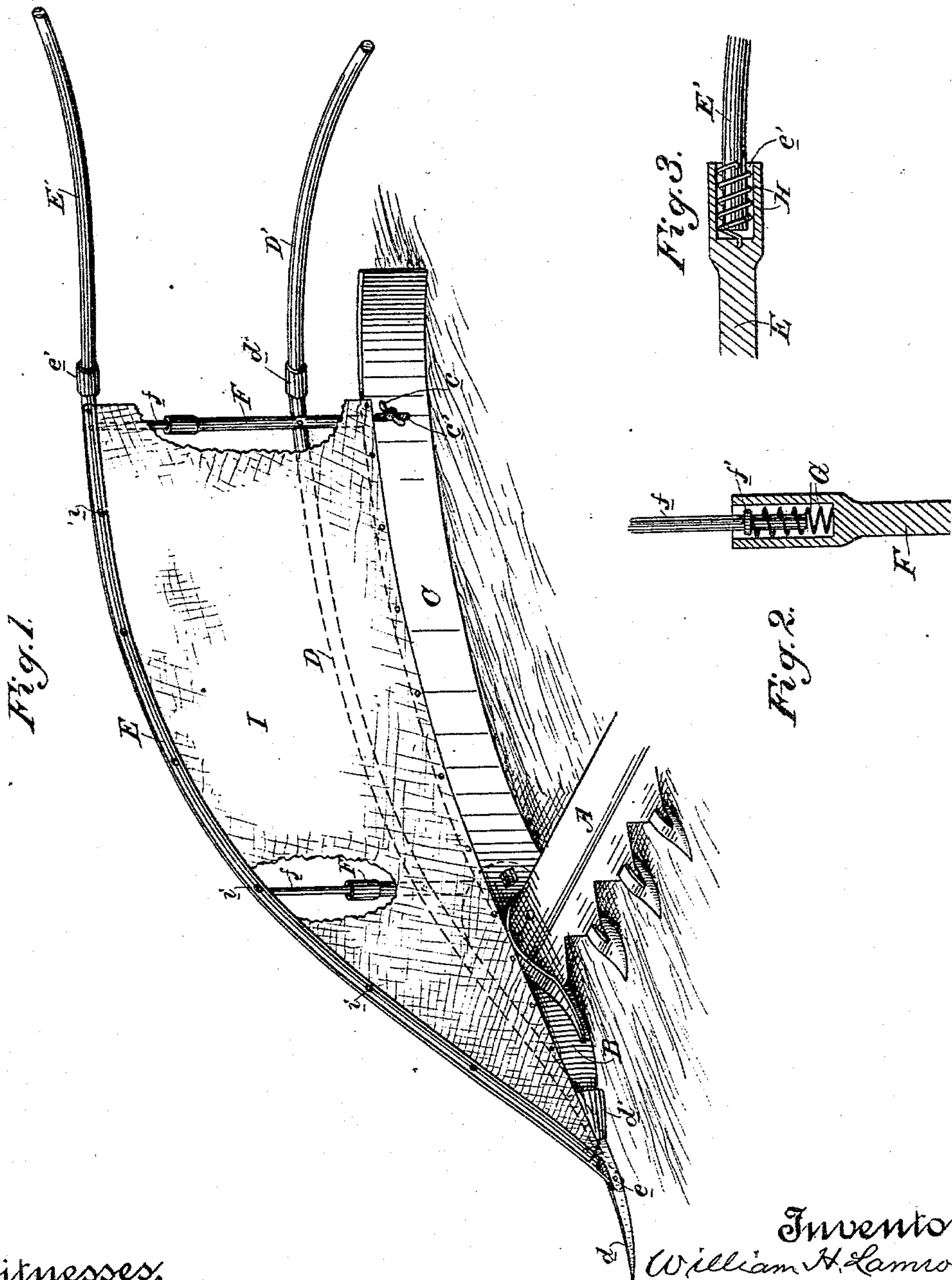


(No Model.)

W. H. LAMROCK.
SWATHER.

No. 412,102.

Patented Oct. 1, 1889.



Witnesses,
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UNITED STATES PATENT OFFICE.

WILLIAM H. LAMROCK, OF COYOTE, CALIFORNIA.

SWATHER.

SPECIFICATION forming part of Letters Patent No. 412,102, dated October 1, 1889.

Application filed June 26, 1889. Serial No. 315,663. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM HENRY LAMROCK, of Coyote, Santa Clara county, State of California, have invented an Improvement in Swathers; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates, generally, to the class of mowing-machines, and particularly to that class of attachments thereto known as "swathers," the object of which is to turn the grain over into the swath away from the standing grain.

My invention consists in the hereinafter-described novel arrangement and construction of the parts of the swather, the objects of which will be set forth in connection with the description.

Referring to the accompanying drawings for a more complete explanation of my invention, Figure 1 is a perspective view of my swather. Fig. 2 is a detail showing the connection of the standards G and rods f. Fig. 3 is a detail showing the connection of the extensions with the arms.

I have herein deemed it necessary to show as parts of the mowing-machine only the sickle-bar and sickle, represented by A, and the shoe B on the end of the bar. Connected with the rear of the shoe is a board C, which is found upon devices of this class, the novelty in this portion being in bending the board into a concave shape, so that its rear end extends inwardly to conform to the general shape of the swather-bars.

D is the lower directing-arm of the swather, and consists of a rod or bar, the forward end of which projects beyond the point of the shoe and carries a socketed bearing d', into which the point of the shoe is fitted.

E is the upper directing-arm of the swather, consisting of a rod or bar, the forward end of which is pivoted at the point e to the forward end of the lower directing-arm D.

F are socketed standards, the lower ends of which are connected with the board C, and said standards are also connected with the lower arm D. Rods f are attached to the upper arm E and pass down loosely into the socketed standards F, and are affected by springs G within the said standards, which bear up against the collars f' on the rods f, as shown.

Now, it will be seen that the upper directing-arm E of the swather being freely pivoted at its forward end at the point e, and supported by the springs G, may have a freedom of movement which results, by reason of the traveling and jarring of the machine, in a constant vibratory or shaking movement of said arm. In the ordinary swathers the grain falling upon the upper portion or upper arm thereof is inclined to stick and will not let go because the arm is usually rigid; but with my vibratory arm the grain or hay cannot lodge upon it or stick, as it is constantly agitated, and as the weight of the grain or hay increases the arm yields sufficiently to make it slip off, which result is assisted by the jarring movement of said arm. This is its principal object; but it subserves a further purpose, as follows: In the improved mowing-machines now in use the sickle may be turned downwardly toward the ground to operate upon lower grass, and where the arm of the swather is rigid it is obvious that said arm is elevated, which makes it more difficult for it to throw the grain off; but with my freely-moving arm the weight of the grain or hay presses it down, so that it can slip off, as usual.

Instead of making the directing-arms D and E integral or rigid throughout their length, I make them sectional, providing their ends with extension portions D' and E'. These extension portions are fitted into sockets d' and e', and are provided with springs H, so secured to them as to hold them in position axially. The object of this construction is to allow the bending of the arms to the best shape, especially their rear ends, and still have these ends avoid catching the grain unduly, for as soon as the grain accumulates against the ends of the arms the extensions D' and E' turn axially sufficiently to release it and the spring H returns them to proper position.

The rearmost standard F is attached to the board C by means of a thumb screw or nut c passing through an elongated slot c' in the board, whereby the standard may be set up or down to regulate the initial position of the upper arm E.

The object in curving the board C as heretofore described is to conform it to the general shape of the swather-arms and to avoid

pressing its whole length against the grain or hay, but instead to simply turn inward its rear end to force the grain into the swath.

I is a shield-plate, made of a piece of canvas which is secured on the inner side of the swather and covers the standards F and rods *f*, the object being to prevent the grain or hay from catching upon these parts. I attach this canvas at its upper edge to the arm E by making said arm in two parts of half-round iron and clamping the canvas between said parts, securing it by screws *i*, as shown. The lower portion of the canvas is connected to the board C and the shoe in any suitable manner. The rods *f* are also secured to the arm E by being clamped in between its half-round parts.

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

1. In a swather, the combination of the board C, secured to the shoe of the mower, the directing-arm E, pivoted at its forward end, the socketed standards F, secured to the board C, the rods *f*, secured to the arm E and fitting in the standards, and the springs G therein supporting the rods, substantially as and for the purpose herein described.

2. In a swather, the combination of the board C, secured to the shoe of the mower, the lower directing-arm D, secured to said shoe, the upper directing-arm E, pivoted to the forward end of the lower arm, the socketed standards F, secured to the board and to the

lower directing-arm D, the rods *f*, secured to the upper arm and fitting in the socketed standards, and the springs G in said standards supporting the rods *f*, substantially as described.

3. In a swather, the combination of the board C, the pivoted directing-arm E, the socketed standard F, the thumb screw or nut fitting in an elongated slot in the board, whereby the standard may be adjusted vertically, the rod *f*, secured to the arm E, and the spring G in the standard supporting the rod, substantially as described.

4. In a swather, and in combination with its directing-arms, the extension portions fitted to the rear ends of said arms and axially adjustable, and the springs H, for returning said extensions to position, substantially as described.

5. In a swather, the board C, the directing-arms D and E, and connections F and *f* between said board and arms, in combination with the shield-plate I and the removable portion of the arm E, for clamping the upper edge of said shield to said arm, substantially as described.

In witness whereof I have hereunto set my hand.

WILLIAM H. LAMROCK.

Witnesses:

GEO. B. POLHEMUS,
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