

No. 733,230.

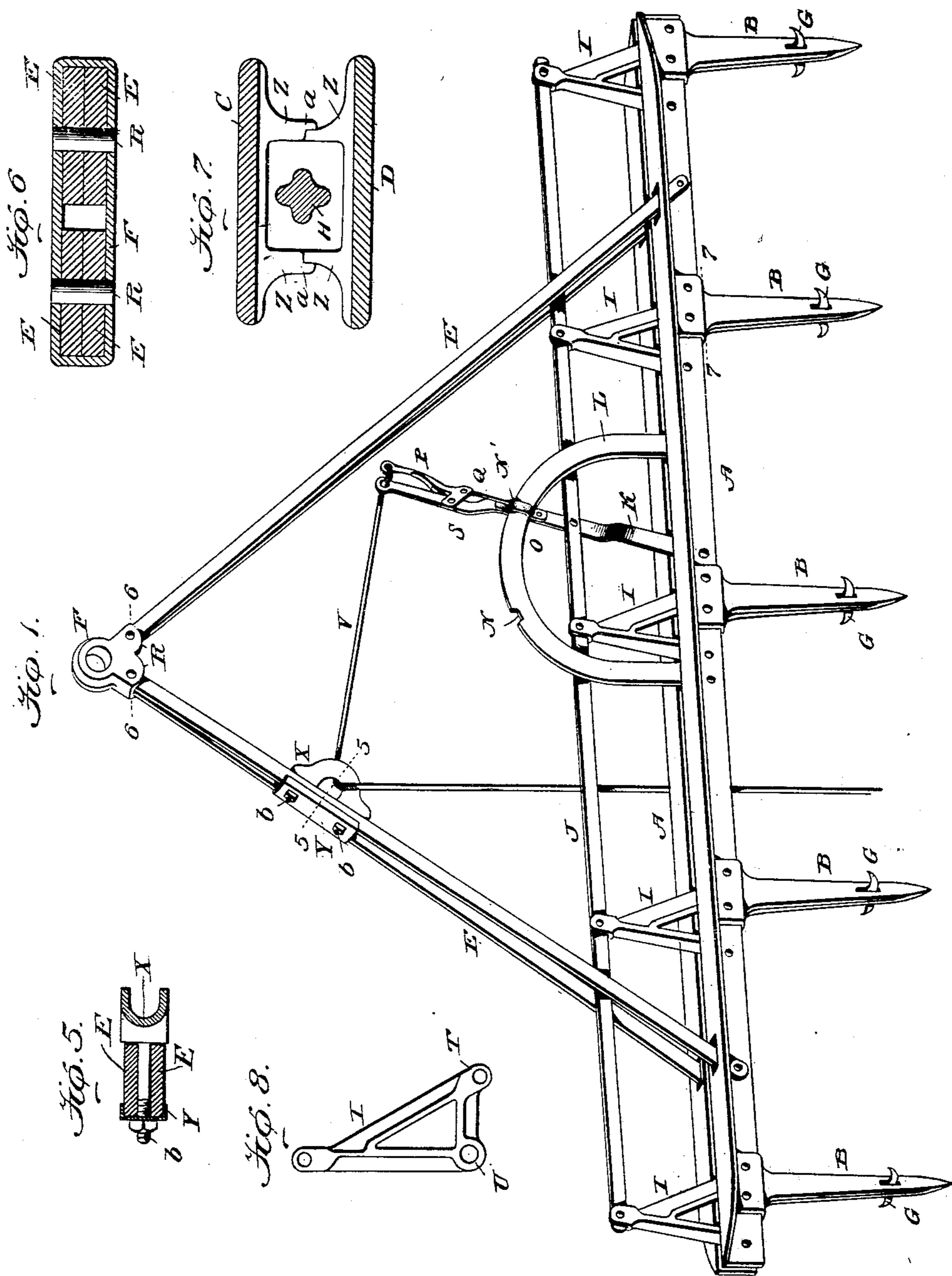
PATENTED JULY 7, 1903.

W. LOUDEN.
HAY FORK.

APPLICATION FILED MAY 2, 1903.

NO MODEL.

2 SHEETS—SHEET 1.



Witnesses

Wm. "Dashie"
Jno. J. Pelligan.

Inventor

William Louden.

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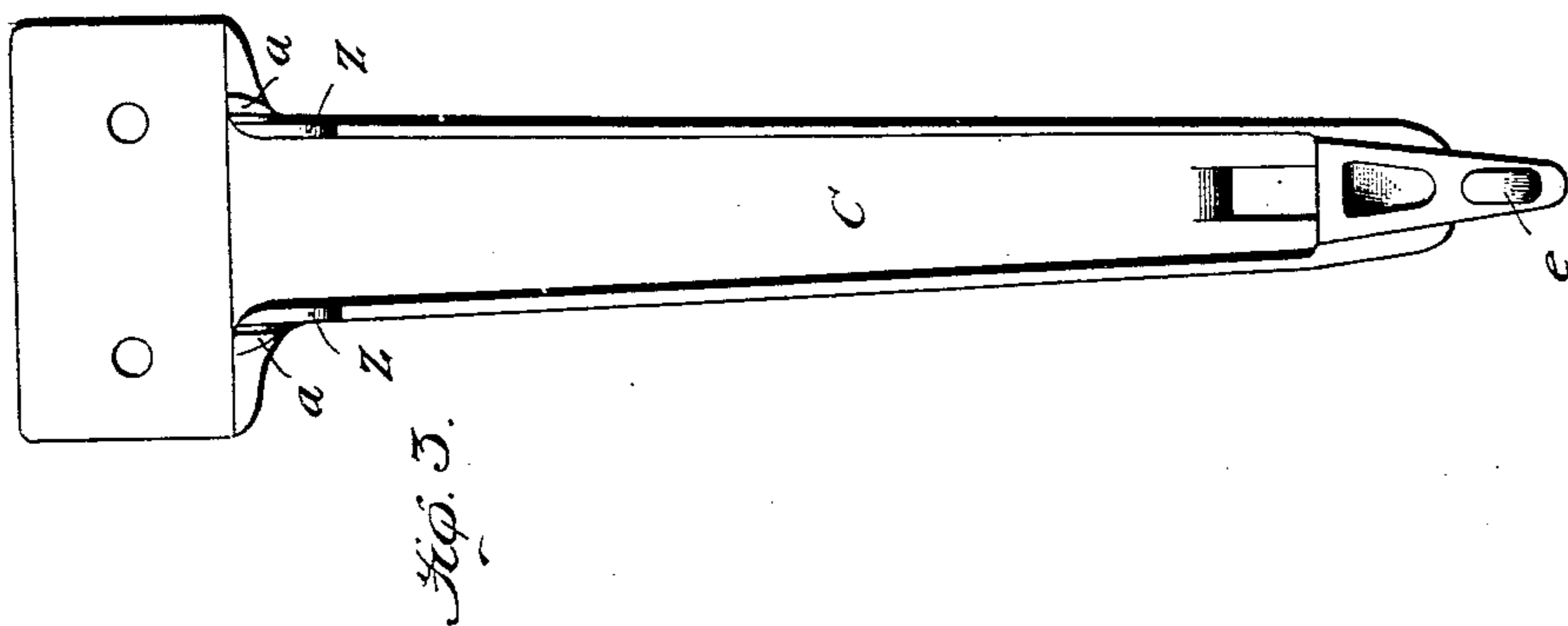
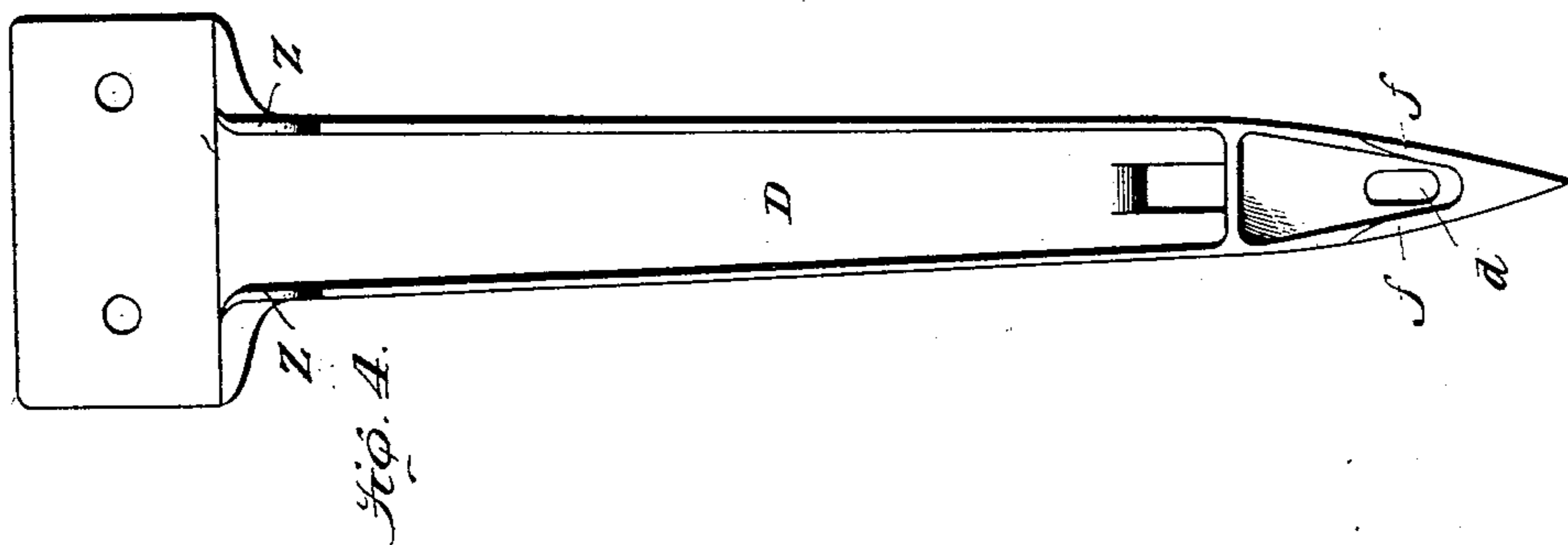
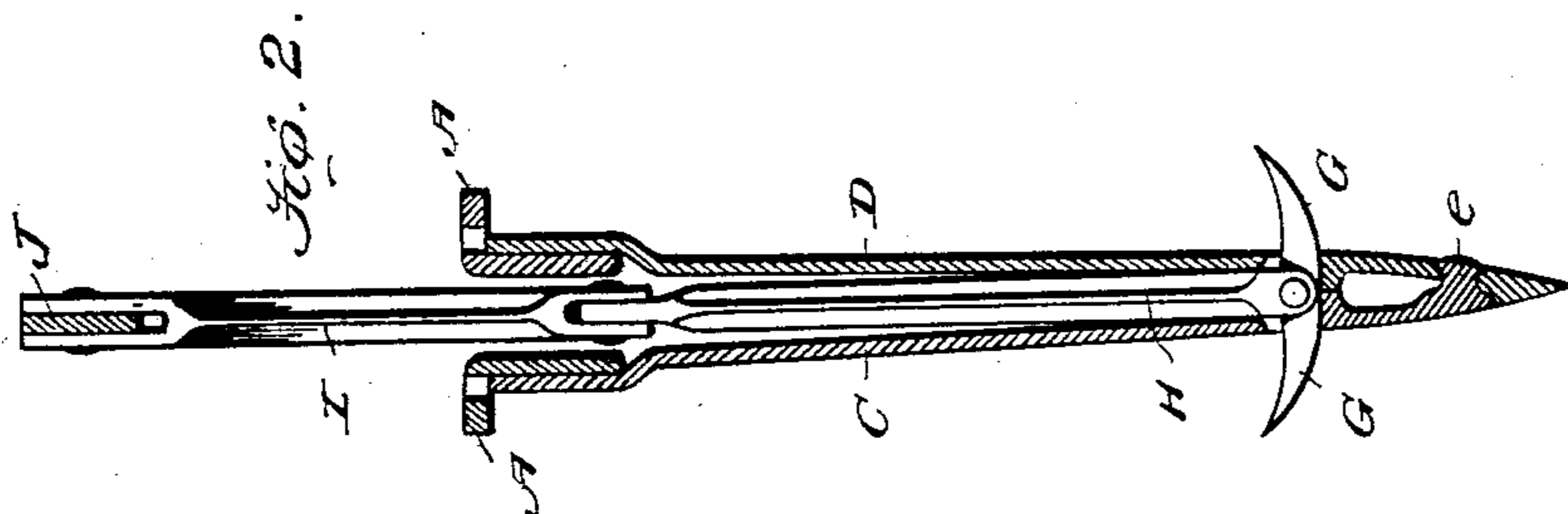
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Jno. J. Keeligan

Inventor

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UNITED STATES PATENT OFFICE.

WILLIAM LOUDEN, OF FAIRFIELD, IOWA.

HAY-FORK.

SPECIFICATION forming part of Letters Patent No. 733,230, dated July 7, 1903.

Application filed May 2, 1903. Serial No. 155,329. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM LOUDEN, a citizen of the United States, residing at Fairfield, in the county of Jefferson and State of Iowa, have invented a new and useful Improvement in Hay-Forks, of which the following is a specification.

My invention relates to power hay-forks, principally designed for handling baled hay and the like; and it consists of an improvement whereby the fork is made more effective and durable than heretofore made, the construction being fully set forth herein.

In the accompanying drawings, forming a part of this specification, Figure 1 is a perspective of a fork embodying my invention. Fig. 2 is a transverse section of one of the tines and its operating-lever. Figs. 3 and 4 are inside views of the pieces forming the tines. Figs. 5, 6, and 7 are sectional views on corresponding lines of Fig. 1. Fig. 8 is a detail view.

Referring to the drawings, the frame of the fork consists of two parallel angle-bars A, having a space between them, and the horizontal flanges pointing outward.

B represents the tines, comprising two opposing pieces C and D, which are secured to the outer side of the adjacent bars A.

The bail is composed of two pair of bars E, the lower ends of which are passed through openings in the horizontal flanges of the angle-bars A and are bolted to the outer sides of the vertical flanges of said bars. The upper ends of the bars E are inserted in a recess in the lower end of the eye F and are secured therein by rivets R. The pieces C and D comprising the tines B are made concave on their interior sides, so as to form an opening therein, and each piece has an opening near its lower end through which barbs G are projected. These barbs are hinged at their inner ends to the lower ends of central bars or thrust-rods H, which in turn are pivotally connected at their upper ends to the lower corners T of triangular-shaped levers I. These levers are pivoted at their other lower corners U between the bars A and at their upper ends to a rocking bar J.

A trip-lever K is pivoted at its lower end between the bars A and is centrally connected to the rocking bar J, so that by rocking the lever K the barbs G will be withdrawn or protruded by communicating the movement of the lever K through the medium of the rocking bar J, triangular levers I, and thrust-rods H. A segment L is secured between the bars A, so as to be in the line of movement of the lever K, and is provided with two or more notches N and N' on its outer face. The lever K is fitted with a keeper O, which holds it in contact with the segment L. It is also fitted with a pivoted handpiece P, connected to a trip-bolt Q, which enters an opening in the upper end of the keeper O, so that it may enter or be withdrawn from the notches N and N'. The handpiece P is also provided with a spring S to bear against the lever K and hold the bolt Q in engagement with the notches N and N'. The lever K and handpiece P have each an eye in their upper ends, and a trip-cord V may be connected to the eye of the handpiece P and passed through the eye of the lever K, so as to release the trip-bolt Q from the notch N' and allow the barbs G to be withdrawn to discharge the hay.

To insure the proper direction of the trip-cord V, a guide-loop X is secured to the bars E on the opposite side from the lever K. It is provided with two bolts b and a cap-piece Y, having flanges on its opposite edges to embrace the outer edges of the bars E. By this means no holes have to be made in the bars E to attach the guide, and it can be adjusted thereon by simply loosening and tightening the bolts b.

At their upper and inner ends the pieces C and D are provided with inwardly-projecting spurs or lugs Z, which come in contact with each other and hold the pieces C and D the proper distance apart. The spurs on one of the pieces are provided with overlapping lips a, which are adapted to project over the spurs on the opposite piece and prevent these spurs from slipping off each other.

The lower end of the piece D has a recess terminating in an opening D, and the lower

end of the piece C is made shorter and narrower, so as to fit in this recess, and is provided with a lug *e*, which is adapted to enter the opening *d* and be secured therein. The point of the piece C, passing into the recess in the point of the piece D, will not cause any notch or break in the point of the tines to catch on the hay in entering, the flanges *f* on the sides of the recess in the point of the piece D forming guards to conduct straws, &c., over the joint.

The tines B are spaced so as to enter and hold adjoining bales of hay, but may be used, if desired, to handle loose hay. The horizontal flanges add stiffness to the bars A, and the lower ends of the bars E being spread apart and passed through openings in said flanges and then secured to the outer sides of the vertical flanges, while their upper ends are brought together and inserted in the recess in the eye F, makes a very strong well-braced bail for a hay-fork. However, the horizontal flanges may be discarded, if preferred, and plain flat bars may be used for the frame instead, in which case the lower ends of the bail-bars will be secured to the outer sides of frame-bars so as to secure the bracing effect described.

The trip-cord V is used to discharge the fork when it is elevated to such an extent that it cannot be discharged by hand. The elevating-tackle is attached to the eye F in the usual manner.

What I claim is—

1. In hay-forks, the combination of a frame comprising two parallel bars having a space between them, a series of tines secured to said frame, and adapted to penetrate the hay, means for catching, holding and releasing the hay, and a bail composed of two pairs of bars having the upper ends joined together so as to form a single point of attachment for the elevating-tackle, and their lower ends spread apart and secured to the outer sides of the bars comprising the frame.

2. The combination of a frame comprising two parallel bars having a space between them, a series of tines secured at intervals to said bars, barbs mounted in said tines, means for operating said barbs mounted in the space between said parallel bars, and a bail composed of two pairs of diverging bars having their upper ends joined together so as to form a single point of attachment for the elevating-tackle, and their lower ends spread apart and secured to the outer sides of said frame.

3. In a fork of the character described, the combination of two pairs of bars having their upper ends joined together and their lower ends spread apart and secured to the frame of the fork, and an eye having a recess in its lower end, said recessed portion of the eye being fitted over and secured to the upper ends of said bars.

4. In a fork of the character described a series of tines provided with barbs for engaging the hay, rocking levers connected together by means of a rocking bar so as to operate said barbs simultaneously, a segment with notches in its outer edge, a trip-lever connected to said rocking lever and being provided with a trip-bolt to engage said notches, and a handpiece to operate the trip-bolt, said trip-lever having an eye in its upper end, and a trip-cord secured to the free end of the handpiece and passed through the eye in the trip-lever.

5. In a fork of the character described, a series of tines provided with barbs for engaging the hay, rocking levers connected together by means of a rocking bar so as to operate said barbs simultaneously, a segment with notches in its outer edge, a trip-lever connected to said rocking lever and being provided with a trip-bolt to engage said notches, and a handpiece to operate the trip-bolt, said trip-lever having an eye in its upper end, a trip-cord secured to the free end of the handpiece and passed through the eye in the trip-lever, and a guide-loop for the trip-cord secured to the bail of the fork.

6. In a fork of the character described, a bail having one or more pairs of bars located side by side with a space between them, and a guide-loop for a trip-cord secured to one of said pairs of bars by means of bolts passing through the space between the bars, and a flanged plate fitted over said bars so as to hold the bolts and loop in place.

7. In a fork of the character described, a frame comprising two parallel bars having a space between them for the mounting of the working parts therein, a bail fitted to the parallel bars, and horizontally-disposed outwardly-projecting flanges formed on said parallel bars.

8. In a fork of the character described, a frame comprising two parallel bars having a space between them for the mounting of the working parts therein horizontally-disposed outwardly-projecting flanges formed on the upper edges of said parallel bars, and a bail comprising two pairs of diverging bars having their upper ends joined together and their lower ends passed through openings in said horizontal flanges and secured to the outer sides of said parallel bars.

9. In a hay-fork, a tine composed of two opposing pieces having an interior opening, barbs and thrust-rods operating the barbs mounted in said interior openings, the upper ends of said pieces having opposing spurs coming in contact with each other and overlapping lips on the spurs on one of said pieces.

10. In a hay-fork, a tine composed of two opposing pieces having an interior opening, barbs and thrust-rods operating the barbs mounted in said interior openings, the lower end of one of the pieces having a recess and

opening near its point and the lower end of
the other piece being cut shorter and narrow
so as to enter said recess, and having a lug to
enter said opening and be secured therein so
5 as to form a penetrating-point with the joint
protected by flanges on the first-mentioned
piece.

In witness whereof I have hereunto sub-
scribed my name in the presence of two wit-
nesses.

WILLIAM LOUDEN.

Witnesses:

HOLBROOK FAHNESTOCK,
JOHN J. NELLIGAN.