

No. 753,706.

PATENTED MAR. 1, 1904.

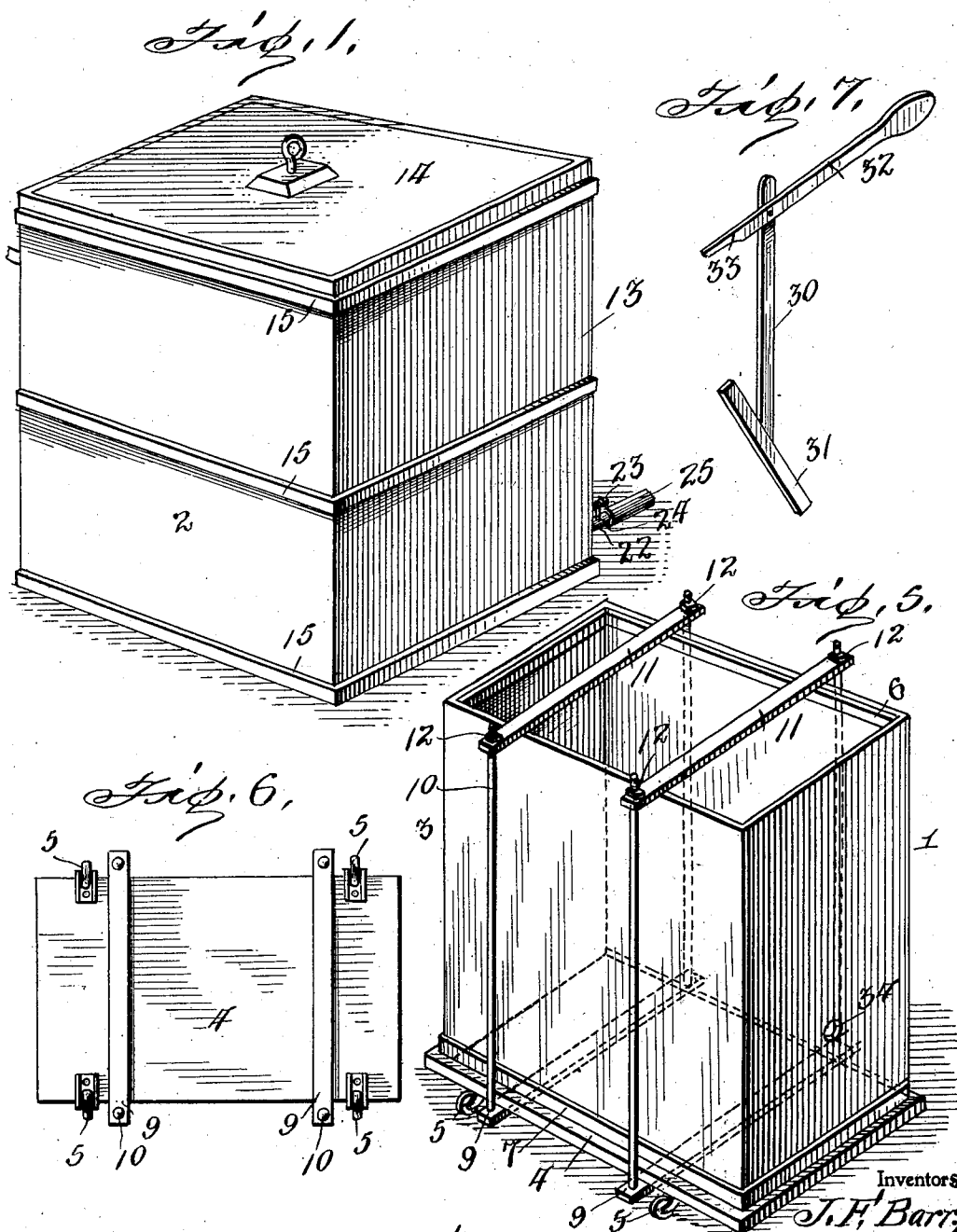
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### APPARATUS FOR MOLDING SOAP.

APPLICATION FILED NOV. 19, 1903.

NO MODEL.

2 SHEETS—SHEET 1.



### Witnesses

Witnesses  
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*Edwinson*

F. C. Inver, J. W. Alexander & J. M. Ochiltree.

By

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**Attorney**

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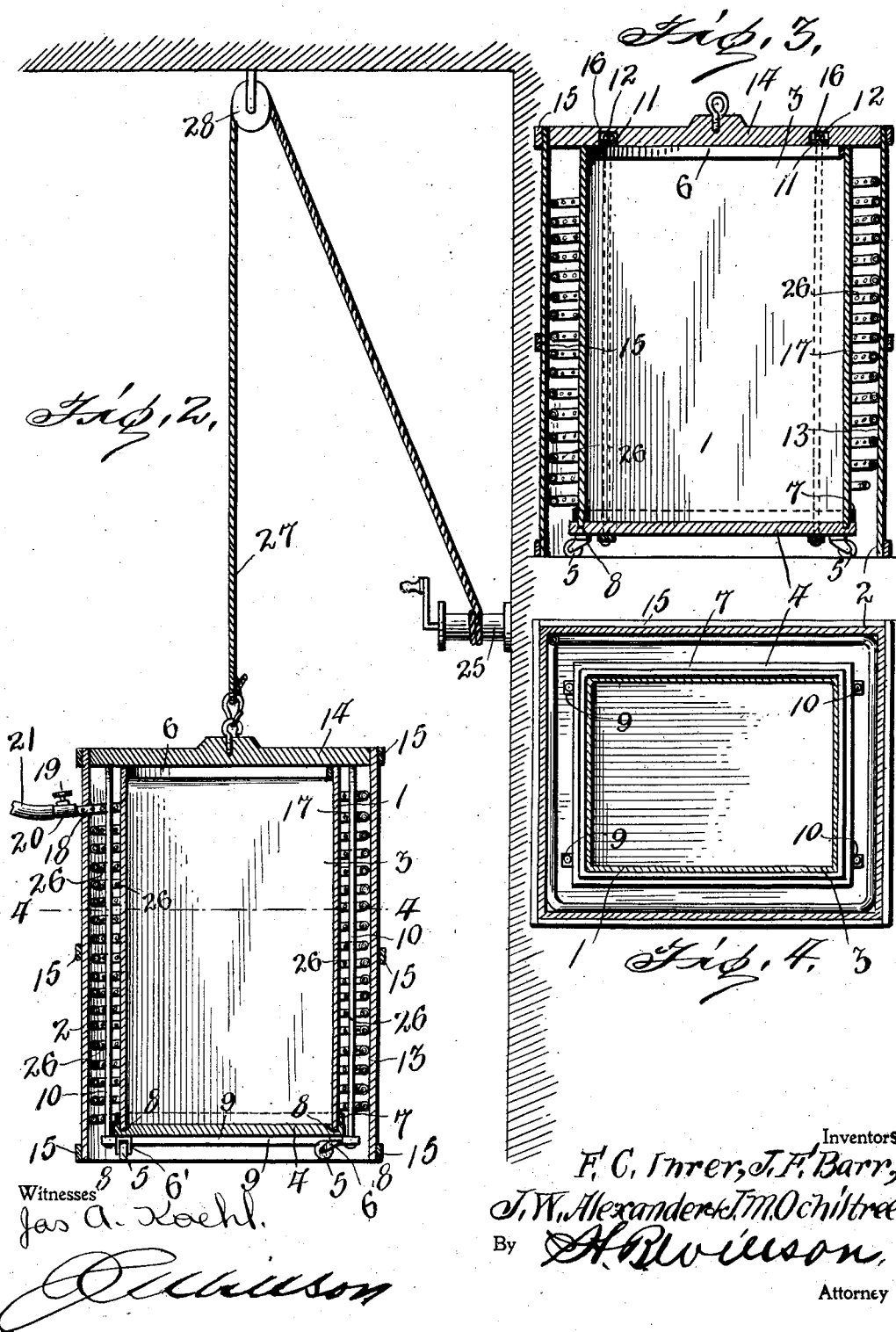
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2 SHEETS—SHEET 2.



# UNITED STATES PATENT OFFICE.

FREDERICK C. IHRER, JOHN W. ALEXANDER, JAMES F. BARR, AND JOHN M. OCHILTREE, OF BURLINGTON, IOWA.

## APPARATUS FOR MOLDING SOAP.

SPECIFICATION forming part of Letters Patent No. 753,706, dated March 1, 1904.

Application filed November 19, 1903. Serial No. 181,878. (No model.)

*To all whom it may concern:*

Be it known that we, FREDERICK C. IHRER, JOHN W. ALEXANDER, JAMES F. BARR, and JOHN M. OCHILTREE, citizens of the United States, residing at Burlington, in the county of Des Moines and State of Iowa, have invented certain new and useful Improvements in Apparatus for Molding Soap; and we do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

Our invention relates to improvements in apparatus for molding soap and the like, and more particularly to the means and the apparatus for removing the mold or frame from a molded cake of soap.

The object of our invention is to provide a simple, durable, and inexpensive apparatus of this character which will perform the work in an efficient manner with a great saving of time and labor.

With this and other objects in view the invention consists of certain novel features of construction, combination, and arrangement of parts, as will be more fully described, and particularly pointed out in the appended claims.

In the accompanying drawings, Figure 1 is a perspective view of our improved apparatus. Fig. 2 is a vertical transverse section through the same. Fig. 3 is a vertical longitudinal section. Fig. 4 is a horizontal section taken on the line 4-4 of Fig. 2. Fig. 5 is a perspective view of the soap mold or frame removed from the heating hood or jacket. Fig. 6 is a bottom plan view of said mold or frame. Fig. 7 is a perspective view of a device or tool used in lifting the mold-frame from the molded cake or block.

Referring to the drawings by numerals, 1 denotes a mold or frame in which a cake or block of soap or similar plastic substance is molded and from which it may be separated or loosened by the use of our improved steam jacket or hood, denoted by the numeral 2. The said soap-mold, as shown, comprises an open top and bottom rectangular frame 3, removably secured upon a base 4, which is

mounted upon rollers or casters 5 to form a movable truck or carriage. Said frame 3 is preferably of sheet metal and is strengthened at its top by a metal band 6 running around its inside and at its bottom by a similar band 7 running around its outer side. The bottom edges of the sides and ends of said frame 3 are adapted to enter longitudinal and transverse grooves 8, formed in the top of the base or truck 4, and said frame 3 is detachably fastened upon said base by securing upon the bottom of said base, adjacent to each of its ends, a transverse bar 9, the outer ends of which project beyond the sides of the base and are apertured to receive the lower ends of tie-rods or bolts 10, the upper ends of which are passed through apertures in the outer ends of transverse bars 11, placed across the open top of the frame 3 in vertical alinement with the similar bars 9. A thumb-nut 12 is screwed upon the threaded upper end of the tie-rods to clamp the bars 11 down upon the frame 3, or any other suitable fastening device may be provided upon the ends of the tie-rods. The supporting rollers or wheels 5 are journaled in caster-frames 6', which are revolvably mounted in bearings upon the under side or bottom of the base 4 to permit the truck to be moved or rolled in any direction. The said steam hood or jacket 2 is in the form of a rectangular box-like casing of sufficient size to contain the soap-mold 1. Said jacket preferably comprises a metallic frame 13, having a closed top 14, of wood or other material, and an open bottom, so as to be readily telescoped over the said soap-mold. The top and bottom edges and the center of the sides and ends of said frame 13 are strengthened by surrounding brace-rods 15, as shown, and the under side of the top 14 is formed with transverse recesses 16, into which the cross-bars 11 project when the jacket is lowered upon the mold in order to permit the top 14 to set squarely upon the open top of the mold-frame 3 and keep the steam from contact with the molded cake of soap. Secured to the inner faces of the sides and ends of the jacket-frame 13 is a steam-pipe 17 in the form of a rectangular-shaped spiral coil. The inlet

end 18 of said pipe 17 projects through one end of the frame 13 adjacent to its upper end and is provided with a valve 19 and a connection 20, to which a flexible steam-pipe 21 is attached. The outlet end 22 of said coiled pipe 17 projects through the opposite end of said frame 13 adjacent to its bottom and is also provided with a valve 23 and a connection 24, to which is attached a flexible pipe or tube 25. The coiled pipe 17 is perforated, as at 26, to project the steam against the sides and ends of the mold-frame 3, and thereby heat the same and cause the cake or block of soap to loosen from the frame 3, so that the latter may be readily removed.

The hood or jacket may be lowered upon and raised from the mold in any suitable manner; but we preferably provide, as shown in Fig. 2 of the drawings, a windlass 25, which may be secured to a post or to the wall of a building. A cable 27, wound about said windlass, is passed up over a pulley or sheave 28, secured to the ceiling of a building, and has its opposite end attached to the top 14 of the hood or jacket. By operating the crank-handle of the windlass the hood or jacket may be readily raised or lowered, as will be readily understood.

The tool or device shown in Fig. 7 is used for removing the frame 13 from the cake of soap after it has been loosened by the heat applied to it while in the steam-jacket. Said tool comprises an upright 30, to the lower end of which is secured a cross-bar 31, and to its upper end is pivoted an operating-lever 32. When the tool is used, the bar 31 is placed upon the end of the base 4 and the end 33 of the lever 32 is engaged with an opening 34 in one of the ends of the frame 3. By using two of these tools, one at each end of the mold, and depressing the outer ends of the levers 32 the frame 3 may be readily raised.

The operation and advantages of our invention will be readily understood from the foregoing description, taken in connection with the accompanying drawings and the following statement. After the cake of soap has been molded in the mold 1 the latter is rolled under the suspended steam-jacket 2, which is then lowered to cover said mold. Steam is then

admitted to the coiled pipe 17 by operating the valves 19 and 23, and after the frame 3 has been sufficiently heated by the steam said valves are closed and the jacket is elevated. After the tie-rods have been loosened and the cross-bars 11 removed the frame 3 may be quickly removed from the cake of soap and the base 4 by means of the tools shown in Fig. 7.

Various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. In an apparatus of the character described, the combination of a mold, closed at its bottom and open at its upper end, a jacket of a size and shape adapting it to inclose the mold, having its upper end closed and its lower end open, means to lower the jacket over the mold and to raise it therefrom, and means to supply a heating medium to the interior of the jacket when the same is lowered to inclose the mold.

2. In an apparatus of the character described, the combination with a mold, of a closed jacket adapted to be telescoped upon said mold, and a coil of perforated pipe in said jacket adapted to project steam against said mold, substantially as described.

3. In an apparatus of the character described, the combination with a mold, of a telescoping jacket adapted to inclose said mold, a coil of steam-pipe in said jacket adapted to surround said mold and to project steam against the same, and means for raising and lowering said jacket, substantially as described.

In testimony whereof we have hereunto set our hands in presence of two subscribing witnesses.

FREDERICK C. IHRER.  
JOHN W. ALEXANDER.  
JAMES F. BARR.  
JOHN M. OCHILTREE.

Witnesses:  
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