(No Model.)

J. M. LAFLIN.

EXERCISING APPARATUS.

No. 298,392. Patented May 13, 1884.

Fig. 1.

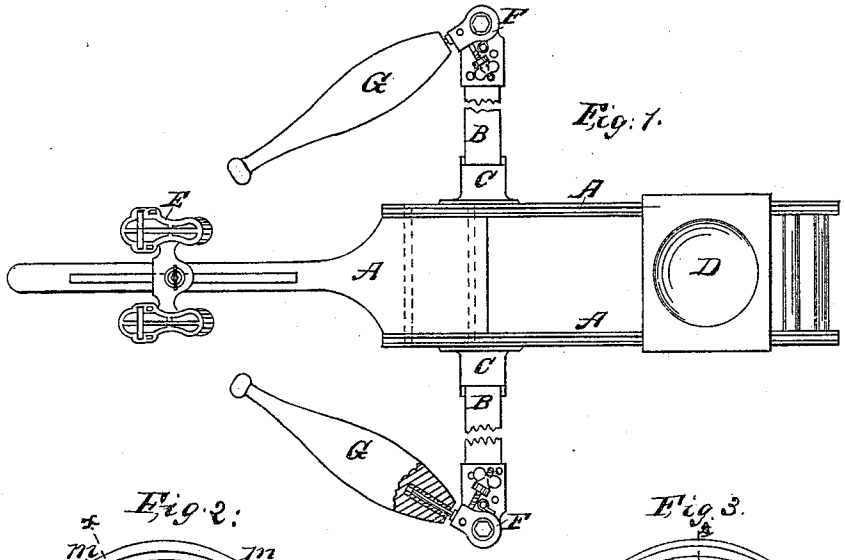


Fig. 2.

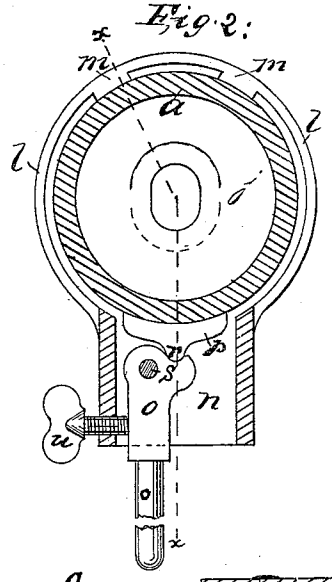


Fig. 3.

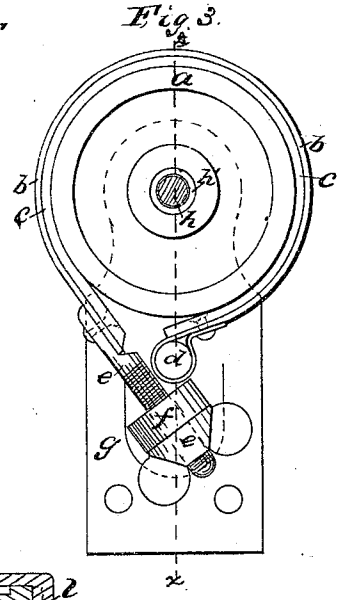
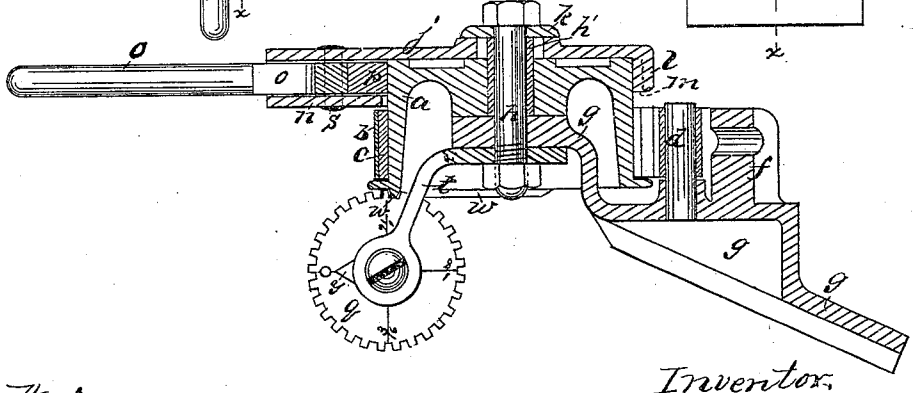


Fig. 4.



Witnesses:
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Christian Webb

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UNITED STATES PATENT OFFICE.

JOHN M. LAFLIN, OF NEW YORK, N. Y.

EXERCISING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 298,392, dated May 13, 1884.

Application filed September 26, 1883. (No model.)

To all whom it may concern:

Be it known that I, JOHN M. LAFLIN, a citizen of the United States, and a resident of New York city, in the county of New York and State of New York, have invented certain new and useful Improvements in Exercising Apparatus, of which the following is a specification.

My improvement relates to the patents granted to me June 29, 1877, No. 192,271, and May 30, 1882, No. 258,773.

My improved apparatus, when properly rigged, may serve as a rowing apparatus, which may be used in private houses, in a parlor or bedroom, or in gymnastic halls, &c.; but instead of using rubber or spiral metallic springs which extend or contract, or coil-springs which coil and uncoil, to give resistance to the oar, as in my former patents, I provide on the outer end of the outriggers a friction clutching device, with a protruding lever for the reception of either Indian clubs, base-ball clubs, or some other similar devices which can be readily detached when desired. The amount of pressure required for resistance to the oar is adjusted by the friction-band, and when returning after the stroke there is no elasticity to the springs to draw the oar back, as formerly, but requires the operators to rest their hands on same and push them back in a similar manner to ordinary rowing. The protruding ends of levers allow the oars to be feathered or turned one-fourth revolution at each stroke. I also provide a counter or registering device attached to the under side of the friction appliance in a convenient position to be seen by the operators, and affording them a chance to keep a record of their performances, the dial being operated by the friction-wheel, and calculated from the time and distance of a professional oarsman, and one revolution of dial is equivalent to one-fourth of a mile. The counter being simple, with but few parts, there is no danger of getting out of order, and is perfectly noiseless and positive in movements.

In the accompanying drawings, which form a part of this specification, Figure 1 represents plan view of the entire apparatus. Fig. 2 represents plan of cap or cover inverted, showing the clutching lever and shoes. Fig. 3 shows plan with cover removed, showing manner of applying the friction-band. Fig. 4 represents elevation in section on line *x x*, Figs. 2 and 3.

Similar letters refer to similar parts in the several views.

A is frame or body of machine; B, outriggers fitted into iron sockets C on the outside of frame A; D, seat; E, foot-rest; F, friction-clutch entire, and secured to the outer end of outrigger; G, Indian club or oar.

The friction-clutch F is composed of several parts, as shown in Figs. 3, 4, and 5, in which *a* is a small pulley or wheel turned true on the periphery, around which the friction-band *b*, with its lining *c* of leather, rawhide, or other suitable material, is securely attached by rivets or bolts, one end of said band being fixed to the pin *d* and wrapping around the pulley *a*, the other end having a threaded rod and thumb-nut, *e*, which extend through the lug or projection *f*, and by tightening or slacking the nut *e* any desired tension may be obtained. The pulley *a* is secured to the case *g* by the center bolt, *h*, and sleeve *h'*, and revolving freely around the latter, the said sleeve extending through the cap or cover *j*, above which the washer *k* is fitted, and binds the sleeve *h'* firmly to the case *g* by bolt *h*, but allowing the pulley *a* and cover *j* to move freely in any direction. The cover *j* is provided with rim *l*, extending down over the pulley *a*, and on the inner side of same are two projections or bearing-lugs, *m*, (shown in Fig. 2,) fitting and bearing on the periphery of the pulley, while on the opposite side of the cap *j* is a protruding case, *n*, in which the lever *o* is pivoted, and the bearing-shoe *p*. The center *r* of the shoe *p* is in direct axial line with lugs *m m*. The lever being fulcrumed at *s* on one side of the center, any pressure applied to the lever *o* will cause the strain to act direct across the center of the pulley. The end of the lever *o* extends beyond the case *n* and is fitted to the oar G.

To prevent too much lost motion to the oar G, I put a small thumb-screw, *u*, in the case *n* back of the lever *o*, the point of which engages with lever *o*, and can be adjusted as desired.

The counter consists of a toothed wheel, *q*,

suspended under the rim of the pulley *a* by a bracket, *t*, with pointer *y*, and is secured to the bottom of case *g* by the nut of the bolt *h*.

The toothed wheel *q* or dial is operated by a rib or vein, *w*, on the under side of the rim of the pulley *a* engaging with the teeth of the dial *q*, and moving the dial one tooth at every revolution of the pulley *a* by means of the rib *w* which extends part way around the pulley, but is set eccentric with the line of movement of the pulley *a*. The dial of the counter is graduated by the record of professional oarsmen at thirty-two strokes per minute, hence one revolution of same is equivalent to one-fourth mile.

In order to operate the machine, the oar (the base of which has been previously lined with a metallic tube to prevent excessive wear, which is represented in my aforesaid patent of 1882) is placed on the protruding lever *o* and drawn forward in direction of the arrow, Fig. 2, which forces the shoe *p* against the periphery of the pulley *a*, and, drawing the lugs *m m* against the opposite side, grips or clutches the pulley firmly and revolves said pulley. At the same time the amount of pressure is regulated by the thumb-nut *e* on friction-band *b*. When the forward stroke is finished and the motion of the oar reversed, the lever pivots on the fulcrum-pin *s* until engaging with thumb-screw *u*, releasing the shoe *p* and lugs *m m*, which allow the cap *j* to move back with the oar freely, while the pulley *a* remains still, retained by the friction-band *b*. When the backward stroke is finished, the aforesaid operation is repeated for the forward stroke.

The feathering of the oar is accomplished in the same manner as in my patent of 1882.

There are several advantages gained in using friction over all other devices heretofore or now made. First, the pressure on the oar is the same at start as the finish of the stroke, which is more natural; second, there are no springs to break or lose their elasticity; third, there is no noise, and, being simple in construction, there is nothing to get out of order. As the most wear is on the lining of the friction-band, I prefer to use rawhide, as it will wear for a long time and is not expensive to replace. Any other material may be used, or even metal; but it is preferable to use material which will not abrade or cut.

Thus it will be seen I have a machine simple in construction, strong, durable, and positive in its movement, fulfilling all the requirements of such machines, and in all its movements similar to ordinary rowing.

Having described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In an exercising apparatus with outriggers B, the friction-wheel *a*, cap *j*, with rim *l*, lugs *m m*, shoe *p*, and lever *o*, substantially as, for the purpose specified.

2. In an exercising apparatus with outriggers B, the friction-wheel *a*, with rib or vein *w* on the rim thereof engaging with the toothed wheel *q* of a counter, substantially for the purpose described.

3. In an exercising apparatus with outriggers B, friction-wheel *a*, cap *j*, rim *l*, lugs *m m*, shoe *p*, lever *o*, rib or vein *w*, and tooth-wheel *q*, all constructed, arranged, and operated substantially as described and shown.

Signed at New York, in the county of New York and State of New York, this 24th day of September, A. D. 1883.

J. M. LAFLIN.

Witnesses:
BENJN. A. DARE,
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