

(No Model.)

G. S. SANBORN.
EXERCISING APPARATUS.

No. 419,285.

Patented Jan. 14, 1890.

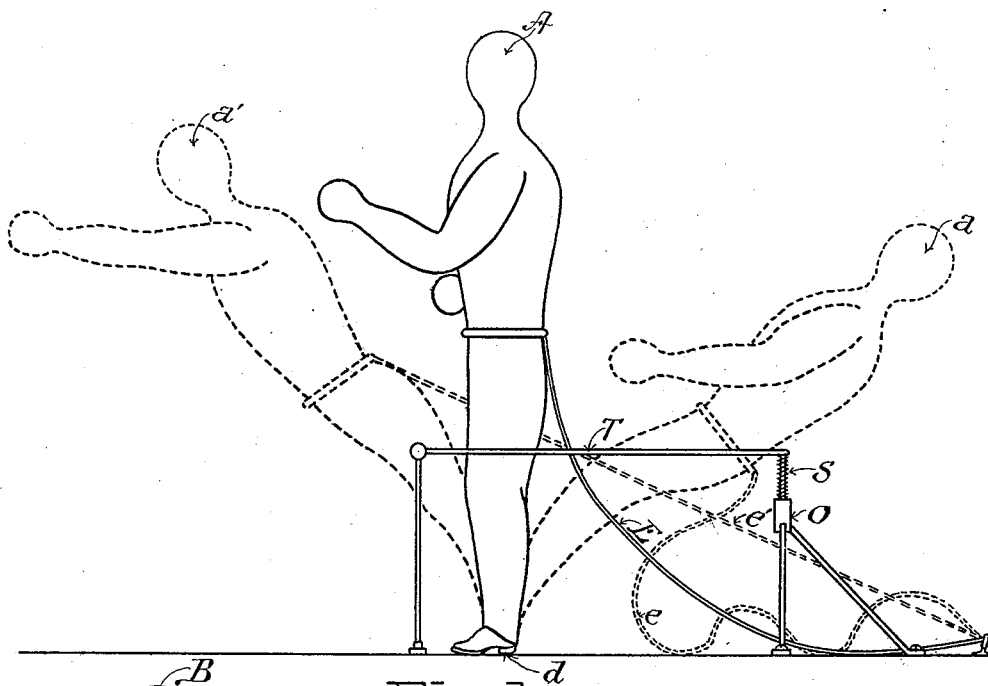


Fig. 1.

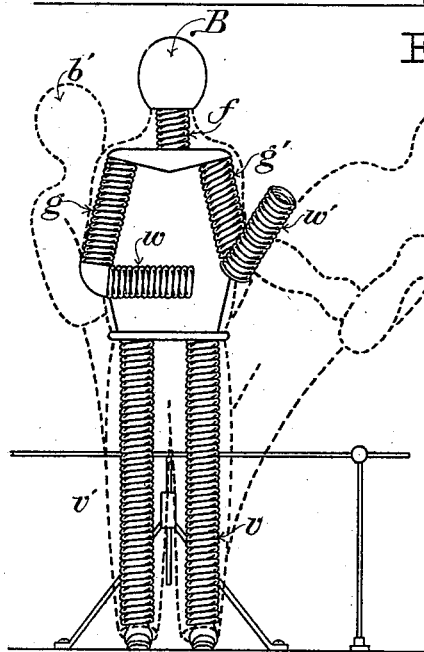


Fig. 2.

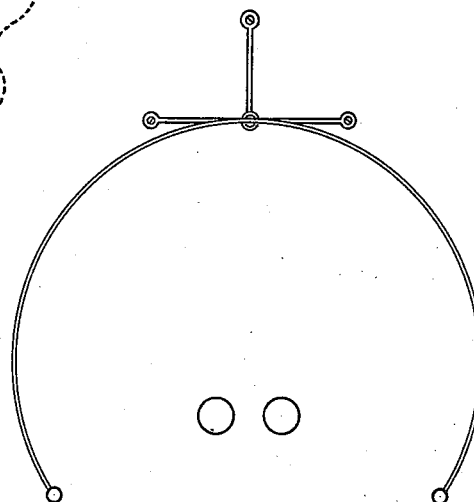


Fig. 3.

Witnesses:
Walter S. Coffin.
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Inventor:
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By his Attorneys
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UNITED STATES PATENT OFFICE.

GEORGE S. SANBORN, OF LYNN, MASSACHUSETTS, ASSIGNOR OF SEVENTWELFTHS TO JOSEPH A. FLEET AND EDWARD WILLIAMS, BOTH OF SAME PLACE.

EXERCISING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 419,285, dated January 14, 1890.

Application filed September 16, 1889. Serial No. 324,045. (No model.)

To all whom it may concern:

Be it known that I, GEORGE S. SANBORN, a citizen of the United States, residing at Lynn, in the county of Essex and State of Massachusetts, have invented a new and useful Exercising Apparatus, of which the following is a specification.

My invention relates to improvements in exercising apparatus in which a representation of a human figure, constructed wholly or in part of resilient or elastic material, is struck by the fist and bent away from the blow a distance depending on the force thereof.

The object of my invention is to produce a more attractive exercising apparatus of this class and to afford an exercise similar to that of an actual boxing contest. I accomplish this object by the mechanism of which the accompanying drawings are an illustration.

Figure 1 shows a side view of the apparatus. A is a representation of a human figure constructed wholly or in part of resilient or elastic material and firmly fastened to the base *d*. E represents a flexible strap used to control the motion of the figure A. T represents a curved rail running partially around the figure A, supported by standards, and at a point in the rear of the figure held in position by a spring *s*, the spring *s* being wound round a rod fixed to the rail and passing through the center of the block *o*, as shown in Fig. 2. The figure *a* shows one of the positions that may be assumed by the figure A after receiving the blow. When the figure is brought in contact with the rail T, the rod passing through the spring *s* is forced downward through the block *o*, and by any simple mechanical device may be made to indicate the force of the blow. When the force of the blow is overcome, the figure, through its own elasticity or resilience, tends to resume its original position, but by the momentum gained in so doing is carried beyond that position until checked by the regulating-strap E, assuming the position shown in figure *a'*. By lengthening or shortening the strap E the movements of the figure may be confined within any desired limit. The

arms of the figure *a*, being themselves constructed of resilient or elastic material, would, in the positions *a* and *a'* of the figure, assume the position shown in said figures; and when the motion of the figure is suddenly checked by the regulating-strap E the arms will be thrown forward with considerable velocity, forcing a person using the apparatus to retire quickly to avoid a smart blow. Positions *a* and *a'* are chosen simply as convenient illustrations. The figure A, bending freely in any direction, may assume an indefinite number of positions, depending on the force and the direction of the blow. The arms, through the motion of the figure and the momentum acquired, are constantly changing their position.

The details of construction of the figure are shown in Fig. 2, a front view of the apparatus. *v* and *v'* represent closely-wound spiral springs firmly fixed at the base and to the body of the figure, which is of itself made of wood or other light material. *g* and *g'* represent two closely-wound spiral springs bent in such a manner as to form elbows to the forearms *w* and *w'*, being fastened at one extremity to the shoulders of the figure and having the other extremity free, the free extremity carrying a boxing glove or pad. *f* represents a similar spring forming the neck of the figure. *b'* and *b* show the position of the figure B after receiving a side blow. All parts of the figure above the belt, as shown in Fig. 1, are covered with a thick covering of padding or soft material, so that it may be safely struck with the bare fist; but such covering may be omitted from part of the back of the figure.

Fig. 3 shows a horizontal view of the curved rail, the two small circles indicating the position of the base of the figure.

I do not consider my invention limited to the arrangement of springs above described; but

I claim as my invention, and I desire to secure by Letters Patent, in an exercising apparatus—

1. The combination of the base and a representation of a human figure mounted thereon and constructed wholly or in part of resili-

ent or elastic material, substantially as set forth.

2. The combination of the base and a representation of a human figure mounted there-
5 on having legs constructed wholly or in part of resilient or elastic material, substantially as set forth.

3. The combination of the base and a representation of a human figure mounted there-
10 on having arms constructed wholly or in part of resilient or elastic material, substantially as set forth.

4. The combination of the base and a representation of a human figure mounted there-
15 on having a neck constructed wholly or in part of resilient or elastic material, substantially as set forth.

5. The combination of the base and a representation of a human figure mounted there-
on and constructed wholly or in part of resili- 20
ent or elastic material, and a flexible strap used to control the motion of the same, substantially as set forth.

6. The combination of the base and a representation of a human figure mounted there- 25
on and firmly fixed thereto, but bending freely in any direction, and a spring acting to keep said figure in an upright position, all substantially as set forth.

GEORGE S. SANBORN.

Witnesses:

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BENJAMIN PHILLIPS.