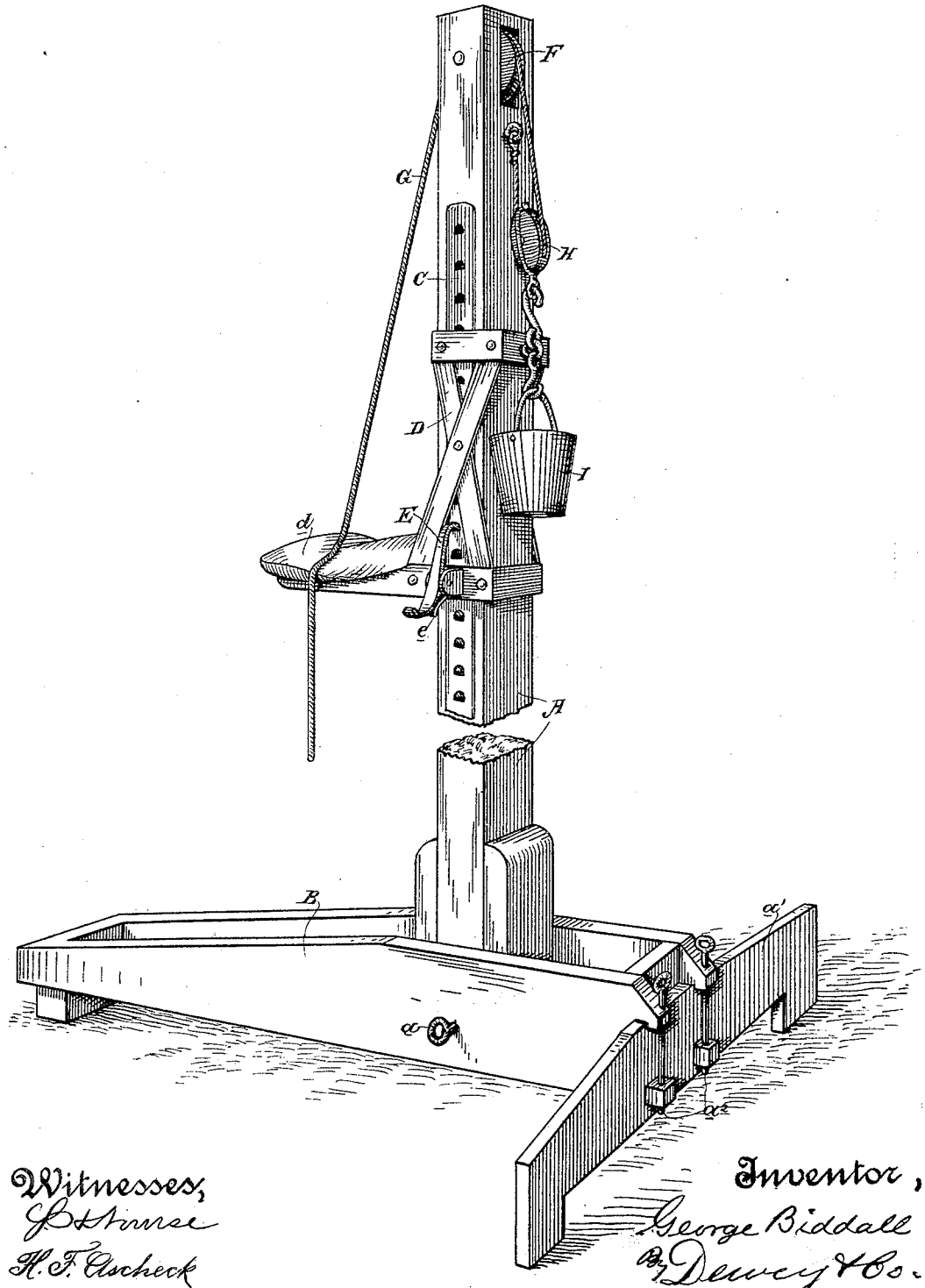
(No Model.)

G. BIDDALL.

SELF HOISTING MECHANISM.

No. 459,247. Patented Sept. 8, 1891.



Witnesses,
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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

GEORGE BIDDALL, OF WOODLAND, CALIFORNIA.

SELF-HOISTING MECHANISM.

SPECIFICATION forming part of Letters Patent No. 459,247, dated September 8, 1891.

Application filed February 4, 1891. Serial No. 380,197. (No model.)

To all whom it may concern:

Be it known that I, GEORGE BIDDALL, a citizen of the United States, residing at Woodland, Yolo county, State of California, have invented an Improvement in Self-Hoisting Mechanisms; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to that class of lifting mechanisms or hoists in which the operator, by means of a suitably-arranged tackle, raises himself to various heights to perform any work desired.

My invention consists in the novel construction and arrangement of parts hereinafter fully described, and specifically pointed out in the claim.

The object of my invention is to provide a simple and effective device by which a man can raise himself to any point desired.

Two of the objects which may be mentioned and for which my device is particularly adapted are the picking of fruit and the pruning of trees.

Referring to the accompanying drawing for a more complete explanation of my invention, the figure is a perspective view of my hoist.

A is a standard, which is supported by a base-frame B. To provide for the easy transportation of the device, the standard and base-frame are made separable, the former fitting into a socket in the latter and being held therein by means of a cross-pin *a*.

The base-frame, for the sake of stability, has three points of support, two of which are at the ends of an end piece a', which is also removably secured to the main piece and held in place by means of pins a^2.

Upon the side of the standard is made a rack C of any suitable description, here shown as formed by a metal face-plate having holes in it.

Fitted upon the standard and adapted to slide up and down thereon is a seat-frame D, which carries a seat *d*. One side of this frame has pivoted in it a strong pawl or dog E, the upper end or point of which is adapted to engage the rack by fitting in its holes, and it is held to this engagement normally by a spring *e*. The lower portion of the pawl is curved and is in such a position with respect to the seat *d* that the operator can readily reach the pawl with his leg or hand and can throw it out of engagement with the rack.

In the top of the standard is a pulley F, over which passes the hoisting-rope G, the fall of which extends within reach of the operator upon the seat. This rope carries the pulley-block H, and the end of the rope is attached firmly to the standard near its top. The pulley-block H is connected with the top of the seat-frame.

I have here illustrated a basket or bucket I, connected with the top of the seat-frame, which simply shows a convenient position in which to carry any receptacle to be used in the work.

The operation of the device is as follows: The operator takes his place upon the seat, and pulling upon the hoisting-rope raises the entire seat-frame and himself. In this upward movement the pawl or dog slips freely by the teeth or holes of the rack, so that he has not to attend to this pawl or dog, but simply to the exertion of his power, resulting in lifting himself to the point desired. When he has reached this point he has only to relieve the rope, whereupon the pawl or dog engaging the rack will hold the seat-frame at such point. To lower himself he first raises the frame slightly in order to relieve the pawl or dog, and then holding said pawl or dog out he allows himself to descend as he pays out on the hoisting-rope. Thus, no matter what work may be in hand wherein it is necessary for one to raise himself to different elevations, the operator by the use of this device can accomplish the result.

In picking fruit and pruning trees the device is particularly useful, as it can be readily transported from tree to tree, is very stable, not liable to rock or to get out of order, and is strong and durable.

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

In a hoisting device, the combination of the supporting-base having a socket and detachable end piece, the single standard removably fitted thereto and supported thereby, the rack on the side of the standard, the frame mounted and adapted to slide upon the standard, the seat of the frame, the pawl or dog car-

ried by the seat-frame and engaging the rack, the pulley-block connected with the frame, the pulley in the top of the standard, and the hoisting-rope connected with the standard top, passing over the block and pulley, and falling within reach of the operator, substantially as herein described.

In witness whereof I have hereunto set my hand.

GEORGE BIDDALL.

Witnesses:
NICHOLAS A. HAWKINS,
G. T. BALL.