

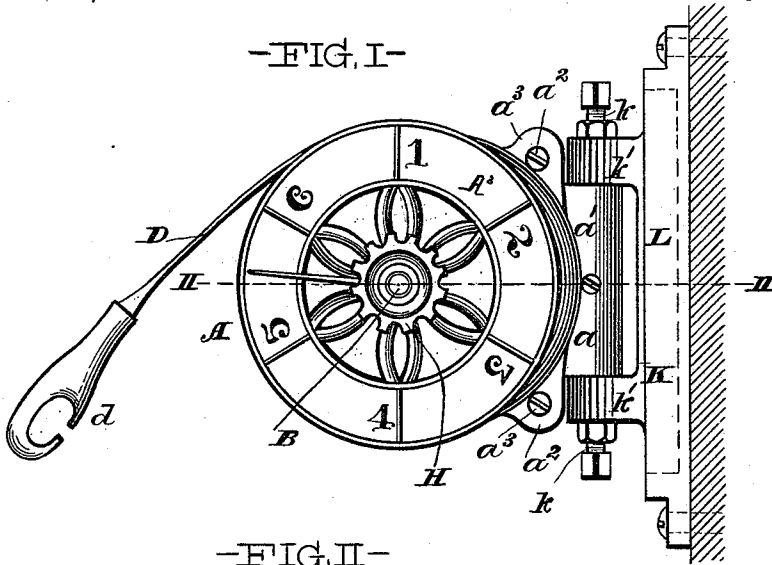
(No Model.)

G. F. POOLE.
EXERCISING MACHINE.

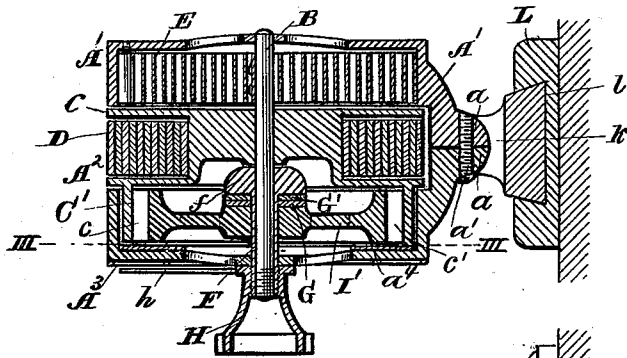
No. 518,967.

Patented May 1, 1894.

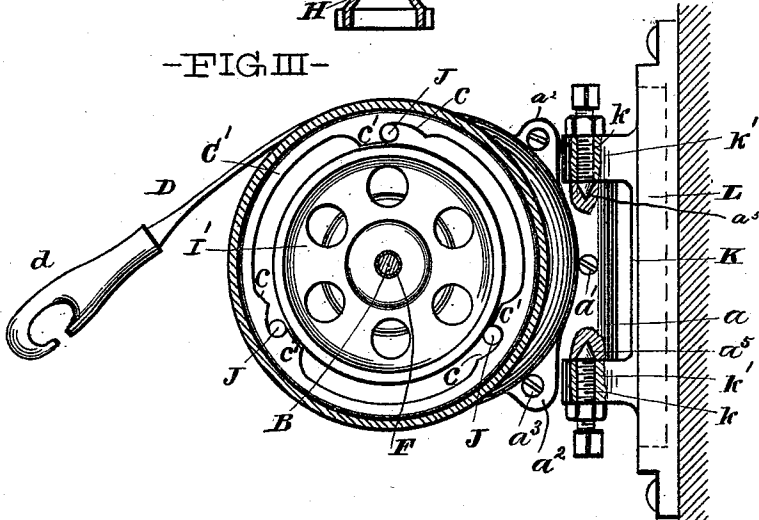
-FIG. I-



-FIG. II-



-FIG. III-



WITNESSES:
J. C. Turnes
J. M. Lecher

INVENTOR.
G. F. Poole
By *Hall & Gay* ATTORNEYS.

UNITED STATES PATENT OFFICE.

GEORGE F. POOLE, OF CLEVELAND, OHIO.

EXERCISING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 518,967, dated May 1, 1894.

Application filed May 2, 1893. Serial No. 472,754. (No model.)

To all whom it may concern:

Be it known that I, GEORGE F. POOLE, a subject of the Queen of Great Britain, and a resident of Cleveland, county of Cuyahoga, and State of Ohio, have invented certain new and useful Improvements in Exercising Apparatus, of which the following is a specification, the principle of the invention being herein explained and the best mode in which I have contemplated applying that principle, so as to distinguish it from other inventions.

The annexed drawings and the following description set forth in detail, one mechanical form embodying the invention; such detail construction being but one of various mechanical forms in which the principle of the invention may be used.

In said annexed drawings—Figure I represents a side elevation of my improved exercising apparatus; Fig. II, a horizontal section of the same, on the line II—II, in Fig. I, and Fig. III, a vertical section of the apparatus, on the line III—III, in Fig. II.

A cylindrical casing, A, is formed from two parts, A' and A², having each a semicylindrical ear, *a*, at the meeting face of the rear edge, through which ears passes a screw, *a'*, which holds the two parts together. Each part of the casing has furthermore two ears, *a*², through which pass screws, *a*³, which serve as additional means for holding the two parts of the casing together. A shaft, B, is axially journaled in the casing and has a flanged pulley, C, secured upon it at about its middle. A strap, D, has its inner end secured to the center of said pulley, and is wound upon the same, between the flanges. The casing is formed with an opening which admits of the strap being freely unwound from or wound upon the pulley. The free end of the strap has an eye, *d*, or other suitable means for attaching a handle to it. A flat helical spring, E, is secured at one end to the shaft and at the other end to the casing, and said spring will be wound up when the strap is unwound, and will wind the strap when it again unwinds. The pulley C has a flange, C', upon the side opposite to the spring, and this flange is formed upon its inner side with wedge-shaped projections, *c*, and with projections, *c'*, at the narrow ends of the wedges, where cylindrical recesses will be formed. A sleeve, F, fits

upon the end of the shaft, which revolves within the sleeve; and said sleeve has an enlarged head, *f*, upon its inner end, which confines a friction brake disk G, an and elastic washer or spring, G'. A finger nut, H, fits and turns upon the screw-threaded outer end of the sleeve, and bears against the center of the head or end of the cylindrical casing, so that the sleeve may be adjusted longitudinally upon the shaft by means of said nut. The nut is provided with an index, *h*, which may point to a graduated dial, A³, upon the head or end of the cylindrical casing. A wheel, I', is journaled upon the sleeve inside of the casing, and has the friction brake disk bearing against the inner face of its hub, while the outer edge of its rim may bear against an annular friction brake lining or surface, *a*⁴, inside of the head of the casing,—said lining, as well as the brake disk being preferably formed from close grained wood or fiber, and forming brake surfaces for the wheel. Rollers, J, are interposed between the rim of the wheel and the inner side of the flange of the pulley, said rollers resting in the cylindrical recesses in the flange, when the pulley and flange may revolve independent of the wheel; or being jammed between the wheel rim and the wedge-shaped projections upon the pulley flange, when the pulley and wheel will revolve together. Thus, when the pulley is revolved in one direction, the wheel will be carried with it,—which happens when the strap is drawn out; and when the pulley is revolved in the opposite direction,—when the strap is again wound,—the pulley revolves, while the wheel remains stationary. The ends of the cylindrical projection upon the casing,—formed by the semicylindrical ears *a* upon the two parts which form said casing,—are formed with conical seats, *a*⁵, into which the conical ends of two pivot screws, *k*, may fit. Said screws are adjustably secured in ears, *k'*, projecting from a dovetailed block, K, which fits in a correspondingly shaped groove, *l*,—open at its upper end,—in a plate, L, which may be permanently secured to a wall, post, floor, or other rigid support, wherever it is desired to support the apparatus.

When the apparatus is to be used, the dovetailed block is slid down into the groove of the supporting block, and the casing is thus

supported to swing laterally upon the pivot screws. When the strap is drawn out, the spring is wound tight, and the clutch mechanism between the pulley and the brake wheel
 5 I' will engage said wheel to revolve with it. When the strap is released, the spring will unwind and will wind the strap upon the pulley, which will revolve in the reverse direction without revolving the brake wheel. The
 10 tension of the brake upon the brake wheel may be adjusted by means of the finger nut H, and the degree of tension may be ascertained by the index upon said nut and the dial upon the casing.

15 The elastic washer or spring of the brake device will render the brake friction sufficiently yielding to admit of adjustment of the tension and limited or retarded movement for the brake wheel. Without such
 20 washer or spring, the brake friction would be too positive or dead, and no proper adjustment of the tension, nor movement of the brake wheel when the brake was applied, could take place.

25 Other modes of applying the principle of my invention may be employed for the mode herein explained. Change may therefore be made as regards the mechanism thus disclosed, provided the principles of construction
 30 set forth respectively in the following claims are employed.

I therefore particularly point out and distinctly claim as my invention—

1. In an exercising apparatus, the combination of a pulley, a strap secured to and
 35 adapted to be wound upon and unwound from said pulley, means for revolving said pulley to wind the strap, a brake wheel, a clutch device between said pulley and brake wheel, and
 40 brake mechanism arranged to bear against the sides of said brake wheel, substantially as set forth.

2. In an exercising apparatus, the combination of a casing formed with a brake surface at the inside of one head, a pulley journaled in said casing, a strap secured to and
 45 adapted to be wound upon and unwound from said pulley, means for revolving said pulley to wind the strap, a brake wheel, clutch mechanism between the pulley and
 50 brake wheel, and a brake bearing against one

side of the hub of the brake wheel and provided with means for moving it toward and from said wheel and for moving the wheel toward and from the brake surface in the casing, substantially as set forth. 55

3. In an exercising apparatus, the combination of a casing formed with an annular brake surface at the inside of one head, a pulley journaled in said casing, a strap secured to and adapted to be wound upon and unwound from said pulley, means for revolving said pulley to wind the strap, a brake wheel, clutch mechanism between the pulley and brake wheel, a sleeve upon which said wheel
 60 is journaled and formed with a head at its inner end, a brake disk upon said sleeve between the head and the hub of the brake wheel, and a finger nut upon the sleeve and bearing against the head of the casing, substantially as set forth. 65 70

4. In an exercising apparatus, the combination of a pulley having means for revolving it in opposite directions and formed with a flange upon one face having wedges upon
 75 its inner side and projections at the narrow ends of said wedges, a brake wheel having its rim within said wedges and projections and opposed to the same, and rollers adapted to catch between said wedges and the periphery
 80 of the brake wheel, substantially as set forth.

5. In an exercising apparatus, the combination of a casing formed with a brake surface, a pulley in said casing, a strap secured to and adapted to be wound upon and unwound from said pulley, means for revolving said pulley to wind the strap, a brake wheel, having one face bearing against the brake surface, a clutch device between said wheel and the pulley, and a yieldingly supported
 85 brake, bearing against the hub of the brake wheel and provided with means for moving it toward and from said hub, substantially as set forth. 90

In testimony that I claim the foregoing to be my invention I have hereunto set my hand this 24th day of April, A. D. 1893. 95

GEORGE F. POOLE.

Witnesses:

WM. SECHER,
 DAVID T. DAVIES.