

J. J. NOHR.
COMBINED STALK CUTTER AND ROLLER.

APPLICATION FILED APR. 18, 1905.

2 SHEETS—SHEET 1.

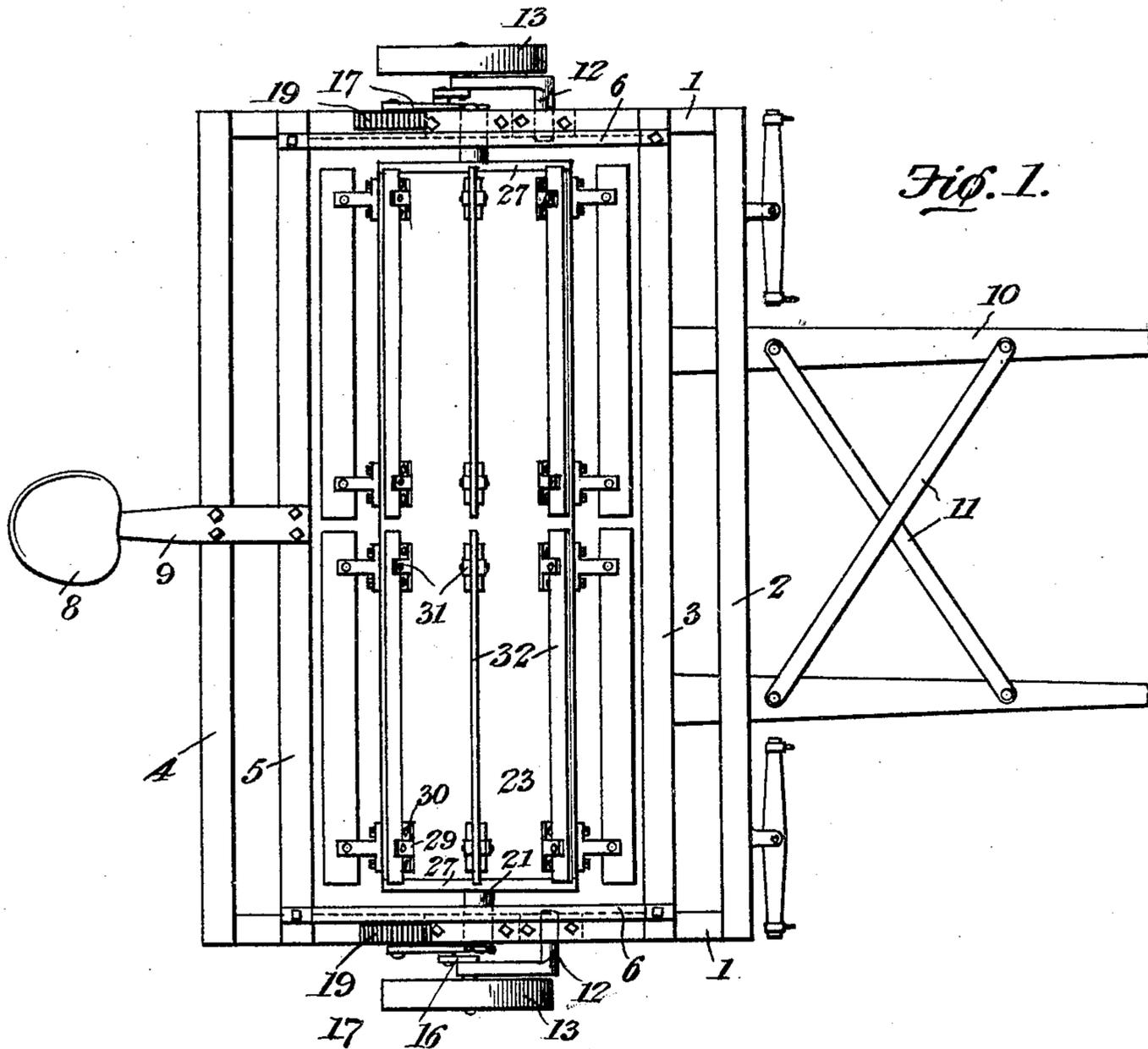


Fig. 1.

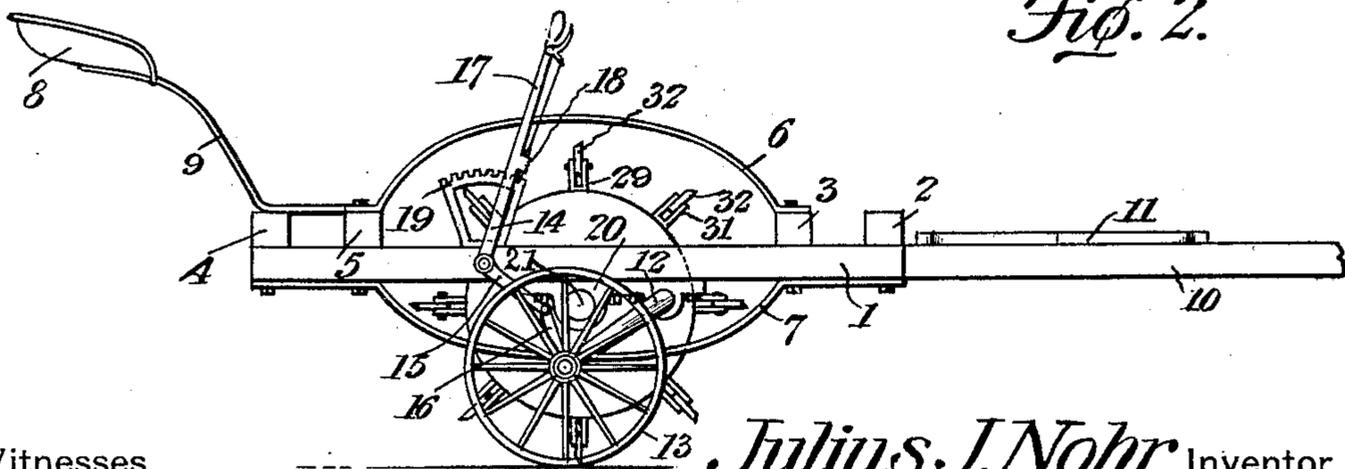


Fig. 2.

Witnesses

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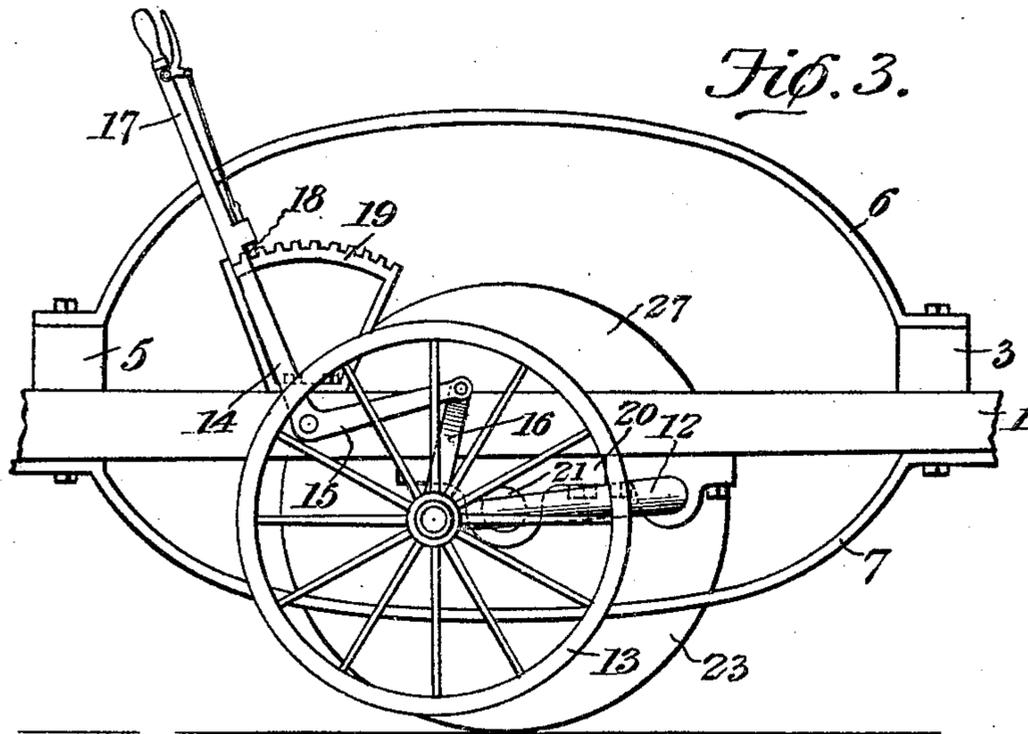


Fig. 4.

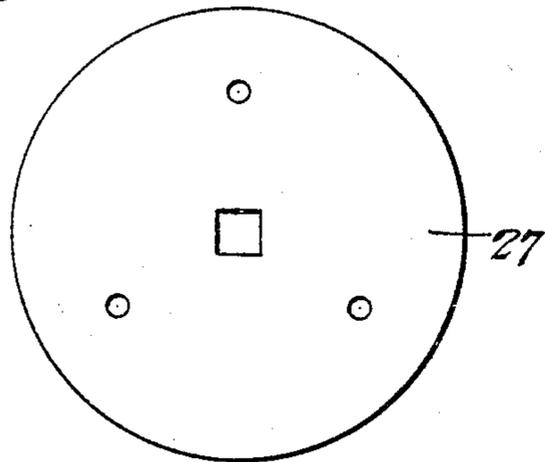


Fig. 5.

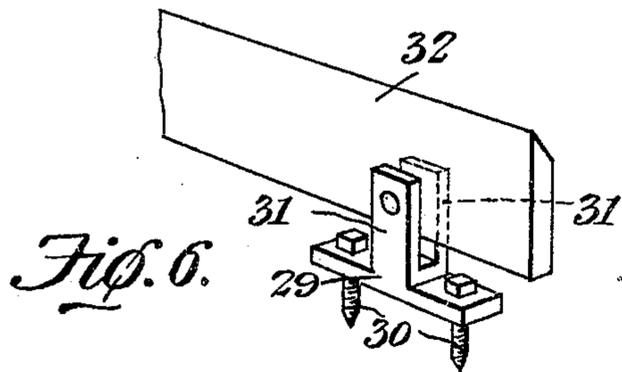
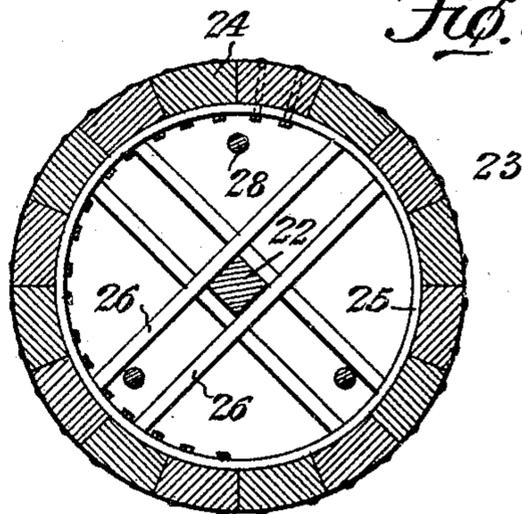


Fig. 6.

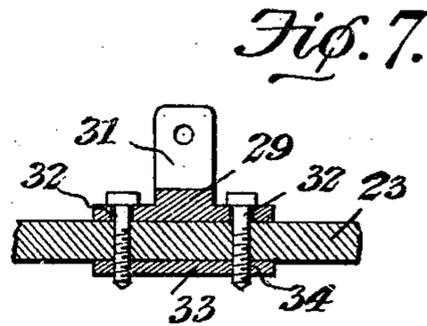


Fig. 7.

Witnesses
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UNITED STATES PATENT OFFICE.

JULIUS J. NOHR, OF YANKTON, SOUTH DAKOTA.

COMBINED STALK-CUTTER AND ROLLER.

No. 799,488.

Specification of Letters Patent.

Patented Sept. 12, 1905.

Application filed April 18, 1905. Serial No. 256,207.

To all whom it may concern:

Be it known that I, JULIUS J. NOHR, a citizen of the United States, residing at Yankton, in the county of Yankton and State of South Dakota, have invented a new and useful Combined Stalk-Cutter and Roller, of which the following is a specification.

This invention relates to stalk-cutters and land rollers and pulverizers; and it has for its object to provide an implement of this class which shall possess superior advantages in point of simplicity, durability, and general efficiency.

With these and other ends in view, which will readily appear as the nature of the invention is better understood, the same consists in the improved construction and novel arrangement and combination of parts, which will be hereinafter fully described, and particularly pointed out in the claims.

In the accompanying drawings has been illustrated a simple and preferred form of embodiment of the invention, it being, however, understood that no limitation is necessarily made to the precise structural details therein exhibited, but that changes, alterations, and modifications may be made within the scope of the invention when such changes and modifications may be resorted to without departing from the spirit of said invention.

In the drawings, Figure 1 is a top plan view of a machine constructed in accordance with the principles of the invention. Fig. 2 is a side elevation of the same. Fig. 3 is a side view showing the machine arranged as a land-roller. Fig. 4 is an end view of the roller. Fig. 5 is a transverse sectional view of the same. Fig. 6 is a perspective detail view showing a portion of one of the cutters and the fastening means for the same. Fig. 7 is a sectional detail view illustrating a modification.

Corresponding parts in the several figures are indicated throughout by similar characters of reference.

The frame of the improved machine includes the side bars 1 1, which are connected at and near their front ends by means of cross-bars 2 3 and at and near their rear ends by cross-bars 4 5, said cross-bars being disposed upon the upper sides of the side beams. The cross-bars 3 5 are connected above the side members 1 by means of arch-braces 6, and the side beams 1 are provided upon their under sides with similar arch-braces 7, whereby the frame

construction is greatly reinforced. A seat 8 is supported upon a bar 9, mounted upon the cross-bars 4 5, and draft-tongues 10 are connected with and extend forwardly from the front cross-bars 2 3, said draft-tongues being reinforced by obliquely-disposed braces 11.

The side members of the frame of the machine are provided with boxes affording bearings for cranks 12, carrying at their free ends the transporting-wheels 13. Bell-crank levers 14, which are fulcrumed upon the outer sides of the side members of the frame, are provided with downwardly-extending short arms 15, which are connected, by means of links 16, with the wheel-carrying ends of the cranks 12. The upwardly-extending arms 17 of the bell-crank levers are provided with spring-actuated stop members 18 of ordinary construction engaging segment-racks 19, which are supported upon the side members of the frame. It will be observed that by manipulating the bell-crank levers the frame may be raised or lowered with relation to the transporting-wheels and that the frame may be supported at any of its various adjustments by the stop member 18 engaging the segment-rack 19.

The side members of the frame are provided upon their under sides with boxes 20, affording bearings for the ends 21, constituting the spindles of the roller-carrying shaft or axle 22. The greater portion of the latter is of non-circular, preferably square, cross-section, only the ends 21, which constitute the spindles, being of circular cross-section. The roller 23, carried upon said shaft or axle, consists of a drum or cylinder made up of a plurality of segmental sections, as 24, which have been shown as bolted upon and braced interiorly by circular rims, one of which appears at 25 in Fig. 5 of the drawings and of which any desired number may be used, said rims being connected with and spaced from the shaft or axle by means of spokes 26, arranged in pairs parallel to each other, and the several pairs of spokes being disposed crosswise or at an angle to each other, as will be clearly seen in Fig. 5. The ends of the roller or drum are formed by massive cast-iron plates, as 27, which may be connected with each other by means of bolts or tie-rods 28, extending longitudinally through the roller.

Cutter-holders, as 29, are secured exteriorly upon the roller at suitable distances apart,

preferably by means of screws, as 30, which will enable said cutter-holders to be conveniently detached and replaced, as may be required. Said holders consist of flat plates 5 perforated for the passage of the screws 30 and provided with outwardly-extending lugs 31, between which the blades or cutters 32 may be secured by means of pins, bolts, or rivets. These cutters or blades when applied 10 to the roller will serve to chop stalks and like material, while the weight of the roller will assist in crushing the same, as will be readily understood.

Instead of securing the cutter-holders 29 15 by means of screws 30 screwing directly into the wooden roller it will sometimes be found preferable to provide the roller with perforations for the passage of the screws or stud-bolts 32 and to place plates 33 against the inner surface of the roller having threaded 20 apertures 34 for engagement with said stud-bolts. This construction, which is obviously stronger and more durable, will be particularly resorted to when the machine is to be 25 used as a stalk-chopper only.

The roller may be made of or covered with metal, if preferred.

The operation of this device will be readily understood from the foregoing description, taken in connection with the drawings 30 hereto annexed. The roller-carrying frame may be elevated to any desired position for transportation, or it may be supported at any desired elevation where the stalk-cutters 35 will operatively engage the ground. Adjustment may also be made whereby the roller will engage or rest upon the ground with its full weight, as shown in Fig. 3 of the drawings. The roller may be placed in this position 40 either with the stalk-cutters attached or when the stalk-cutters have been removed therefrom, as in Fig. 3.

It is obvious that although the machine 45 illustrated in the accompanying drawings is provided with means for the attachment of three draft-animals provision may within the scope of the invention be made for operating the machine by any desired number of draft-animals.

Having thus described the invention, what 50 is claimed is—

1. In a machine of the class described, a frame, boxes upon the sides of said frame, a shaft mounted for rotation in said boxes and having a non-circular portion extending between the spindles, and a roller supported 55 upon said shaft; said roller being provided with interior peripheral braces and with spaced spokes disposed in pairs adjacent to the non-circular portion of the shaft, said 60 pairs of spokes being disposed crosswise, or at an angle to each other.

2. In a machine of the class described, a roller composed of segmental sections joined together and braced by interior peripheral 65 braces, pairs of spokes connected with said braces, said spokes of each pair being disposed parallel to each other and the several pairs of spokes being arranged at various angles; and a supporting-shaft having spindles 70 at the ends thereof, and an intermediate portion which is square in cross-section; said shaft being disposed with the sides thereof in contact with the pairs of spokes.

3. In a machine of the class described, a 75 roller composed of segmental sections joined together and braced by interior peripheral braces, plates abutting upon the ends of said roller, and suitable connecting means.

4. In a machine of the class described, a 80 hollow cylindrical roller having apertures, plates having outwardly-extending lugs and provided with apertures in registry with the outer ends of the apertures in the roller, plates adjacent to the inner ends of said aper- 85 tures and having threaded perforations registering therewith, stud-bolts extending through the outer plates and through the roller and engaging said threaded perforations, and chopping-blades secured between 90 the lugs of the outer plates.

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

JULIUS J. NOHR.

Witnesses:

TITUS E. PRICE,
F. M. SCOBLE.