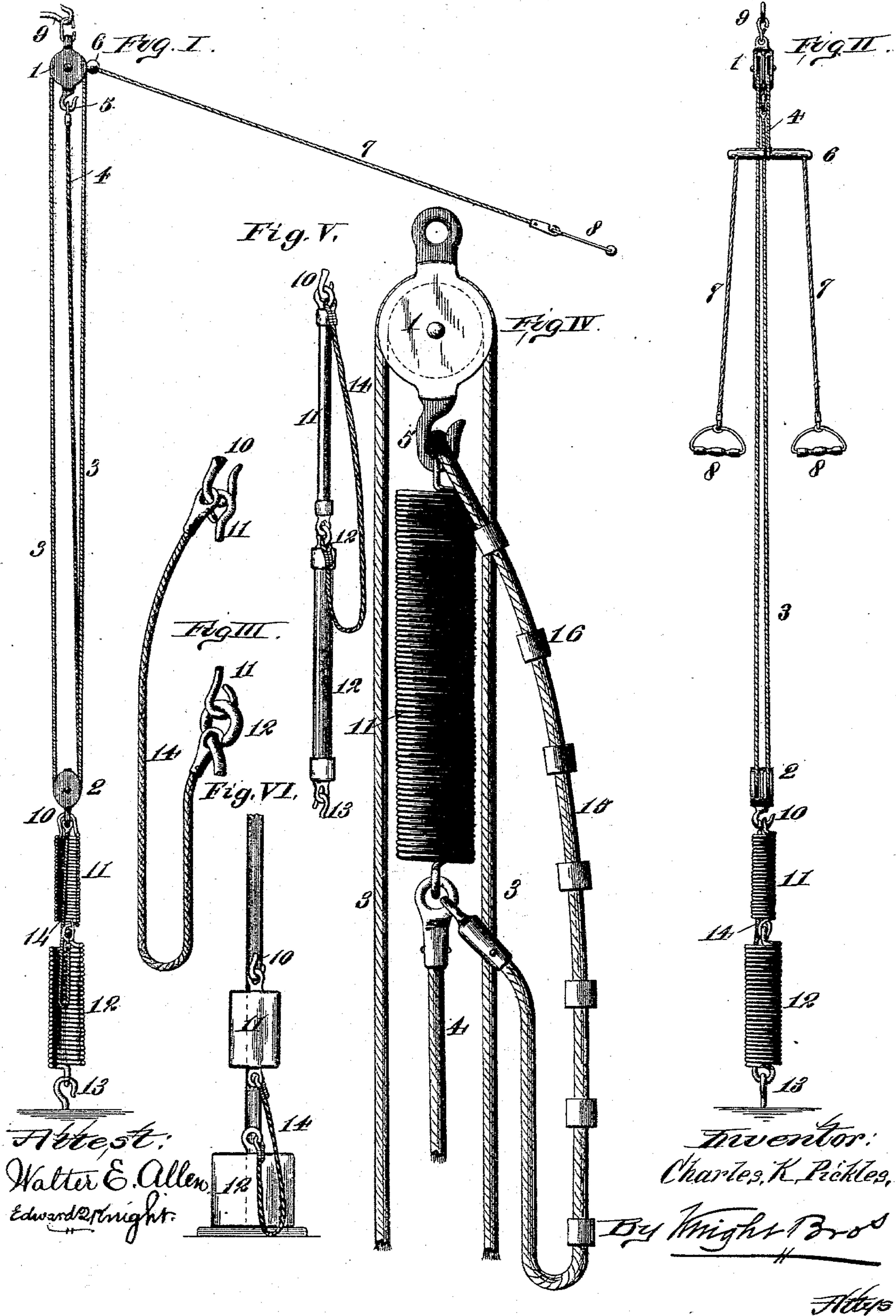


(No Model.)

C. K. PICKLES.
EXERCISING APPARATUS.

No. 511,251.

Patented Dec. 19, 1893.



Attest:
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UNITED STATES PATENT OFFICE.

CHARLES K. PICKLES, OF ST. LOUIS, MISSOURI, ASSIGNOR TO W. B. KNIGHT & CO., OF SAME PLACE.

EXERCISING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 511,251, dated December 19, 1893.

Application filed November 17, 1892. Serial No. 452,336. (No model.)

To all whom it may concern:

Be it known that I, CHARLES K. PICKLES, of the city of St. Louis, in the State of Missouri, have invented a certain new and useful Improvement in Exercising Apparatuses, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to that class of apparatus, known as home gymnasiums or exercisers, in which a spring or springs give the desired resistance; and my invention consists in features of novelty hereinafter fully described and pointed out in the claims.

Figure I illustrates a side elevation of my invention, the springs of the apparatus being shown in section. Fig. II is a front elevation. Fig. III is an enlarged, detail view of the cord connections between the lower pulley block and the lower spring. Fig. IV is a detail elevation, showing the light spring attached to the upper pulley block instead of the lower one, the operating cord being interposed between the springs, and showing also a slack cord provided with buttons for optional connection with the spring attachment for the purpose of varying the limit of extension of the spring. Fig. V is a modification in which, instead of a coiled wire spring, a rubber spring is used. Fig. VI is a modification, showing weights of different resistance that may take the place of the springs.

Referring to the drawings, 1 represents the upper, and 2 the lower pulley block around which passes the operating cord 3, whose confined end 4 is connected to the block 1 by a hook 5 or otherwise.

6 is a cross piece, on the free end of the operating cord 3, through which passes the hand-rope 7, provided with handles 8. The upper pulley 1 is supported by a hook 9 secured in the wall or door frame, window frame, or other suitable support. The lower pulley block 2 is provided with a hook 10, receiving one end of the light spring 11, while to the lower end of a spring 11 is connected a heavier spring 12. The spring 12 is coupled to a hook, or other fastening, 13, inserted in the floor or in the foot-board near the floor.

14 is a cord, one end of which is made fast to the block 2, and whose end is attached to the upper end of the spring 12, this cord 14 being normally slack, as shown in Fig. I. The construction is such that when the handle ropes are drawn forward the lower pulley block 2 is caused to move upward first expanding the light spring 11, thereby giving opportunity to exercise with a light spring, if desired, while should heavier exercise be wished, by stepping farther from the apparatus, the slack in the cord 14 is drawn out, the spring 11 is cut out from further expansion, and the heavy spring 12 expands.

In the modification I have shown in Fig. IV, the heavy spring 12 is designed to be connected directly to the pulley block 2, while the lighter spring 11 is shown connected by one end to the hook 5 of the pulley block 1, and at its other end to the end 4 of the cord 3. A slack cord 15 is here provided, connected at one end to the rope 3, and such slack cord is provided with suitable buttons 16 that hold the cord and prevent it, when the slack is drawn out, from slipping through the hook 5, through which it is passed. The operation is the same in this modified form as in the preferred form, for the light spring is expanded before the heavy spring begins to expand, the heavy spring not expanding until the slack in the cord 15 is drawn out, when the light spring is cut out and further expansion in it is prevented.

By the use of pulley blocks I am enabled to obtain a slight movement of the one pulley toward the other with a greatly increased movement of the hand cords, thereby obtaining the desired movement in the handles with a slight expansion of the spring or springs. I have shown each pulley block with two sheaves, but it is evident that more than this number can be used to advantage, if desired, the number of sheaves regulating the relative expansion of the springs with relation to the movement of the hand ropes. If desired, either one of the springs may be removed and the remaining spring connected directly to the pulley block and the detaining hook when but the one degree of resistance will be afforded.

An apparatus constructed in accordance

with my invention combines the features of light and heavy resistance, making it applicable, when the light spring alone is used, for use by women or children, while when the
5 light spring is cut out, increased resistance is afforded by the heavier spring, suitable for the exercise of men.

I claim as my invention—

1. In an exercising apparatus, the combination of two pulley blocks, an operating
10 cord held at one end, passing around both blocks, hand cords secured to the free end of the operating cord, and springs of different degrees of resistance brought successively
15 into action by the strain of the operating cord, substantially as described.

2. In an exercising apparatus, the combination of an operating cord, a light and heavy

spring arranged to be operated by said cord, and a slack cord arranged between said
20 springs; substantially as and for the purpose set forth.

3. In an exercising apparatus, the combination of a resisting spring, an operating
25 cord applying tension to said spring, and a slack cord attached by one extremity at one end of the spring, and provided with stops or buttons by which it is connected to the attachment at the other end of the spring, with
30 variable length whereby the limit of extension of said spring may be varied, as explained.

CHARLES K. PICKLES.

In presence of—

ALBERT M. EBERSOLE,
M. M. KINGSLAND.