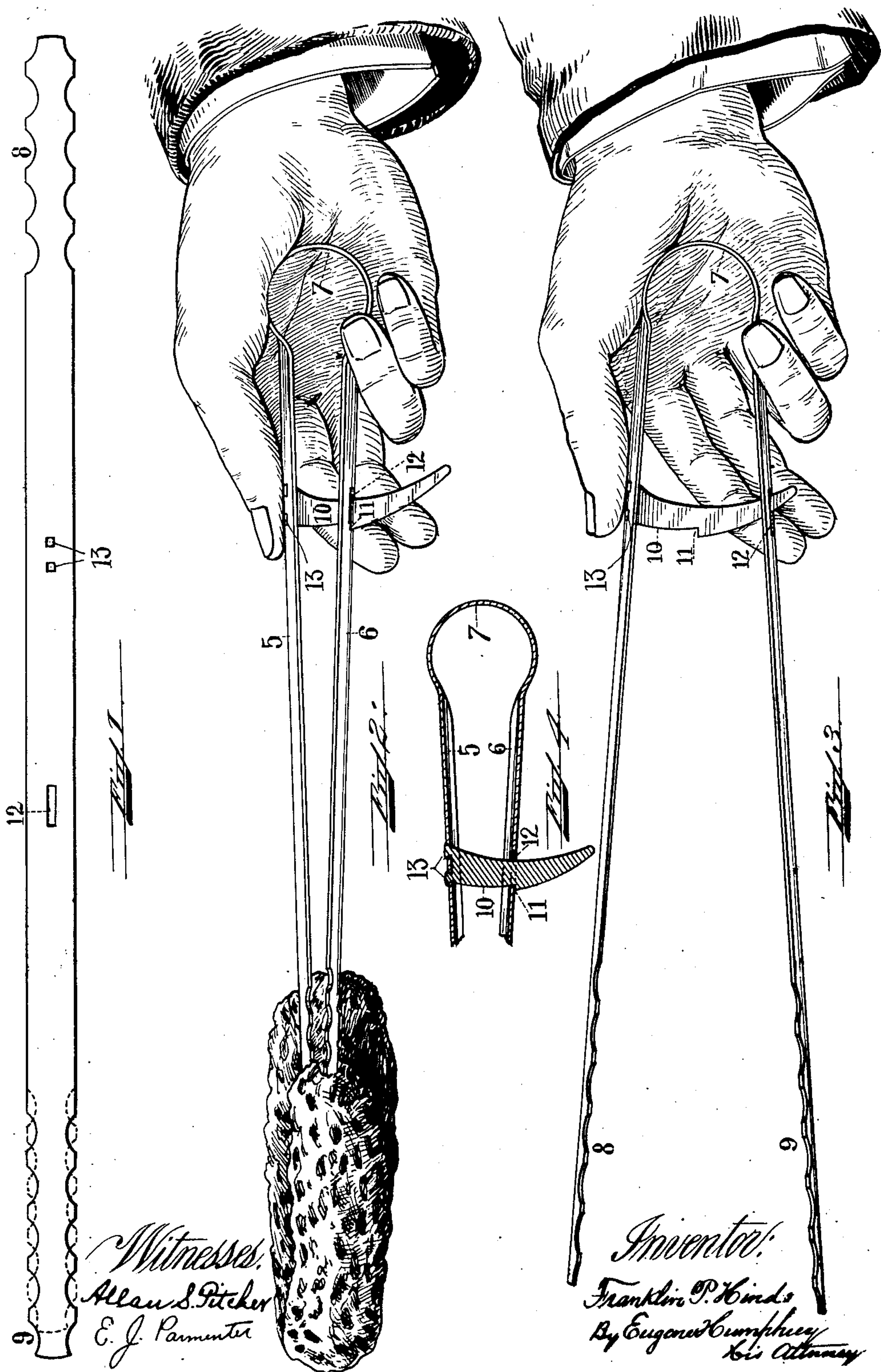


No. 832,317.

PATENTED OCT. 2, 1906.

F. P. HINDS.  
LOCK GRIP GRASPING TONGS.  
APPLICATION FILED DEC. 22, 1905.





# UNITED STATES PATENT OFFICE.

FRANKLIN P. HINDS, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO  
GUSTAVUS A. TOWLE, OF LOWELL, MASSACHUSETTS.

## LOCK-GRIP GRASPING-TONGS.

No. 832,317.

Specification of Letters Patent.

Patented Oct. 2, 1906.

Application filed December 22, 1905. Serial No. 292,913.

*To all whom it may concern:*

Be it known that I, FRANKLIN P. HINDS, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented new and useful Lock-Grip Grasping-Tongs for Various Household Purposes, of which the following is a specification.

My invention relates to a household implement for grasping and holding light articles, hot or cold, and has for its object to furnish a cheap, convenient, and practical grasping utensil or tongs provided with a locking device by which the arms of the tongs may be locked together upon an article when desired.

I attain the object stated by means of the interlocking spring-tongs illustrated in the accompanying drawings, in which—

Figure 1 is a plan of a blank formed as shown of suitable sheet metal, preferably steel, and adapted to be folded into shape for its practical use. Fig. 2 is a perspective of the same folded into shape for practical use and shown as closed upon a sponge or cloth and secured with its lock-grip thereon and also illustrating the method of holding the same in the hand of the user. Fig. 3 is a perspective showing the tongs released from the locking-plate and sprung open and also illustrating its position in the hand when thus released. Fig. 4 is a sectional view of the spring end of the tongs and showing the notched guide and locking-plate riveted in the upper arm of the tongs and passing through a slot in the lower arm with which it interlocks.

My invention is embodied in the lock-grip tongs thus shown and illustrated in said drawings and is preferably constructed of light sheet-steel formed substantially as shown, having two arms 5 and 6, connected by an integral spring curve 7, which are concaved and provided with teeth 8 and 9, formed on the edges of the grasping ends thereof, so that the two opposing sets of teeth are interposed when the arms are closed together, as shown in Fig. 2 and indicated by dotted lines in Fig. 1, and have some relative freedom of endwise movement. A lock-plate 10, having a notch 11 in the edge thereof, is riveted through arm 5 at 13, and its free end projects through a slot 12 in arm 6 when the arms are closed to-

gether, as shown in Fig. 2, to grasp a cloth or sponge or any other similar article. When thus fully closed together to grasp with the teeth a dish-cloth, for instance, or a cloth for dusting or cleaning a lamp-chimney or any other use, then the grasp required and exerted is mechanical and not merely dependent on the grip of the hand. The act of thus closing the arms upon the object grasped will, by reason of the elasticity of the arms and the spring curve 7, cause the notch 11 to interlock with the end of the slot 12, and thus firmly hold the article so gripped between the teeth without regard to manual pressure upon the arms for closing the same, which may then be relaxed and dispensed with. To release the lock-plate 10 from slot 12, the tool is held with curve 7 against the ball of the thumb, as illustrated in Figs. 2 and 3, and the projecting plate is pulled like a trigger by the finger of the hand bearing upon the same, and thus pressing the curve 7 against the hand and springing arm 6 forward endwise sufficiently to release the end of slot 12 from notch 11 and to allow the arms to automatically expand by force of the elastic curve 7. The lock-plate 10 not only serves to secure the arms together as and for the purposes described, but further serves as a guide to cause the two arms to approach each other directly without lateral deviation, thus securing coincident contact of the gripping ends of the same and avoiding torsional action and consequent weakening of the hold upon an article picked up by them. When thus closed together, the teeth upon one arm are interposed between the teeth of the opposite arm, being formed and spaced so to do and with sufficient separation to permit of the necessary endwise movement of the arms to engage them with and disengage them from the notch 11 in the lock-plate 10.

When the tool is used manually to pick up objects—as, for instance, boiling eggs out of the hot water, or vegetables—the locking device is not required, and the arms in such cases do not approach each other near enough for the lock-plate to act, and it does not interfere with the manual uses of the implement, but then serves only as a guide to prevent torsion and deviation from a direct approach of the arms toward each other, as before described.



The simple grasping of any object, as is obvious, is caused by manual pressure upon the arms of the tongs, and when such pressure is relaxed the arms are self-expanding 5 and in all cases except when held by the mechanical lock-plate, which must then be released, as before stated.

I claim—

10 The described grasping-tongs, consisting of light metallic arms 5 and 6, concaved, and having toothed grasping ends 8 and 9, and being connected by an integral spring curve 7, and provided with a guiding lock-plate 10,

having a notch 11, in one edge thereof; said plate being attached to one arm, as at 5, and 15 extended therefrom through a slot in the other arm, as at 12; and the grasping ends of the arms being self-expanding by means of spring curve 7, and capable of being locked together by the same spring acting in con- 20 junction with the notched lock-plate; all as and for the purposes specified.

FRANKLIN P. HINDS.

Witnesses:

G. A. TOWLE,  
EUGENE HUMPHREY.