

J. Smith,
Gymnastic App^s.
No. 108401. Patented Oct. 18. 1870.

Fig. 1.

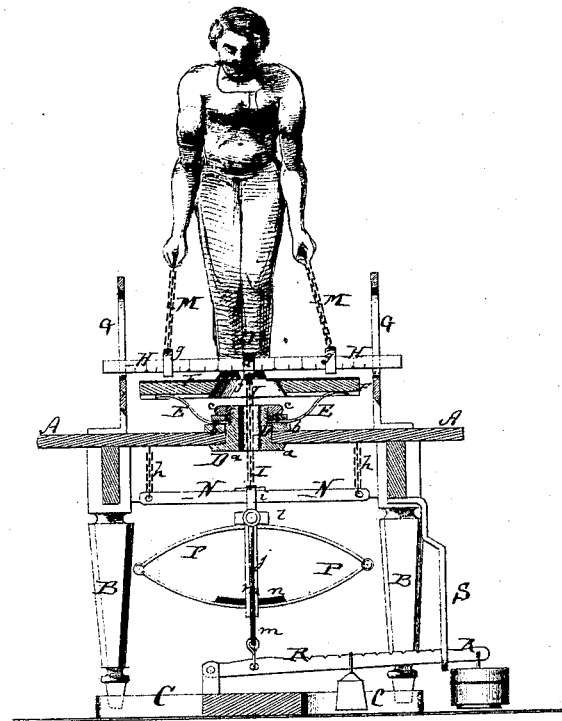


Fig. 3.

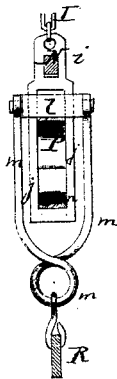


Fig. 2.

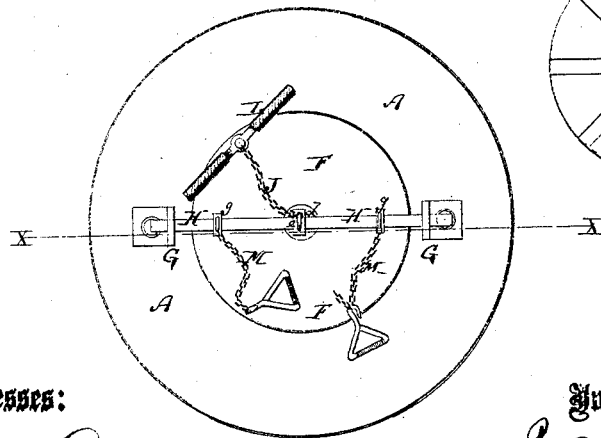
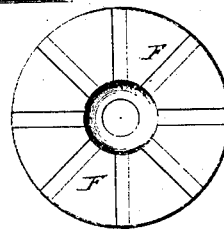


Fig. 4.



Witnesses:

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JOHN SMITH, OF ST. PAUL, MINNESOTA.

Letters Patent No. 108,401, dated October 18, 1870.

IMPROVEMENT IN GYMNASTIC 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, JOHN SMITH, of St. Paul, in the county of Ramsey and State of Minnesota, have invented a new and improved Gymnastic Apparatus; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing, forming part of this specification.

Figure 1 represents a vertical central section of my improved gymnastic apparatus, taken on the plane of the line *z z*, fig. 2.

Figure 2 is a plan or top view of the same.

Figure 3 is a detail transverse section, on an enlarged scale, of the elliptic spring and fastening.

Figure 4 is an inverted plan view of the supporting platform.

Similar letters of reference indicate corresponding parts.

This invention has for its object to construct a gymnastic apparatus which is to be operated entirely by the hands, and still to call all the muscles of the body into harmonious action, taking cognizance of the principle that the fingers are the proper indices of human power, and that any strain put upon the body in excess of what the fingers can bear is dangerous and injurious.

The invention consists in the application of adjustable spring-power for the hands, and of an elastic support for the body of the gymnast, all parts being arranged to be adjustable to persons of different power, as hereinafter more fully described.

A represents a table, of circular or other shape, having the lower ends of the legs B rest in the ends of a metal cross, C, which rests upon the floor. The center of the table A has an opening, through which is fitted a tube, D, with a head, *a*, at the lower end, the said head fitting against the under side of the table, while a washer, *b*, is fitted around the tube D to rest upon the table. Upon this washer rest the ends of a number of flat steel bars or springs, E E, with their outward points curved upward and equidistant from each other.

The springs E are locked to the table by means of the nuts *c*, which are applied to the tube as shown in fig. 1.

F is a circular platform, of wood, about eighteen inches diameter, and lined on top and bottom with sheet-iron. It has a hole in the center with grooves for the steel springs E to slide in on the under side. This platform rests on the outer end of the steel bars. The hole in the center has beveled edges to enable it to sink around the nut *c* when the weight comes upon it. Both table and platform are preferably covered with cloth. On opposite sides of the platform are slotted standards, G, G, bolted to the table to act as guides for the arm H, which passes through the slots of said standards. The lower ends of these slots may be lined with small pieces of rubber to break the jar in letting the arm H down. This arm H has an iron

band, *n*, passing around the center, with a hook, *e*, on the under side to receive the center chain I, and a hook, *f*, on the upper side to receive the upper chain J. The upper chain is, at its upper end, secured to the center of an iron bar or handle, L. The outer ends of the handle L are covered with leather, to make it easy for the hands.

The arm H is divided into a scale of inches from the center toward each end, and is adapted to receive two slides, *g g*, which hold chains M M and handles for the side-lift.

Suspended from the underside of the table, by two small chains, *h h*, is a cross-bar, N. Around the center of the bar N is fitted a bar, *i*, which is attached to the loose end of the lifting-chain I. From the band *i* project downward slotted arms *j j*, which are, at their lower ends, secured to the lower arm of an elliptic spring, P. Upon the upper arm, on the spring P, rests a plate, *l*, with a slot through the center for the arms *j* to slide through.

The ends of the plate *l* are pivoted to a forked arm, *m*, that projects from a scale-beam, B. The beam B is pivoted to ears *m m*, that project from the cross C. The outer arm of the beam B is guided in a slotted plate S, which projects downward from the table. Rubber springs *u* may be secured to the inner edges of the arms of the spring P, which meet when a heavy strain comes upon the spring to prevent injury to the same.

The person using the apparatus stands upon the platform F, and applies his hands either to handle L or to the handles of the chains M M. The apparatus can be worked in different positions, to wit: either by using the handle L entirely in front of the body, or by having it in rear, or by having one hand in front and the other in rear, the handle passing between the legs, or, finally, by using the outside chains. On every plan the apparatus can be regulated to suit the power of the person using it, not only by means of weights on the scale-beam, but also by adjusting the chains M on the bar H.

Having thus described my invention,

I claim as new and desire to secure by Letters Patent—

1. The combination of the arm H, guides *g*, platform F, chains M and I, with the spring P and cross-bar N, all arranged as shown and described.

2. The springs E E, clamped to the tube D, and applied to the table for supporting the platform F, substantially as described.

3. The spring P, suspended with its lower arm from the chain I, while its upper arm is connected with the beam B, as set forth.

4. The cross-bar N, combined with the chain I and spring P, substantially as herein shown and described.

JOHN SMITH.

Witnesses:

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