

G. B. WINDSHIP.

Apparatus for Physical Culture.

No. 134,578.

Patented Jan. 7, 1873.

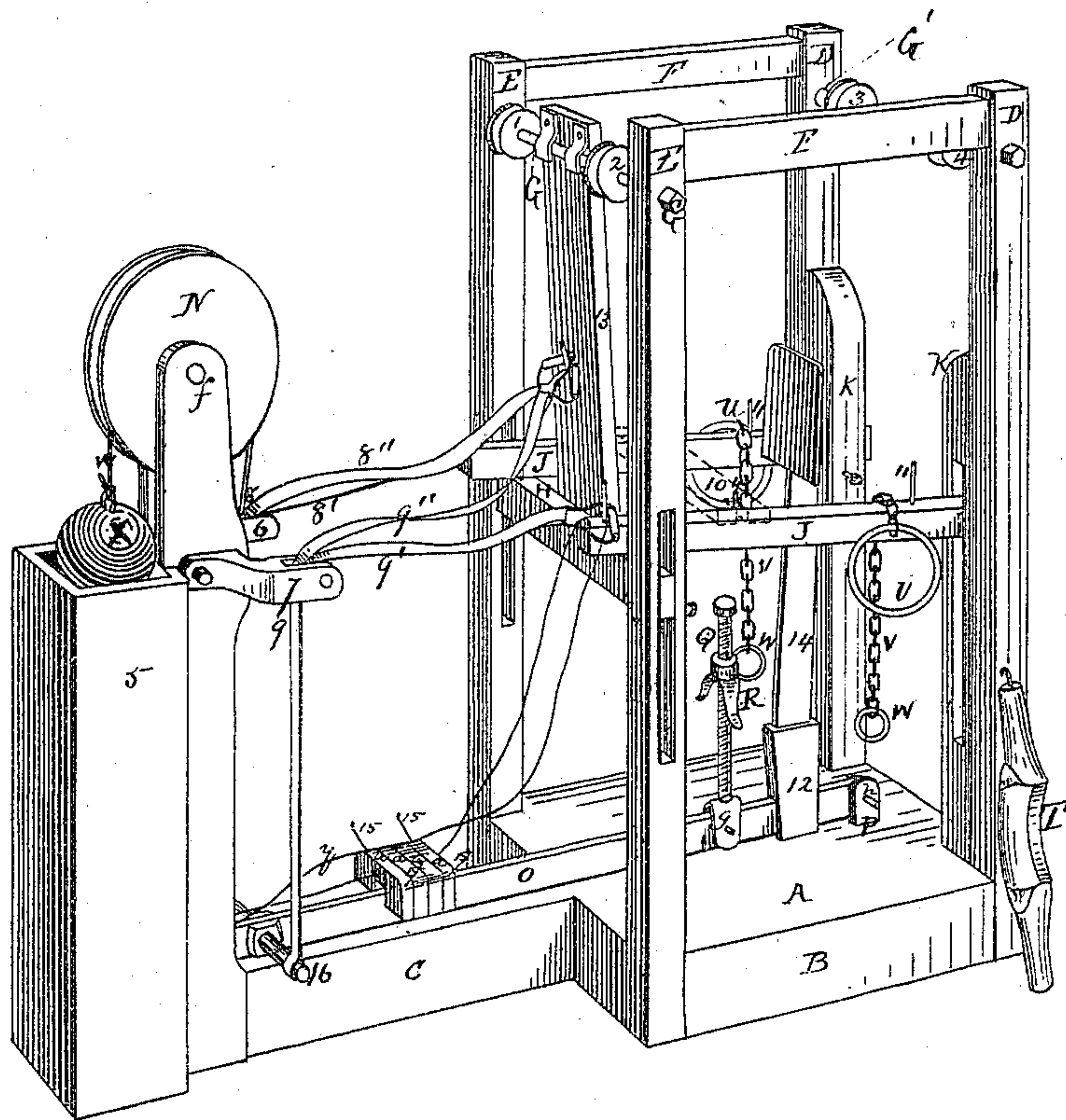


Fig. 1.

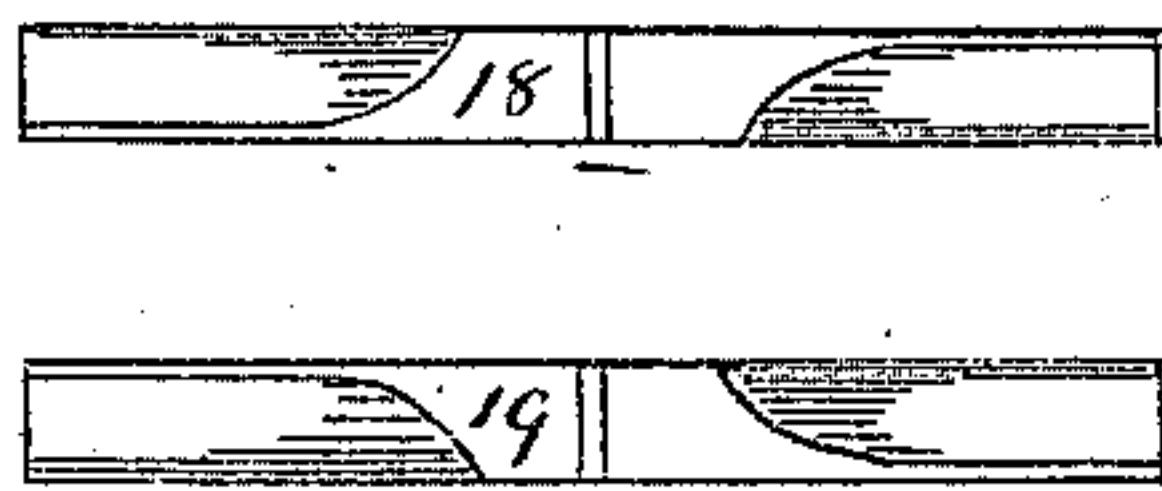


Fig. 2.

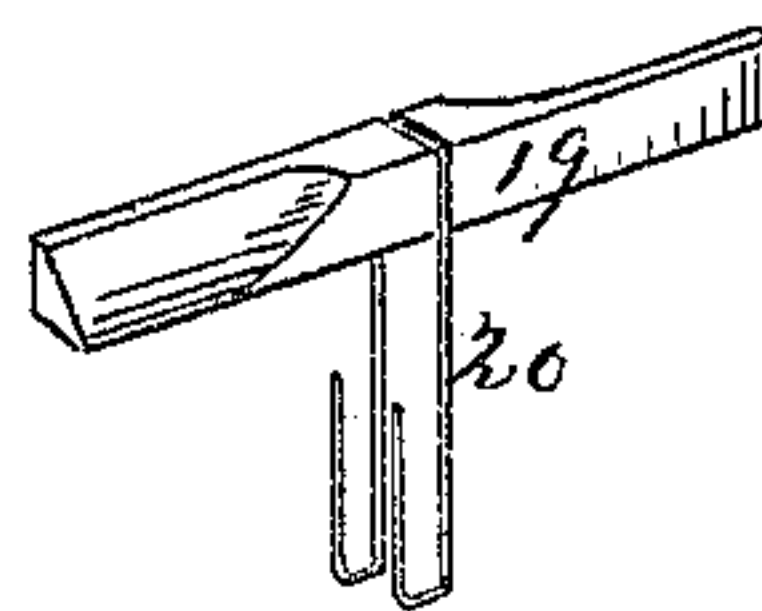


Fig. 3.

WITNESSES

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# UNITED STATES PATENT OFFICE.

GEORGE B. WINDSHIP, OF BOSTON, MASSACHUSETTS.

## IMPROVEMENT IN APPARATUS FOR PHYSICAL CULTURE.

Specification forming part of Letters Patent No. 134,578, dated January 7, 1873.

*To all whom it may concern:*

Be it known that I, GEORGE B. WINDSHIP, of Boston, Massachusetts, have invented an Improved Apparatus for Promoting Physical Culture, of which the following is a specification:

The nature of this invention consists in adding to and combining with the lifting apparatus patented to said GEORGE B. WINDSHIP certain additional parts, whereby said apparatus, originally designed simply for yoke-lifting, is expanded at small expense into, first, a hand-shoving apparatus, whereby the exercise of pulling or pushing pulley-weights of various gravity can be attained with great variety of range; second, an apparatus for getting the rowing exercise with greater or less degrees of resistance; third, a hand-lifting apparatus; fourth, an apparatus for leg exercise with greater or less resistance; fifth, a horizontal bar; and sixth, an apparatus for obtaining the arm exercise of lifting the body or climbing a rope with less exercise of power than in these.

The parts of the machine already described in Letters Patent 49,945, dated September 12, 1865, are similarly lettered in this application, and only additions or alterations will be new lettered or particularly specified.

The drawing shows the invention.

Figure 1 is a perspective; Fig. 2, an illustration of the handles for hand-lifting; and Fig. 3, a perspective of a handle with its link for such hand-lifting.

The upright studs D D and E E are made about eight feet high, the cross-bar G is raised to that or nearly that height, and another cross-bar, G', round or oval in section, is mounted on the studs D D. Each of these bars G G' carries two pulleys, 1 2 3 4, for passing straps over for the exercise of pulling down, and, as a person exercising with them could never raise himself, they serve as a capital preparation for the rope-climbing exercise. The straps would be connected with the rowing and shoving-out straps, hereafter described, and raise the weight similarly. The counterpoise X I prefer to make in section, so as to be able to enhance a little or modify a little

the weight to be raised beyond the control given me by the sliding car and sectional weight *a a a a* of my former patent; and I make the pulley N with a deep groove, about three times as deep as the cord is thick, whereby the effect of the spring may be attained and the spring *m* of the old patent dispensed with. I box the weight X, as shown at 5. Two brackets, 6 and 7, carry two pulleys, over each of which runs a strap, 8 and 9. This strap forks into two branches, 8' 8'' and 9' 9'', and it may also have a third, not shown, to pass over the pulleys 1 and 2 or 3 and 4. The branches have each a handle at the end like a stirrup or D. 8' 9' are shorter than 9'' 8'', and are used for the rowing exercise. Upon the braces F F rests a seat, 10, which has a scarf at each end. A pin, 11, in each brace fits into this scarf and fixes it either near studs E for foot exercise or near studs D for rowing exercise. A socket, 12, fits on the beam O, and is slightly adjustable to and from the fulcrum *h* to accommodate different lengths of leg. Into this socket may be fitted the spade-shaped standard or foot-rest 14, about three feet long. A back-board, 13, is hung by a hook to rod or cross-bar G, and on this is a hook for one or the other sets of pulling-straps. To keep cord *y* from catching under the car one or more of the weights *a a a a* is provided with horns 15 to catch the cord when carelessly thrown down. The straps 8 and 9 are attached to lever O in any convenient manner. The cheapest way, perhaps, is to extend, as shown, a bar, 16, through the lever, firmly fastened to it. Two handles, 18 19, made rights and lefts, as shown, have a hooked link, 20, fit over them, which hooks on the horns of swivel R, so that the exerciser may practice hand-lifting with either hand forward.

I will now explain the use of this machine as constructed in detail, putting a pupil through his exercises.

The least shoulder-lift in the machine ordinarily in use is 225.5 pounds; the greatest with weight X on is 1,103, and without weight X, 1,523.

For weights of hand-lifts deduct the weight of yoke and chains, about 26 pounds, and they



are as follows: Least, 199.5 pounds; greatest, 1,077 pounds; greatest with weight X detached, 1,497 pounds.

Similar proportions exist between the other exercises.

Kind.	Least.	Greatest.	X detached.
Hand shove or pull.	31.5 lbs.	207 lbs.	267 lbs.
Foot-shove.....	62.5 "	325.5 "	415.5 "

These weights may, of course, be varied by increasing or diminishing the weights *a a a a* on the car, or the weight X; but the above I consider the ordinary proportion between exercises to secure development in harmonious proportion.

The exerciser gets into the frame properly dressed to allow play of the muscles. He adjusts the yoke and chains, arranges the car so that he may, if in good condition, lift a little more than the last time, and takes two or three lifts, then replaces the yoke and chains, takes his exercise-card, marks on it the weight lifted and the number of times lifted, walks about a moment or two, and then begins to arrange for hand-lifting or some other of the exercises. This record, replacement of the apparatus, and interval of rest is of importance, and no exercise ought to be tried which shall call the muscles into strained, but only into full, exertion, nor should any be repeated till tired, but only till fairly felt as an exertion which has left all the reserves of the system as a full surplus.

Exercise should always be within the powers, and the utmost limit of physical ability or of endurance should never be approached or tested.

Classes or society in the gymnasium thus become valuable as affording means of recreation in the intervals of the exercises. But the setting and closing of stirrups should be avoided and forbidden. Exercise should therefore, at first, be taken under the eye of a competent instructor with some knowledge of hygiene and physiology.

For the hand-shoving, the exerciser removes the seat 10, places his back against the back-board 13, takes the long straps 8' 9", and thrusts out before him.

For rowing, he places the seat 10 near studs D, seats himself upon it, braces his feet on foot-rest H, and pulls either with arms alone or with arms and body on the straps 8' 9".

For foot-shoving, the seat is placed near studs E, the standard 14 of the foot-rest is placed in its socket, the exerciser takes his seat on the seat, braces his back against the back-board, his feet against the blade of the foot-rest, and straightens his knees.

For down-pulling, the exerciser passes straps over pulleys 1 and 2 or 3 and 4, and pulls down.

For hand-lifting, the handle 18 or 19 is adjusted to link 20, and the hooks of the latter are hooked on the horns of swivel R, the exerciser straddles the lever O, lays hold of the handle in front and behind, and lifts.

The horizontal bar G' serves also for the horizontal-bar exercise—swinging by the arms and the like.

I claim—

1. The combination of the straps 8 9 8' 9" with the lever O, and with or without the back-board 13, as a device for hand-shoving exercise, substantially as described.

2. The combination of the straps 8 9 8' 9" with the lever O and seat 10 placed near studs D, and with cross-bar H as a foot-rest, as a device for rowing or pulling exercise, substantially as described.

3. The handles 18 19 and link 20, in combination with the lever O as a device for hand-lifting exercise, substantially as described.

4. The seat 10, placed near the studs E, back-board 13, and foot-rest 14, in combination with lever O, as a device for leg exercise, substantially as described.

5. The horizontal bar G', in combination with studs D, and raised about eight feet from the platform, substantially as described.

6. The pulleys 1 2 3 4 on bars G G', in combination with straps in continuation of 8 9 and with lever O, as a device for the arm exercise of rope-climbing with moderated exertion, substantially as described.

7. The horns 15, in combination with one or more of the weights *a a a a*, substantially as and for the purpose described.

GEORGE B. WINDSHIP.

Witnesses:

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JOHN J. HALEY.