May 1, 1923. 1,453,543

F. BONSER

GRASPING INSTRUMENT

Filed May 19, 1921

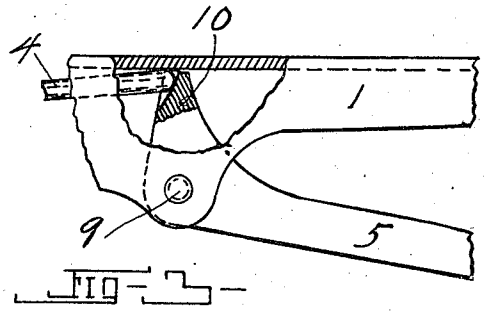

FIG-3-

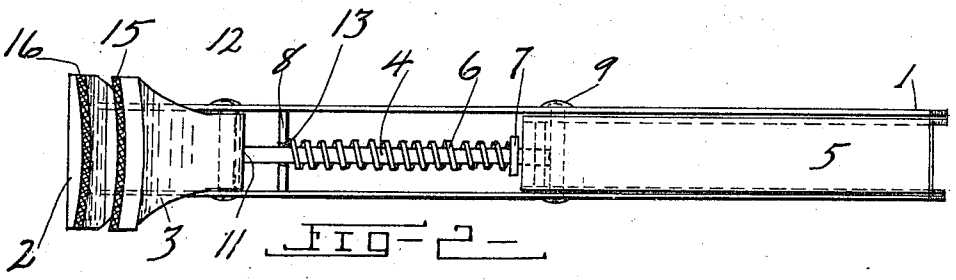

FIG-2-

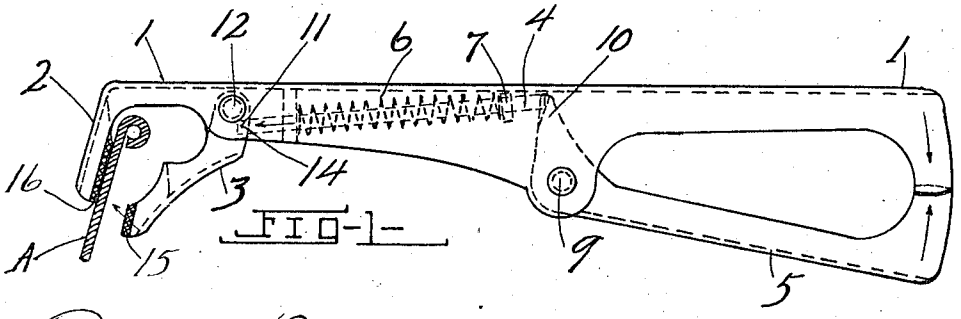

FIG-1-

Witnesses:
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UNITED STATES PATENT OFFICE.

FRED BONSER, OF COLORADO SPRINGS, COLORADO.

GRASPING INSTRUMENT.

Application filed May 19, 1921. Serial No. 471,023.

To all whom it may concern:

Be it known that I, FRED BONSER, a citizen of the United States, residing at 1724 West Bijou Street, in the city of Colorado Springs, county of El Paso, and State of Colorado, have invented a new and useful Grasping Instrument, of which the following is a specification.

My improvement and invention relates to grasping instruments in which a pivoted lower jaw is operated by means of grasping a pivoted lever to close the jaw and by a return acting spring to open the jaw; and the objects of my invention are first, to provide a simply constructed grasping instrument that will grasp and hold and lift a receptacle without injuring or scratching it; second, will enable the operator to lift a jar of boiling fruit from a container or stove without injuring the jar or spilling its contents; third, will enable the operator to pick up any common culinary article from the stove or from the fire without injuring the article, or dropping it; fourth, will enable the operator to apply only such grasping force as will hold the article grasped without exerting enough force to crush it; and other objects that will appear in this specification.

I attain these objects by means of the mechanism illustrated in the accompanying drawing, in which—

Figure 1, is a plan view of one side of the instrument; Fig. 2, is a plan view of the under side of Figure 1; and Fig. 3, is a detail of the pivotal connection of the hand-operated lever and plunger.

Similar numerals refer to similar parts throughout the several views.

The stalk 1, of this instrument may be made of metal, wood or composition, and is provided with a metal front jaw 2, extending downwardly at an obtuse angle from said stalk 1, and integral therewith.

The pivoted lower jaw 3, is operated forwardly so as to engage the front jaw, by means of a plunger pin 4, actuated forwardly by the handle lever 5, and said jaw 3, and said pin 4, are actuated backwardly to their normal positions by means of the coil spring 6, pressing outwardly against the collar 7, which is integral with said pin 4, and against the abutment 8, which is integral with said stalk 1.

In using this grasping instrument the operator takes hold of the stalk at end opposite said jaws and when he has caused said jaws to inclose the article to be grasped, as the edge of a dish, as represented by the sectional part of a metal pan shown at A, in Fig. 1, he grips the handle lever 5, which is pivoted to the stalk 1 at 9, and compressing it throws the integral lever 10, forward, forcing the plunger pin forward against the lower jaw 3, at 11, thus causing jaw 3 to move forward against A, and 2, by reason of being pivoted at 12. In compressing the lever 5, against the stalk 1, the plunger pin 4, is slid along through the hole 13, in the abutment 8, and when the hand pressure is released by the operator from the hand lever 5, the coil spring 6, forces said plunger pin back and as it is pivoted at 14, to the jaw 3, it too is drawn backwardly and opens the space between jaws 2 and 3, and thus releases the article grasped. At 15, and 16, are shown facings of pliable material, as asbestos, secured to the contact part of said jaws for the purpose of avoiding scratching or marring the articles grasped.

Having thus described my invention in this grasping instrument; I claim—

1. A grasping instrument comprising in combination, a stalk, extending the whole length of the instrument; a jaw member at one end of said stalk and integral therewith and extending at an angle of about forty five degrees from the line of extension of said stalk; a separate jaw provided to oppose said integral jaw and to register therewith and pivotally secured at its upper end to the under side of said stalk; a plunger pin pivotally secured at its forward end to said separate pivotally secured jaw to operate it against said integral jaw; a bell crank pivoted on said stalk on its under side near its longitudinal center with its longer lever extending longitudinally with said stalk to its end and its short lever extending toward said stalk, the end of said short lever being pivotally secured to the opposite end of said plunger pin from said pivoted jaw; a coil spring surrounding said plunger pin and normally forcing it toward said bell crank, thus drawing said pivotally suspended jaw from said integral jaw, and soft cushions on the faces of said jaws, for the purposes specified.

2. A grasping instrument of the class described, comprising in combination, a handle, a pair of grasping jaws operatively connected at one end of said handle, one of said

jaws being integral with the end of said handle and the other said jaw being pivotally mounted at one end upon said handle near the other jaw, a graspable lever pivotally secured near the middle of said handle and its swing end extending to the end of the handle and slidably connected therewith, a projecting lug integral with said lever and extending inwardly from its pivotal point toward said handle, a plunger pin connecting said inwardly projecting lug and said pivotally mounted jaw facings of pliable nonabrasive material mounted on the contact faces of said jaws, causing them to work in unison, a housing in said handle enclosing said plunger pin, and a coil spring mounted about said plunger pin and normally actuating it away from said integral jaw.

FRED BONSER.

Witnesses:
A. W. SPARKMAN,
A. R. THORNTON.