

No. 635,064.

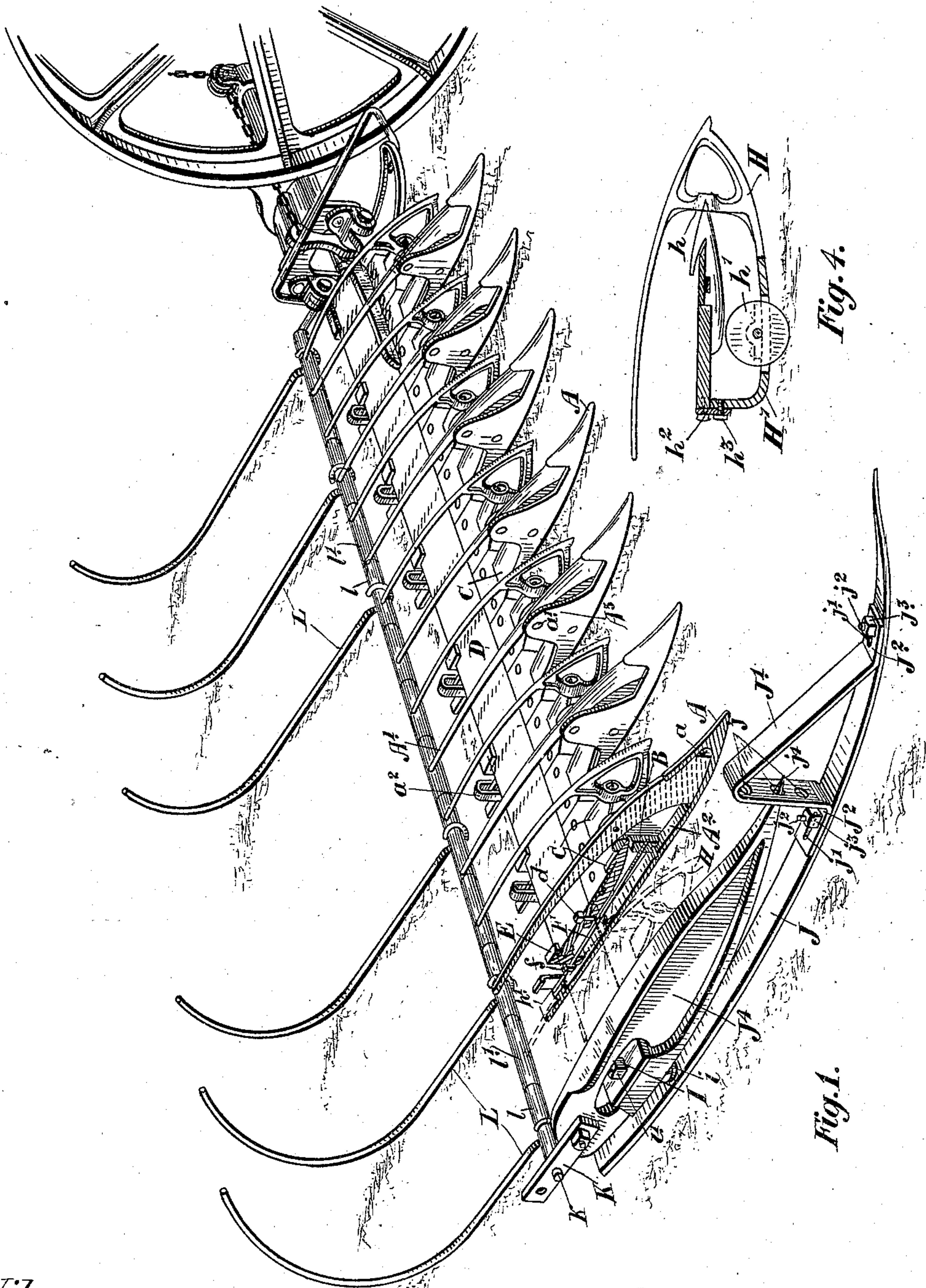
Patented Oct. 17, 1899.

W. G. ST. JOHN.
PEA HARVESTER.

(Application filed June 3, 1895. Renewed Jan. 20, 1899.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses.
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 E. R. Case

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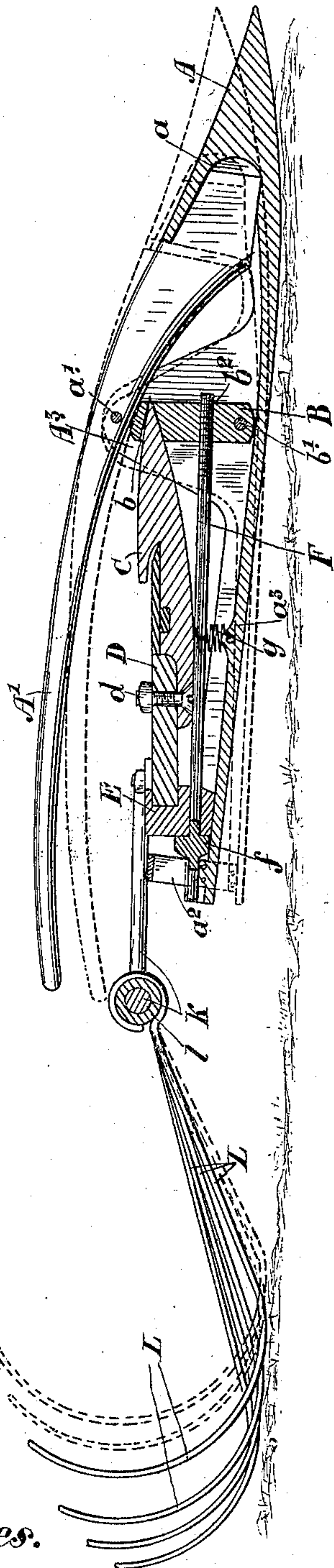


Fig. 2.

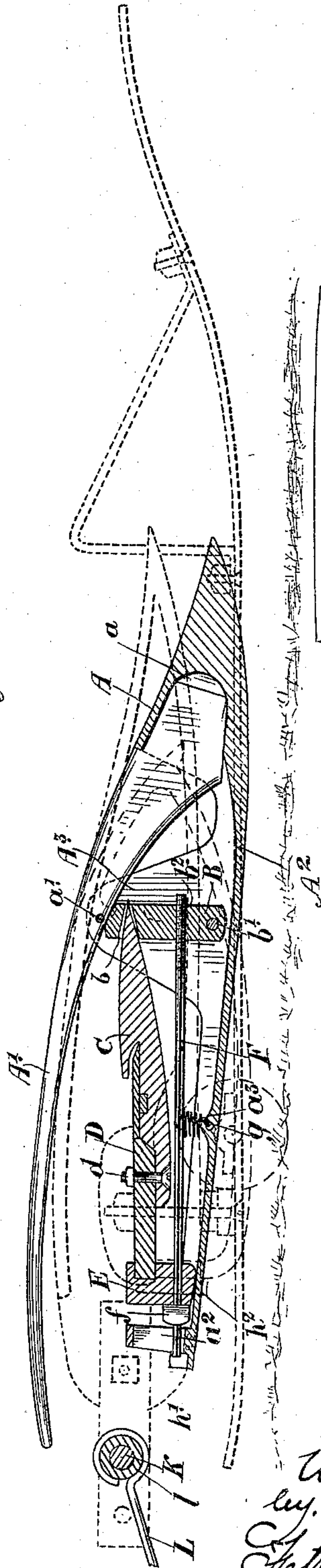


Fig. 3.

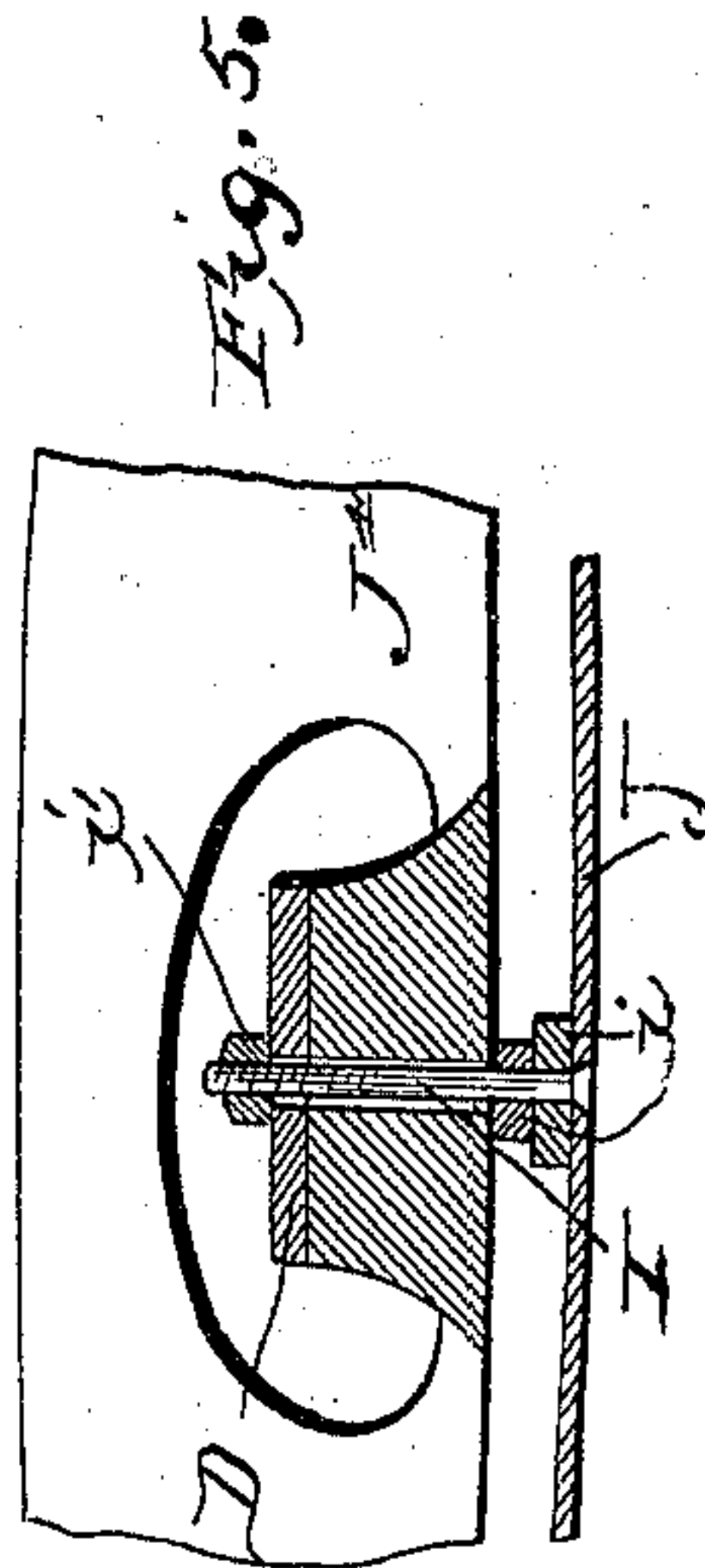


Fig. 5.

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UNITED STATES PATENT OFFICE.

WILLIAM GLOVER ST. JOHN, OF SUNDERLAND, CANADA.

PEA-HARVESTER.

SPECIFICATION forming part of Letters Patent No. 635,064, dated October 17, 1899.

Application filed June 3, 1895. Renewed January 20, 1899. Serial No. 702,844. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM GLOVER ST. JOHN, of the village of Sunderland, in the county of Ontario, in the Province of Ontario, Canada, have invented certain new and useful Improvements in Pea-Harvesters, of which the following is a specification.

My invention relates to improvements in pea-harvesters, and the object of the invention is, first, to devise a form in which the lifters will always hug the ground closely, so as to effectually lift the vines in uneven or undulating ground, and, secondly, to provide a simple means whereby the snake divider located on the end of the finger-bar may be prevented from shelling the peas; and it consists, essentially, first, of a peculiar form of lifters which are pivoted to the front of the finger-bar on hangers secured to the fingers, as hereinafter more particularly explained, and, secondly, of a shoe attached beneath the lifter next the snake divider, so that the snake divider is raised clear of the ground, as hereinafter more particularly explained.

The invention also includes a series of arms pivotally supported at the rear of the cutter-bar and extending downwardly, with their free ends resting upon the ground and adapted to gather the vines.

Figure 1 is a perspective view of a pea-harvester constructed in accordance with my invention, parts being shown in section. Fig. 2 is a cross-section through the finger-bar. Fig. 3 is a cross-section showing also the outer supporting-shoe and wheel and the snake divider dotted in relative position. Fig. 4 is a cross-section showing outer supporting-shoe and wheel. Fig. 5 is a detail view.

A are the lifters, which are provided with the usual rearward extensions A' , which pass rearwardly over the finger-bar, but in my form are entirely free at the rear.

A^2 is the lower rearward extension, which passes underneath the mower-bar.

A^3 are upwardly-extending lugs forming a strap, between which passes the upper extension A' . The forward end of the upper extension A' is secured in a recess a near the point of the lifter by a pin a' passing through it and the strap A^3 .

B is a hanger which has a slot b made in it at the upper end. This slot b is passed over

the point of the finger or guard C. The lifter extends over the hanger, which is situated between the sides of the strap A^3 and is pivoted on the pin b' , which extends through the hanger and both sides of the strap A^3 .

D is the finger-bar, to which the fingers are attached by the bolt d .

E is a hanger which is provided with a front groove which is made to conform to the shape of the rear of the finger-bar D, over which it fits.

F is a bolt provided with a head f intermediate of its length, but located, preferably, very close to the rear end. The threaded front end of the bolt extends through a corresponding hole b^2 , made in the hanger B.

a^2 is a strap which is secured to the rear end of the lower portion A^2 . The strap a^2 straddles the rear end of the bolt F. The head of the bolt is preferably made square or multilateral. By turning the bolt F the hanger is brought up upon the finger and held securely in position.

In order to hold the rear end of the lifter close to the finger-bar, and thereby keep the point down, I provide a tension-spring g , which I connect at one end to a lug a^3 at the top of the rear portion A^2 and at the other end to the bolt F. This is a spiral spring; but I might use any other form of spring and connect it in any suitable manner to a portion of the mower-bar and to the bottom portion of the lifter.

Although I describe only one lifter, it will be understood that each lifter across the machine is constructed as hereinbefore described.

Interposed between each of the lifters A is a short lifter H, that next the shoe I construct in a peculiar manner. h is a socket made in the front portion of this lifter H. The socket h fits over the guard-finger next the snake divider. The shoe portion of the lifter H is separated centrally beneath the cutter-bar, so as to receive a wheel h' , which is suitably journaled in bearings on the top of the shoe H' of the lifter. The rear portion of the shoe H' behind the wheel extends upwardly vertical to the finger-bar.

h^2 is a down-hanger securely bolted to the rear of the finger-bar, and h^3 is a screw-bolt which extends through the lower end of the

down-hanger into the shoe H' . By turning this bolt the lifter H may be drawn tightly, so that the socket h fits tightly upon the finger of the guard. Different sizes of wheels may of course be used, this depending upon the height it is necessary to raise the bottom of the snake divider above the ground. The purpose of this shoe and wheel is to maintain the snake divider at a distance from the ground, so that when it passes over the pea-vines it will not shell them. (See position shown in Fig. 3.)

It is sometimes necessary to raise or lower the front of the snake divider to permit the point of the bottom bar thereof to clear the vines, this of course depending on the height of the pea-vines.

In order to provide a ready means of adjusting the front of the snake divider and also for lowering the rear of the bottom bar of such divider, I construct it in the following manner: I is a bolt which is countersunk in the bottom bar J of the divider and passes through one or more washers i up through the finger-bar, where it is secured by a nut i' , which serves to bind the parts together. The bolt I preferably fits its hole loosely. At the front of the bar J , I provide an angular bar J' , the rear vertical portion of which has a series of holes j . The angular bar J' has forward and rearward extensions J^2 , provided with slots j' , through which extend the countersunk bolts j^2 , provided with nuts j^3 , as shown in dotted lines. By merely loosening the nuts j^3 the angle-bar J' may be moved forward sufficiently so as to relieve the point j^4 of the divider J^4 . The bottom bar J of the divider may now be raised or lowered at the front, this depending on the height of the pea-vine lying on the ground, so as to bring the point j^4 into either the upper or lower hole j , so that the front of the snake divider may pass readily over the pea-vine. The nuts j^3 on the bolts j^2 must now be screwed home to secure the angular bar J' in position.

K are rearwardly-extending arms, in which is held a rod k , extending from end to end of the finger-bar.

L are a series of arms which are attached to sleeves l on the rod k to the rear of the finger-bar and which rest upon the ground. The sleeves l are separated by sleeves l' . The arms L are curved upwardly, the length and height of the curve of each successive arm decreasing from outside to inside, so that the base portions of the outer arms are narrower than those situated more inwardly. The two central arms I preferably locate at a greater distance apart than the others by placing three sleeves l' between the sleeves l . I arrange the spaces between these arms greater than the spaces between the others for the purpose of permitting the hay-fork to be inserted.

An advantage which I claim by the construction above described is that the driver seated on the mower can if he meets an ob-

struction by simply tilting the finger-bar get over the obstruction as easily as with an ordinary mower, as the lifters are pivoted on the guard and lift with it. I am also enabled by using the form of lifters shown to lift those peas that are standing up fairly clear of the ground, and if I come to where they are down flat on the ground it is simply necessary to tilt the bar, and it will hug the ground closely, which it is impossible to do with any other pea-harvester hung in the rear of which I am aware.

What I claim as my invention is—

1. In combination in a pea-harvester the finger-bar and finger, the lifter comprising the bottom bar having a socket in its forward end, and the upper bar held in said socket, the lugs intermediately connecting said upper and lower bars whereby the said bars are braced, and the free rearward extensions of said bars, substantially as described.

2. In a harvester, the combination with the finger-bar and fingers, of lifters pivotally supported near their forward ends by hangers secured on the ends of the fingers, said lifters having rearward extensions held at their forward ends in sockets in the points of the lifters, the lugs embracing each of the sides of said extensions, and the pins passing through said lugs and extensions, substantially as described.

3. In combination, the finger-bar, the fingers, the hangers B removably supported on the end of the fingers, the lifters pivoted to said hangers, the hangers E rigidly secured to the finger-bar, and the connection between said hangers B and E , whereby said hangers B can be forced on or off the ends of said fingers, substantially as described.

4. The combination with the finger-bar and fingers of lifters pivoted near the forward end on hangers secured on the ends of the fingers, bolts screwed into the hangers and passing rearwardly through hangers, E , on the rear of the finger-bar, heads intermediate of the length of the bolts abutting the hangers, lower rearward extensions having straps secured to the rear end straddling the ends of the bolts as and for the purpose specified.

5. In a pea-harvester the combination with the finger-bar and fingers, the snake divider at the outer end of the finger-bar, of a shoe secured beneath the finger-bar provided with a running-wheel, the bottom of which extends beneath the level of the lifters and dividers as and for the purpose specified.

6. In a pea-harvester the combination with the finger-bar and fingers, the snake divider at the outer end of the finger-bar, of a shoe having a socket fitting over the finger of the guard, an opening in the central portion for the reception of the wheel and a rear upward extension and the down-hanger, h^2 , and bolt, h^3 , all arranged as and for the purpose specified.

7. In a pea-harvester the combination with

the finger-bar and lifters, of a snake divider consisting of a bottom bar and dividing end plate provided with a forward point, an angular bar J', provided with holes j, and slot-
5 ted forward and rearward extensions J², and bolts and nuts for securing the angular bar J', in position as and for the purpose specified.

8. In combination, the finger-bar and fingers, the lifters, the snake divider having a
10 bottom bar, the bolt countersunk in said bottom bar and passing loosely through said divider and finger-bar, and means carried by said bottom bar and engaging said divider, whereby said bottom bar can be tilted, sub-
15 stantially as described.

9. In combination in a pea-harvester, the finger-bar and lifters, the divider, the bottom bar secured thereto and extending forwardly thereof, the adjustable bracket carried there-
20 by having a series of openings therein, the end of said divider being adapted to be brought into engagement with and supported

in one of said openings, substantially as described.

10. The combination with the cutter-bar, 25 of a series of arms pivotally supported at the rear thereof, adapted to swing in vertical planes having their free ends curved upwardly, said arms normally extending rear-
wardly and downwardly from their pivotal 30 points to rest upon the ground, said arms from their pivotal points to their point of contact with the ground successively increasing in length from the outside to the inside to form a tapered pocket whereby the contact 35 of the vines with the ground will roll the same into a bundle in said pocket as the harvester is drawn forwardly, substantially as described.

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Witnesses:

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