metal, the upper end of which standard is curved downward and slightly inward in the direction of the body of the standard to form, essentially, a spring-hook. When this auxiliary arm is to be used, the hook-section of the standard 30 is made to engage with the bow-section 22, uniting the guide-rods 19 and 20 between the prongs 23, and the plate 27 of the auxiliary jaw is of such length that when the jaw is thus applied the prongs 23 of the device proper will extend downward between the outer face of the plate and the curved or curled extremities 28 thereof. In this manner the auxiliary jaw is retained in a fixed position and all lateral movement is avoided.

I desire it to be distinctly understood that I do not confine myself, as heretofore stated, to the form of jaws 25 illustrated, or to the manner of attaching the said jaws to the clamping-plate 24, as, instead of pivoting the said jaws in the said plate, they may be attached rigidly to the outer face of the clamping-plate 24, in similar manner to the block 29 of the auxiliary jaws, and the said jaws may be rectangular, if so desired.

In operation, by the action of the spring 18, coiled upon the operating-rod 13, the arm 16, attached to said rod, is, as hereinbefore stated, normally made to engage with the upper wall of the body-slot 12, and when the arm 16 in this position is in its normal position, practically shown in Fig. 2—that is, at the outer extremities of the guide-rods 19 and 20—the tension of the spring 18 is so great that any object inserted between the clamping-plate 24 and the prongs or auxiliary jaws will be securely held to the clamping-plate 24. To remove an object from a shelf or other high support, the operating-rod is drawn downward, preferably by grasping the handle 15, which movement carries the clamping-plate 24 in the direction of the head-block 11, and when the clamping-plate and the

prongs or auxiliary jaw contact with the opposite sides of the articles to be removed or placed the operating-rod 13 is released, and the clamping-plate, returning to its normal position, firmly retains the object between it and the opposed clamping-surfaces. When the object has been removed from the shelf and it is desired to remove it from the device, it is not absolutely necessary that the operating-rod 13 should be manipulated, as by pressing the sleeve downward the clamping-plate 24 is forced inward.

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

1. The combination, with a tubular slotted body, a rod held to slide in the said body, an arm projected from the said rod at or near the top, and guide-rods secured horizontally in the upper end of the body, united by a bow-section, of a stationary clamping-jaw secured to the bow-section of the guide-rods, a clamping-plate held to slide upon the said guide-rods, and a connecting-rod uniting the said clamping-plate and the arm of the body-rod, substantially as shown and described.

2. The combination, with a tubular body provided with a longitudinal slot, a body-rod held to slide in the body, an arm projected from the upper surface of the body-rod, a spring bearing against said arm, whereby it is normally held in contact with the upper wall of the body-slot, and horizontal guide-rods secured in the upper extremity of the body, united at their outer ends by a bow-section having a clamping-jaw attached thereto, of a clamping-plate held to slide upon the guide-rods, jaws of a yielding material secured to the clamping-plate, and a connecting-rod uniting the said plate with the arm of the operating-rod, substantially as shown and described.

3. The combination, with a tubular body, an operating-rod held to slide in the said body, passing through an apertured disk secured therein and having an enlarged upper end, a spring encircling the operating-rod, bearing against the enlarged upper surface of the rod and the said disk, and guide-rods horizontally held in the upper end of the body and provided with attached clamping-surfaces, of a clamping-plate held to travel upon the guide-rods, yielding jaws or contact-surfaces secured upon the said plate, and a connecting-rod uniting the plate and the operating-rod near the upper end of the latter, for operation substantially as shown and described.

4. The combination, with a tubular body, an operating-rod held to slide in the said body and through a disk secured therein, said rod being provided with an enlarged upper end, a spring encircling the rod, bearing against the disk and the said enlarged upper end, an arm projected from the upper part of the rod, a sleeve held to slide upon the body bearing upon the said arm, guide-rods

horizontally secured in the upper portion of the body, united at their outer ends by a bow-section provided with downwardly-extending prongs, and a detachable clamping-jaw supported by the said bow-section, of a clamping-plate held to slide upon the guide-rods, clamping-jaws of a flexible or yielding material secured to the said clamping-plate, and a connecting-rod uniting the arm of the operating-rod and the said clamping-plate, for operation substantially as shown and described.

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Witnesses:

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