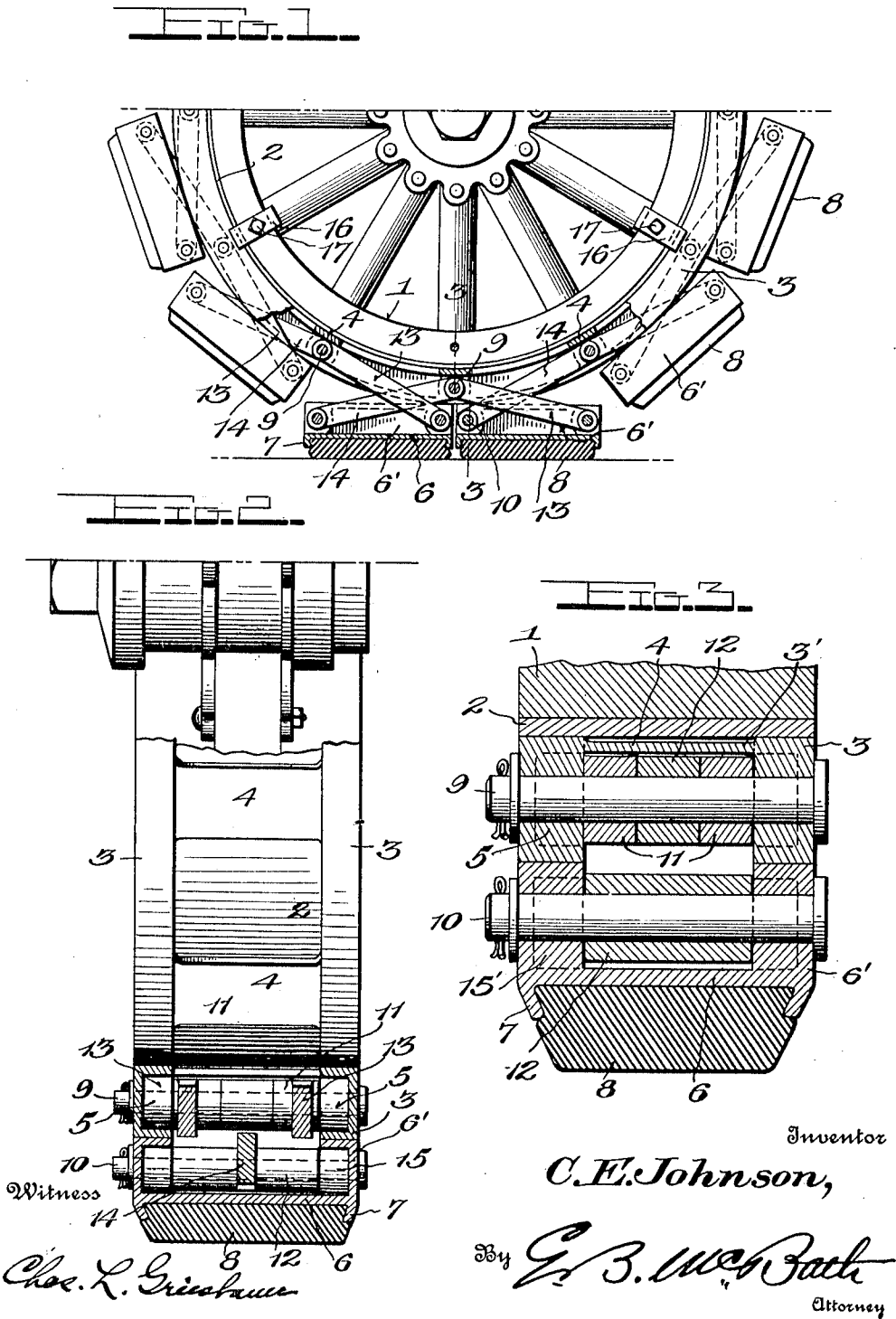


C. E. JOHNSON.
 DEMOUNTABLE TRACTION WHEEL.
 APPLICATION FILED AUG. 15, 1917.

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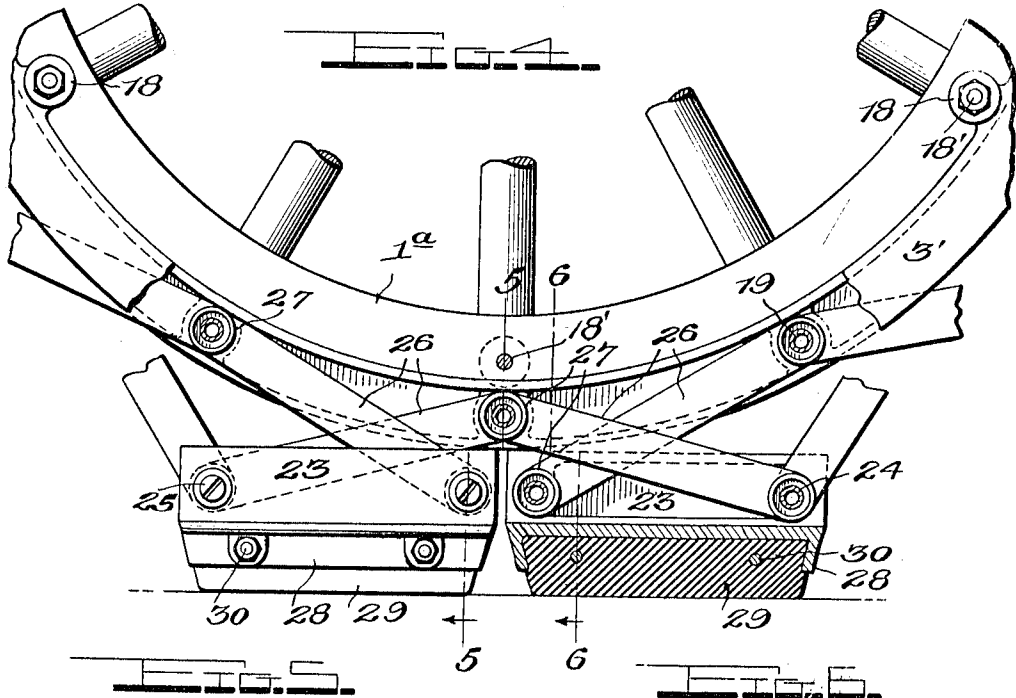
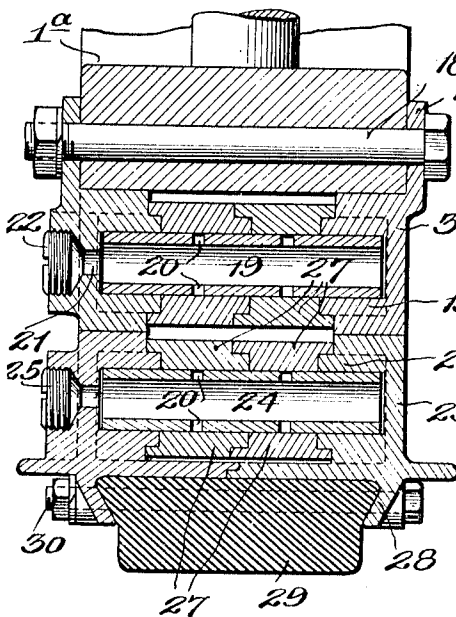
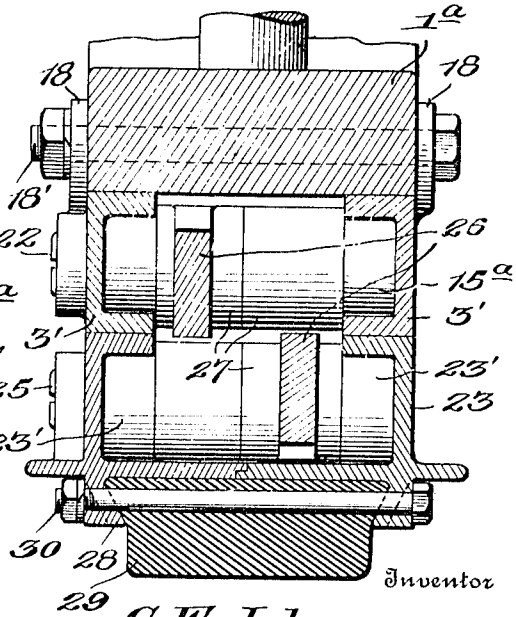
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 3 SHEETS—SHEET 1.



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Witness

Chas. L. Griesbauer.

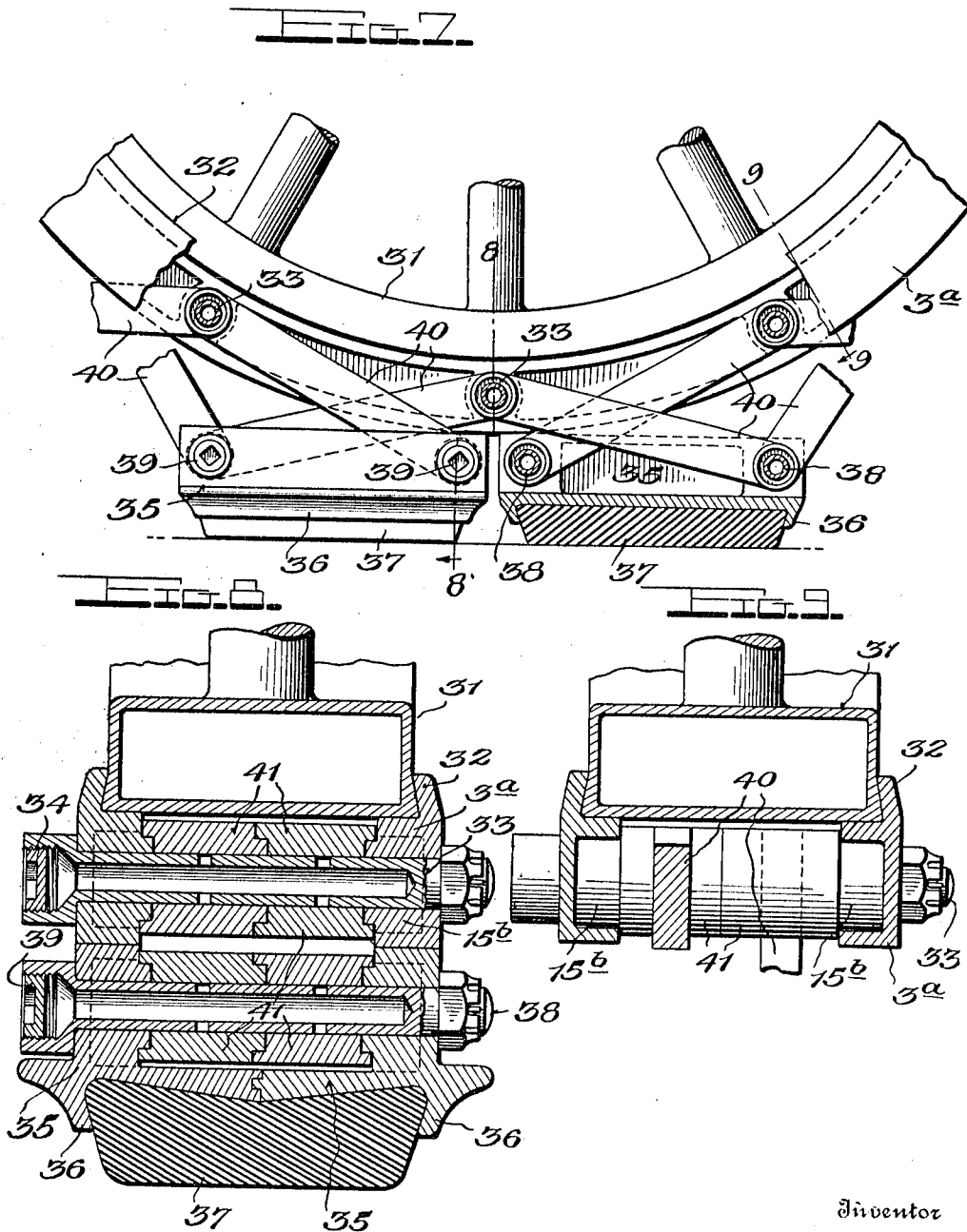
C. E. Johnson,

By *G. B. W. & B. B.*
Attorney

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3 SHEETS—SHEET 3.



Witness
Chas. L. Griebner.

Inventor
C. E. Johnson,
By *E. B. Webb*
Attorney

UNITED STATES PATENT OFFICE.

CARL E. JOHNSON, OF ST. PAUL, MINNESOTA.

DEMOUNTABLE TRACTION-WHEEL.

1,309,633.

Specification of Letters Patent.

Patented July 15, 1919.

Application filed August 15, 1917. Serial No. 186,386.

To all whom it may concern:

Be it known that I, CARL E. JOHNSON, a citizen of the United States, residing at St. Paul, in the county of Ramsey and State of Minnesota, have invented certain new and useful Improvements in Demountable Traction-Wheels, of which the following is a specification.

This invention relates to demountable rims for tractor wheels. It is common to provide tractors, heavy trucks, artillery trucks, etc. with tractor devices, either in the form of spurs or with pivoted pads, as in the patent granted to me March 27, 1917, No. 1,220,852.

But in all of these cases so far as I am aware of, the tractor devices, especially the pads, have been connected direct to the wheel, each pad being individually fastened in place. In case of the breaking of a wheel it would therefore be necessary to remove the pads from it one at a time and resecure them one at a time to the new wheel.

This would require considerable time and work, and furthermore would require in most cases a special form of wheel, or alterations in it, such as drilling bolt holes.

My invention saves this time and work by providing a demountable rim to which the tractor pads are secured, instead of securing them to the wheel itself, and all of the pads are properly placed on the wheel at once by simply pressing on the demountable rim, and the locking of the rim to the wheel secures all of the pads in place. In case the wheel breaks the rim may be removed, thus removing all of the pads at the same time, and it can then be quickly placed in position on a new wheel. Or if a pad is broken or the links broken, and there is not time for repairs, a new rim with new pads can be placed on the wheel, and the broken parts repaired at leisure.

The invention also consists in novel means of securing the pads to the demountable rim, and in lubricating the links.

In the accompanying drawings:

Figure 1 is a sectional side elevation of one half of an artillery wheel with my invention applied thereto, parts being broken away and in section.

Fig. 2 is an enlarged face view of the rim, partly broken away and in cross section.

Fig. 3 is a section on the line 3—3 of Fig. 1.

Fig. 4 is a sectional side elevation, parts

being broken away, showing a modified construction.

Fig. 5 is a section on the line 5—5 of Fig. 4.

Fig. 6 is a section on the line 6—6 of Fig. 4.

Fig. 7 is a side elevation, partly in section and partly broken away of a further modification.

Fig. 8 is a section on the line 8—8 of Fig. 7.

Fig. 9 is a section on the line 9—9 of Fig. 7.

In the drawings 1 designates a wooden wheel of the artillery type having the usual metal wheel rim 2.

My demountable rim comprises two parallel channeled members 3 spaced apart and adapted to be forced or pressed on the rim of the wheel 1. These members are connected by spaced webs 4, which makes a lighter construction than if they were connected by a continuous, annular plate or band. On the interior faces of the members, and within the flanges forming the channel of the rim, are formed at suitable intervals cylindrical bosses 5 suitably perforated.

To the rim are connected the pads 6, said pads being grouped circumferentially about the rim. The pads have side flanges 7 which hold rubber or other cushions 8.

The pads are also of channel form and are provided with bosses 15, the same as the rim, each pad having two of these bosses on each side, and adjacent the pad ends. Cotter pins 9 and 10 pass respectively through the bosses 5 and 15. Link sleeves 11 and 12 are mounted respectively on these pins and carry links 13 and 14.

The link construction and arrangement in this form of rim is substantially that shown and described in detail in the patent above referred to.

In Fig. 4 I have shown a slightly modified form, as it will be noted that in the first form the rim is locked to the wheel by clamps 16 and bolts 17, the latter passing through the wheel felly.

In Fig. 4 1^a designates the felly and 3' the channeled members of my demountable rim. The webs 4 in this construction are omitted, and also the clamping plates 16, the channel members 3' being secured to the wheel and to each other by tabs 18 and bolts 18', the tabs being offset to overlap the felly.

The members 3' are provided with bosses 15^a recessed to form bearings for the end portions of hollow pins or sleeves 19 provided with lubricating openings or perforations 20. On one of the members 3' the bosses are recessed and threaded and provided with a lubricating bore 21, normally closed by plugs 22 fitting in the recesses of the bosses.

The pads 23 are formed in interlocking sections and are provided with hollow perforated lubricating sleeves 24 and closure plugs 25. Links 26 carry sleeves 27, which are undercut and flanged to overlap, breaking joint both with each other and the bosses in which they are journaled, and which are similar to those of the rim, as at 23'. The pads having converging flanges 28 that hold in place the cushion 29.

The form shown in Figs. 7, 8 and 9 is substantially that of the preceding modification, except as to the means of securing the sections together. In the last described form bolts 30 held the pad sections together as the bolts 18' did the rim sections.

In the form shown in Figs. 7 to 9 the lubricating sleeve forms the bolt connection.

This form is especially adapted to use with a cast wheel, 31 being the felly, 3^a the demountable rim sections having the bosses 15^b and having converging flanges to grip the inclined outer faces of the felly as at 32. A tubular bolt 33 is suitably perforated and is open at the head end, the head being recessed and threaded to receive a closure plug 34. This bolt takes the place of both the sleeve 19 and the bolt 18' of Fig. 4.

The same construction is applied to the pad, the sections 35, which unite by tongue and groove, being provided with flanges 36 to receive the pad 37 and being secured together by the tubular bolt 38 closed by the plug 39. Links 40 have rabbeted sleeves 41 which interlock and work on the lubricating bolts 33 and 38, respectively.

It is thought that the drawings and the above description will make the invention

clear. Briefly summed up it consists in two parallel channeled members, connected either by the webs 4, bolts 18' or bolts 33, and about which the pads are grouped, the links of the pads being pivotally connected to the pins or sleeves for which the bosses form bearings.

The advantages of such construction will be obvious.

Where the form shown in Fig. 1 is pressed tightly on the wheel the clamps 16 may not be necessary and may be omitted.

What I claim is:

1. A demountable tractor rim formed of two channeled sections, each of said sections having interior bosses, said bosses being perforated on at least one of the sections, tractor pads arranged circumferentially about the rim, and connecting links provided with sleeves, means carried by the bosses for lubricating the link sleeves, the sleeves being pivotally mounted on said means, said sleeves being rabbeted to overlap, and the bosses being rabbeted to cooperate with said sleeves.

2. A demountable tractor rim comprising sections channeled and spaced apart, and provided with alining, interior bosses, hollow, perforated bolts passing through said bosses and open at one end, closure plugs for the bolts, traction pads, said pads being arranged about the demountable rim, and links connecting the pads to the rim, said links having overlapping sleeves rotatably mounted on said bolts.

3. The combination with a wheel, of a demountable rim, tubular, laterally perforated bolts carried by the rim, sectional tractor pads, tubular, laterally perforated bolts carried by and uniting the sections of said pads, closure plugs for said bolts, and links having rabbeted, overlapping sleeves, said sleeves being carried, respectively by the bolts of the rim and the pad, as and for the purpose set forth.

In testimony whereof I affix my signature.

CARL E. JOHNSON.