No. 690,166. Patented Dec. 31, 1901.

# M. LYONS.

## FINGER MANIPULATOR.

(Application filed Apr. 17, 1901.)

(No Model.)

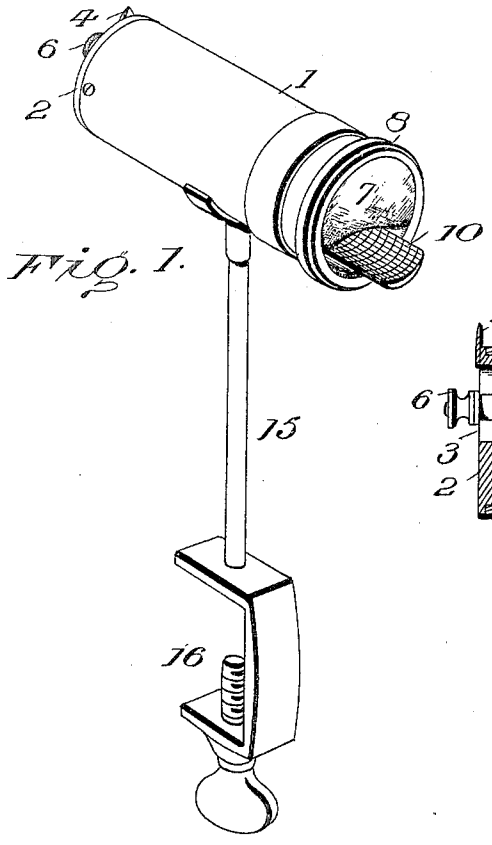



Fig. 1.

Fig. 2.

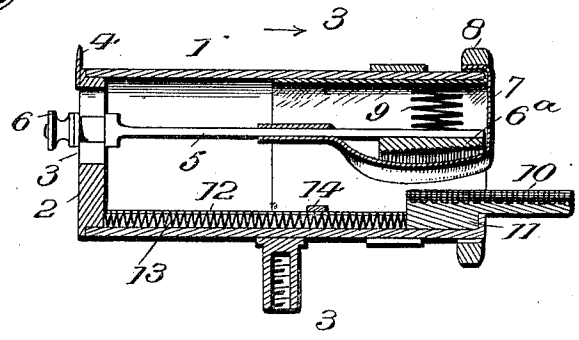



Fig. 3.

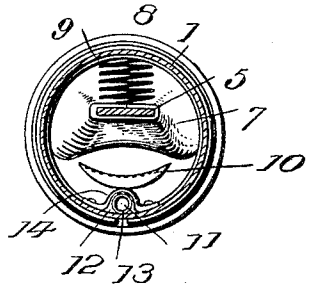



Fig. 4.

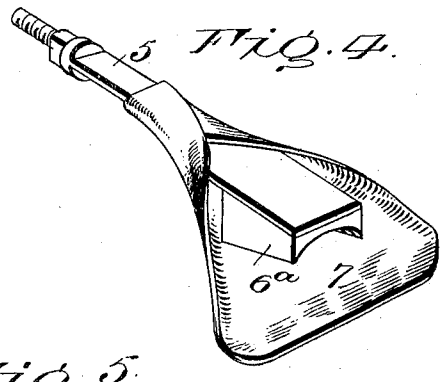
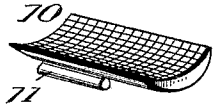



Fig. 5.




Witnesses

Inventor

By

Attorney.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

# UNITED STATES PATENT OFFICE.

MARY LYONS, OF NEW YORK, N. Y.

## FINGER-MANIPULATOR.

SPECIFICATION forming part of Letters Patent No. 690,166, dated December 31, 1901.

Application filed April 17, 1901. Serial No. 56,277. (No model.)

*To all whom it may concern:*

Be it known that I, MARY LYONS, of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Finger-Manipulators; and I do hereby 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.

This invention contemplates certain new and useful improvements in finger-manipulators, being specially designed as an improvement upon the device embraced by Letters Patent No. 639,073, issued to me December 12, 1899. The invention disclosed in said patent contemplates the employment of a mechanical device by means of which the several fingers of a person's hand may be treated with results practically the same as that derived from manual massage, such device being intended to act on the cuticle of each finger in the longitudinal movement of the finger or of the device in relation thereto. In the manufacture and use of the device embodying the primary invention covered by said patent I have found that it is desirable to provide a movable carrier or support for the finger while being treated. This support is intended to move longitudinally beneath the yielding surface with which the cuticle of the finger is designed to engage, such surface, as pointed out in my before-mentioned patent, consisting of a projection preferably covered by some soft material, although such covering is not absolutely essential if the projection itself possesses the necessary qualities to prevent injury to the finger.

The invention will be hereinafter fully set forth, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a view in perspective. Fig. 2 is a central longitudinal sectional view. Fig. 3 is a cross-section on line 3 3, Fig. 2, looking in the direction of the arrow. Fig. 4 is a view in perspective of the finger-engaging projection or plate and its cover. Fig. 5 is a detached view of a finger support or carrier.

Referring to the drawings, 1 designates the finger-receptacle, which is shown in the form of a cylinder closed at its rear end by a removable plate 2, formed with a slot 3, and equipped with a flange 4 for the treatment of the epidermis, as pointed out in my patent.

5 is a spring-plate extended longitudinally within the receptacle and adjustably held to plate 2 by a nut 6 on a screw extended through slot 3. On the under side of this plate is a block $6^a$ of rubber, the under surface of which is concaved to conform to the contour of the finger. This rubber block and the forward end of the spring-plate are preferably inclosed by a covering 7, consisting of chamois or other suitable material, which in practice extends over nearly the entire front of the receptacle, upon the outside of which latter it is held firmly by a ring 8. I have shown a coil-spring 9 bearing downwardly upon the plate 5 immediately above the concaved block.

10 is the finger carrier or support, capable of being reciprocated longitudinally beneath the yielding projection formed by the concaved block. This support is shown in the form of a concavo-convex body, preferably corrugated or crisscrossed on its upper surface. From its under side projects a rounded flange 11, which fits within and is guided by a barrel 12, extended longitudinally along the bottom of the receptacle. In this barrel is a long spiral spring 13, which tends to hold the support projected beyond the end of the receptacle, as shown in Figs. 1 and 2, the outward movement thereof being limited by the engagement of its flange with the forward closed end of the barrel. The inward movement of the support or carrier is limited by a stop 14.

In practice a person placing the finger to be treated upon the support or carrier by giving a slight rearward pressure will force the support inward as against the tension of the spring 13, and the finger upon coming in contact with the active portion of the manipulator (in the present instance the covered block on the under side of the spring-plate) will receive the required massage treatment, and by the continuous operation the cuticle will be pushed back off the nail. Upon the release of the rearward pressure the support or carrier is instantly projected outwardly by the spring 13. I have found that by means of the reciprocating support or carrier the massage can be more quickly and thoroughly

accomplished than when no such means is employed.

I have shown the receptacle as mounted on a rod 15, extending from a clamp 16, by which the device may be secured to a stand or table.

I claim as my invention—

1. A finger-massage device consisting of a receptacle having a finger-engaging surface, a finger support or carrier located beneath such surface, and means holding the support in such relation to the finger-engaging surface that it may be moved longitudinally beneath the latter, as set forth.

2. A finger-massage device consisting of a receptacle having a finger-engaging surface, a support or carrier for the finger capable of being reciprocated longitudinally beneath such surface, and a spring for holding such support or carrier in its normal position, as set forth.

3. A finger-massage device consisting of a receptacle having a finger-engaging surface, a finger support or carrier movable longitudinally beneath such surface, and a guide therefor, as set forth.

4. A finger-massage device consisting of a receptacle having a finger-engaging surface, a support or carrier for the finger capable of being reciprocated longitudinally beneath such surface and having a flange on its under side, a guide for such flange, and a spring acting on said support or carrier for holding the latter in its normal position, as set forth.

5. A finger-massage device consisting of a receptacle, a plate therein having a concaved surface designed to conform to a person's finger, a finger support or carrier located beneath such surface, and means for holding the support in such relation to the concaved surface that it may be moved longitudinally beneath the latter, as set forth.

6. A finger-massage device consisting of a receptacle, a plate therein having a concaved surface on its under side, a spring bearing downwardly on such plate, a longitudinally-movable finger support or carrier, and means holding the support in such relation to the concaved surface that it may be moved longitudinally beneath such surface, as set forth.

7. A finger-massage device consisting of a receptacle, a plate extending longitudinally therein secured at one end to one end of said receptacle, a spring bearing downwardly on the other end of said plate, a flexible cover over such latter end, and a longitudinally-movable support or carrier within the receptacle beneath such end, as set forth.

8. A finger-massage device consisting of a receptacle open at one end, a plate extending longitudinally therein secured to the other end of such receptacle, said plate having a concaved surface on its under side at its other end, a spring bearing downwardly on such end, a flexible covering inclosing such end and extended over the open end of the receptacle, and a ring holding such covering, as set forth.

9. A finger-massage device consisting of a receptacle open at one end, a plate extending longitudinally therein having a concaved surface on its under side, a spring bearing downwardly on said plate above such surface, a flexible covering inclosing such surface and extending over the open end of the receptacle, means for securing such covering, and a longitudinally-movable support or carrier within the receptacle beneath said concaved surface, as set forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

MARY LYONS.

Witnesses:
GRAFTON L. MCGILL,
J. NOTA MCGILL.