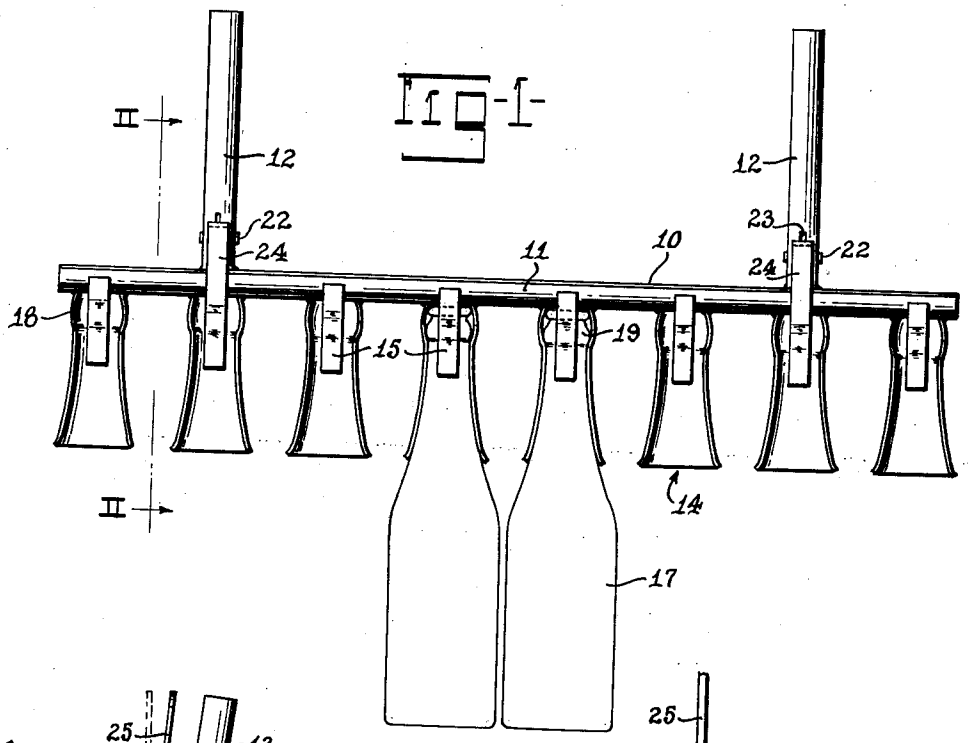
Aug. 18, 1936. W. R. HUDSON 2,051,481

MULTIPLE TONGS

Filed Nov. 28, 1934

Fig. 1



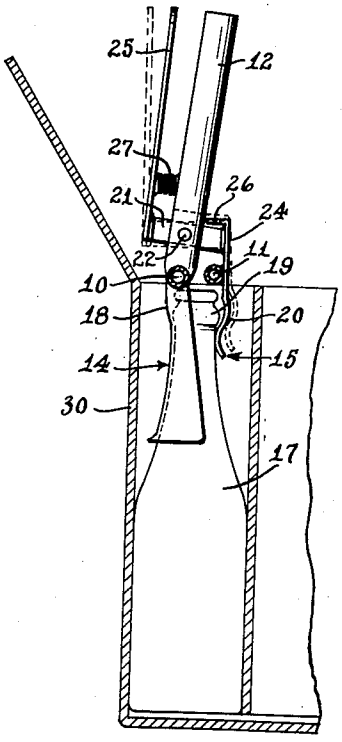


Fig. 2

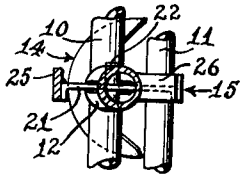


Fig. 4

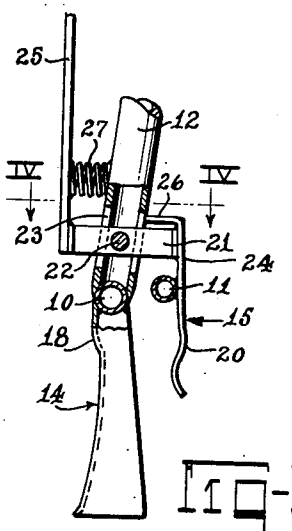


Fig. 3

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Patented Aug. 18, 1936

2,051,481

UNITED STATES PATENT OFFICE

2,051,481

MULTIPLE TONGS

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Application November 28, 1934, Serial No. 755,100

2 Claims. (Cl. 294—87)

My invention relates to an implement for gripping a plurality of articles simultaneously for lifting and transferring them from one position to another. In its preferred form, the invention comprises an implement designed for gripping a row of bottles or similar articles and is useful for transferring the articles to or from a carton or the like, or for moving said articles from one position to another.

An object of the invention is to provide a multiple tongs or article gripping device which is simple in construction, reliable in operation and which permits the transfer of a row of bottles or other articles quickly from one position to another without disturbing or changing the relative position of the articles, and which permits the articles to be easily picked up or set down without liability of being tipped over.

Other objects of the invention will appear hereinafter.

Referring to the accompanying drawing:

Fig. 1 is a front elevation of a preferred form of the implement.

Fig. 2 is a sectional elevation at the line II—II on Fig. 1, and also shows a carton containing the articles.

Fig. 3 is a detailed sectional elevation showing a pair of gripping elements and operating means therefor.

Fig. 4 is a section at the line IV—IV on Fig. 3.

The implement comprises parallel rods 10 and 11 extending horizontally. These rods, as shown, are tubular and may be made of any suitable metal or other material. Handles 12, also shown as tubular rods, are vertically disposed and rigidly attached at their lower ends to the rod 10 a short distance from each end of the latter.

Pairs of oppositely disposed article gripping members 14 and 15 are rigidly attached at their upper ends to the rods 10 and 11, respectively. These gripping members are preferably spaced at equal intervals along the rods. As herein shown, they are adapted for gripping and holding bottles of conventional shape, although their construction and arrangement might be modified for handling articles of various other shapes and sizes. The gripping members 14, in the particular form shown, are curved and tapered to provide hoods which fit the tapered shoulders of the bottles 17. These hoods may be substantially semi-circular in cross-section, as indicated, and may also be formed with enlarged recesses 18 adjacent their upper ends to accommodate the enlarged upper end portions 19 of the bottles. The opposite jaws or grippers 15 may also be formed with outwardly curved or convex portions 20 to fit over the bottle enlargements 19. The lower ends of the gripping arms 15 are curved outwardly for guiding them into position.

The rod 11 is mounted for bodily movement toward and from the rod 10 for moving the gripping arms 14 and 15 to and from article gripping position. For this purpose, lever arms 21 are pivotally connected to the handles 12 by means of pivot pins 22. The arms 21 extend through slots 23 in the tubular rods 12 and at their forward ends have a rigid connection with extensions 24 on two of the gripping arms 15. Fixed to the lever arms 21 at the rear ends thereof and extending upwardly therefrom are hand grips 25. Coil springs 27 interposed between the parts 12 and 25 are under compression and serve to hold the article gripping members apart. The upper end portions of the extensions 24 are bent inwardly towards the arms 12 into position to engage said arms and serve as stops to determine the spread of the gripping elements under the influence of the springs 27.

The tongs may be used as follows: The operator grasps the handles 12 and places the implement in position to engage a row of bottles 17. As the implement is lowered, the arms 15, being made of resilient material, will spring outwardly to pass the heads 19 of the bottles while the arms 14 are brought into position to fit the tapered neck portions of the bottles. The operator now applies pressure to the hand grips 25 toward the handles 12, thereby swinging them about the pivots 22 and causing the articles 17 to be firmly gripped. The row of articles may then be lifted and transferred to any desired position.

As shown in Fig. 2, a carton 30 is provided in which the bottles may be packed. The tongs serve as a means for removing a row of bottles from the carton or placing them in position therein. The hoods 14 being extended a considerable distance longitudinally of the bottles, effectively prevent tilting movement of the bottles relative to the tongs while gripped thereby. This construction also facilitates the placing of a row of bottles on a platform or in other position with the bottles accurately spaced and without danger of tipping them.

Modifications may be resorted to within the spirit and scope of my invention.

I claim:

1. Tongs for grasping and conveying a plurality of bottles and like articles by their necks comprising parallel rods, article holding arms adapted to fit over the necks of said articles, said

arms arranged in pairs at intervals along said rods, the arms of each pair having fixed connection, respectively, with said rods and extending downwardly therefrom, hand grips, and operating connections between said hand grips and said rods for moving one rod toward and from the other and thereby moving the said rods to and from an article gripping position, one of the arms of each said pair having a concave article engaging surface and being extended downward a substantial distance below the other arm and providing a stabilizing means to prevent swinging or tilting of an article relative to the holding arms while held thereby, said extended arms being rigid, the other arms being resilient.

2. Tongs comprising parallel rods, article holding arms arranged in pairs at intervals along said rods, the arms of each pair having fixed connection, respectively, with said rods and extending downwardly therefrom, hand grips, and operating connections between said hand grips and said rods for moving one rod toward and from the other and thereby moving the said rods to and from an article gripping position, one of the arms of each said pair being rigid and formed to provide an article engaging surface which is concave in cross-section and which is downwardly and outwardly flared, the other arm of each pair being resilient and arranged to hold an article with a yielding pressure against said rigid arm.

WALTER R. HUDSON.