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J. B. THEISEN

ROLLER ATTACHMENT FOR TRACTORS

Filed June 26, 1922

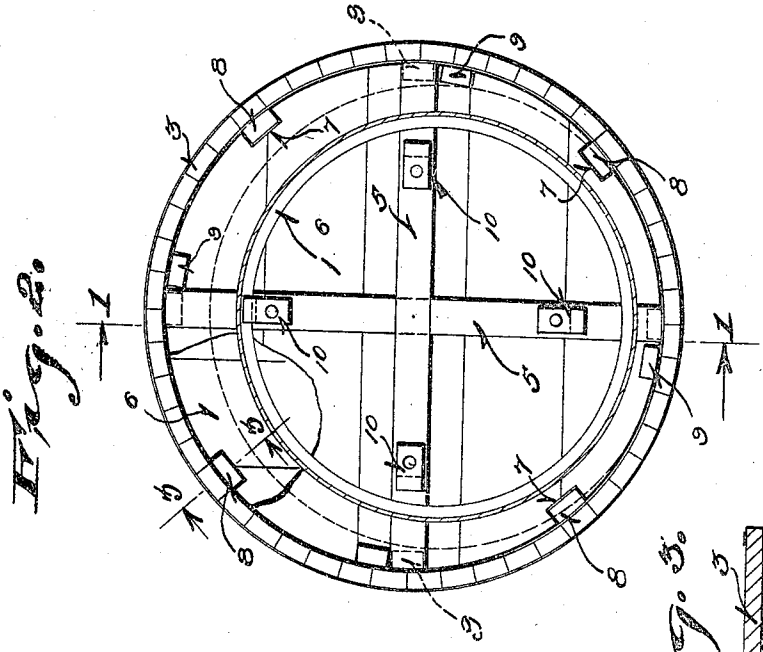


Fig. 2.

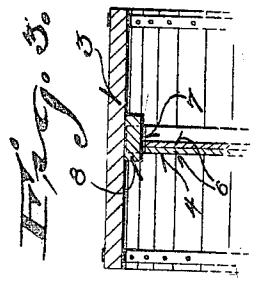


Fig. 3.

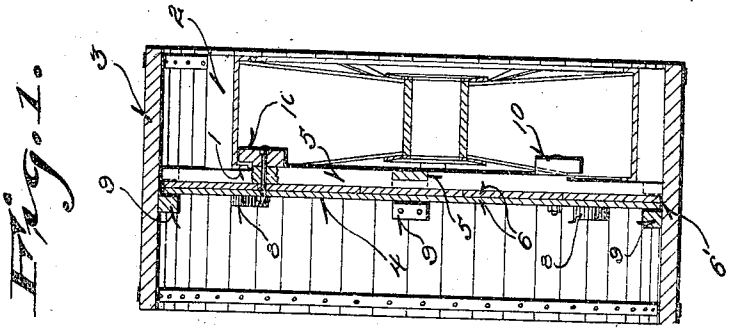


Fig. 1.

Witness:
Erwin B. Eiring

Inventor:
John B. Theisen.
Young & Young
Attorneys.

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UNITED STATES PATENT OFFICE.

JOHN B. THEISEN, OF ALLENTON, WISCONSIN.

ROLLER ATTACHMENT FOR TRACTORS.

Application filed June 26, 1922. Serial No. 571,092.

To all whom it may concern:

Be it known that I, JOHN B. THEISEN, a citizen of the United States, and resident of Allenton, in the county of Washington and State of Wisconsin, have invented certain new and useful Improvements in Roller Attachments for Tractors; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention refers particularly to land roller attachment for tractor wheels, and it has for its primary object to provide a simple, economical and efficient drum unit for encasing the wheels of a tractor, whereby the load strain at the ground line of the tractor wheel will impart rotation to the roller units, the said roller units having play relative to its associated tractor wheel to permit slight, independent and vertical transverse movement of the same.

The main object of the invention is to utilize the roller units for rolling in or tamping cultivated land in the early spring, which land has been previously seeded and to thus ensure a maximum crop.

Another particular function of the device is to roll in loose stones, which may be expelled from the earth during the winter season and to, in effect, press the cultivated surface of the ground, whereby the seed will be more readily sprouted.

It follows that the rollers may be used for various other purposes to which such rollers are applicable in farm usage.

With the above and other minor objects in view, the invention consists in certain peculiarities of construction and combination of mechanism elements as are hereinafter set forth with reference to the accompanying drawing and subsequently claimed.

In the drawings,

Figure 1 represents a sectional elevation of a tractor wheel equipped with a roller unit embodying the features of my invention.

Figure 2, a face view of the same, with parts broken away and other parts in section to more clearly show certain structural features, and

Figure 3, a detail sectional view thru the drum illustrating the key-block connection between it and a disk member.

Referring by characters to the drawing, 1 represents the outer inturn flange of a standard tractor wheel, provided with the usual tractor ribs or lags 2 disposed about the periphery of the wheel tread, the said lag being of any suitable design. Each wheel is encased within a drum 3, which drum is preferably formed from a plurality of wood strips or stays bound by suitable metallic hooks, as shown. Approximately one-half of the drum overhangs or encases the wheel tread and the other half projects outwardly beyond the same to form a wide rolling surface.

The drum is loosely mounted upon a disk 4, which is positioned midway of the width of the drum. This disk is also preferably formed of wood, and, as shown, it is divided with a pair of crossed radial arms 5, which, for example, may be developed from stock scantling. Secured to the outer faces of the cross arms is a double wood paneling 6, the same being formed in two layers running in opposite directions to render the disk rigid and of sufficient thickness to resist strains. The circular faces of the paneling 6 are bound by a metallic band 6′, and at spaced intervals the band and peripheral face of the paneling is notched out to form engaging recesses 7 for key-blocks 8, which key-blocks fit loosely in the recesses 7 and are secured to the inner face of the drum, whereby said drum is held against rotation relative to the disk, but it is also permitted to have a predetermined play relative to the disk in a lateral and radial direction. The lateral play of the drum with relation to the disk is limited by cleats 9, which cleats are secured to the face of the drum upon opposite sides of the disk paneling 6.

It will be noted that the drum is of greater diameter than the tractor wheel, and that the lags upon said tractor wheel engage the inner surface of the drum at the ground line, whereby the load strain will be directed upon the drum at said line to provide ample weight for rolling purposes. The drum structure is loosely held in its nested engagement over the wheel by a plurality of fingers 10, which fingers are confined to the cross arms 5 and the disk paneling by bolts. The cross arms, at their ends, are cut away slightly to permit abutting engagement of the outer wheel flange 1 and the fingers project above the shoulder or cut away portion of the cross arm a sufficient distance to engage the inner surface of the flange 1 at predetermined points about said flange during

rotation of the wheel and its associated drum.

It is understood that the drum is rotated in the same direction as the tractor wheel by frictional engagement of the lags 2 of said wheel with the inner surface of the drum, and while the locking fingers prevent disengagement of the drum from the wheel, they permit a slight independent play of said drum and its disk, both in an axial direction and a radial direction. Hence it will be seen that as the smaller tractor wheel is rotated, the drum will be driven in the same direction and will be permitted to accommodate its outer surface to irregularities of the ground surface. The said ground surface is rolled thoroughly and the flexibility between the rollers and the tractor will permit proper function of the parts.

While I have shown and described the drums as being constructed from wood parts wholly, it is within the scope of my invention to manufacture the same either wholly or in part from metallic elements.

It will also be seen that when the drums are not in use, they can be readily removed from the tractor wheels and likewise attached thereto, when required.

While I have shown and described a simple example of my invention minutely with reference to its details, it is understood that I may vary the structural features within the scope of the claims as they will be hereinafter interpreted.

I claim:

1. In a tractor wheel, the tread of which is provided with an inturn flange; the combination of a roller attachment for the wheel tread, the same including a disk of greater diameter than the wheel tread, fingers carried by the disk for loosely confining the same to the wheel flange, an open ended drum loosely mounted upon the disk and encasing the wheel tread, and means associated with the periphery of the disk and inner surface of said drum to limit lateral movement of the same relative to the disk.

2. In a tractor wheel having a tread provided with an inturn flange, the combination of a roller attachment, the same comprising a disk, fingers carried by the disk for engaging the wheel flange, a drum surmounting the disk and encasing the wheel tread, the said tread being in engagement with the inner surface of the drum at its ground line, and means for loosely confining the drum to the disk, whereby said drum is capable of play in an axial direction and radial direction relative to the disk.

In testimony that I claim the foregoing I have hereunto set my hand at Allenton, in the county of Washington and State of Wisconsin.

JOHN B. THEISEN.