

No. 715,383.

Patented Dec. 9, 1902.

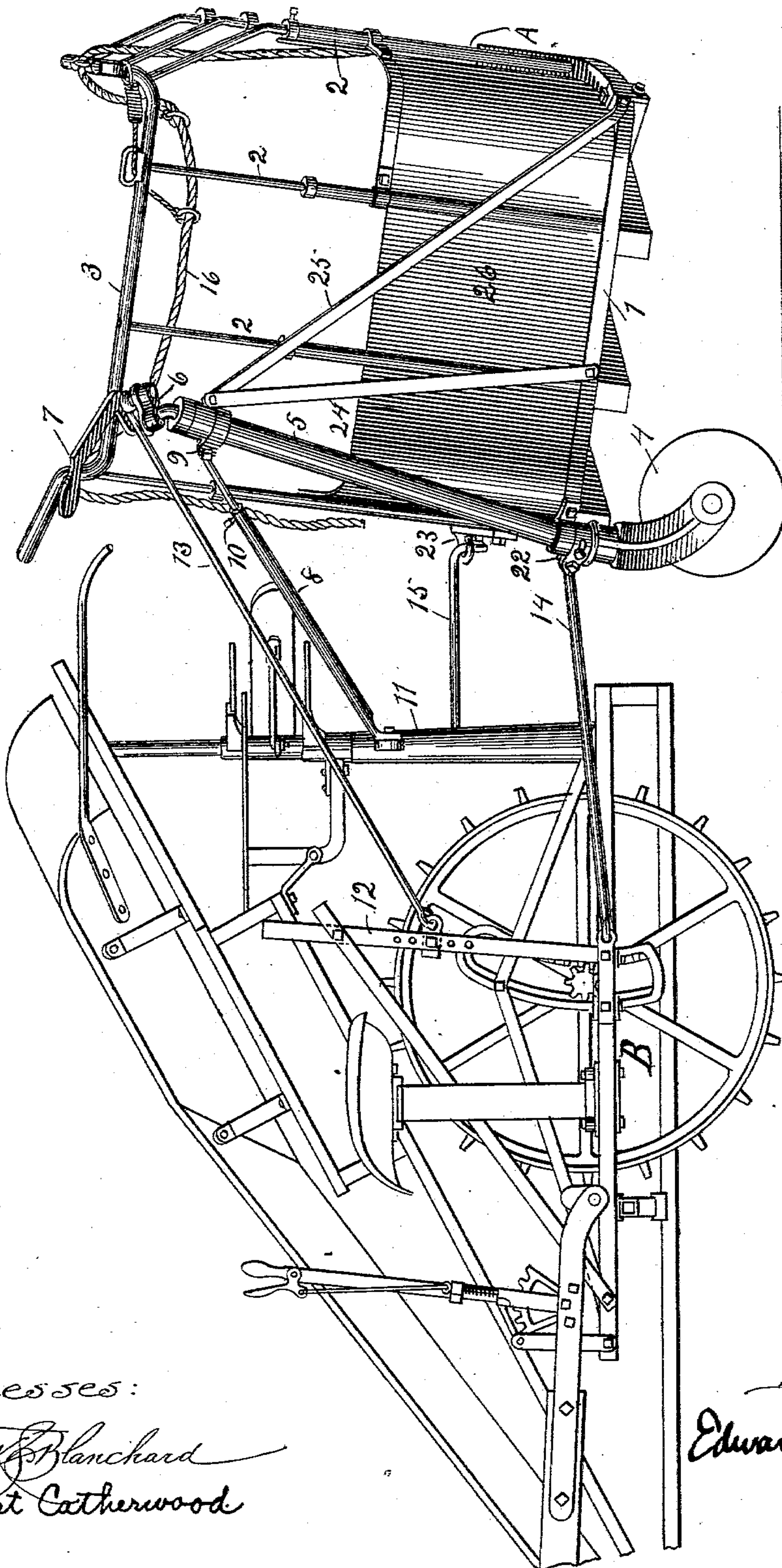
E. A. JOHNSTON.
SHOCK CARRIER.

(Application filed Jan. 9, 1901.)

(No Model.)

3 Sheets—Sheet 1.

Fig. 1.



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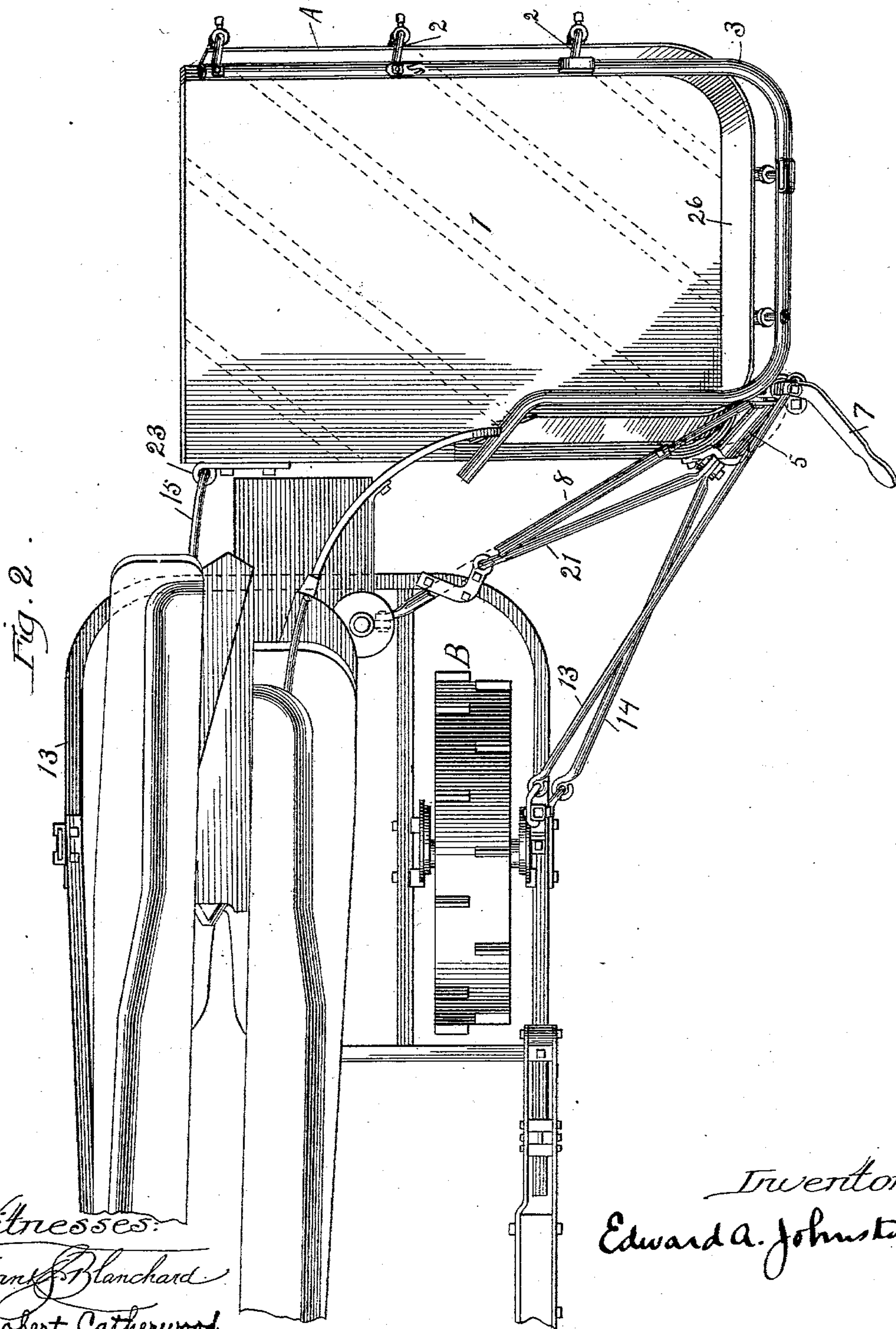
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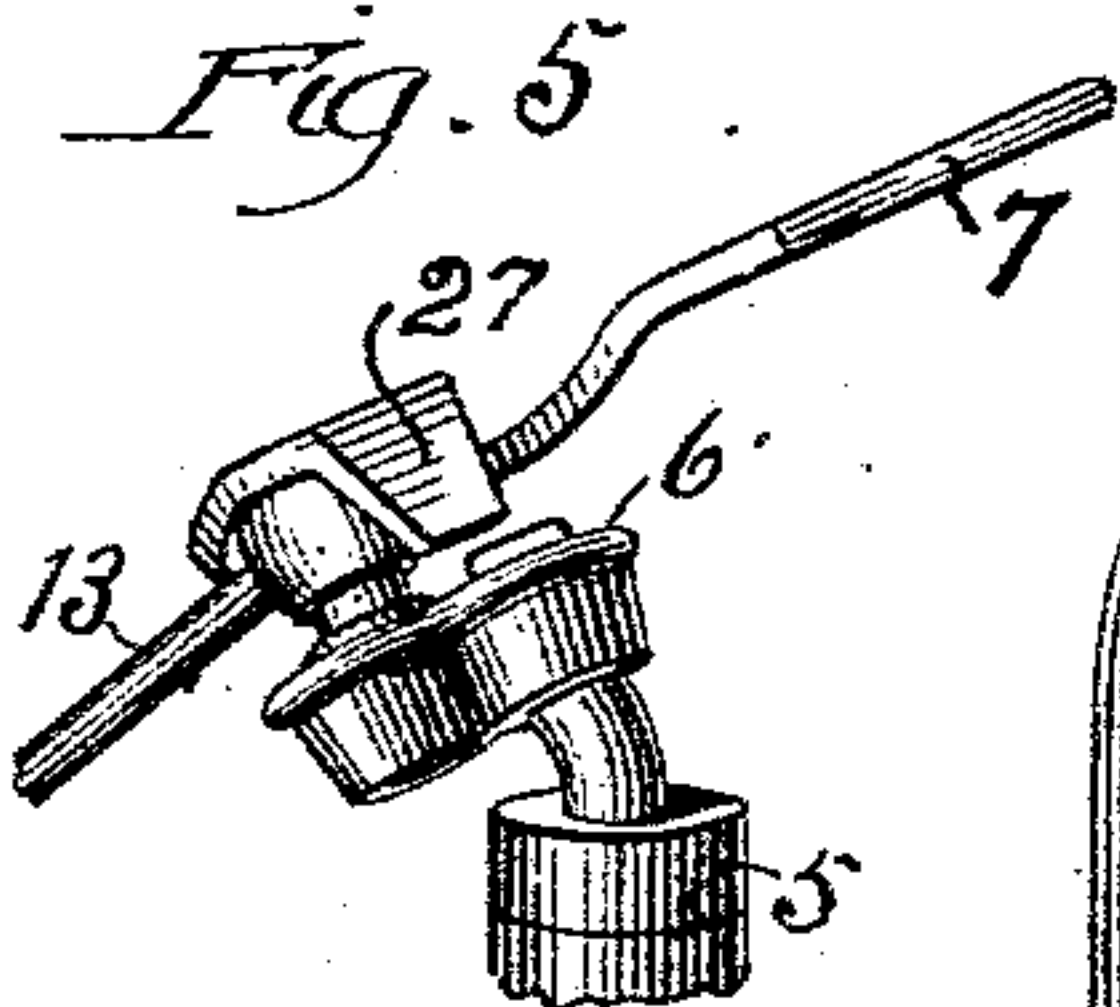
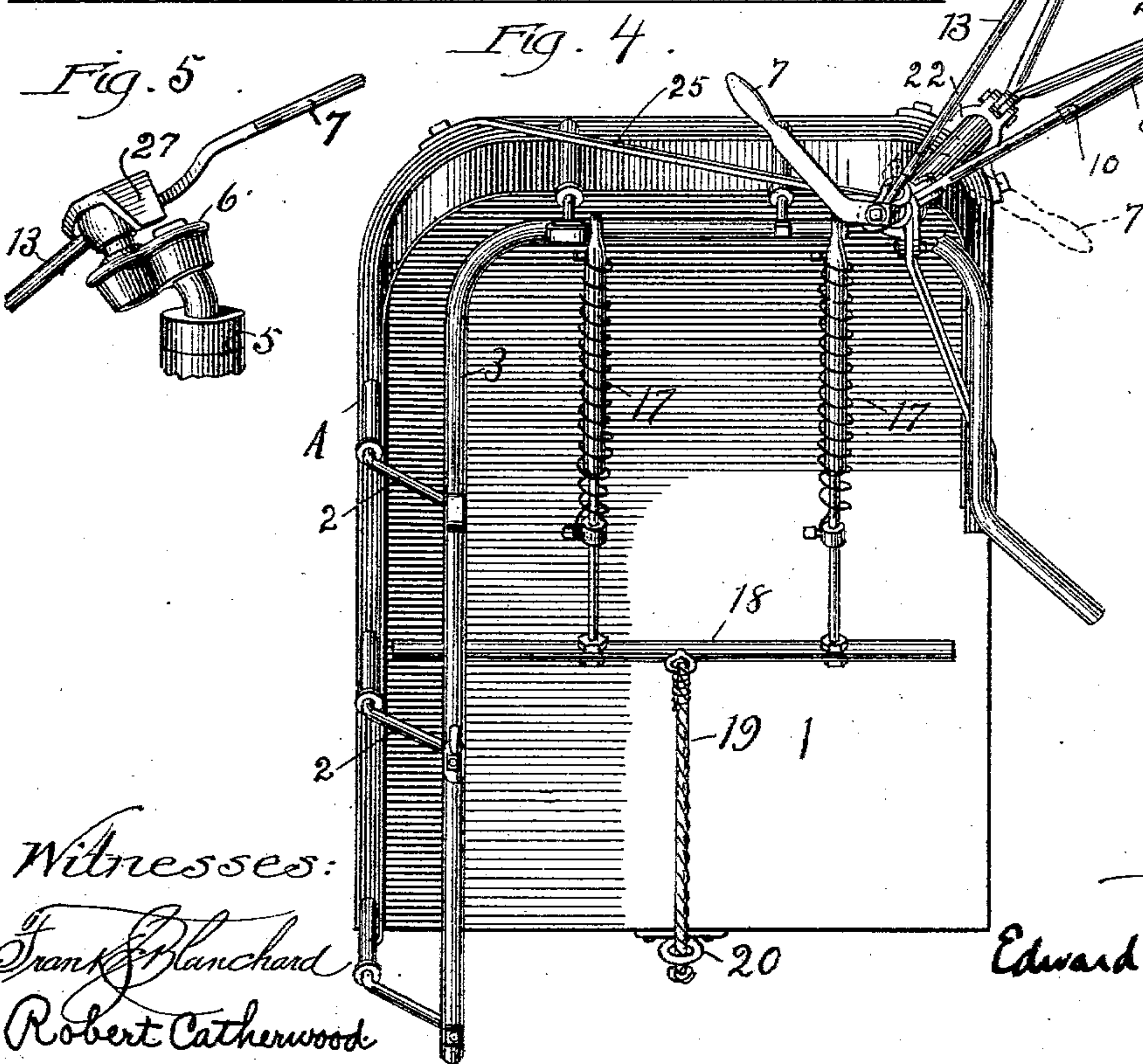
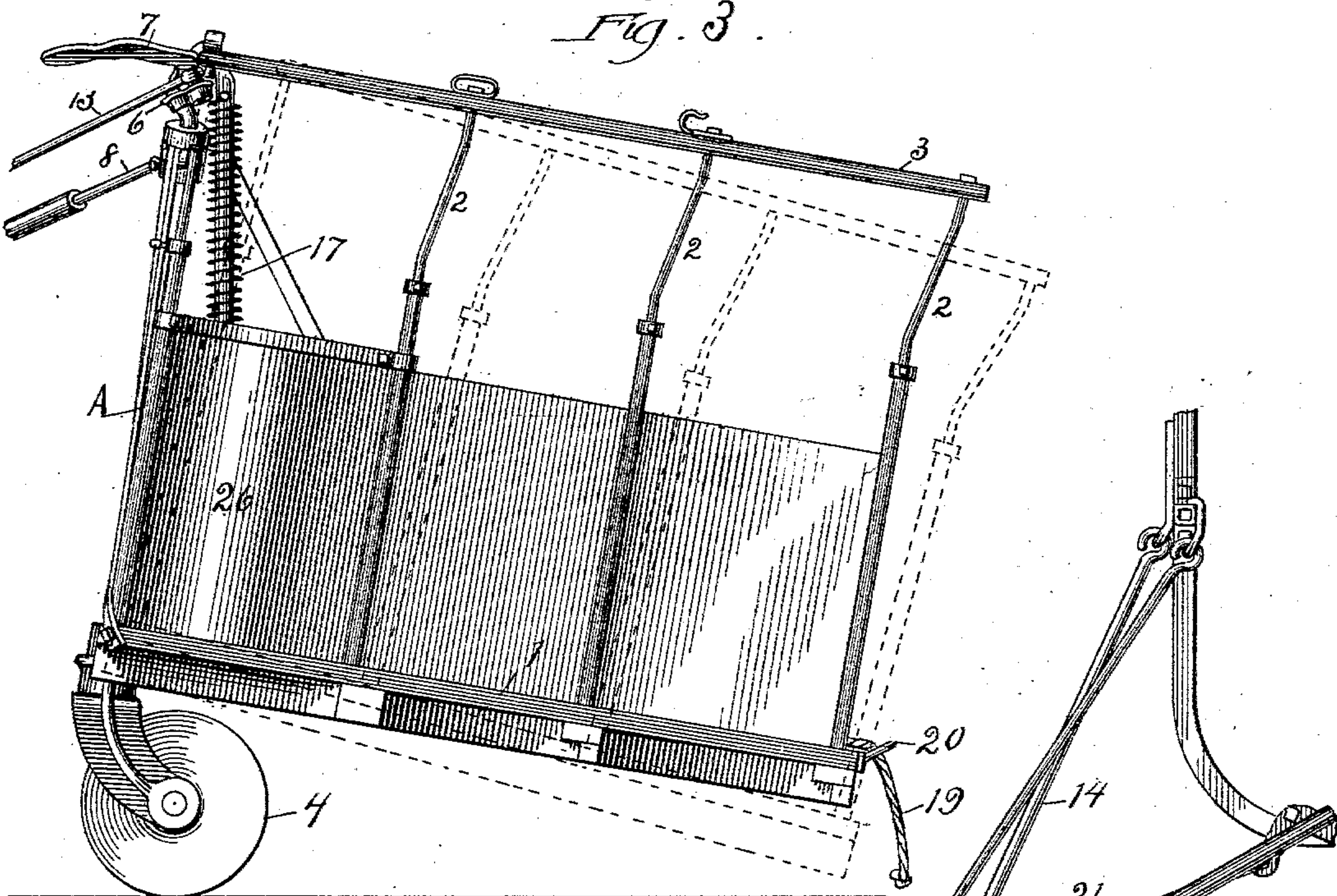
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UNITED STATES PATENT OFFICE.

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SHOCK-CARRIER.

SPECIFICATION forming part of Letters Patent No. 715,383, dated December 9, 1902.

Application filed January 9, 1901. Serial No. 42,697. (No model.)

To all whom it may concern:

Be it known that I, EDWARD A. JOHNSTON, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Shock-Carrier, of which the following is a specification.

This invention relates to shock-carriers designed for use in connection with harvesting-machines, the special object of the invention being to provide a carrier adapted to receive and retain in upright position successive bundles of corn as they come from the binder and adapted to conveniently discharge them outside the path traveled by the team in the next round.

Figure 1 of the accompanying drawings illustrates an embodiment of this invention as applied to an upright corn-harvester of a well-known type, the shock-carrier being in the position in which it travels for the reception and carriage of the bundles. Fig. 2 is a plan of the same. Fig. 3 is a side view of the shock-carrier when swung into discharging position, the dotted lines indicating the position assumed in the downward tilt, hereinafter described. Fig. 4 is a plan of the shock-carrier, showing therein mechanism for ejecting the shock. Fig. 5 is a somewhat-enlarged view of the crank used in tilting the carrier.

A represents the shock-carrier, and B any suitable harvester to which it is attached, the harvester here illustrated being one heretofore well known as adapted to cut and bind corn in a vertical position. The carrier has a platform 1, which is substantially horizontal when in receiving and carrying position. From this platform extend the uprights 2, converging inward at their upper ends and carrying a rail 3. This rail is shown as bent toward the harvester at the receiving end, so as to facilitate the introduction of the bundles. The carrier is mounted on the broad-faced wheel 4, from which extends upward the inclined standard 5. A collar 22, embracing this standard slightly above the wheel, has a link connection with the harvester through rods 14 and 21. A collar near the upper end of this standard is connected by rod 8 to the upright 11 on the harvester,

the connection being such as to permit the angular movement of this rod required for the tilting of the carrier, hereinafter described. The rod 8 is shown as adjustable to different lengths by means of the set-screw 10. The upper end of the standard 5 is bent, as shown, and has pivoted thereto one end of the crank-arm 6, to the other end of which is pivoted one end of the rod 13. Rigidly secured to the crank-arm 6 is the crank-handle 7, by which it is operated. A stop 27, in one part with the crank-handle or otherwise rigidly attached thereto, is adapted to engage the rod 13 and hold the parts in their locked position. The opposite end of rod 13 is connected with the upright 12 on the harvester, so as to permit the swinging movement hereinafter referred to.

15 is a rod having a suitable link connection with the harvester and adapted to be hooked into the eye 23 or other suitable connection on the carrier.

16 is a rope, cord, or chain hung upon the carrier near the upper railing 3 in such manner as to be readily passed around the heads of the bundles, as hereinafter described.

17 represents extensible rods controlled by coil-springs hung from the rail 3, having at their lower ends, somewhat above the floor of the carrier, the cross-bar 18, to which is attached rope or chain 19, extending through the eye 20 and sufficiently beyond to be readily seized and operated, as hereinafter described.

24 and 25 are braces connected to the standard 5 near its upper end and to the platform of the carrier.

26 is a wall, rim, or lateral support for the bundles, extending partly around the carrier at or near the bottom.

27 (shown in Fig. 5) is a stop serving to limit the movement of the crank in each direction.

When connected to the harvester in the position illustrated in Figs. 1 and 2, the carrier rides on the wheel 4 in suitable relation to the harvester to conveniently receive the bundles of corn as they are bound and discharged and while they are retained upright. A man may ride on the carrier, standing upon the platform, to guide these bundles into suit-

able position as they come from the binder. The rail 3 is brought by the inward bend of the uprights 2 into a position suitable for sustaining the tops of the bundles, while their butts are crowded against and supported by the lower wall or rim 26. When a sufficient number of bundles to form a shock has been thus collected, the rope 16 may be passed around them near the top for the purpose of temporarily confining them as a shock. Any proper binding for the shock is then applied, and when the shock is thus completed the rope 16 is released and the rod 15 is unhooked, permitting the carrier to swing on the inclined upright 5 until its open end extends rearward and downward. As the carrier reaches the limit of its rearward movement it engages the crank-handle 7, turns the crank-arm 6 on its pivot, and carries the connection of the rod 13 with said crank-arm out of its locked position and beyond its dead-center, whereupon the three centers of connection between the upright 12 and the standard 5 are immediately brought into a straight line by the weight of the shock, thus, in effect, lengthening the rod 13 by twice the amount of the eccentricity of the crank-arm. This movement carries the parts into position shown in Figs. 3 and 5. The practical lengthening of the rod 13 gives the standard 5 an increased rearward inclination, which is permitted by rod 8, for as the standard 5 is inclined to the rear it is also inclined toward the machine, the top swinging on an arc of a circle about the connection of the rod 8 with the binder-frame 11 as the center. This increased rearward inclination of the standard 5 causes the carrier to tilt farther into the position represented by the dotted lines in Fig. 3. The stop 27 serves as a limit to the movement of the crank. The crank passes the center in turning from dumping to receiving position, and is thus locked when arrested by this stop. The harvester, which usually remains stationary while the shock is being bound, may be then started up, permitting the shock to slide rearward and be discharged. In order to facilitate its discharge, I provide the ejecting mechanism. (Illustrated in Fig. 4.) A pull upon the rope 19 draws the cross-bar 18 rearward, forcing the shock before it. The spring-rods 17, yielding as this pull is applied, enable the cross-bar to travel in approximately horizontal position instead of forcing it to travel in the arc of a circle, as they would if incapable of extension. The springs serve also to bring back the rods into normal receiving position when the cord 19 is released. If found desirable, an anchor may be attached to the end of the rope 19, adapted to engage the ground, so that the team may be utilized to discharge the shock. The carrier is then swung back to the position illustrated in Figs. 1 and 2 and the rod 15 hooked into the eye 23, as before. It may be restored to this position either before or after the harvester is started forward. The supporting-standard

5, upon which the carrier swings, is in such position relative to the harvester as to insure the discharge of the shock substantially farther from the standing corn than the position where the binding takes place, and hence well outside the path of travel in the next round. This is a further advantage, in that it brings the draft of the bundle-carrier on the opposite side of the master-wheel of the harvester from the cutting and binding mechanism, thus serving to counterbalance the draft of the harvester.

I claim—

1. A shock-carrier pivotally hung on an inclined standard carried by a wheel, and adapted to swing thereon from a position substantially at right angles to the line of travel to a position substantially parallel to the line of travel, means for connecting the said standard to a harvester and for alternately connecting and releasing the discharge end of the receptacle to and from the harvester, whereby the carrier may be maintained in the first-mentioned position when receiving the bundles and swing rearward and outward to discharge the shock, for the purposes described.

2. In a shock-carrier, the combination of a bundle-receptacle pivotally hung on an inclined standard, a wheel carrying said standard, rods connecting said standard with a harvester, a detachable connection for said carrier on the harvester near the discharge end of the carrier, and a rail above the deck adapted to support the bundles in a vertical position, for the purposes described.

3. In a shock-carrier, the combination of a bundle-receptacle pivotally hung on an inclined standard, a wheel carrying said standard, means for connecting said standard with the rear of the harvester and means for connecting to the harvester and releasing therefrom the discharge end of the receptacle whereby it is enabled to swing rearward and outward, and means connected to said standard whereby the discharge end may be further tilted downward, for the purposes described.

4. In combination with the bundle-receptacle of a shock-carrier, the inclined standard pivotally supporting the receptacle, the crank thereon adapted to tilt the receptacle, means for automatically increasing the inclination of said standard as the receptacle swings thereon, and means for connecting the upper and lower ends of said standard to the harvester adapted to permit such tilting, for the purposes described.

5. In combination with the bundle-receptacle swinging on an inclined standard, the overhanging rail adapted to support the heads of the bundles and maintain them in vertical position, and means for discharging the same while retained in vertical position, for the purposes described.

6. In combination with the bundle-receptacle and discharger extending transversely

thereof and suspended therein above the platform upon which the bundles stand, the swinging spring-controlled support for said discharger, said support yielding to permit the
 5 discharger to be drawn horizontally to discharge the shock and retracting to restore it to normal position, and means whereby the operator can draw said discharger toward the end of the platform when the machine is at
 10 rest, for the purpose described.

7. In combination with a harvester, a shock-carrier extending transversely in the rear thereof pivotally mounted on an upwardly and rearwardly inclined standard, means for
 15 securing such standard to the rear of the harvester at a point lateral thereto and on the opposite side of the master-wheel from the binding mechanism, and means for detachably connecting the discharge end of the carrier to the harvester in proximity to the discharge of the binder, whereby upon the release of the discharge end it swings rearward, outward and downward, substantially as described.

25 8. In combination with a harvester, a shock-carrier pivotally mounted on an inclined standard, a wheel upon which said standard is carried, means for connecting the lower end of said standard to the harvester, an adjustable connection between the upper end of the standard and the harvester, a crank
 30 whose arm is connected to the upper end of said standard, said crank being mounted on a rod connected to the harvester and serving to tilt said standard, and means for connect-

ing the discharge end of the receptacle to and releasing it from the harvester near the binder-discharge whereby the receptacle is enabled to receive and carry the bundles and discharge the shock, substantially as described. 40

9. The shock-carrier pivotally mounted on an outwardly and rearwardly inclined standard having connections for the harvester substantially as described, the crank by which the inclination of said standard is increased, 45 farther tilting the carrier, and means for connecting the discharge end of the carrier to the harvester and releasing it therefrom, whereby it is adapted to receive the bundles in proximity to the discharge of the binder and to be 50 swung rearward, outward and downward, and means for ejecting the shock therefrom, substantially as and for the purposes described.

10. In a shock-carrier, the combination of an inclined standard having a farther-inclined 55 arm at its upper end, a bundle-receptacle mounted and adapted to swing on said standard, a crank-arm pivoted to said inclined arm, a link connected to the harvester at one end and pivoted to said crank-arm at the other 60 end, and a crank-handle rigidly secured to said crank-arm in position to be engaged and actuated by said receptacle when swinging to dumping position, whereby additional tilt is given to said standard, for the purpose described. 65

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Witnesses:

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