No. 850,092. PATENTED APR. 9, 1907.

J. MERCKENS.

PRESS FOR CLOSING AND OPENING SHEET METAL RECEPTACLES.

APPLICATION FILED FEB. 9, 1906.

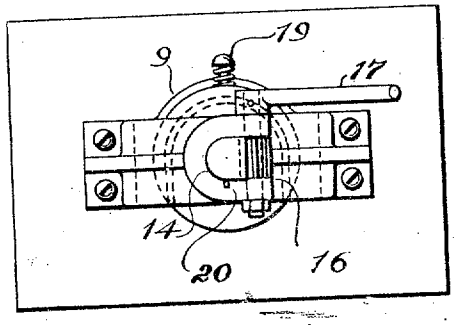


Fig. 1.

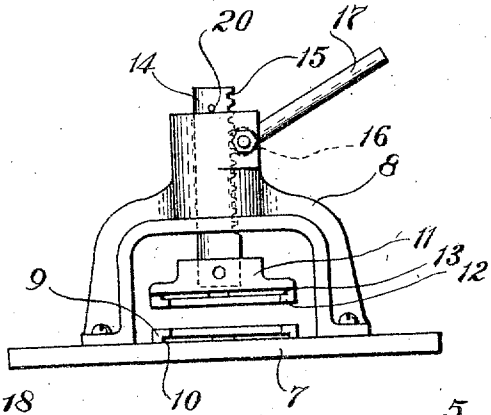


Fig. 2.

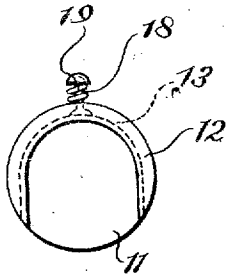


Fig. 3.

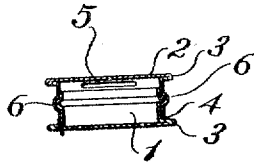


Fig. 4.

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UNITED STATES PATENT OFFICE.

JOHN MERCKENS, OF CHICAGO, ILLINOIS.

PRESS FOR CLOSING AND OPENING SHEET-METAL RECEPTACLES.

No. 850,092. Specification of Letters Patent. Patented April 9, 1907.

Application filed February 9, 1906. Serial No. 300,332.

To all whom it may concern:

Be it known that I, JOHN MERCKENS, a citizen of the United States of America, and a resident of Chicago, Cook county, Illinois, have invented certain new and useful Improvements in Presses for Closing and Opening Sheet-Metal Receptacles, of which the following is a specification.

This invention relates to presses for closing and opening sheet-metal receptacles which are formed of two parts having telescoping side walls with registering grooves and shoulders and which are adapted to be forced into interlocking engagement with each other through the resilient yielding of said walls.

The particular device which is herein described is designed to lock and unlock a pocket savings-bank composed of two cylindrical parts telescoping with each other and each having in its side walls an annular crease or bead, said beads being adapted to interlock with each other, so as to prevent the separation of said parts except through the application of considerable power.

The main object of this invention is to provide a simple and improved form of press which is capable of securely gripping annular shoulders at edges of such receptacle for forcing together or separating its two parts. I accomplish this object by the device shown in the accompanying drawings, in which—

Figure 1 is a top plan of a press constructed according to this invention and designed for opening and closing savings-banks of the form shown in Fig. 4. Fig. 2 is a front elevation of the same. Fig. 3 is a plan of the gripping-face of one of the jaws of the press. Fig. 4 is a transverse section illustrating the type of sheet-metal receptacle for the opening and closing of which the herein-described press is particularly designed.

The receptacle shown in Fig. 4 consists of a pocket savings-bank formed of sheet metal and comprising two parts—a body portion 1 and a cover 2—each of cylindrical form and each closed at one end. These parts are constructed of resilient sheet metal, and each is provided with an outwardly-projecting flange or bead 3 at the periphery of its closed end. This bead serves as a shoulder for engagement with the jaws of the press. The side walls of the part 1 are somewhat less in height than those of the part 2, so that when said parts are interlocked in telescopic engagement with each other, as shown in Fig. 4, and the rim 4 of the cover bears against the flange 3 of the body part 1 then there will be room beyond the rim of the part 1 for a coin-slot 5 in the wall of the receptacle. The side walls of the parts 1 and 2 are each spun outward at 6 to form an annular shoulder on one and a registering groove in the other which will spring into interlocking engagement when the parts 1 and 2 are forced together in the relation shown in Fig. 4.

When the receptacle is closed, it is practically impossible to separate the parts 1 and 2, except by means of special apparatus. The press which is herein shown is designed particularly for opening and closing a receptacle of this type. In the form shown this press consists of a bed-plate or lower jaw 7 and a frame 8, rigidly mounted thereon. The bed 7 has centrally located thereon a U-shaped flange or rim 9, extending upwardly and inwardly, so as to fit the sides of the receptacle 1 and provide a groove 10, adapted to fit the bead 3.

A second jaw 11, corresponding in form to the jaw 7, is mounted in the frame 8 in a position directly opposed to said first jaw and is provided with a similar flange 12 and groove 13. The jaw 11 is provided with a vertical shank 14, which is slidable in the frame 8, so as to move the jaw 11 toward and away from the jaw 7. A rack 15 is formed on one side of the shank 14 and engages a pinion 16, which is journaled in the frame 8 and operated by means of a lever 17. The flanges 9 and 12 are each provided with a plunger 18. These enter the grooves 10 and 13, respectively, and provide means for pushing the parts of the bank out of engagement with the jaws of the press. The plungers 18 are normally held in a withdrawn position by means of springs 19. A stop-pin 20 limits the downward movement of the jaw 11 to a position corresponding to the standard height of can for which the press is designed.

In the operation of the device shown the lever 17 is thrown up until its movement is limited by the stop 20. This brings the jaws 11 and 7 into position for receiving the closed bank. The bank is then slid sidewise between the jaws, so that the beads 3 enter engagement with the grooves 10 and 13. By forcing the lever 17 downward the jaw 11 is lifted, and the two parts of the bank are then forced apart. Each part is then removed from the press by striking the plunger 19. To close the bank, the parts may be pushed into telescopic engagement with each other

and proper pressure exerted to cause the resilient walls to yield and permit the interlocking of the bead and groove. This may be done by the press by reversing the order of operations which have been described for the opening of the receptacle.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a device of the class described, the combination of a pair of jaws having opposed coacting faces, each having projecting from its face a grooved rim adapted to engage one of the beaded heads of a can at opposite sides thereof, and means for pulling said jaws apart while in position to retain their grip on said heads.

2. In a device of the class described, the combination of a pair of jaws having opposed coacting faces, each having projecting from its face a U-shaped rim having an inner groove extending throughout its length, said rims being adapted to engage the heads of a receptacle for the purpose of pulling the respective members apart, and mechanism for forcing one of said jaws toward and away from the other.

3. In a device of the class described, the combination of a pair of jaws having opposed coacting faces, each having projecting from its face a U-shaped rim having an inner groove extending throughout its length, said rims being adapted to engage the heads of a receptacle for the purpose of pulling the respective members apart, said rims having substantially the same inner size and form, and mechanism for forcing one of said jaws toward and away from the other.

4. In a device of the class described, the combination of a pair of jaws having opposed coacting faces, each having projecting from its face a rim extending around three sides thereof and open toward the other side, and each of said rims having an inner groove extending throughout the length of the rim; a member seated in the part of the rim opposite the open side, and having limited movement across the groove in the direction of said open side; and mechanism for forcing one of said jaws toward and away from the other.

5. In a device of the class described, the combination of a pair of jaws having opposed coacting faces, each having projecting from its face a rim extending around three sides thereof and open toward the other side, and each of said rims having an inner groove extending throughout the length of the rim; a member seated in the part of the rim opposite the open side, and having limited movement across the groove in the direction of said open side said member being normally urged outwardly of said groove; and mechanism for forcing one of said jaws toward and away from the other.

Signed at Chicago this 27th day of January, 1906.

JOHN MERCKENS.

Witnesses:
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