J. LIEVRE.

PHYSICAL EXERCISER.

APPLICATION FILED MAR. 25, 1908.

904,339.

Patented Nov. 17, 1908.

2 SHEETS—SHEET 1.

Fig. 1.

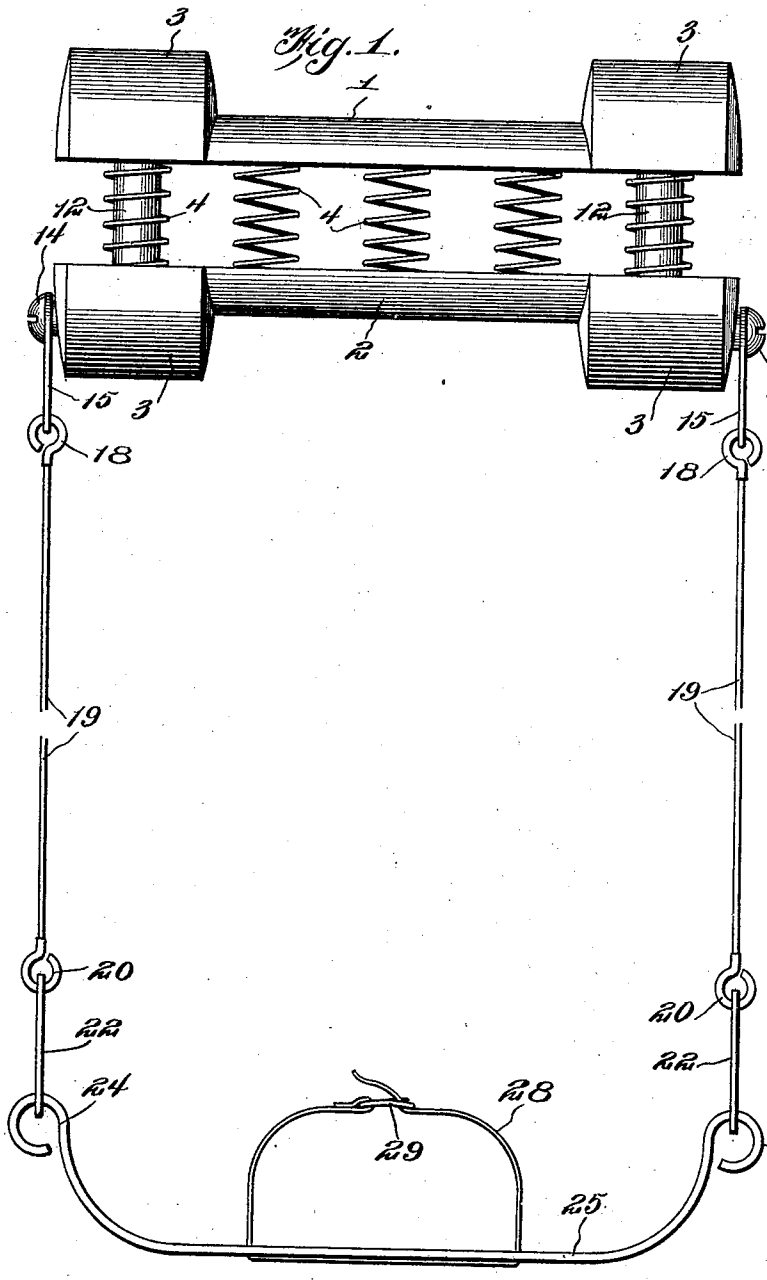
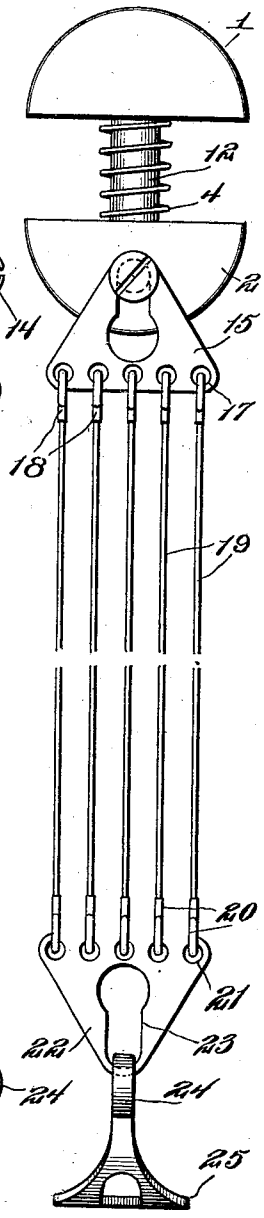


Fig. 2.



Witnesses

Louis R. Heinzelman.

R. M. Smith.

Inventor

Joseph Lievre

By Victor J. Evans.

Attorney

THE NORRIS PETERS CO., WASHINGTON, D. C.

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2 SHEETS—SHEET 2.

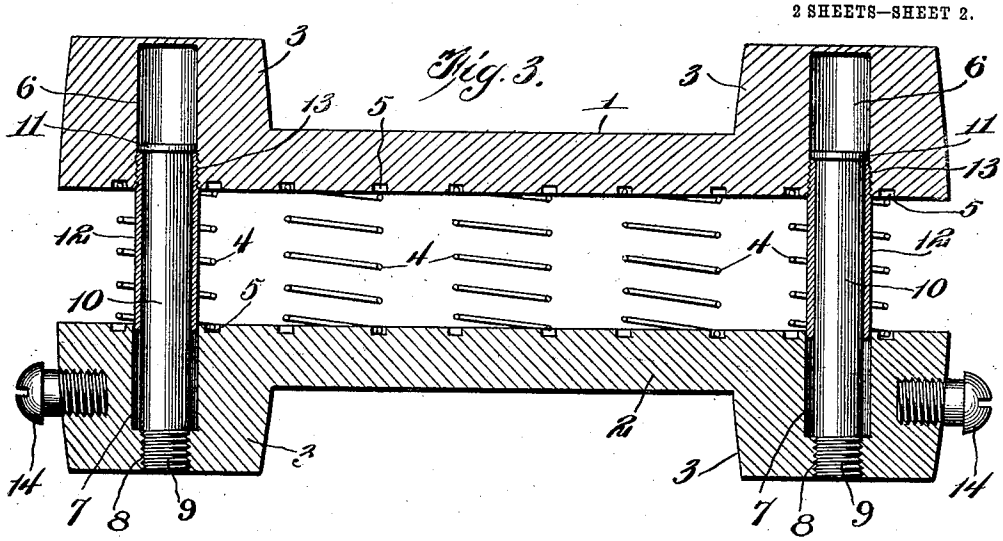


Fig. 3.

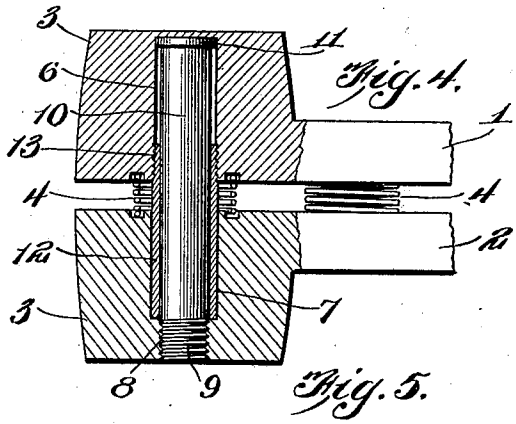


Fig. 4.

Fig. 5.

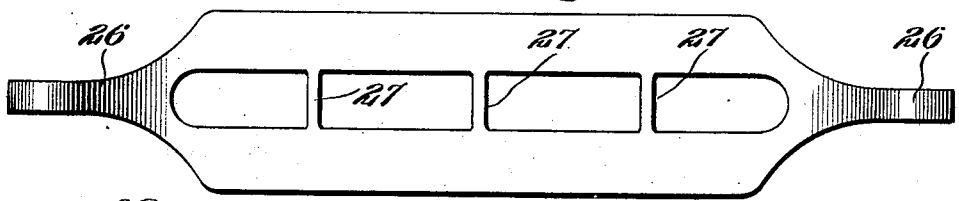




Fig. 6.

Inventor

Joseph Lievre

Witnesses

Louis R. Heinrichs.

R. M. Smith.

By Victor J. Evans

Attorney

THE NURRIS PETERS CO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JOSEPH LIEVRE, OF NEW ORLEANS, LOUISIANA.

PHYSICAL EXERCISER.

No. 904,339. Specification of Letters Patent. Patented Nov. 17, 1908.

Application filed March 25, 1908. Serial No. 423,268.

To all whom it may concern:

Be it known that I, JOSEPH LIEVRE, a citizen of the Republic of France, residing at New Orleans, in the parish of Orleans and State of Louisiana, have invented new and useful Improvements in Physical Exercisers, of which the following is a specification.

This invention relates to physical exercisers the object of the invention being to provide simple, convenient and portable apparatus for developing the physical strength and muscles of the human body.

With the above and other objects in view, the nature of which will more fully appear as the description proceeds, the invention consists in the novel construction, combination and arrangement of parts as herein fully described, illustrated and claimed.

In the accompanying drawings:—Figure 1 is a front elevation of one-half of the apparatus embodying the present invention. Fig. 2 is a side elevation of the same. Fig. 3 is an enlarged longitudinal section through the hand piece. Fig. 4 is a section through one end of the hand piece, showing the position of the parts when the sections of the hand piece are pressed together. Fig. 5 is a plan view of the stirrup. Fig. 6 is a plan view of the anchor strap.

The hand piece of the apparatus resembles a dumb-bell but in carrying out the present invention said hand piece is provided centrally and longitudinally into upper and lower sections 1 and 2 respectively, the same being provided with enlarged or headed ends 3 which are utilized as housings for the guiding and staying means hereinafter particularly described.

The sections 1 and 2 are normally pressed apart by means of springs 4 which are interposed between the sections as clearly shown in the drawings, the inner faces of the sections being preferably countersunk or recessed as shown at 5 to receive the end coils of the springs 4 as clearly shown in Fig. 3.

The enlarged end portions of the hand piece sections 1 and 2 are bored out as shown at 6 and 7, the bore 6 extending from the inner end of the section 1 outward toward the outer end but terminating short of the outer surface while the outer section of the bored section of the outer section is reduced and screw-threaded as shown at 8 to receive the threaded end 9 of a stay pin or guide 10 the opposite end of which is provided with an enlarged head or flange 11 which moves back and forth in the bore 6.

Surrounding the pin 10 is a guiding and stay sleeve 12 one end of which is threaded as shown at 13 and screwed into the inner end of the bore 6 while the opposite end is freed to play back and forth in the opposite section of the hand piece, the movement of the sleeve 12 being limited by the same coming in contact with the end of the bore 7. At the same time the head 11 of the guide pin 10 comes in contact with the closed outer end of the bore 6. This limits the movements of the sections of the hand piece toward each other while the movement of said sections away from each other is limited by the head 11 of the pin 10 coming in contact with the guide sleeve 12, the last named position being illustrated in Fig. 3.

It will be understood that these guide pins or sleeves are arranged in both ends of the hand piece and sleeve as shown in Fig. 3. The lower section of the hand piece is provided with headed studs 14 which may be in the form of screws as shown in Fig. 3 inserted in threaded openings in the enlarged end portions of the lower section of the hand piece. These headed studs are designed to receive yoke plates or connectors 15 each of which is preferably triangular in shape as shown in Fig. 2 and provided with a key-hole slot 16 to enable the yoke plate or connector to be detachably associated with the headed stud 14. The plate 15 is also provided with a plurality of holes 17 adapted to receive hooks or open eyes 18 at the upper extremities of a series of elastic strips 19 which are provided at their lower ends with corresponding eyes or hooks 20 adapted to engage a corresponding series of holes 21. in other yoke plates or connectors 22 of the same shape and construction as the plates 15 above described, the last named plates 22 being provided with key-hole slots 23 adapting them to be detachably connected to eyes 24 at the opposite ends of a stirrup 25.

The stirrup 25 may be of any suitable length and consists of a metal strap having the end portions thereof upturned to extend above the floor or ground upon the stirrup as ordinarily held and placed and held by the foot of the operator, the extremities of

the upturned end portions 26 of the stirrup being formed into the open eyes or hooks 24. The central portion of the stirrup is preferably of skeleton form as shown in Fig. 5, embodying a plurality of cross bars 27. In the use of the apparatus where the stirrup 25 is placed upon the floor or ground, I employ a foot strap 28 which passes around two of the cross bars 27 shown in Fig. 5, said foot strap being provided with a take-up shown in the form of a buckle 29. Where the device is to be used attached to a wall or ceiling or other support, I employ an anchor strap 30 provided at its opposite ends with hooks or open eyes 31 and 32 one of which is adapted to be connected with the central cross bar 27 while the other may be connected to any suitable hook fastened to the wall, ceiling or other support.

It will, of course, be understood that two of such devices are preferably employed in physical exercising devices, one for each hand, the stirrup being ordinarily engaged with the operator's feet which are retained in the straps 28. By means of the apparatus described, the major portions of the muscles of the body may be exercised and developed, including particularly the biceps and the finger muscles, the spring pressed portions of the hand grips enabling the grip to be developed to any desired extent in a gradual manner. It thus, of course, will be understood that the elasticity of the straps 19 may be varied to suit different persons and to suit the same persons at different stages in the development of the muscles. The several parts of the apparatus are so assembled that they may be readily disconnected for transportation and storage.

Having thus described the invention, what is claimed as new, is:—

1. Physical exercising apparatus embodying a hand piece, a stirrup, a foot strap connected with said stirrup, yoke plates detachably connected with the stirrup, other yoke plates detachably connected with the hand piece, and elastic strips connecting the yoke pieces of the hand piece and stirrup, substantially as described.

2. Physical exercising apparatus comprising a foot stirrup, a hand piece, and elastic strips connecting the stirrup and hand piece, said hand piece comprising longitudinally divided sections, expansive springs interposed between the sections, and pins connecting the sections for guiding the movements thereof relatively to each other and also limiting the outward movements of the sections, substantially as described.

3. Physical exercising apparatus comprising a foot strap, a hand piece, and elastic straps connecting the stirrup and hand piece, said hand piece being in the form of a dumbbell divided longitudinally and centrally into two sections, expansive springs interposed between said sections, guide pins connected to one section and guide sleeves connected to the other section and embracing said guide pins, and means connected with said pins and sleeves for limiting the movement of the sections relatively to each other.

In testimony whereof I affix my signature in presence of two witnesses.

JOSEPH LIEVRE.

Witnesses:
EUGENE JACOB,
HARY TINKE.