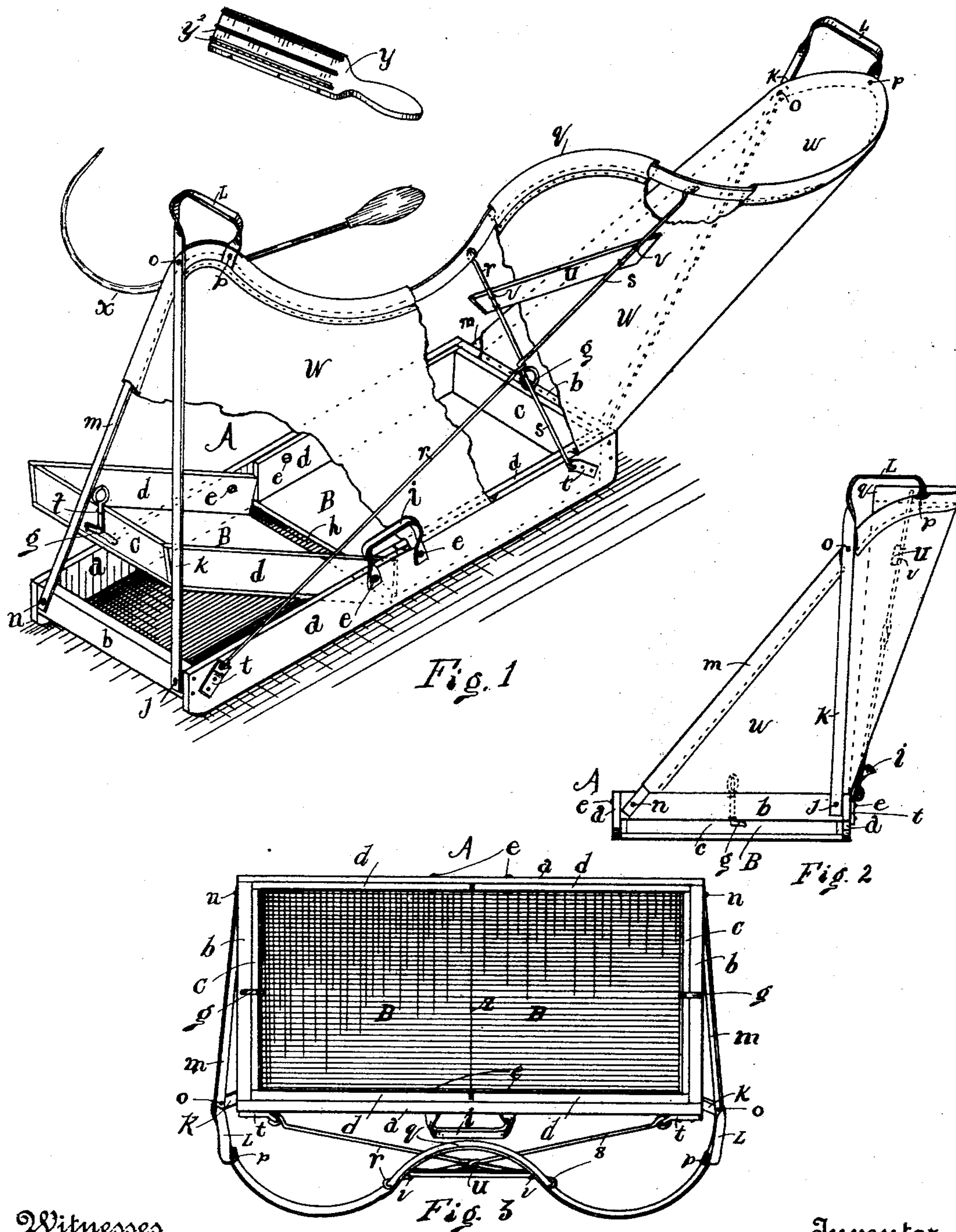


(No Model.)

E. HORTON.
BERRY HARVESTER.

No. 520,054.

Patented May 22, 1894.



Witnesses
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BERRY-HARVESTER.

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To all whom it may concern:

Be it known that I, EMMET HORTON, a citizen of the United States, residing at Dundee, in the county of Yates and State of New York, have invented certain new and useful Improvements in Berry Harvesters or Gatherers, of which the following, with reference to the drawings, is a full, clear, and exact description.

My invention relates to that class of devices for gathering berries, and it consists in certain novel features of construction and combination of parts, such as will be more fully described hereinafter and pointed out in the claims.

In the drawings hereto annexed, Figure 1 is a perspective view of the complete harvester, but showing one of the trays lifted up from its normal position, and the canvas which is arranged to form a chute to the trays, by covering from the trays to an outwardly curved bail, or extended member of the frame, is broken or torn away, to better reveal the manner in which the several parts of the frame are arranged and put together. Fig. 2 is an end elevational view of the complete harvester, not showing the bat or hook incidental to its use. Fig. 3 is a plan view of the complete frame of the harvester without the canvas for covering the skeleton parts.

In berry gatherers heretofore made, one of the main elements of their construction has been wheels or runners upon which to transport them, the use of which, as applied to their work makes them not self supporting, and where a simply arranged receptacle resting upon the runners or wheels, has been constructed, no provision has been made to prevent the berries from rebounding out of the receptacle as they forcefully strike the canvas, or to conveniently empty the berries therefrom; and where trays have been arranged for conveniently emptying the berries, other cumbersome elements with the wheels, have been introduced into the same mechanism, and for these reasons the devices for gathering berries as heretofore made, have been rendered inconvenient and cumbersome in operation. It is to overcome all of these objections, and at the same time make a light and good harvester, that I have arranged my present invention.

A represents a rectangular frame, the component parts of which are two sides *a a* and two ends *b b*, all of which parts are firmly nailed, or otherwise secured together end to end at the corners of the frame. As thus constructed the frame is made longer one way than the other, and the end parts *b b* are of less width than the side parts, but all are arranged together vertically and evenly upon their top edges.

B B represent two trays each of which is provided with an end wall *c* and two side walls *d d* and a bottom. The walls of the trays are made to fill within, and closely fitted alongside of the walls of the frame A, the end wall of the trays adjoining the end wall of the frame, and the top edges of all the walls in the frame and trays are made level with each other. From this normal position of the trays in the frame, they are allowed to swing by having supplied to them pivots *e e* which pass through the end of the side walls of the trays, and near the center of the side walls of the frame. The end walls *c* of the trays in their vertical adjustment are slightly inclined outward at their top edge, so that when they are let down into the frame their top edge part over-reaches and comes in contact with the frame ends, and the trays are thus prevented from dropping lower than a level with the frame, and at this time the bottoms of the trays come together, and prevent the trays from swinging farther downward than a level with the frame, the bottoms separating on a central line *z* crossing the frame, and the pivots being located near the top edges of the walls, each tray exerts upon the other, as they are being filled, a balancing leverage. To the end wall of each tray in a grooved seat for the purpose is secured to turn, under the staples *f* astride it and entering the wall, the L shaped hook *g*, the upper end of the hook is bent into a circle above the wall of the tray, and by which means the hook may be grasped and turned to hook under the narrower end piece *b* of the frame, thus holding the trays down, while in process of filling them with berries, and also to turn to unhook them and lift the trays on their pivots and open the throat *h* between the trays, and dump the berries from the trays through the throat thus made to open, for them, and by which means

they can be emptied into a small box or other receptacle.

The frame of the harvester has a back and front side, to which I will refer in the description of the parts as they are associated or united in the frame.

To the back side piece *b* of the frame and near the center of its length, is made fast on the same bolts which form the pivots for the back side walls of the trays, a handle *i* projecting upwardly to be grasped in carrying the harvester.

To each end of the frame near the back side thereof, is secured on the bolt *j* an upright standard or brace *k* the upper end of which is returned, thus bending it into a loop or handle *L*. These braces are made to stand slightly outward and rearward, and are sustained in their position by another upright arm or rod *m* made fast on the bolt *n* to the ends near the front of the frame, and projecting outwardly and rearwardly up to the upper end, and just below the handle of the brace *k*, where the two uprights are made fast together by the bolt or rivet *o* and again by the rivet *p* through the returned end of the brace or handle *L*, from this union of the uprights the front rod *m* is made continuous, and as it passes across from its union with one brace to that of the other, it is bent into recircuitous curvatures, or into three distinct circular arcs, the central one *q* being forward and uniting the other two which are rearward, and from which the same rod is extended down to the frame. It will be seen that the rod *m* is thus formed into a sort of bail or skeleton frame for a chute to the trays, and is braced rearwardly by the rods *k*, and endwise of the frame by the wire braces *r* and *s* which are made to connect diagonally the upper curved part of the rod *m* and the back side of the frame below, the wires being looped or twisted about each other where they cross in the center, and to make it convenient in their fastening below to the frame, pieces of hoop iron *t* provided with a hole into which the end of the wire may be hooked, are nailed onto the ends of the back side *a* of the frame.

U represents a rest for the arm as the operator reaches down over it to grasp hold of the handle *i* at the back side of the frame, to lift and transport the harvester. Said rest is secured to the wire braces above where they cross each other, and by staples *v* which are driven over the wire braces into the rest and clinched to prevent their withdrawing.

Tacked down and around to the upper edge of the ends and back side of the frame is the canvas covering *w* and which is drawn taut in all directions to be looped and sewed, or otherwise secured, on the rod *m* *q* or bail of the frame. The canvas is thus brought into a corrugated or uneven chute which approaches a rectangular form as it approaches the trays, and as the berries are knocked off the bushes against the canvas and into the

trays, it will be found they will not rebound because of the uneven surface of the canvas, or because the berries cannot be directed to, or precipitated upon the canvas in a direct radial line to its curves, and the berries go circling one way or the other, as they strike the canvas, down into the trays.

x represents a rod with one end bent into a circular hook and the other end provided with a handle by which it may be grasped in the hand of the operator and the hook utilized to hook around the bushes and draw them over the trays, the bat *y* then can be brought into play by gently striking the bushes with it, or directly the berries if somewhat dried, thus jarring and knocking the ripe ones off the bushes and gathering them into the trays. The bat *y* is made of a piece of flat wood with one end shaped into a handle for its manipulation and the other free part provided with longitudinal slots, in which are inserted pieces of rubber *y*² that are made to project slightly beyond the wood of the bat, thus furnishing a sort of cushion to the blow of the bat on the bushes. The rubber strips are retained in the bat by nails which may be driven through from its edges.

As the harvester will sit alone upright, or support itself the operator can step to one side of it, raise the bushes, and by grasping hold of the handle nearest him draw the harvester under the bushes thus held up, and as bushes heavily laden with fruit are often on the ground it is of great concern to have the harvester support itself and thus give greater liberty to the person operating it.

What I claim is—

1. A berry harvester having a receptacle for retaining the berries, and a chute for gathering and directing the berries to the receptacle, said receptacle consisting of a tray or trays arranged to swing, and to upset and dump their contents through the bottom of the harvester substantially as described.

2. The combination in a berry harvester of a receptacle consisting of a tray or trays, and a rod extending outwardly and connecting to the ends of the receptacle, and canvas secured to the receptacle and the rod, to form a chute to gather and direct the berries into the receptacle, substantially as described.

3. In a berry harvester, a chute having its side walls tapering upward and diverging into concaved chutes, said chutes being separated by a convex deflecting wall, or walls, to govern and direct the berries therein, substantially as described.

4. In a berry harvester, in combination, a bat having one or more raised ribs of elastic material projecting on its face, substantially as described.

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Witnesses:

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