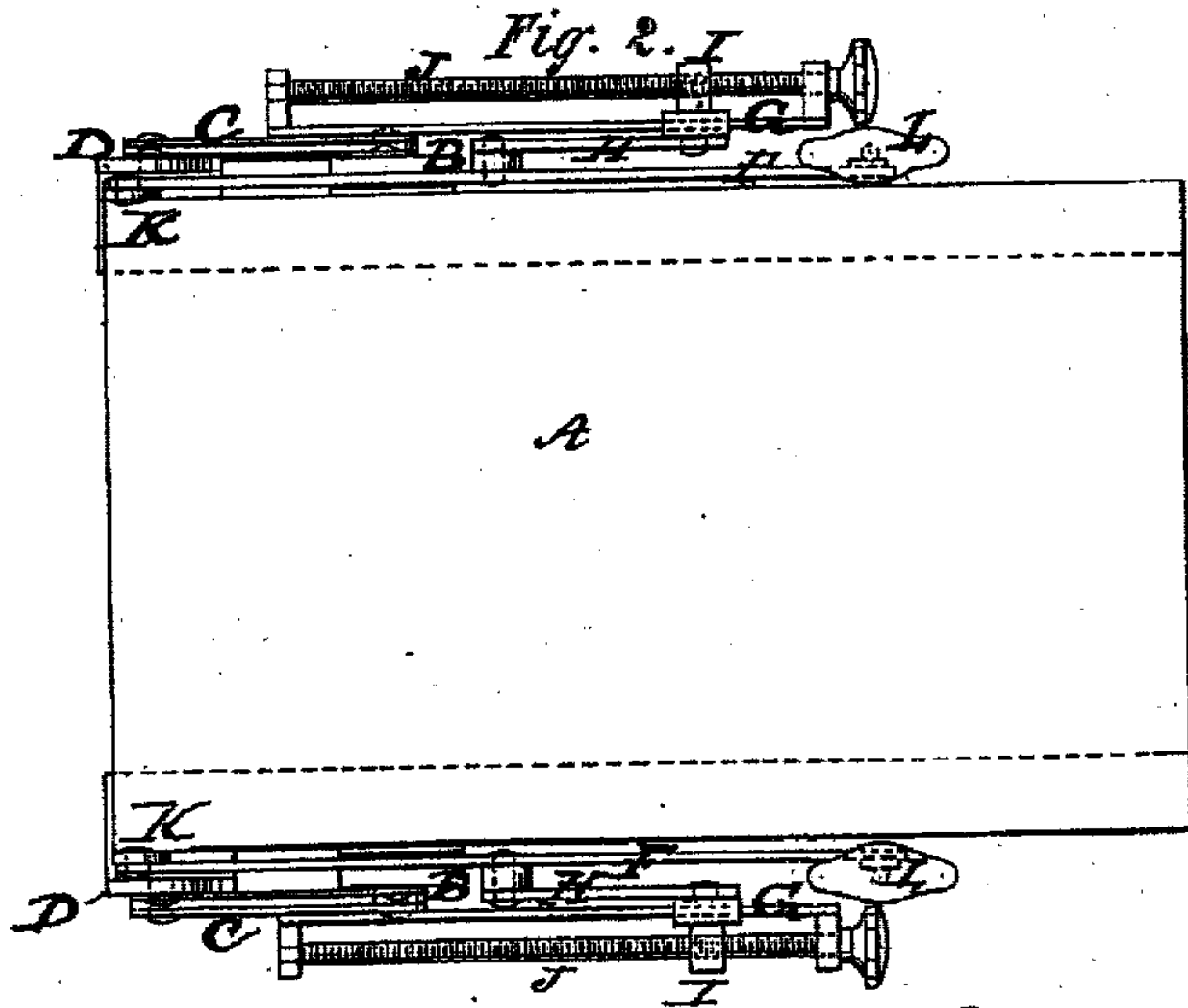
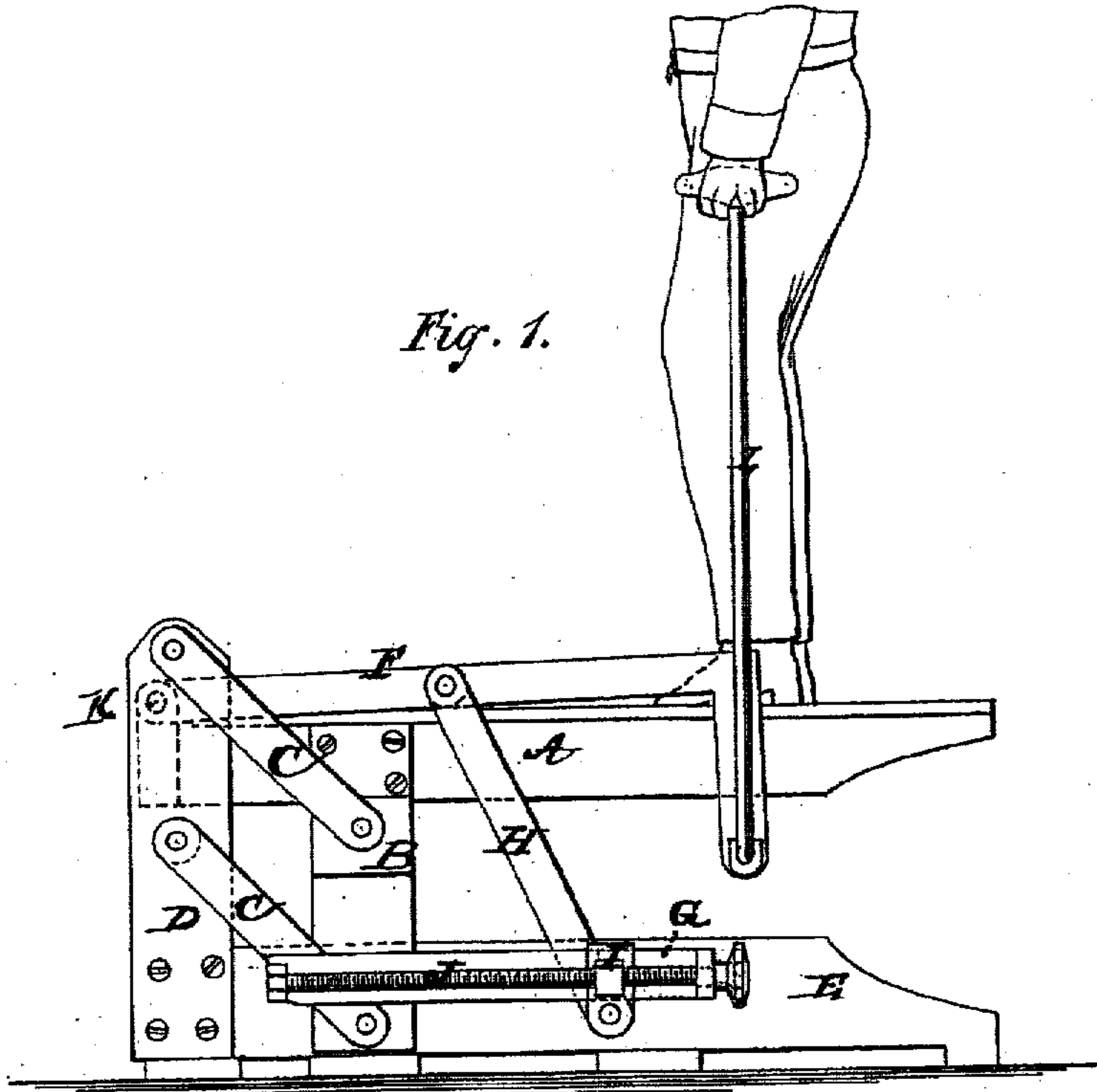


E. A. TUTTLE.
Exercising Machine.

No. 232,217.

Patented Sept. 14, 1880.



WITNESSES.

J. A. Thayer.
O. T. Smith

By

INVENTOR.

Edward A. Tuttle
A. P. Thayer Attorney

UNITED STATES PATENT OFFICE.

EDWARD A. TUTTLE, OF NEW YORK, N. Y.

EXERCISING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 232,217, dated September 14, 1880.

Application filed September 25, 1879.

To all whom it may concern:

Be it known that I, EDWARD A. TUTTLE, a resident of the city, county, and State of New York, have invented a new and useful Improvement in Exercising-Machines, (Case A,) of which the following is a specification.

The invention consists of an improved arrangement of the main lifting-levers and auxiliary levers with reference to the platform, and also an arrangement of the supports of the platform with reference to the point of connection therewith and the point thereon where the operator stands, all as hereinafter described, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation, and Fig. 2 is a plan view, of the machine.

A is the platform whereon the operator stands; B, the supports for the same; and C, the parallel bars by which the supports B are coupled to the permanent standards D of the base E, for allowing the platform to be raised and lowered.

The operator stands on the platform at one side of the supports B, while the auxiliary levers F are fulcrumed at K to the platform on the opposite side of said supports, said fulcrums moving upward and downward with it.

The lifting-rods L, with the handles, are connected to the free ends of the levers, and between the said handle-connections and the fulcrum or pivotal points of the auxiliary levers the main levers are coupled to the former by the bars H, said bars being adjustable along the main levers G, to vary the leverage by the slides I and the adjusting-screws J. The main levers G are attached to or formed with the parallel bars C, preferably the lower one.

By these arrangements a compound-lever contrivance is obtained in lifting-machines by which the required leverage and adjustment

are brought within the limited size desirable, and with a simple, cheap, and durable construction, and the operation is greatly improved.

By the fulcrums of the auxiliary levers moving with the platform they do not turn so far, and the pull is more direct; also, the strains and wear are lessened by the platform-supports being between the place where the operator stands and the fulcrums of the auxiliary levers, because the downward pressure of the levers at their point of connection tends to balance the downward thrust of the operator by lifting.

Instead of the double or two-side arrangement, as shown, the same combination made singly and placed centrally with the platform may be used, although I prefer the former.

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

1. In an exercising-machine, the auxiliary levers F, the fulcrums of which are upon and move with the platform, as described.

2. The auxiliary levers F, pivoted or fulcrumed to the platform and coupled to the main levers G by the adjusting-bars H, substantially as described.

3. The auxiliary levers F, connected with the main levers G by the adjusting-bars H at a point between their fulcrums and the handle attachments, substantially as described.

4. The combination of the platform A, supports B, levers F and G, adjusting-bars H, parallel bars C, and the standards D, substantially as described.

EDWARD A. TUTTLE.

Witnesses:

F. A. THAYER,
O. T. BURT.