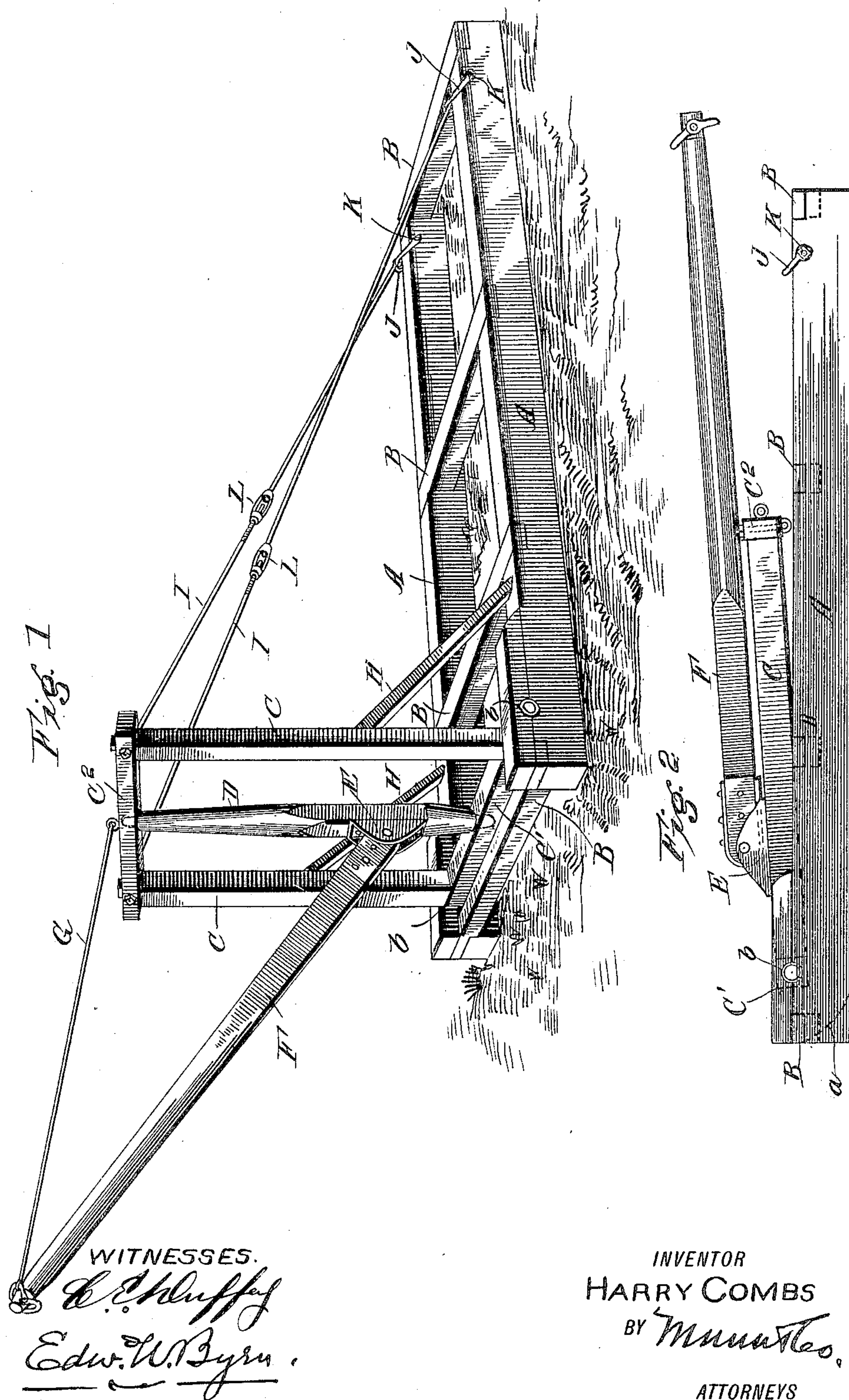


No. 813,352.

PATENTED FEB. 20, 1906.

H. COMBS.
LOG DERRICK.
APPLICATION FILED SEPT. 15, 1905.



UNITED STATES PATENT OFFICE.

HARRY COMBS, OF UPSON, WISCONSIN.

LOG-DERRICK.

No. 813,352.

Specification of Letters Patent.

Patented Feb. 20, 1906.

Application filed September 15, 1905. Serial No. 278,589.

To all whom it may concern:

Be it known that I, HARRY COMBS, a citizen of the United States, residing at Upson, in the county of Iron and State of Wisconsin, have invented a new and useful Improvement in Log-Derricks, of which the following is a specification.

My invention is in the nature of an improvement in log-derricks, sometimes called "log-jammers," the same being a form of portable derrick used in the woods for handling and loading heavy logs.

It consists in the novel construction and arrangement of parts in which the derrick is so constructed as to fold down flat and be dragged from place to place in the woods like a sled and be quickly erected for use at any desired point and substantially braced to stand the lifting strain, as hereinafter fully described with reference to the drawings, in which—

Figure 1 is a perspective view of the derrick set up for use, and Fig. 2 is a side view of the same when folded down flat for transportation.

In the drawings, A A represent two parallel base-sills connected by cross-bars B and arranged to rest upon the ground and be dragged across the same. To facilitate such transportation, either the front or rear ends of the sills may be made of runner shape and shod with iron like the front end of a sled-runner, as shown by the curved dotted line *a*.

Near the front end of the sills in suitable bearings or pillow-blocks *b b* is journaled the lower end of a foldable rectangular frame composed of two long side bars C C, a heavy cross-bar C' at the bottom connecting the side bars and having rounded and trunnion-shaped ends turning in the pillow-blocks about a horizontal axis, and a cross-bar C² at the top connecting the upper ends of the side bars. In the upper and lower cross-bars C² C' of the foldable frame is pivotally mounted a mast D, adapted to turn in its bearings in said cross-bars about a vertical axis. To this mast is connected by a hinge-plate E a boom-arm F, whose outer end is connected by a guy-cable G with the cross-bar at the top of the foldable mast-frame.

H H are two detachable struts or thrust-braces, which are arranged in inclined position between the sills A and side bars C of the

foldable frame. The ends of these braces are tenoned, and they enter mortises in the sills and side bars and are detachable therefrom when the foldable frame is to be laid down on the sills.

I I are guy-cables extending from the opposite corners of the top of the foldable mast-frame to the remote corners of the sills. These guy-cables are crossed, so as to better hold the upright frame against lateral movement, and the anchor ends of the cable are provided with clevis-loops J, whose ends embrace the sills, and through perforations or eyes in the ends of the clevis-arms a stout bolt K passes and also passes through a hole in the sill. In the length of each guy-cable is interposed a turnbuckle L, by turning which the cables may be tightened and placed under the proper tension to hold the mast-frame against the braces.

When the foldable frame is in upright position, as in Fig. 1, the tension of the guy-cables I holds it tightly against the struts or thrust-braces in a vertical position, and the weight of the log suspended from the outer end of the boom is easily sustained and the log shifted from side to side by swinging the boom and the mast which supports it, said mast turning about its vertical axis in the bearings at its upper and lower ends. The slinging and raising of the log from the outer end of the boom is accomplished by the usual block and tackle employed for that purpose.

When the derrick is to be transported or compactly stored away, so as to occupy but little space, the guy-cables are loosened and the inclined braces are removed. The upright mast-frame is then folded down to a horizontal position parallel to and above the sills, and the boom in turn folds on its hinge into a horizontal and parallel position above the frame, as seen in Fig. 2. The derrick may then be conveniently transported by dragging, as there is neither any danger of its turning over nor of striking the limbs of trees.

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

A derrick comprising a base-frame, a rectangular mast-frame connected to the base-frame by a horizontal axis, a vertically-pivoted mast carried by the mast-frame, a boom-

arm hinged to the mast, a guy-cable connecting the outer end of the boom to the upper end of the frame, inclined and detachable strut-braces arranged between the base-
5 frame and the mast-frame, guy-cables connecting the top of the mast-frame to the base-frame and turnbuckles in said cables for

tightening up the same and holding the mast-frame against the inclined braces.

HARRY COMBS.

Witnesses:

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MOSE PREGENT.