

No. 696,697.

Patented Apr. 1, 1902.

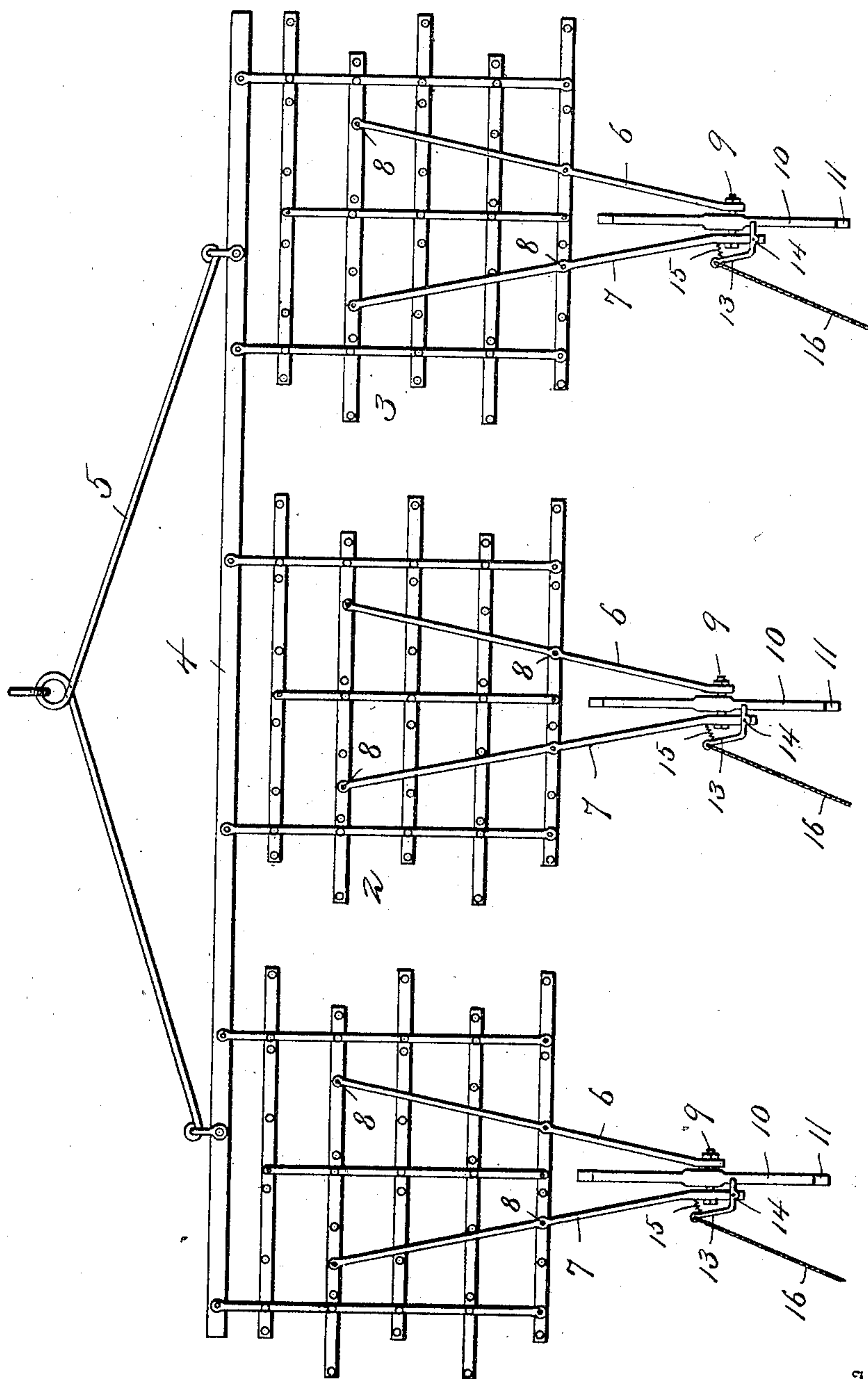
N. W. THOMPSON.
HARROW JACK.

(Application filed Aug. 31, 1901.)

(No Model.)

2 Sheets—Sheet 1.

FIG. 1.



Witnesses

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2 Sheets—Sheet 2.

FIG. 2.

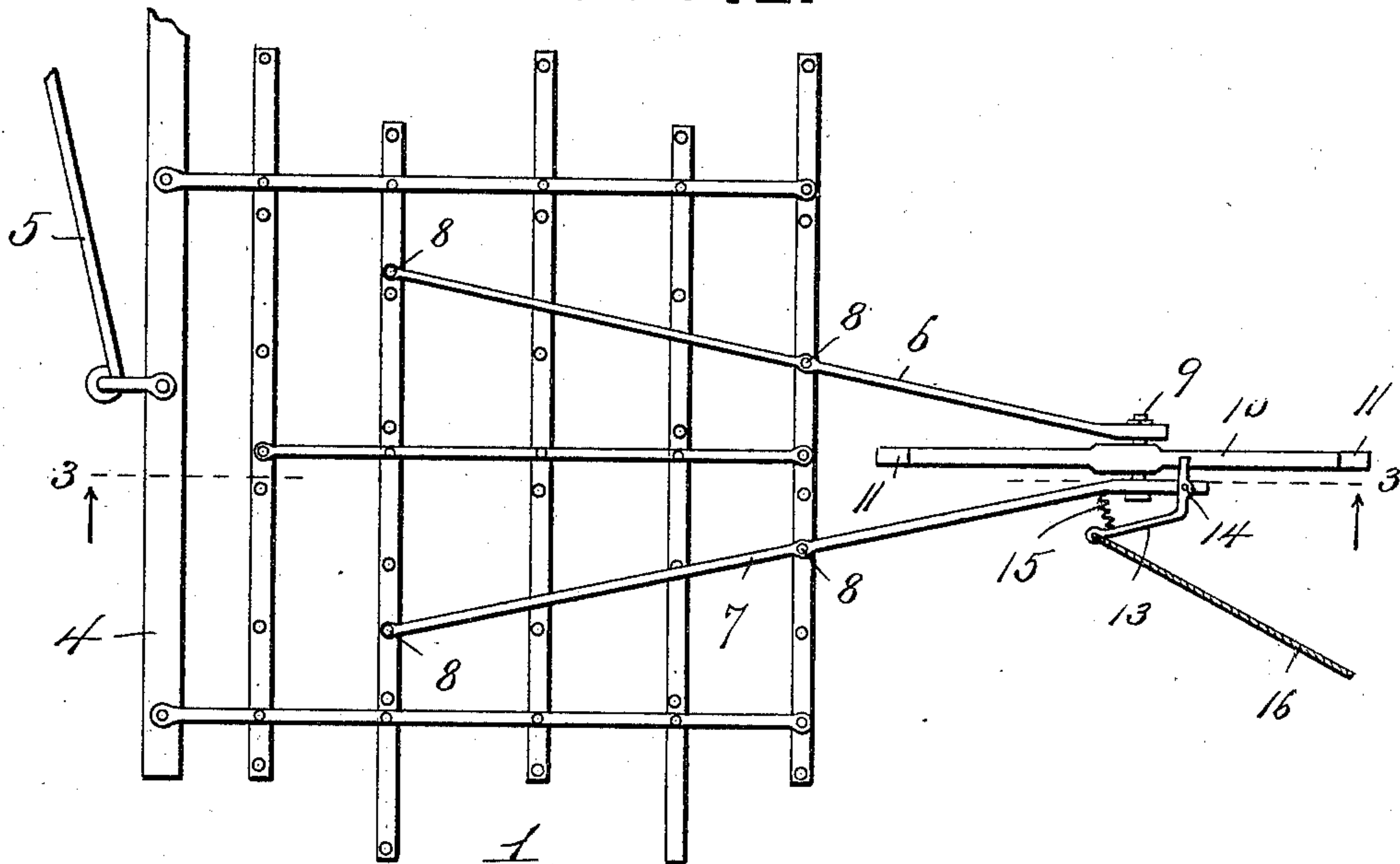


FIG. 3.

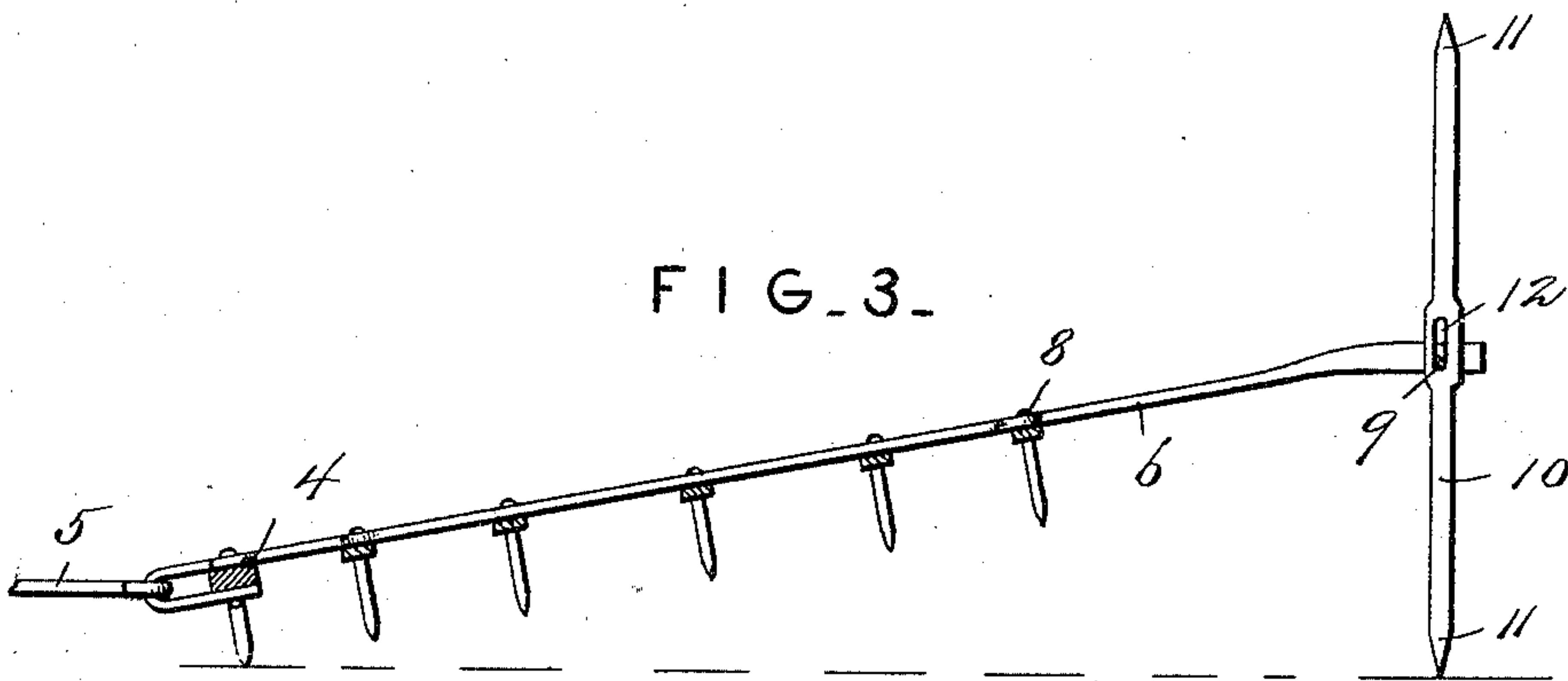
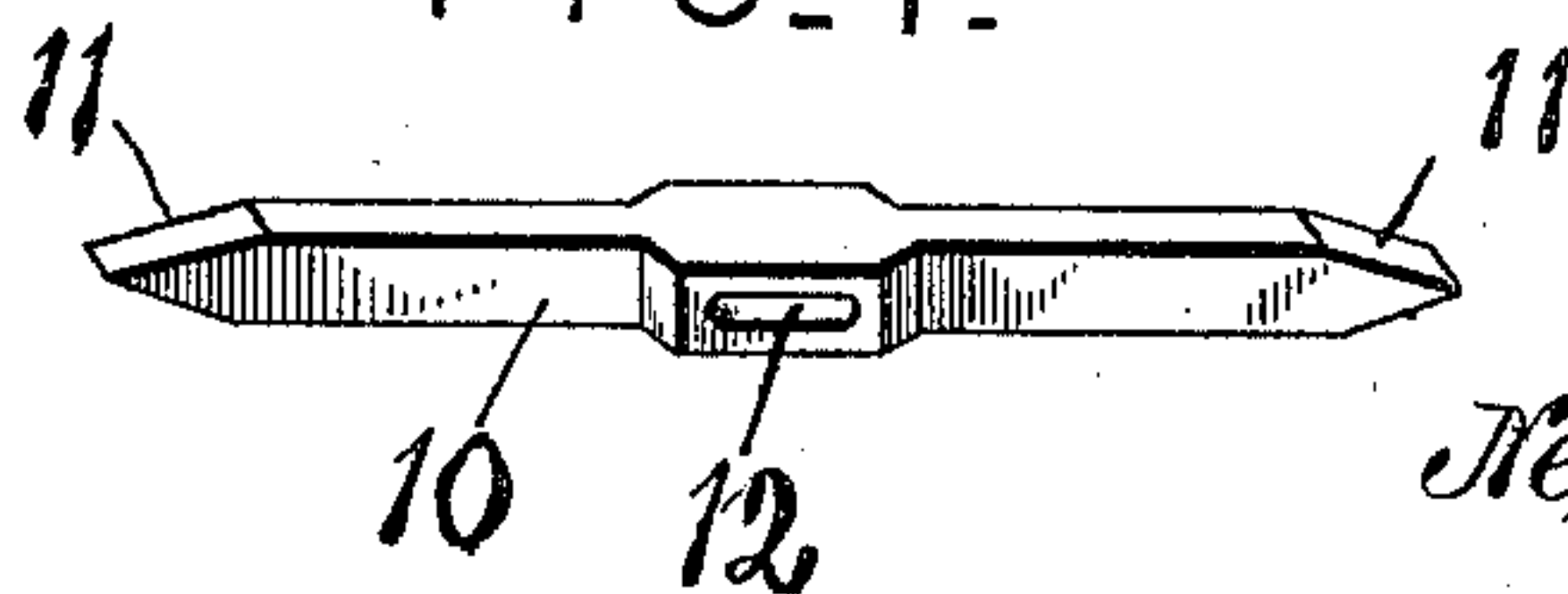


FIG. 4.



Witnesses

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UNITED STATES PATENT OFFICE.

NELSEN W. THOMPSON, OF BIGLOW, OREGON.

HARROW-JACK.

SPECIFICATION forming part of Letters Patent No. 696,697, dated April 1, 1902.

Application filed August 31, 1901. Serial No. 73,996. (No model.)

To all whom it may concern:

Be it known that I, NELSEN W. THOMPSON, a citizen of the United States, residing at Biglow, in the county of Sherman and State of Oregon, have invented new and useful Improvements in Harrow-Jacks, of which the following is a specification.

This invention relates to harrow-jacks; and the object in view is to provide in connection with a single or multiple harrow means whereby the harrow-frame or the sections thereof may be lifted or tilted for the purpose of clearing from the teeth trash or other matter adhering thereto, so as to keep the harrow-teeth in good operative condition.

It is also an object of this invention to provide in connection with a multiple harrow or a harrow comprising a series of harrow-sections means whereby any one of the harrow-sections may be tilted or lifted independently of the other sections.

The tilting device or jack is so constructed and arranged with respect to the frame of the harrow-section that when released by means of a suitable tripping device it will thereafter act automatically to elevate and lower the harrow-section with which it is associated. The jack may be thrown into operation at any desired moment by means of a trip under the control of the operator.

With the above and other objects in view the invention consists in the novel construction, combination, and arrangement of parts hereinafter fully described, illustrated, and claimed.

In the accompanying drawings, Figure 1 is a plan view of a harrow comprising a number of sections, each of which is equipped with an independently-operable jack. Fig. 2 is an enlarged plan view of a single harrow-section, showing the jack and tripping device. Fig. 3 is a central longitudinal section through the same, showing the jack in operation. Fig. 4 is a detail perspective view of the jack.

Like numerals of reference denote like parts in all the figures of the drawings.

The operating-jack contemplated in this invention is equally applicable to a single harrow or to a harrow comprising a plurality of sections. In Fig. 1 I have illustrated a harrow comprising a series of sections 1, 2,

and 3, all of the sections being coupled to a common drag-bar 4, to which is applied a draft attachment 5. In said figure it will be seen that an independent operating cord or connection is used for the jack of each harrow-section, thus enabling any one or more of the sections to be raised or tilted for clearing the trash and other matter therefrom without interfering with the other sections.

In describing the details of construction reference will be made especially to Figs. 2 and 3, in which it will be seen that the harrow-section 1 is provided with a pair of rearwardly - converging bars 6 and 7, the same being bolted, riveted, or otherwise secured at 8 to the frame of the harrow, said bars extending in rear of the frame of the harrow and forming practically a rigid projecting bracket. One of the bars, as 6, is shorter than the other bar, and a pivot-bolt or short axle 9 is passed through the projecting ends of the bars 6 and 7 to form a fulcrum for the jack 10. This jack is in the form of a straight bar having the opposite ends thereof pointed, as at 11, and provided centrally with a longitudinal slot 12, through which the bolt or axle 9 passes. The jack normally occupies a substantially horizontal position, as shown in Figs. 1 and 2, with the bolt 9 resting in the rear end of the slot 12. Therefore the forward portion of the bar is the longer, and consequently the heavier, so that when said bar or jack is released, the forward end falls to the ground, causing the pointed extremity thereof to engage the soil, whereupon in the further forward movement of the harrow the jack is brought to a vertical position, as shown in Fig. 3. This elevates the rear end of the harrow and causes the trash and other matter adhering to the harrow-teeth to be dragged therefrom by the stubble. In the further forward movement of the harrow the jack falls to its normal horizontal position and is then slid forward to be in readiness for a second operation. In order to provide means for releasing or tripping the jack, one of the bars, as 7, is made longer than the bar 6, and a bell-crank trip-lever 13 is fulcrumed thereon, as shown at 14. The shorter arm of said trip-lever normally projects across the path of the jack, as clearly shown in the plan views, while the longer arm of the trip-lever

is held in proper position by means of a retracting-spring 15. Connected with the outer extremity of the trip-lever is a trip-cord 16, which the operator grasps in order to rock
5 the trip-lever out of engagement with the jack.

From the foregoing description it will be seen that all the operator has to do is to pull upon the proper trip-cord 16, whereupon the
10 jack of that harrow-section will be released and will automatically operate to raise and lower the rearend of the harrow-section with the result stated. After the jack returns to its horizontal position it is slid forward and
15 is then held in a horizontal position by means of the trip-lever 13. The operator may thus throw one or more of the jacks into operation, each jack operating independently of the others.

20 It will of course be understood that the jack or lifter-bar may be made of a length suitable to give the desired tilt or elevation to the harrow-section and that the slot 12 may be made longer or shorter, as may be deemed
25 expedient. These and other changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

30 Having thus described the invention, what is claimed, and desired to be secured by Letters Patent, is—

1. The combination with a harrow, of a jack
35 having a central longitudinal slot wherein it is loosely connected therewith.

2. The combination with a harrow; of a reversible jack pivotally mounted in the rear of the harrow and connected with the frame thereof.

3. The combination with a harrow having 40 rearwardly-projecting bars; of a jack pivotally mounted between said bars, and means for holding and releasing the jack.

4. The combination with a harrow; of a jack pivotally mounted in rear of the harrow and 45 connected therewith, and a trip-lever arranged to have a portion thereof moved into and out of the path of the jack.

5. The combination with a harrow; of rearwardly-converging bars projecting therefrom, 50 a centrally-slotted jack pivotally mounted between said bars, a trip-lever for holding and releasing said jack, a spring for retracting said trip-lever, and means for operating the trip-lever. 55

6. The combination with a harrow; of rearwardly-converging bars extending backward therefrom, a bolt or axle connecting the rear 60 ends of said bars, a jack having a centrally-arranged longitudinal slot which receives said bolt or axle and adapts the jack to be slid longitudinally, and a tripping device for holding and releasing the jack.

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

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Witnesses:

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