

(No Model.)

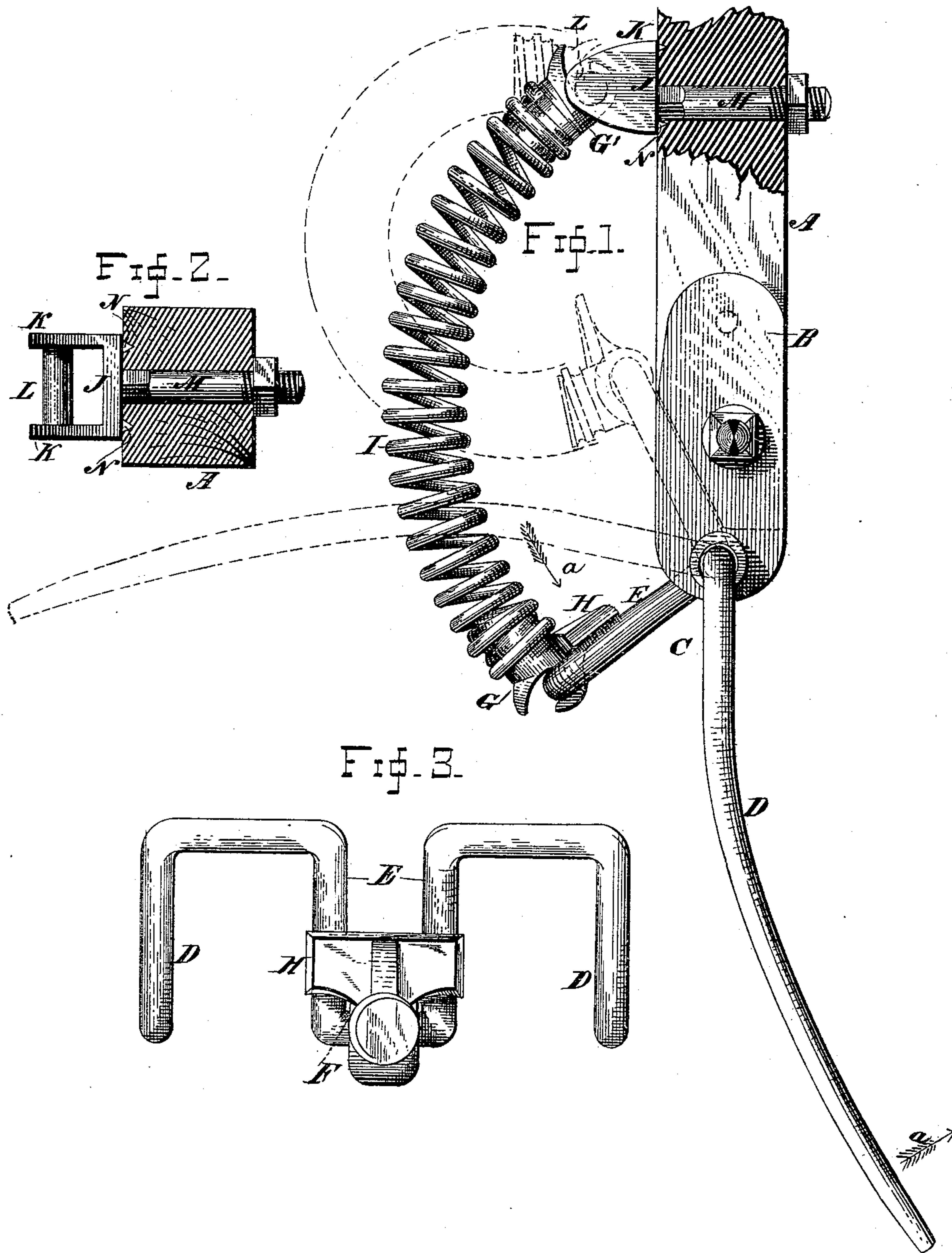
2 Sheets—Sheet 1.

C. H. PAXSON.

TEDDER FORK.

No. 377,047.

Patented Jan. 31, 1888.



WITNESSES

*A. A. Graham,*  
*John H. Hunter*

INVENTOR

*Charles H. Paxson*

*By Coulmin & Femmes,*  
*his Attorneys*

(No Model.)

2 Sheets—Sheet 2.

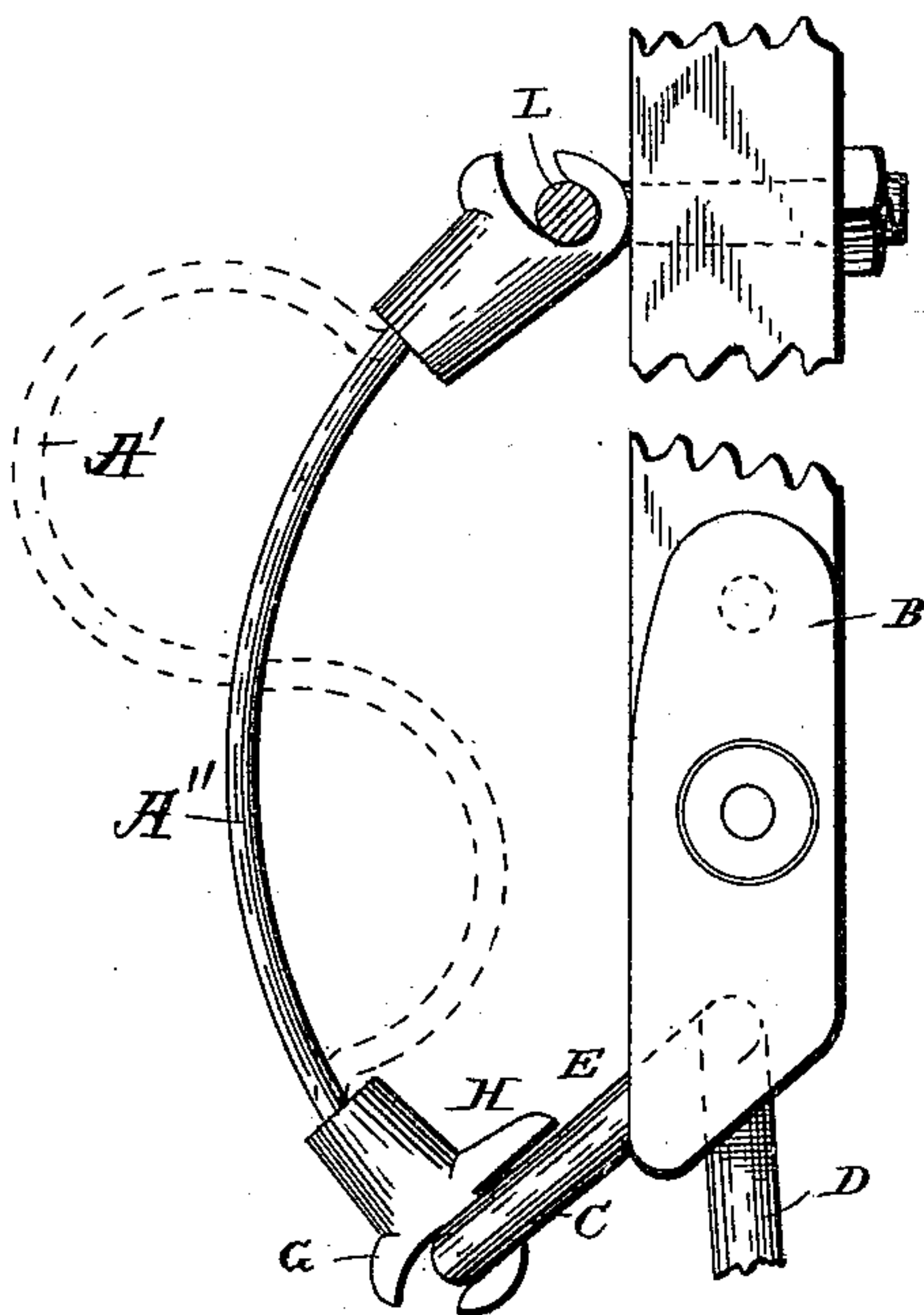
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*Fig. 4.*



WITNESSES

*Edwin L. Bradford*

*Joe H. Hunter*

INVENTOR

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*By Toulmin & Emmes*  
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# UNITED STATES PATENT OFFICE.

CHARLES H. PAXSON, OF SPRINGFIELD, OHIO, ASSIGNOR TO THE THOMAS MANUFACTURING COMPANY, OF SAME PLACE.

## TEDDER-FORK.

SPECIFICATION forming part of Letters Patent No. 377,047, dated January 31, 1838.

Application filed November 23, 1885. Serial No. 183,677. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES H. PAXSON, a citizen of the United States, residing at Springfield, in the county of Clark and State of Ohio, have invented certain new and useful Improvements in Tedder-Forks, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to certain new and useful improvements in tedder-forks, as will be hereinafter pointed out.

In the accompanying drawings, forming part of this specification, and on which like reference-letters indicate the same features, Figure 1 represents a side elevation of the lower portion of a tedder-fork arm, showing a fork and my improvement applied thereto; Fig. 2, a transverse sectional view of the tedder-fork arm, showing a plan view of coupling-iron; Fig. 3, a view of the tedder-fork and connecting-hook, looking in the direction of the arrow shown in Fig. 1; and Fig. 4, a side elevation showing modified forms of springs.

The letter A designates a tedder-fork arm of any approved type, to which are bolted or otherwise secured the journal-plates B, which may also be of any suitable character.

The letter C designates the fork proper, the same consisting of the prongs D and the U-shaped bend E, the cross portion F of which is preferably made straight, so as to afford a better surface for the engagement of the connecting-hook, presently to be described. This fork is mounted in any convenient manner in the bearing-plates B.

The letter G indicates a connecting-hook, preferably constructed of malleable iron, and adapted to engage the cross portion F of the bend E, and having a shank with a spirally-grooved exterior to afford a means of connecting the spring therewith. The hook also has a projecting plate, H, which rests upon the U-shaped bend and prevents the spring from forcing the fork beyond a given position in the direction of the arrow *a*, thus serving the function of a stop, and not only that, but a yielding stop, the advantage of which latter attribute is to permit the fork to yield rearwardly in case the forward side meets with an obstruction while the machine is advancing.

The letter I indicates a spiral spring, which

is fastened to the hook G, in the manner above suggested, at one end, and at the other to a similar hook, G', in a similar manner. The distance between the normal position of the bend E and the upper pivotal point of the spring being shorter than the actual length of the spring itself, the latter is caused to assume a curve, as indicated in Fig. 1, the advantage of which will appear in the description of the portion hereinafter appearing.

It is obvious that various forms of hooks can be adopted, that the manner of connecting the spring with the hooks may be varied, and that the success of the device does not depend upon the use of a spiral spring or a serpentine spring, as any other spring would answer the same purpose, though the spiral spring is the preferred kind, since it possesses two yielding qualities—first, that of bending, and, secondly, that of compressing as the bending takes place.

The form of spring next preferred after a spiral spring is a serpentine spring, as seen at A' in dotted lines in Fig. 4. This form of spring more nearly possesses the characteristics of a spiral spring, because it somewhat compresses when the fork is thrown from normal position. The spring shown at A" in Fig. 4, while possessing the quality of bending, does not possess that of compressing, but still is useful in the connection in which it is shown.

The reason the action of the spring on the fork gradually diminishes is because as the fork rises and approaches its dead-center the leverage or control of the spring over it lessens according to a well-known principle in the operation of cranks. The force exerted by the spring itself need not necessarily diminish; but that force is applied to the crank, as above suggested, at a constantly-decreasing leverage by reason of its approach to a dead-center.

The letter J indicates a coupling-iron, consisting of the side pieces, K, and the pintle L, as also of a bolt, M, a portion of which is preferably angular to prevent the coupling from turning. The coupling is also by preference provided with projecting spurs N, which take into the tedder-fork arm and assist in preventing the coupling from turning out of line with the hook G. The position of the pintle L with respect to the bolt M is eccentric, the object of



which is to shorten the distance between the pivotal points of the spring when the latter shall have become somewhat shortened by the compression due to usage, the space being shortened by turning the coupling J in a reverse position to that shown in Fig. 1. This coupling is preferably constructed of malleable iron.

In operation, when the fork proper meets with an obstruction, the spring will give and allow the fork to yield ground in the manner above described until it has reached the limit and assumed the position shown in dotted lines in Fig. 1, when the spring will have also assumed the position and shape also shown in dotted lines in that figure. As the fork is thrown out of normal position, the plate H gradually recedes from the bend E and swings out of the way, as seen in dotted lines, and allows the bend to travel near to the tedder-fork arm and permit full swing to the fork. As soon as the fork is released from an obstruction, the spring instantly returns it to operative position, the plate H terminating that position. The constant pressure of the spring prevents the disengagement of the hooks and the rattling of the parts. The hooks being made open, the device is quickly and cheaply put together.

I would have it understood that I do not confine myself to any special form of construction, as that may be varied without departing from the spirit of my invention. Eyes may be used in lieu of the hooks, if desired, and the pintle L made to slip into holes in the plates K.

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

1. In a tedder, the combination, with a tedder-arm and a distinct tedder-fork pivoted to the arm, of a spring pivotally connected to said fork at one end and pivoted at the other end to the said arm, of greater length than the greatest distance between its connection with the arm and its connection with the fork, and arranged in such a manner that the leverage of the spring gradually diminishes as the fork turns in its mountings and moves its point away from the ground.

2. In a tedder, the combination, with the tedder-arm and a fork pivotally connected thereto, of a spiral spring pivotally connected to the fork at one end and pivoted at its other end to the said arm, of greater length than the greatest distance between its connection with the fork and the arm, and arranged in such a man-

ner that the leverage of the spring gradually diminishes as the fork turns in its mountings and moves its point away from the ground.

3. In a tedder, the combination, with the tedder-arm, of a fork pivoted thereto and having a bend projecting substantially at a right angle from the upper end thereof, and a spring pivotally connected with the said tedder-arm and pivotally connected with the bend of the fork and of greater length than the greatest distance between said bend and the point of connection of the spring with the arm.

4. In a tedder, the combination, with the fork having a bend projecting substantially at a right angle from the upper end thereof, of a spring pivotally connected with the said bend and having a pivotal connection with the fork-arm, and a stop or projection extending from the spring adapted to bear upon said bend as the spring straightens, the spring being of greater length than the greatest distance between the said bend and the pivotal connection of the spring with the arm.

5. In a tedder, the combination, with the fork-arm, of a fork pivoted thereto and having a U-shaped bend projecting substantially at right angles therefrom, and a spiral spring having connecting-hooks which respectively pivotally engage with the said bend and with the fork-arm.

6. In a tedder, the combination, with the pivoted fork having a U-shaped bend projecting at an angle therefrom, of a coupling-iron secured to the tedder-fork arm above the fork, and a spiral spring having hooks which engage, respectively, the said bend in the fork and the coupling-iron, one of said hooks having a stop or projection adapted to bear upon said bend as the spring straightens.

7. In a tedder, the combination, with a pivoted fork having a U-shaped bend extending at a right angle therefrom, of a coupling-iron secured to the tedder-fork arm above the fork, and a spiral spring having hooks which engage, respectively, with said bend and the coupling-iron, the spring being of greater length than the greatest distance between the bend and the coupling-iron, and one of said hooks having a stop or projection adapted to bear upon said bend as the spring straightens.

In testimony whereof I affix my signature in presence of two witnesses.

CHAS. H. PAXSON.

Witnesses:

A. A. YEATMAN,  
CHASE STEWART.