

F. W. Reilly.

Handles for Lifting Weights.

N^o 90,305.

Patented May 18, 1869.

Fig: 1

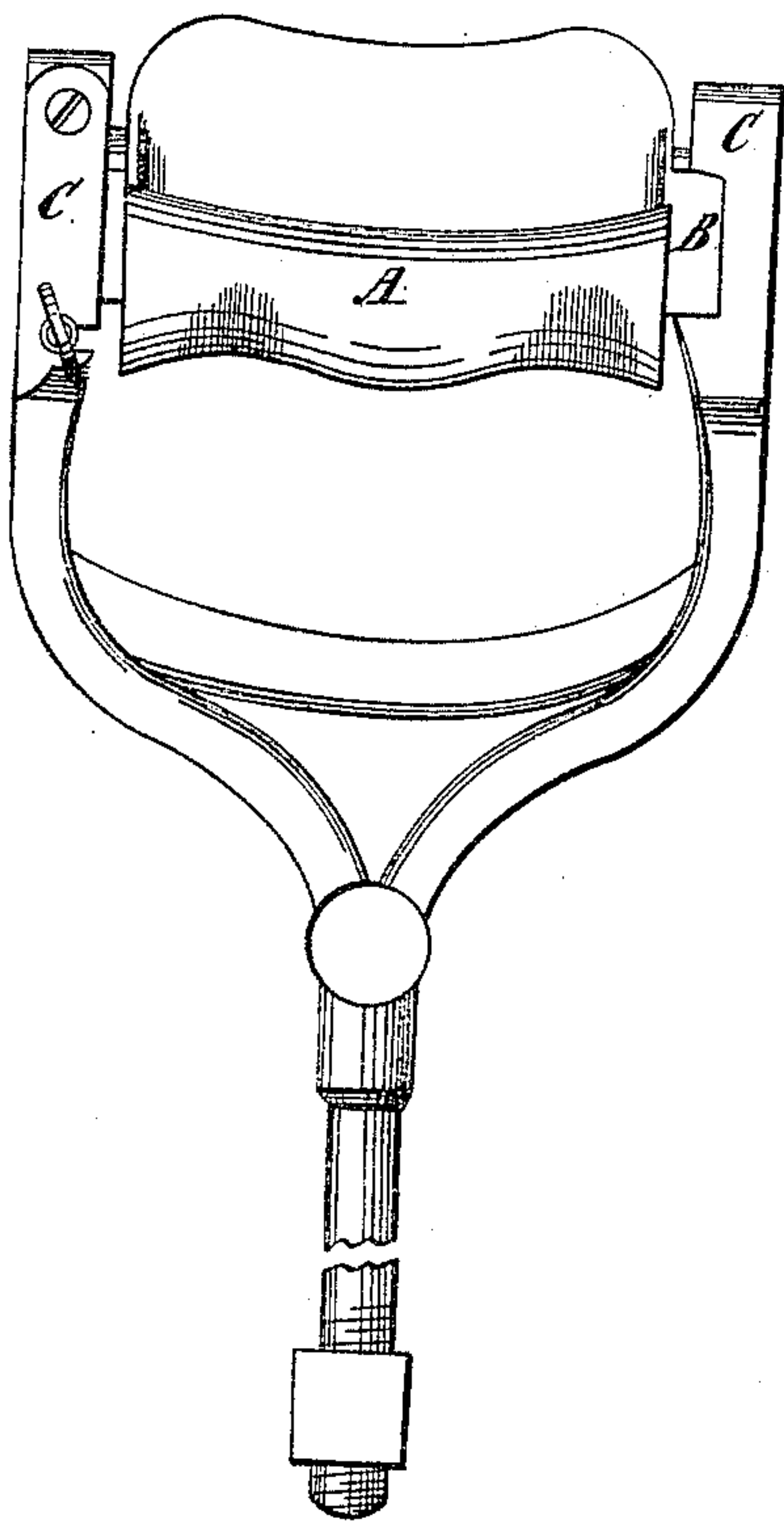
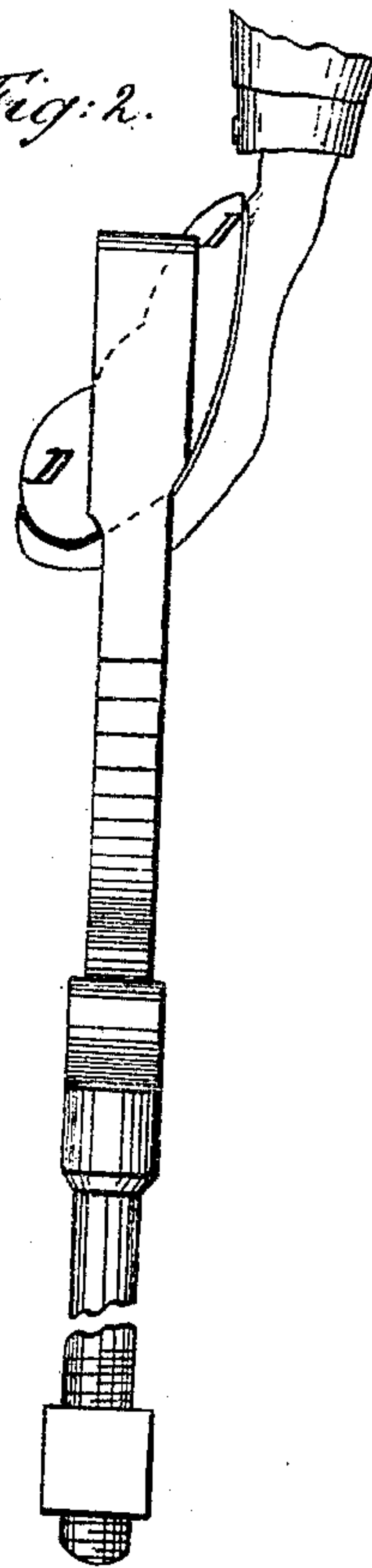


Fig: 2.



Witnesses
J. A. Wilson
W. F. Hodges.

Inventor.
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FRANK W. REILLY, OF CHICAGO, ILLINOIS.

Letters Patent No. 90,305, dated May 18, 1869.

IMPROVEMENT IN HANDLE FOR WEIGHT-LIFTING APPARATUS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, FRANK W. REILLY, of the city of Chicago, in the county of Cook, and State of Illinois, have invented new and useful Improvements in Handles or Grasping-Pieces for Lifting; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawing, making part of this specification, in which—

Figure 1 is a front view of the handle or grasping-piece in its attachment.

Figure 2 is an end view of the same, showing the position of the hand grasping the handle.

My invention consists of an improved form of handle or grasping-piece, designed to facilitate the practice of lifting weights, either as a gymnastic or hygienic exercise, or for any other purpose in which it is desired to raise or move heavy bodies; and in order to make it clearly understood, I shall first proceed to describe the common construction of handles or grasping-pieces heretofore in use for such purposes, and shall then point out the nature of my improvements.

The handles or grasping-pieces heretofore used consist essentially of pieces of wood or other suitable material, variously shaped, as, for instance, a round bar or rod covered with rope, twine, &c., as used in ordinary gymnasiums, or with several angular surfaces and edges, as made by Curtis & Babcock, of New York city, or carved out of wood, as in the lifting-bar patented by D. P. Butler, of Boston, Massachusetts; but all of these agree in relying upon the prehensile strength of the fingers for the hold, and special apparatus has been devised for educating the grasping-power of the fingers, so that the beneficial effects of exercise, by lifting, might be obtained.

Gymnasts, and those interested in physical culture, and others, have thus made numberless experiments with the view of securing the form of handles or grasping-piece best adapted for lifting-purposes.

Moulds of the grasping hand, in plaster, wax, gutta-percha, *papier-maché*, &c., have been taken, in order to secure perfect coaptation of the surfaces of the hand and the grasping-piece or handle; but, as before stated, the principle in each and all of these experiments has been the same, namely, reliance upon the prehensile power, and transmission of the pressure mainly to the bony fingers, causing, usually, painful callouses, bruises, and abrasions, and thus debarring a large class of the community, whose hands are not developed and hardened by manual labor, from this kind of exercise.

The object of my improvement is to avoid these

disadvantages and objections, and so to make the lifting of weights, either for gymnastic or hygienic exercise, or for other purposes, more widely available.

To accomplish this result, I construct handles of such size and general conformation, as that the whole palmar-surface of the hand, from its junction with the wrist to the tips of the fingers, shall be accommodated thereon, thus insuring the greatest possible friction-surface, and distributing the surface over the greatest space.

These handles are secured in suitable sockets, or otherwise connected with the weights to be moved, at such an angle from the vertical line as that, when grasped and traction made upon them, the greatest amount of the pressure is received upon the upper cushions of the hand, and the least upon the more body fingers, thus reversing the distribution of pressure in the modes and construction of handles heretofore used, avoiding the necessity for special education of the prehensile power, by which the flexibility and delicacy of touch, essential to artists, musicians, and others, is destroyed, and preventing the formation of painful callouses, &c.

I construct the grasping-piece A of wood, iron, or any other suitable material, with the general shape and configuration as shown, and provided with lugs or shoulders B, by which the handle may be secured in a suitable socket, C.

The back of the grasping-piece is constructed with an inclination from the vertical line, as shown at D D.

I have contemplated attaching such grasping-pieces to the extremities of a lifting-bar, for use in weight-lifting apparatus. Also, the making such pieces with suitable attachments, either fixed or detachable, for lifting or moving express-safes, trunks, or other heavy bodies.

I have also thought of making the inclination of said grasping-pieces adjustable by means of a set-screw, wedge, or other device.

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

The construction of handles or grasping-pieces with surfaces adapted to the entire palm of the hand and fingers, at such an inclination from the line of traction as shall throw the greatest pressure upon the upper fleshy cushions of the hands, and the least upon the bony fingers, substantially as has been described.

FRANK W. REILLY.

Witnesses:

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