No. 652,825. Patented July 3, 1900.

A. WERNER, Jr.

CORN HUSKING MACHINE.

(Application filed Mar. 22, 1899.)

(No Model.) 2 Sheets—Sheet 1.

Fig. 1.

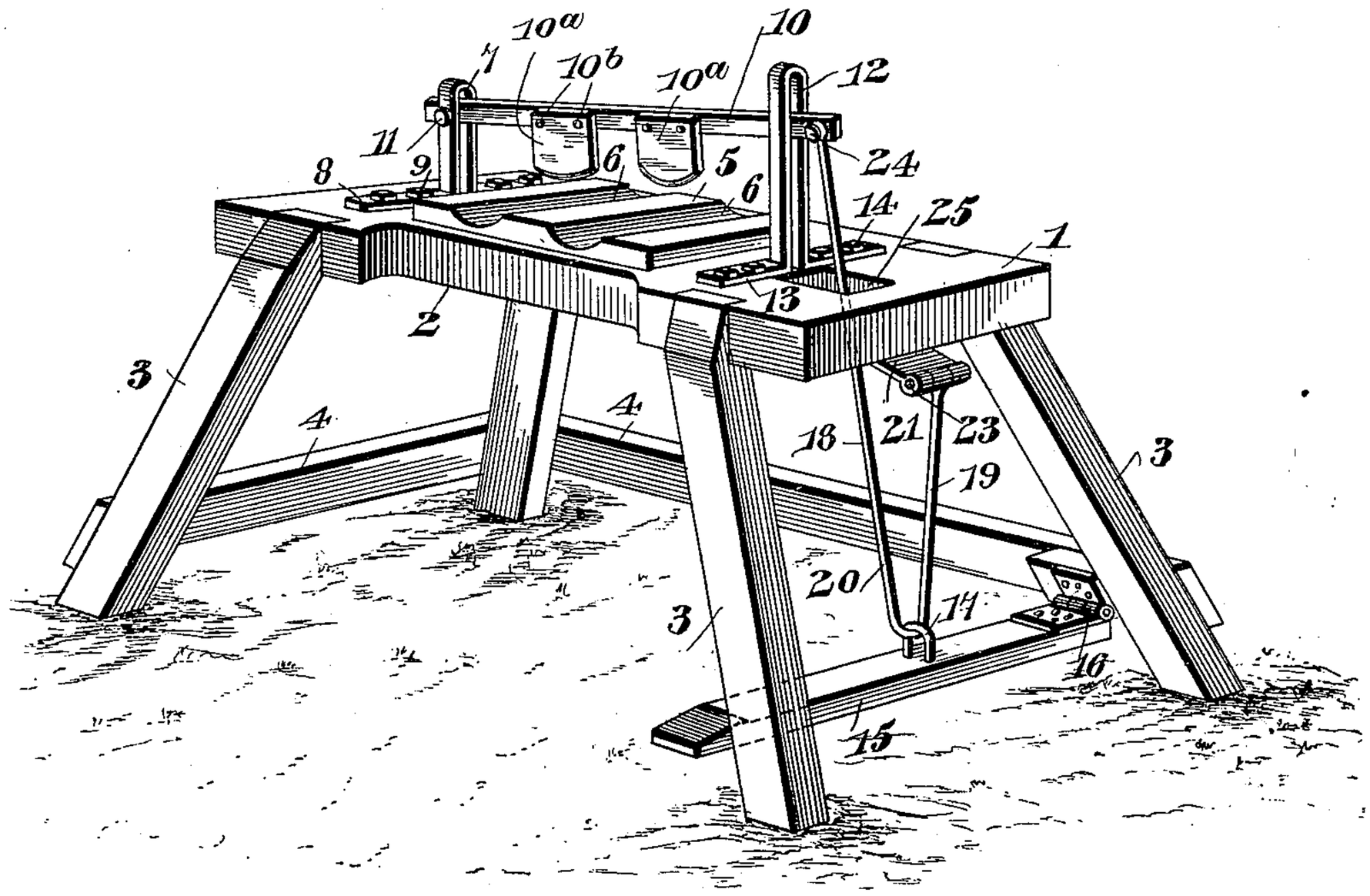
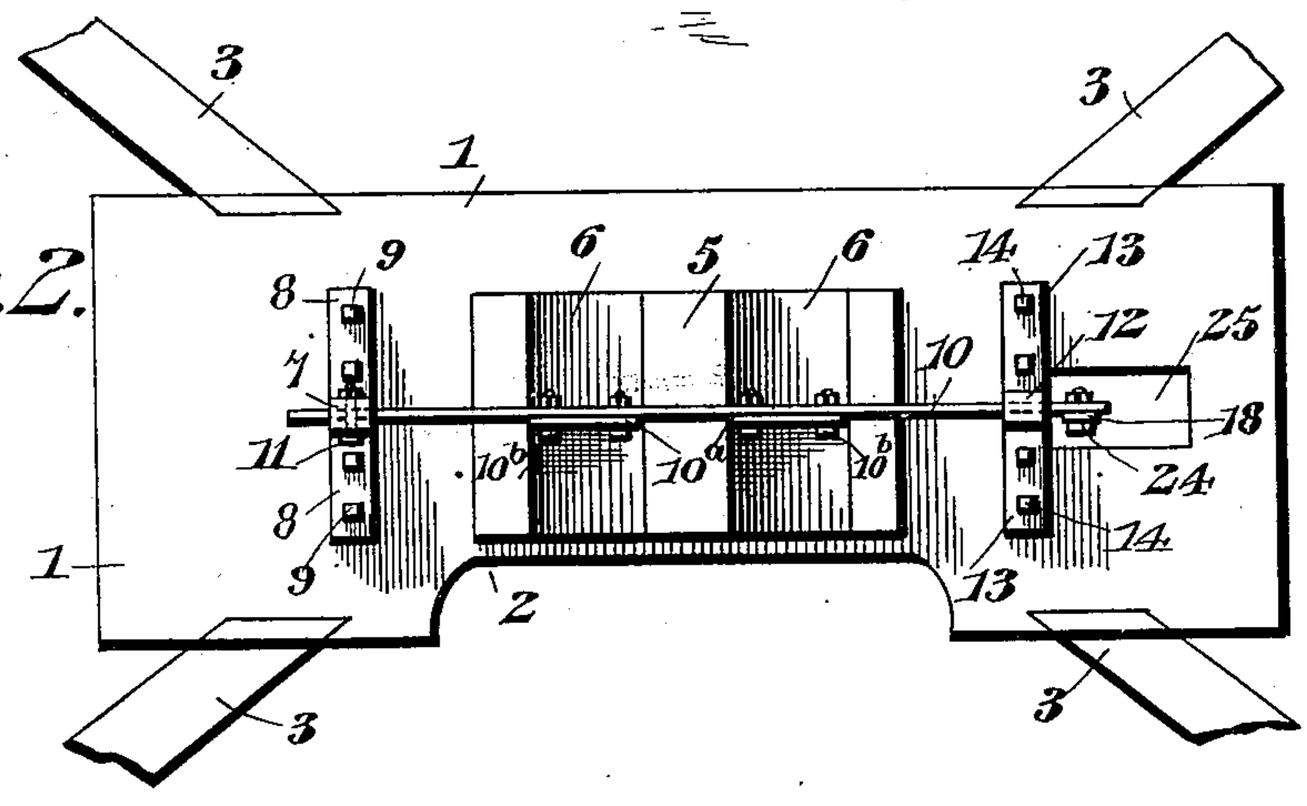


Fig. 2.



Witnesses
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Fig. 3.

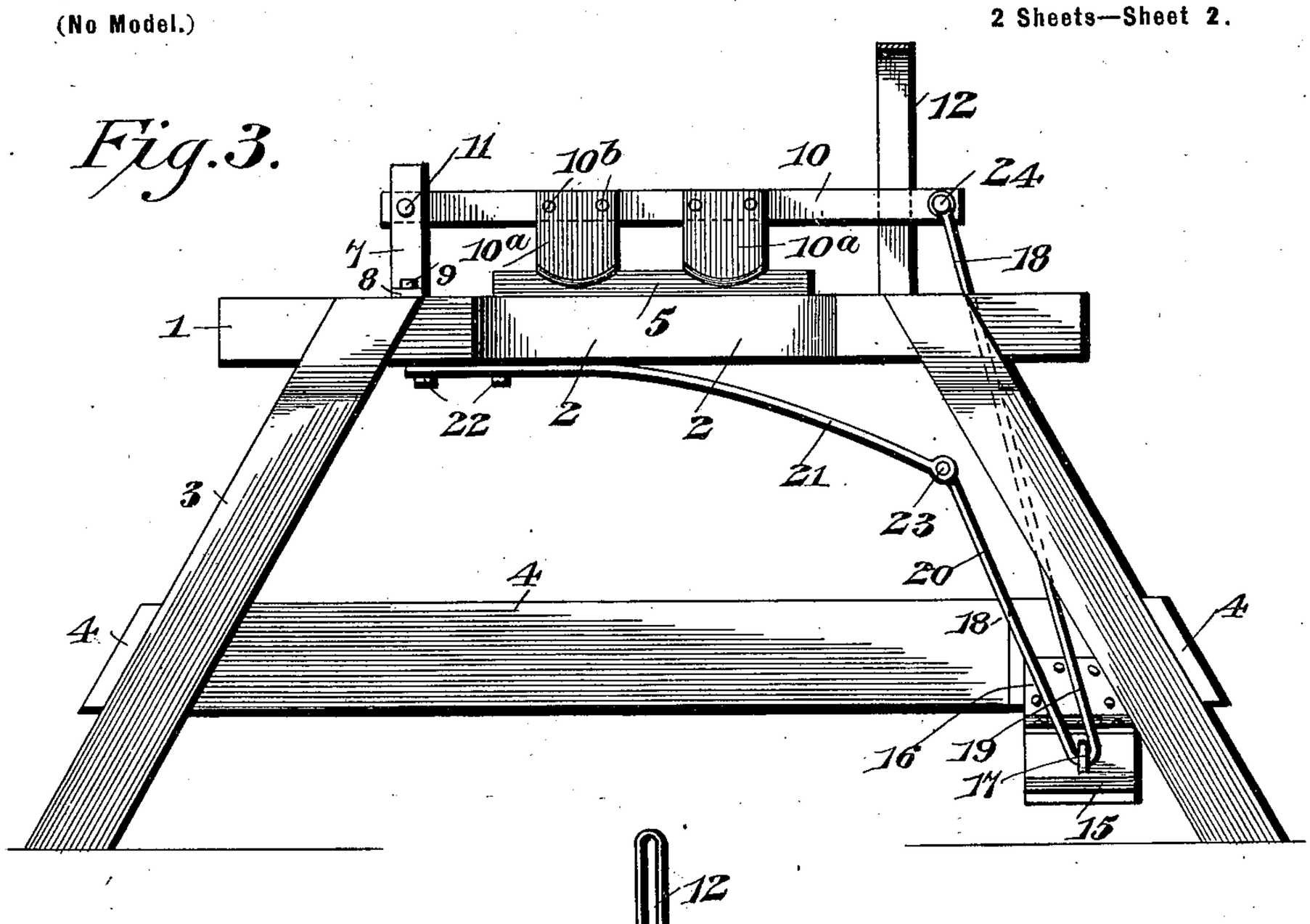
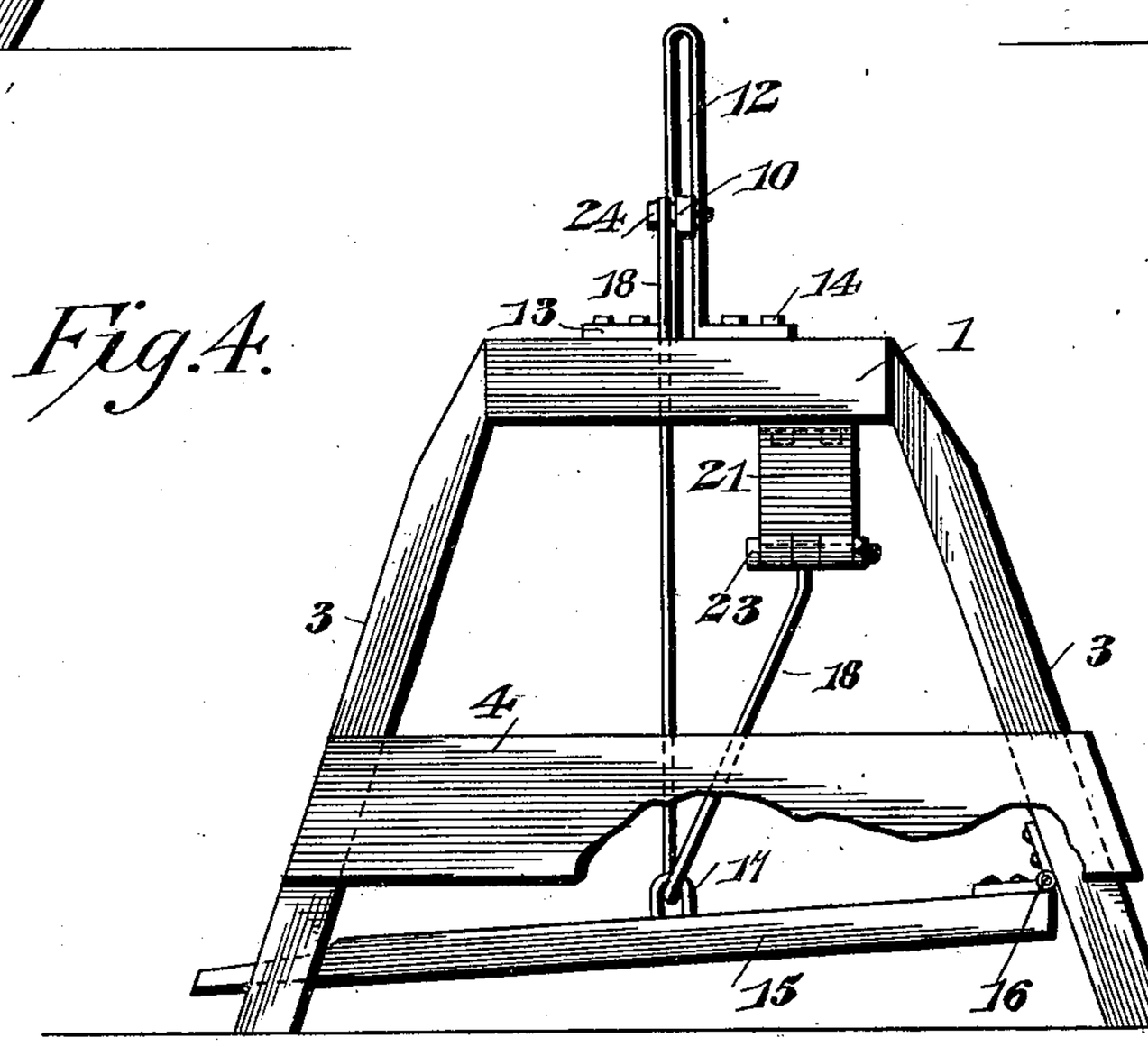


Fig. 4.



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UNITED STATES PATENT OFFICE.

ANTON WERNER, JR., OF NEW BRAUNFELS, TEXAS.

CORN-HUSKING MACHINE.

SPECIFICATION forming part of Letters Patent No. 652,825, dated July 3, 1900.

Application filed March 22, 1899. Serial No. 710,128. (No model.)

To all whom it may concern:

Be it known that I, ANTON WERNER, Jr., a citizen of the United States, residing at New Braunfels, in the county of Comal and State of Texas, have invented a new and useful Improvement in Corn-Husking Machines, of which the following is a specification.

My invention relates to improvements in corn-husking machines designed to cut off the butt-ends of ears of corn, and thereby facilitate the labor of removing the husks; and the primary object is to provide a simple and efficient machine in which the cutter-carrying bar is normally held in an elevated position, so that it is only necessary for the operator to depress a foot-treadle for the purpose of bringing the cutter-bar and the knives thereon into active relation to curved seats in a bed-plate for severing the butt-ends of the ears and releasing the husks from said ears.

With these ends in view the invention consists in the construction, combination, and arrangement of parts, which will be hereinafter fully described and claimed.

To enable others to understand the invention, I have illustrated the same in the accompanying drawings, forming a part of this specification, and in which—

Figure 1 is a perspective view of a corn-husking machine embodying my invention. Fig. 2 is a plan view thereof with the legs of the framework broken away. Fig. 3 is a side elevation, and Fig. 4 is an end elevation.

Like numerals of reference denote like and corresponding parts in each of the several figures of the drawings.

1 designates the horizontal table upon which the operating devices are supported. To enable the operator to stand close to the cutter devices of the machine, this table is provided in one edge thereof with a recess 2. Near the corners of the table are rigidly secured the upper ends of the diverging legs 3, which are joined together by the horizontal brace-bars 4, and these legs and brace-bars form a strong framework designed to support the table 1 at an elevation convenient to the operator.

On the horizontal table is firmly secured a flat bed-plate 5, preferably of metal cast in a single piece. In the upper face of this bed-plate is provided or formed the curved recesses 6, that form seats adapted for the reception of ears of corn, and these seats extend transversely across the bed-plate, so as to open through the side edges thereof, and they lie parallel to each other.

Secured rigidly to the table at one end of the bed-plate 5 is a short fulcrum-standard 7, which occupies a fixed position in the median line of the table and bed-plate. This standard may be of any suitable construction; but I prefer to make it from a single bar of metal, which is bent to form the vertical portion of the standard and the oppositely-extending feet 8, which rest firmly on the table and are secured thereto by the bolts 9.

The cutter-carrying bar 10 consists of a straight length of metal, having one end thereof loosely fitted in the standard 7, and said end of the bar 10 is fulcrumed in the standard by a bolt 11, which passes through the standard and the bar, as clearly shown by the drawings. The opposite or free end of this cutter-bar is guided in a vertical direction within a loop-shaped standard 12, which is erected on the table 1 in line with the standard 7 and at the opposite end of the bed-plate 5. This guide-standard 12 is bent from a bar of metal into the loop-shaped upright portion and also bent at right angles to form the feet 13, adapted to firmly rest upon the table and to be secured thereto by the bolts 14. The cutter-bar 10 is arranged over the middle of the grooved bed-plate 5, and it is adapted to reciprocate or play vertically within the guide-standard 12, that serves to restrain the bar from lateral or sidewise displacement and maintain it in proper relation to the bed-plate. This bar 10 carries a series of knives or cutters 10^a, which are applied against one face of the bar and are secured firmly thereto in a detachable manner by the screws or bolts 10^b, as shown by the drawings, and these plates are spaced on the cutter-bar 10 a distance equivalent to the spacing of the grooves or seats 6 in the upper face of the bed-plate 5, whereby the blades or knives are adapted to enter the seats on the downward movement of the bar 10. The lower working edges of the plates or knives are made convex to conform to the shape of the recesses or seats 6, and said edges are beveled and sharp-

ened to enable the knives to readily sever the butt-ends of the ears. The knives are fastened detachably to the cutter-bar for the purpose of readily sharpening the same, and the cutting edges of said knives conform accurately to the contour of the seats 6, thus giving to the blades maximum efficiency in their operation on the ears of corn. It will be observed that the cutter-bar is pivoted at one end to a short fulcrum-standard and that the knives travel with the cutter-bar in its vertical play, thus giving to the knives a draw or shear cut, which is advantageous in that the parts are thereby combined to facilitate the operation of cutting the tough butt-ends of the ears.

The cutter-bar and its knives are normally sustained in elevated positions by the action of the spring, which is compactly disposed beneath the table, so as to be entirely out of the way of the operator, and said bar and knives may be readily depressed by foot-pressure, so as to leave both hands of the operator free for placing the ears of corn on the bed-plate or removing them from said bed-plate. The treadle-lever 15 is arranged transversely across the machine, near one end thereof, and said lever is hung or fulcrumed by the hinge or its equivalent 16, properly attached to one of the brace-bars 4 of the framework. To the treadle-lever is firmly secured a staple or eyebolt 17, which serves to attach a looped connecting-rod that forms the operative connection between the lifting-spring, the treadle-lever, and the cutter-bar, whereby the lever and cutter-bar are normally raised for ready operation by the attendant. The connecting-rod 18 (shown in the accompanying drawings) is a rod or bar of metal, bent or doubled upon itself to provide the branches 19 and 20, and the looped end of this rod is fitted in the staple or eyebolt 17, so as to loosely connect the rod to the lever. The lifting-spring, hereinbefore referred to, consists, preferably, of the strong leaf-spring 21, arranged beneath the table, near the side thereof opposite to the recess 2, and one end of this spring is firmly fastened on the table by the bolts 22. (See Fig. 3.) The short member 19 of the looped connecting-rod is attached to the free end of the leaf-spring 21 by a pivotal connection 23, while the long branch 20 of said connecting-rod passes vertically through a slot 25 in the table and is attached to the free end of the cutter-bar 10 by the pivotal bolt 24. It will be observed that the tension of the spring 21 is exerted to lift the looped connecting-rod, which in turn raises the treadle-lever and the cutter-bar, and it is only necessary for the operator to depress the treadle-lever sufficiently to overcome the resistance of the spring in order to lower the cutter-bar to bring the guides and blades into operative relation to the bed-plate.

The operation may be described briefly as follows: Both hands of the operator are free to place the ears of corn in the seats 6 of the bed-plate, and by applying foot-pressure to the lever 15 the connecting-rod 18 is depressed to move the cutter-bar 10 in a downward direction and force the blades or knives 10^a through the butt-ends of the ears of corn. The operator now removes the foot-pressure from the treadle to allow the spring to lift the connecting-rod and the cutter-bar, thereby retracting the knives from the bed-plate and allowing the ears of corn to be removed from the seats 6. The severance of the butt-ends of the corn-ears liberates the husks therefrom, and the husks may then be readily detached from the ears. The operator is now able to place other ears of corn in the bed-plate, and the operation is repeated.

Changes may be made in the form of some of the parts while their essential features are retained and the spirit of the invention embodied. Hence I do not desire to be limited to the precise form of all the parts as shown, reserving the right to vary therefrom.

Having thus described the invention, what I claim is—

1. A corn-husking machine comprising a frame having a table, a treadle-lever hung on the frame below the table, a spring arranged beneath the table, a vibratory cutter-bar provided with a cutter, and a stiff looped rod loosely connected at its looped end to the treadle-lever, and having its other ends attached pivotally to the spring and cutter-bar respectively, substantially as described.

2. A corn-husking machine comprising a suitable framework having a slotted table, a bed-plate provided with the transverse parallel seats, the standards secured to the table at opposite ends of the bed-plate, a treadle-lever hung on the framework below the table, a leaf-spring attached to the table on the under side thereof, a cutter-bar fulcrumed in one standard, guided in the other standard and provided with knives or cutters arranged to be presented to the seats of the bed-plate, and a stiff looped rod loosely connected at its doubled end to the treadle-lever and having its ends attached pivotally to the spring and the cutter-bar, respectively, substantially as described.

3. In a corn-husking machine, the combination with a table, of a vibratory cutter-bar carrying a cutter, a spring attached to the table, a treadle, and a bent connecting-rod connected at the bend with the treadle and having its ends connected pivotally to the spring and cutter-bar respectively, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

ANTON WERNER, JR.

Witnesses:

JARED R. JACKSON,

A. W. BITTER.