(No Model.) 2 Sheets—Sheet 1.

G. H. BENEDICT.

CABINET EXERCISING APPARATUS.

No. 332,989. Patented Dec. 22, 1885.

Fig. 1

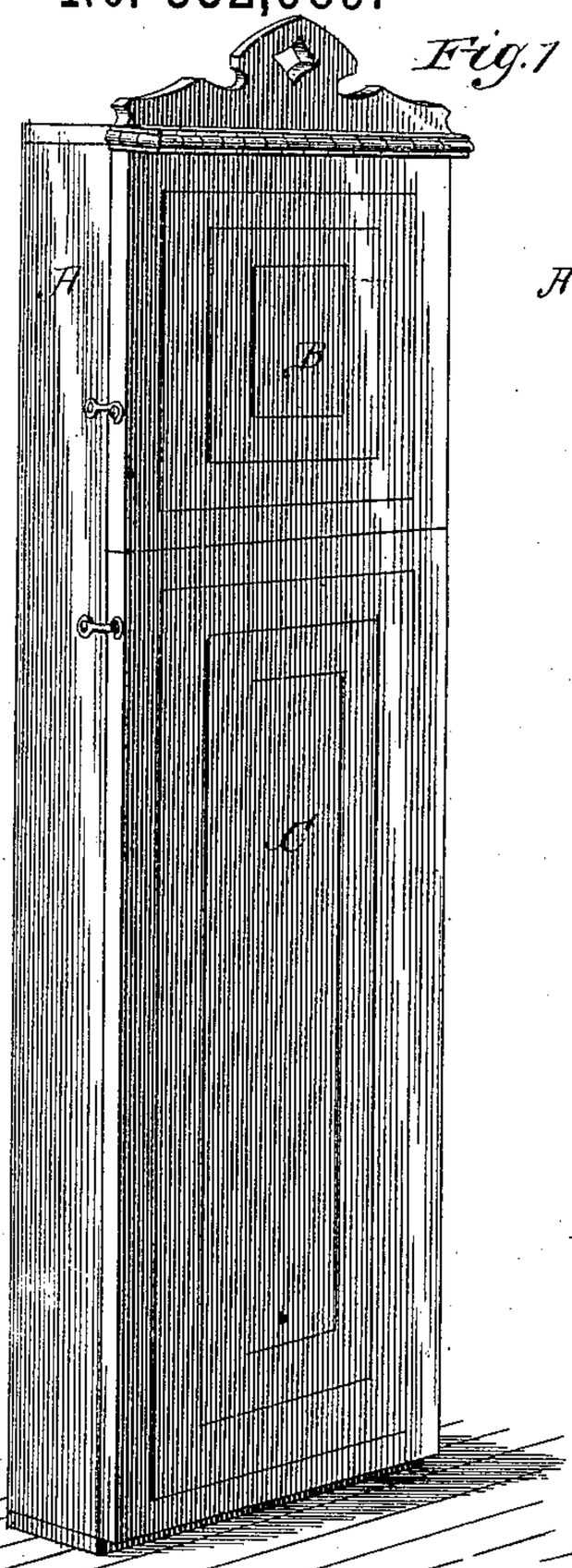

Fig. 2

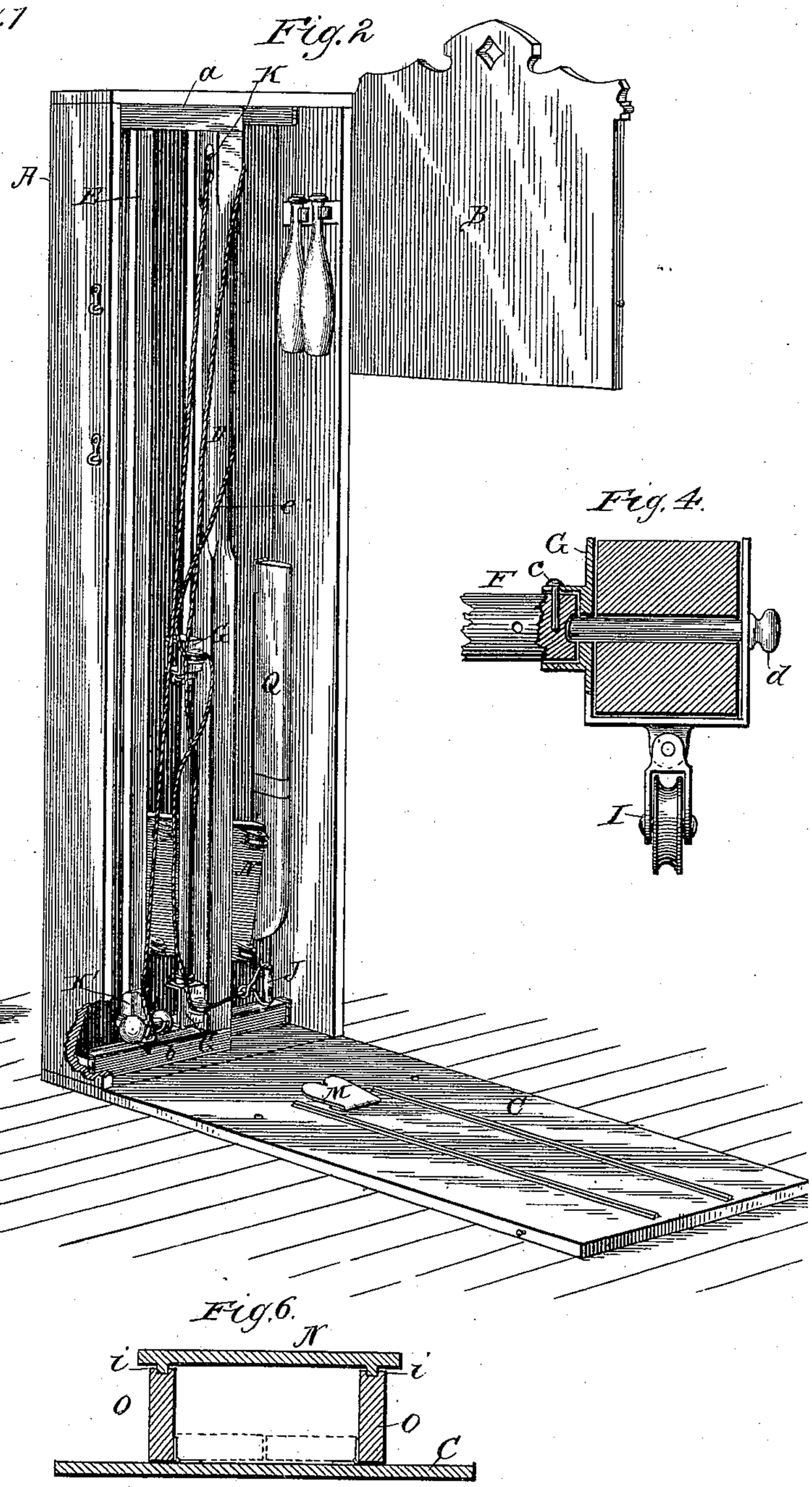

Fig. 4.

Fig. 5

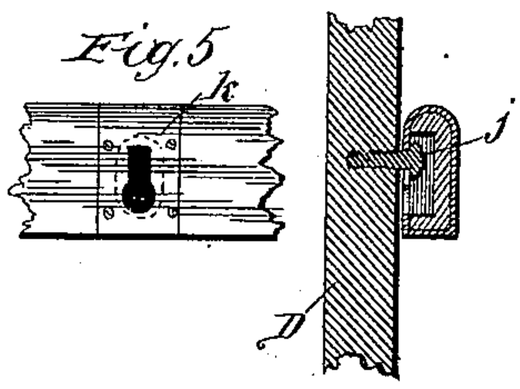

Fig. 6.

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Fig. 3.

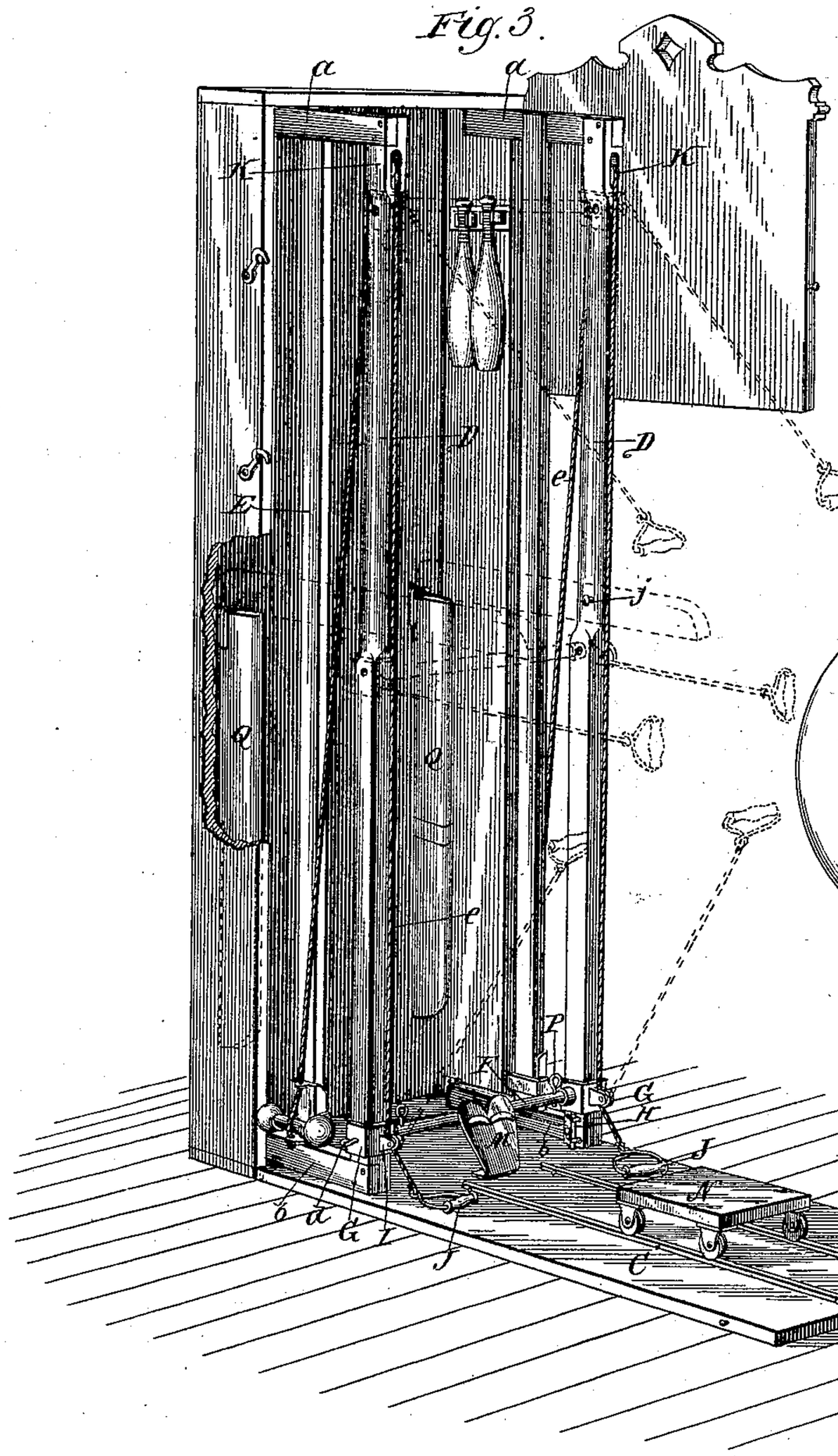


Fig. 7.

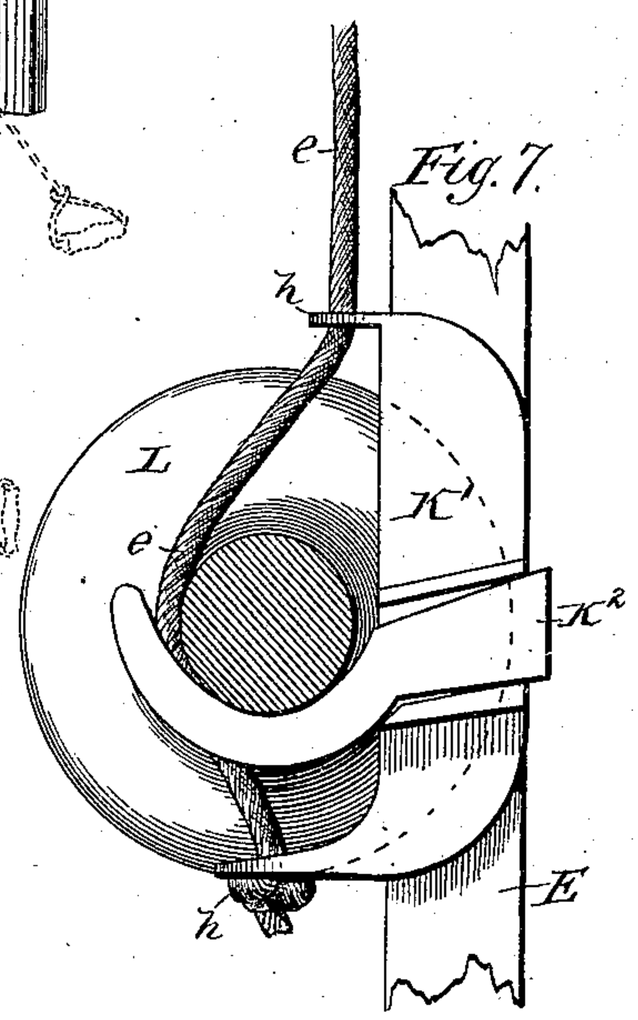


Fig. 8

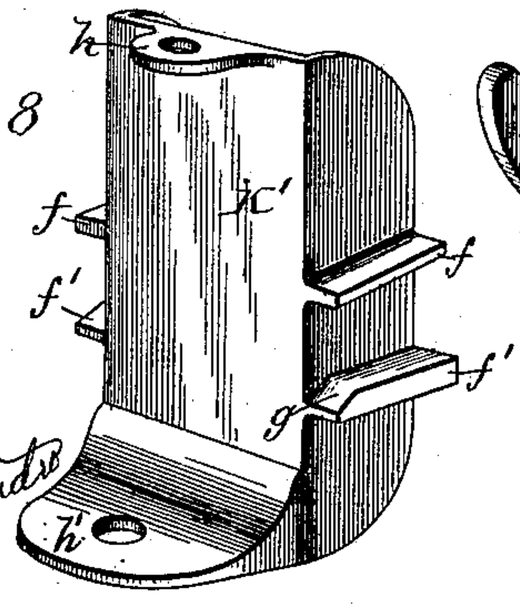
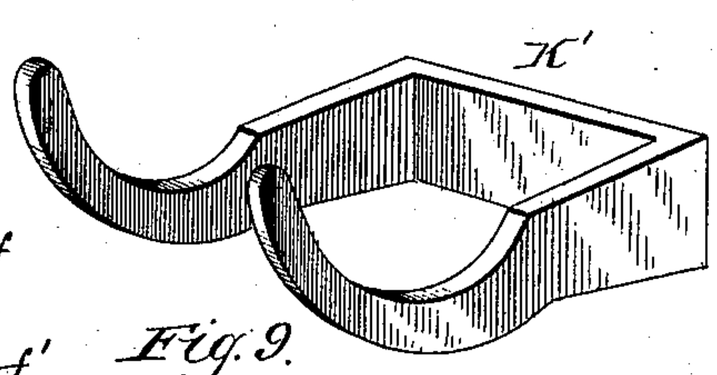


Fig. 9.



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UNITED STATES PATENT OFFICE.

GEORGE H. BENEDICT, OF CHICAGO, ILLINOIS.

CABINET EXERCISING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 332,989, dated December 22, 1885.

Application filed September 21, 1885. Serial No. 177,677. (No model.)

To all whom it may concern:

Be it known that I, GEORGE H. BENEDICT, a citizen of the United States, residing in Chicago, county of Cook, and State of Illinois, have invented a certain new and useful Cabinet Exercising Apparatus, of which the following is a specification.

This invention relates to improvements in gymnasiums especially intended for private use in offices and residences, and in which heretofore the exercising apparatus has been supported by and suspended from an unsightly open frame usually of fixed parts, but in some instances of jointed parts necessarily taken apart and with the apparatus packed in a chest to conceal them. Both of these devices are objectionable, because of their unsightly appearance, their occupying valuable space not conveniently spared by the occupant of the room or office, and owing to their exposed condition the annoyance of being frequently handled by callers, all of which can only be remedied in the one class, and then only by taking down and packing the parts away—a task involving labor and time, and not desirable immediately after exercising or when loss of time is an inconvenience, either before or after exercising, as is usually the case with those necessarily depending on such apparatus for sufficient exercise to maintain a good state of health and physical vigor.

The object of this invention is to produce a gymnasium or exercising apparatus having all of the advantages common to those above referred to without any of their objectionable features, and not only folding within a closed cabinet constituting an ornamental article of furniture, but in such a manner that the cabinet occupies the least space consistent with a maximum number and variety of apparatus to be concealed therein.

A further object is to have such a hinge-connection between the case and the upright chest-bars, serving as a support for the horizontal bar, that said bars, when not in use, will fold within the case, and when in operation will project beyond the case such a distance that the latter will be no obstruction to a free use of said bars.

A further object is to so connect a portion of the front of the cabinet with the base thereof that the front portion may be extended in a plane with said base, and at a right angle to the face of the cabinet, so as to lie upon the floor and constitute not only a brace or extended base sustaining the cabinet in an upright position against strains on the apparatus otherwise tending to topple over the cabinet, whereby the depth of the cabinet may be reduced to a minimum and yet be stable when the apparatus is in use.

A further object is to have the upright chest bars or frame supporting the apparatus connected with the cabinet in such a manner that when swung outwardly in an operative position it will serve to render rigid the joint between the outspread front or door and the body of the cabinet, thereby relieving the hinge-connection between the cabinet and door, and also the cabinet, from the strain of the apparatus when in use.

A further object is to have hinged so as to fold within the cabinet parallel bars adapted to be removably fulcrumed and locked upon the chest or other upright bars supporting the horizontal bar and pulley apparatus.

A further object is to combine with the cabinet a hinged door or front which, when open, shall serve as a base for a sliding seat to be used in connection with an artificial-rowing apparatus, and also as a foot-rest for the same, to provide the extension-frame with pulleys and combine therewith a vertically-adjustable horizontal bar which may be vertically adjusted on the frame, whereby a variety of changes in the direction of strain upon the weighted cords passing over the pulley in said frame may be had.

A further object is to provide a two-part guide embracing a vertical bar of the frame, and locked upon said frame by the gravity of a dumb-bell or other weight supported thereon.

A further object is to provide for such a connection between the supporting and extensible frame, the cord-and-pulley mechanism, and the horizontal bar that the latter may be used as a wrist-roller; and, finally, to have the parts so constructed that they can be converted into a variety of apparatus, hereinafter described, by merely shifting certain parts, and yet fold so compactly within a minimum size of cabinet for that purpose that there shall be space for Indian clubs, foils, boxing-gloves, and other like implements for exercise.

I attain these objects by devices illustrated in the accompanying drawings, in which—

Figure 1 represents a perspective view of an apparatus, showing the cabinet closed and not in position for use; Fig. 2, a similar view showing the door swung open, but the rest of the parts packed in their closed position; Fig. 3, another similar view showing the apparatus unfolded and the parts in position for use as a rowing apparatus, the dotted lines illustrating the position of parts when used as other exercising devices; Fig. 4, a horizontal section through one end of a horizontal bar in its vertical support; Fig. 5, detail views showing the manner of securing the parallel bars in a horizontal position. Fig. 6 represents a modification of the sliding seat for the rowing apparatus; Fig. 7, a side elevation of the sliding dumb-bell or weight support in position for use, showing the dumb-bell in sectional elevation; Figs. 8 and 9, perspective views of the two parts of the dumb bell or weight supports.

Similar letters of reference indicate the same parts in the several figures of the drawings.

The cabinet A is rectangular in form, quite shallow in depth, and of a width substantially corresponding with the distance required between the chest-bars. The back and sides of the cabinet are solidly closed, and its front by two hinged doors, the upper one, B, of which is hinged to one of the side boards of the cabinet, so as to swing on a vertical axis, and the lower one, C, is hinged to the base thereof, so as to swing on a horizontal axis, and designed to close about two-thirds of the front of the cabinet, and to lie flat on the floor when open, as shown in Fig. 1; but, if desired, the door B may be dispensed with and the door C be extended to close the entire front of the cabinet. It is also proper to add that the door C may, when provided with a projected ornamentation, be hinged at an elevation from its present position, and when open rest on said projections, or upon legs which are concealed when the door is closed, and in either case subserve the purpose intended—namely, close the cabinet—and when open constitute an extended base for rendering the cabinet and attached apparatus stable, in which latter function it is augmented by the imposed weight, the gymnast and the apparatus attached to the case, and at the same time constitutes a suitable base for standing upon while exercising, and for the foot-rest and sliding seat of an artificial-rowing apparatus.

The folding and supporting frame is composed of end bars, *a a* and *b b*, respectively, hinged at the upper and lower ends of the cabinet to the inner sides of its side pieces, at a point well toward the back thereof, which said end bars, as shown in Fig. 2, are of such a length as to overlap each other when folded, and to project a considerable distance outside of the cabinet, as shown in Fig. 3, and such a distance that the cabinet will not materially interfere with a free use of the apparatus supported thereon. The outer end of each end bar, *a b*, is connected by a post, D, bolted thereto, which posts, as shown, constitute parallel chest-bars as well as supports for a variety of other apparatus hereinafter described; also, connecting each pair of end bars at a point between their hinges and the chest-bars are bars E, which, besides serving to brace the folding support, serve as a guideway for the pulley-weights, yet to be described.

Connecting the chest-bars with each other is a bar, F, constituting the horizontal bar of the apparatus, which said bar is socketed in a casting, G, which embraces three sides of the chest-bars, as shown in Fig. 4, and is prevented from turning in its socket by means of a pin, *c*, which may be removed when, as hereinafter described, it is desirable to use the horizontal bar as a wrist-roller. The casting or bent or angular plates G are free to slide on the chest-bars for vertically adjusting the horizontal bar, and are maintained at their desired adjustment by a pin, *d*, passing through the angular plates or slides G, a perforation in chest-bars, and, if need be, projected into the socketed ends of the horizontal bar; and in this connection it may be stated that additional rigidity may be given the folding frame by bolts H on the lower ends of the chest-bars projecting into the door C, and by a hinged or other detachable bar (not shown) connecting the end bars *a a*. On the front sides of the slides G are lugs, to which are pivoted the yoke of a sheave, I, (see Fig. 4,) so that said sheave may be swung on a vertical axis and be maintained in a line with the weighted cords *e*, working on said pulleys, which alignment is of importance, owing to the change of direction necessarily given, when exercising, to the projecting ends of the cords, to which are attached handles J, of any approved construction. The weighted cords pass over pulleys K in or secured to the upper ends of the chest-bars, and are attached to weighted slides on the bars E. The weighted slides are composed of two parts, (see Fig. 7,) one of which, K, is E-shaped in cross-section, embraces three sides of the bar E, and has upon its opposing sides opposing lugs *f f'*, slightly inclined with reference to the length of the slide, and the lower one, *f'*, inwardly beveled at its outer end, as shown at *g*. These lugs are designed to embrace the side arms of the yoke K^2, embracing the inner side of the guide-bar, and having their free ends curved upwardly to form a bearing or rack for weights, preferably a dumb-bell, L, as shown, additionally locked in place by having the cords passing through eyes in lugs *h h'*, projecting from the part K', the cord passing outside the dumb-bell and knotted on the under side of the lug *h'*, as shown.

By reference to Fig. 7 it will be seen that when the several parts constituting the weighted slide are in position the yoke thereof will impinge in such a manner on the outer end of

the lug *g* that the dumb-bell securely locks the two parts of the slide together and rigidly with reference to each other, and this is owing to the fact that the arms of the yoke converge from their shank to their curved portions, which form a shoulder abutting against the lug. Converging the arms not only permits their curved ends being passed between the lugs, but their forward ends to drop after the two parts of the slide are attached, and as a result such a direction is given to the strain upon the arms by the dumb-bell and cord that the shoulder and lugs tighten the yoke in its operative position.

The dumb-bells may be used at any time, as ordinarily intended, by removing them from the slides, which serve as racks for them.

By adjusting the horizontal bar at differing heights on the chest-bars a variety of useful exercise can be obtained from the pulley-weights, as is indicated by the dotted lines in Fig. 3—as, for example, when the horizontal bar is at its highest adjustment the pulley-weights are utilized with uplifted arms, when the horizontal bar is midway the length of the chest-bars the arms are extended straight out from the body without lifting them above the shoulders or below the hips, and when the horizontal bar is at the bottom the pulley-weights become a health-lift, requiring the person exercising to stoop over and then straighten himself when taking exercise, and at the same time with the arms exert a lifting force on the pulley-weights. In this connection it may be observed that when the horizontal bar is at its middle adjustment, and at a height that when sitting thereon the feet of the person desiring exercise will not touch the floor, the pulley-weights may be used for developing the muscles of the legs used in propelling a bicycle by putting the feet in the handles and working the legs upwardly and downwardly against the weights, and at the same time steadying the person by grasping the chest-bars. In the lowest adjustment of the horizontal bar the pulley-weights, in addition to being used as a health-lift, are also designed to be used in connection with a foot-rest, M, fastened to the door C, and a movable seat supported on said door as an artificial-rowing apparatus.

Seat N, as shown in Fig. 3, is mounted upon rollers running on a track secured to the door C; but the construction shown in Fig. 6 is preferred, because it is cheaper, and folding more compactly by reason of its being composed of parallel sills O, hinged so as to fold inwardly upon the door C, as indicated in dotted lines, and grooved on their upper edges to receive parallel ribs or projections *i* on the underside of the seat, the grooves forming ways in which the seat may slide, and the projections engaging the grooves, forming a lock between the seat and sills, maintaining the latter in an upright position.

For the purpose of utilizing the horizontal bar as a wrist-roller, the cords of the pulley-weights are detached from the pulleys I and passed through and attached to removable or fixed eyebolts P in the horizontal bar, and the pin *c* removed, so that said bar may freely turn in its sockets.

Hinged at one end to the rear wall of the cabinet are bars Q, which, when swung outwardly, constitute horizontal parallel bars locked in their operative position by the engagement with headed screws *j* on the chest-bars of a key-eye in a plate, *k*, secured to the parallel bars and covering a depression therein receiving the head of the screw *j*, as clearly shown in Fig. 5, the said parallel bars having a sufficient lateral movement on their hinges to admit this connection, which not only sustains them in their operative position, but detachably locks them to the chest-bars.

With the several parts in their operative position it will be observed that the bars *b* of the supporting-frame projecting, as they do, over the open door C and resting thereon, serve to form a rigid connection between the cabinet and its open door, and causing it to form a rigid extended base, promoting stability of the cabinet during the use of the exercising apparatus; but as an additional security against the cabinet being toppled over, and especially during a violent exercise, it may be bolted or screwed to the wall at some point near its upper end.

The extended apparatus may be quickly inclosed in the case by removing the horizontal bar, which requires only the removal of the bolt *d*, then withdrawing the bolts H, disconnecting the bars Q, and letting them swing to the position shown in full lines in the drawings, and finally swinging the supporting-frame inwardly and packing the other parts, as shown in Fig. 2, and closing the doors, all of which may be done without disconnecting the dumb-bells or cords from the slides, or the latter from the horizontal bar. These several parts pack so closely within the cabinet that, although the latter is of minimum capacity for them, there is, owing to their construction, ample room remaining for one or more sets of Indian clubs, as illustrated in Fig. 2, and obviously for foils, broadswords, their accompanying masks, boxing-globes, and other small implements commonly employed for exercise and training.

The cabinet may be ornamented and represent any desired article of furniture consistent with the supporting of and concealment of the apparatus—as, for example, the cabinet may have the outward appearance of a book-case or wardrobe, or be set in the wall so as to have the external appearance of a closet, in which latter case, however, the support of the apparatus should be so constructed as to extend so far outwardly as to be convenient of use.

In conclusion, it may be observed that it would be no departure from my invention to attach the end bars to the cabinet so as to telescope or slide, instead of being swung outwardly and inwardly on a hinge.

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

1. In a cabinet-gymnasium, the cabinet, in combination with a frame hinged thereto, folding therein, and supporting the exercising apparatus, substantially as described.

2. The cabinet, in combination with the bars at the top and bottom of the cabinet, and a connection between said bar and cabinet, and the chest-bars constituting a connection between each pair of said bars, substantially as described.

3. The cabinet, the hinged bars, and the bars E, in combination with the pulley-weights and the slides thereof, embracing said bars, said bars E constituting ways or guides for said slides, substantially as described.

4. The cabinet, the bars hinged thereto, the chest-bars, and the bars E, connecting said hinged bars, in combination with the pulley-weights and connections between said weights and the chest-bars and bars E, substantially as described.

5. The cabinet, the supporting-frame hinged thereto, and the chest-bars of said frame, in combination with the parallel bars, a hinged connection between said bars and cabinet, and a detachable connection between the chest and parallel bars, substantially as described.

6. The cabinet, the chest-bars, and a hinge-connection between said cabinet and bars, in combination with the horizontal bar and an adjustable and sliding connection between said bar and the chest-bars, substantially as described.

7. The cabinet, the chest-bars, the horizontal bar, and an adjustable sliding connection between said bar and chest-bars, in combination with pulley-weights and a connection between the cords thereof and said chest-bars and horizontal bar, substantially as described.

8. The chest-bars, the horizontal bar, the pulleys upon said bars, and a pivot-connection between the horizontal bar and the bearing of the pulley thereof, whereby said pulleys may have a swinging movement, in combination with the pulley-weights, the cords of which engage said pulleys, substantially as and for the purpose described.

9. The cabinet, the chest-bars, and a hinge-connection between said bars and cabinet, in combination with the horizontal bar, an adjustable sliding connection between said horizontal and chest-bars, and removable pin *d*, passing through said connection and chest-bars, said connection being open upon one side, whereby it may be removed from the chest-bars, substantially as described.

10. The chest-bars, the adjustable slides, and the horizontal bar socketed in said slides, and the removable locking-pin *c*, and eyes upon the horizontal bar, in combination with pulley-weights, which may be connected with said eyes, whereby the horizontal bar may be used as a wrist-roller, substantially as described.

11. In a cabinet-gymnasium, the combination, with the pulley-weights, of a two-part slide detachably connected together, a removable weight supported upon one of said parts and by its gravity serving to lock said parts together, and a bar, E, serving as a way for said slide, substantially as described.

12. The guide bar or way E, in combination with a two-part slide, a dumb-bell supported by one of said parts and by its gravity locking together the parts of the slide, and a cord connection engaging the other part and the dumb-bell, substantially as shown and described.

13. In a pulley-weight device for exercising purposes, a two-part slide, one part, K′, of which is provided on opposing sides with parallel lugs, the other part, K^2, being of E-shaped form and its side arms adapted to be embraced by said lugs projecting beyond the part K′ and curved to form bearings for a removable weight, locking said parts together and constituting the weight of the pulley device, substantially as described.

14. The cabinet, and the door C, hinged to the base thereof so as to open outwardly upon the floor and constitute an extended base for said cabinet, in combination with bars hinged to the cabinet so that they may be swung outwardly and embrace said door and constitute a locking-connection between the cabinet and the extended base or door, substantially as described.

15. The cabinet, the door thereof hinged so that when opened it will constitute an extended base for the cabinet, in combination with a track upon said door and a movable seat upon said track, substantially as described.

16. The cabinet and the hinged and extended base thereof, in combination with the hinged sills O, a sliding seat mounted upon said sills, and a locking-connection between the seat and sills, whereby the said sills may fold upon the extension and be maintained in an upright operative position by the seat, substantially as described.

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