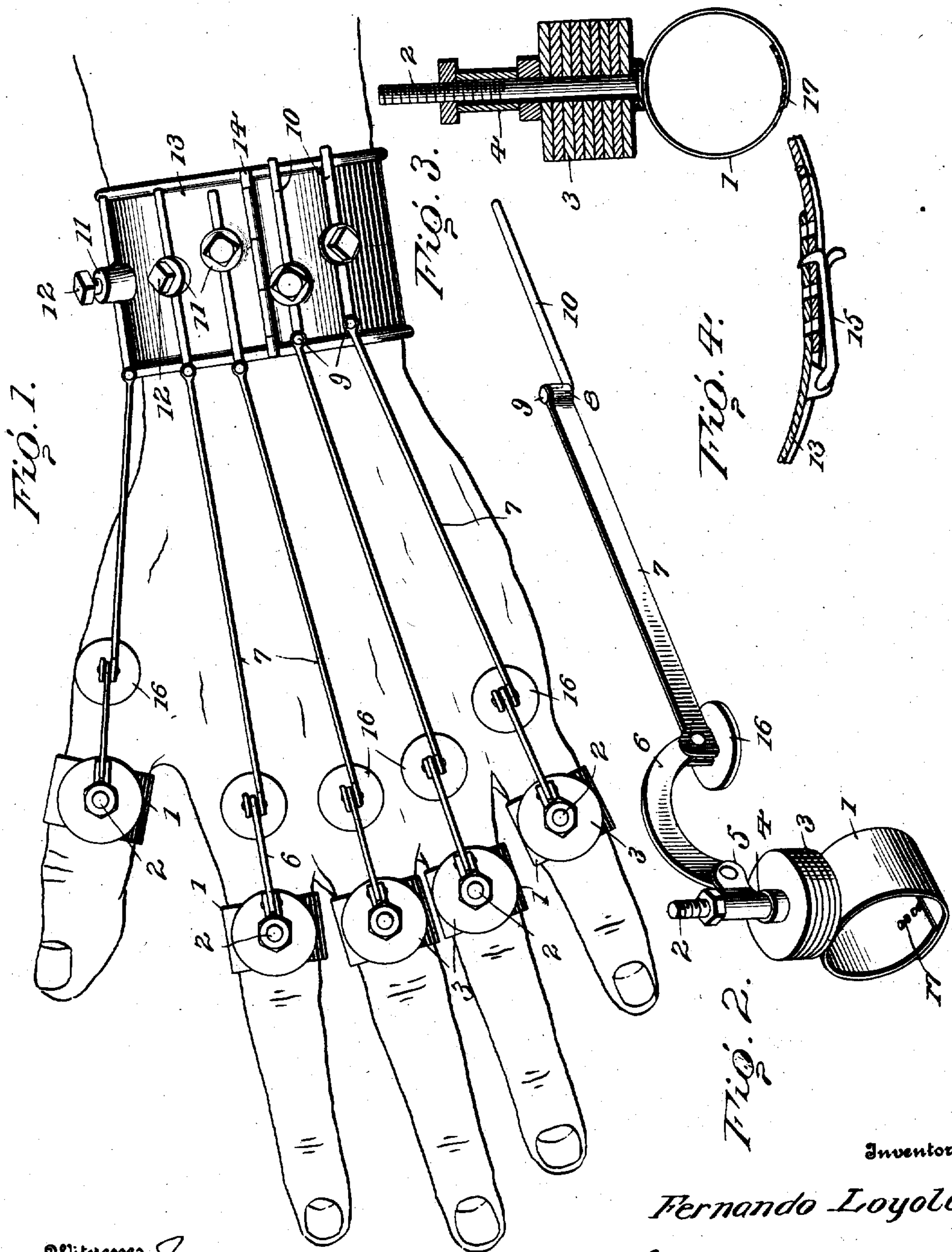


No. 897,471.

PATENTED SEPT. 1, 1908.

F. LOYOLA.  
FINGER DEVELOPING APPLIANCE.  
APPLICATION FILED MAR. 28, 1908.



Inventor

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Witnesses

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# UNITED STATES PATENT OFFICE.

FERNANDO LOYOLA, OF QUERETARO, MEXICO.

## FINGER-DEVELOPING APPLIANCE.

No. 897,471.

Specification of Letters Patent.

Patented Sept. 1, 1908.

Application filed March 28, 1908. Serial No. 423,972.

*To all whom it may concern:*

Be it known that I, FERNANDO LOYOLA, a citizen of Mexico, residing at Queretaro, Mexico, have invented certain new and useful Improvements in Finger-Developing Appliances, of which the following is a specification.

This invention has for its object a simple, durable and efficient construction of device for developing the muscles of the fingers, the device being designed primarily for the use of piano players and arranged to develop all of the finger muscles uniformly, while at the same time to increase the suppleness or flexibility of the joints.

With this and other objects in view as will more fully appear as the description proceeds the invention consists in certain constructions, arrangements and combinations of the parts that I shall hereinafter fully describe and then point out the novel features in the appended claims.

For a full understanding of the invention, reference is to be had to the following description and accompanying drawings, in which:

Figure 1 is a plan view of one of my improved appliances, showing the application thereof; Fig. 2 is a perspective view of one of the finger rings and its connecting arm and rod; Fig. 3 is a vertical sectional view, and Fig. 4 is a detail sectional view of a portion of the wrist band.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

My improved finger developing appliance comprises a series of rings 1 which are designed to be slipped over the fingers and thumb of the piano player. Each ring 1 is provided with a threaded stem 2, and a series of weights 3 in the form of apertured disks are adapted to be slipped over upon the stems 2 and held rigidly thereon by means of washers and lock nuts as shown.

Loops 4 encircle the respective stems 2, and each of said loops is formed with apertured ears 5 by which it is hingedly connected to the forward extremity of a vertically movable section 6 of a connecting arm, such section being preferably curved as shown and being pivotally connected to the forward extremity of a horizontally movable section 7. The latter section is formed at its rear end with a loop 8 encircling the angularly

disposed and upwardly projecting end 9 of a connecting rod 10. Each of the rods 10 for the respective connecting arms of the finger loops is mounted adjustably in a post 11 and held at the required adjustment by means of a set screw 12, said screw being preferably provided with a square head so that a key (not shown) could be applied thereto to securely tighten the set screw against the rod. The posts 11 are secured to a wrist band 13 which is designed to encircle the player's wrist and which is constructed in sections hingedly connected together at 14 and provided with adjustable fastenings 15 so that the wrist band may be made larger or smaller to suit the wrist of the person to which the device is applied.

In order to protect the knuckles from any injury or discomfort caused by the connecting arms striking the back of the hand, I provide a series of pads 16 which are secured, preferably rigidly, to the said arms at the jointed connection between the forward and rear sections 6 and 7 thereof.

It is of course to be understood that a pair of my appliances is provided, so that both hands of the player are equipped with the invention. It is also to be understood that the devices are made in different standard sizes, as manifestly a woman or child would ordinarily require a much smaller size than a man. The adjustability of the wrist band 13 also compensates for wrists of different sizes, and to accommodate the finger rings 1 in the same manner, they are preferably split as clearly illustrated in the drawing, one end being provided with a pin 17 designed to take into any one of a series of apertures in the opposite end, so that the rings may be made smaller or larger as necessary.

From the foregoing description, in connection with the accompanying drawing, it will be seen that I have provided a very simple, durable and efficient construction of appliance of this character which is so arranged that the weights may be increased or decreased in order to properly and gradually develop the muscles of the fingers.

As is well known, it is accepted that the thumb is the strongest one of the digits, the second finger the next strongest, the fourth or little finger the next strongest, the index finger the next, while the third finger is the weakest. Hence when commencing the use of the appliance to develop the finger muscles it is preferred that the weights be increased



accordingly. That is to say, if for example one disk 3 is applied to the thumb ring 1, two should be applied to the second finger, three to the little finger, four to the index finger and five to the third finger so that the fingers will be developed to have uniform strength and flexibility. After the device has been used for some time, it is manifest that the weights may be increased according as the finger muscles are strengthened, the same proportion of weights being preferably adhered to, when they are increased.

It is to be understood that my device is primarily a muscle developer and not intended for use when the player is performing. As a matter of fact it will be found, as I have already demonstrated, that after the device has been used for some time and then removed, the fingers will be found to be very facile or supple and not so susceptible to weariness by long continued use.

Having thus described the invention, what is claimed as new is:

1. An appliance of the character described, comprising a series of rings adapted to be slipped over the fingers and thumb, weights detachably secured to said finger rings, connecting arms embodying articulate sections of which the forward one has a vertically swinging connection with the rear one, said forward sections being secured to the rings and of which the rear sections have a laterally swinging connection with the wrist band, and a wrist band to which said rear sections are secured.

2. An appliance of the character described, comprising a wrist band, a series of finger rings, said rings being provided with stems, apertured disks adapted to be slipped upon

said stems, means for holding said disks in place, articulate arms connected at one end to said stems, and an adjustable connection between said arms and the wrist band.

3. An appliance of the character described, comprising a wrist band, a series of finger rings, said rings being provided with stems, apertured disks adapted to be slipped upon said stems, articulate arms connected to the respective stems, rods having a jointed connection with the rear ends of said arms, and posts secured to said wrist band and arranged for adjustable connection with said rods.

4. An appliance of the character described, comprising a wrist band, a series of finger rings, said rings being provided with stems, disks adapted to be slipped upon said stems, means for holding said disks in place, loops mounted upon said stems, articulate arms having a vertically movable connection with said loops, said arms being constructed in vertically movable sections, rods with which the rear ends of said arms have a laterally movable connection, and means for adjustably holding said rods to the wrist band.

5. A device of the character described, comprising a wrist band, a series of finger rings, articulate sectional arms connected at one end to the wrist band and at their other ends to the finger rings respectively, and pads secured to said arms at the jointed connection between the sections thereof.

In testimony whereof I affix my signature in presence of two witnesses.

FERNANDO LOYOLA. [L. S.]

Witnesses:

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