

C. C. BUTLER.  
ADJUSTABLE CLAMP.  
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962,620.

Patented June 28, 1910.

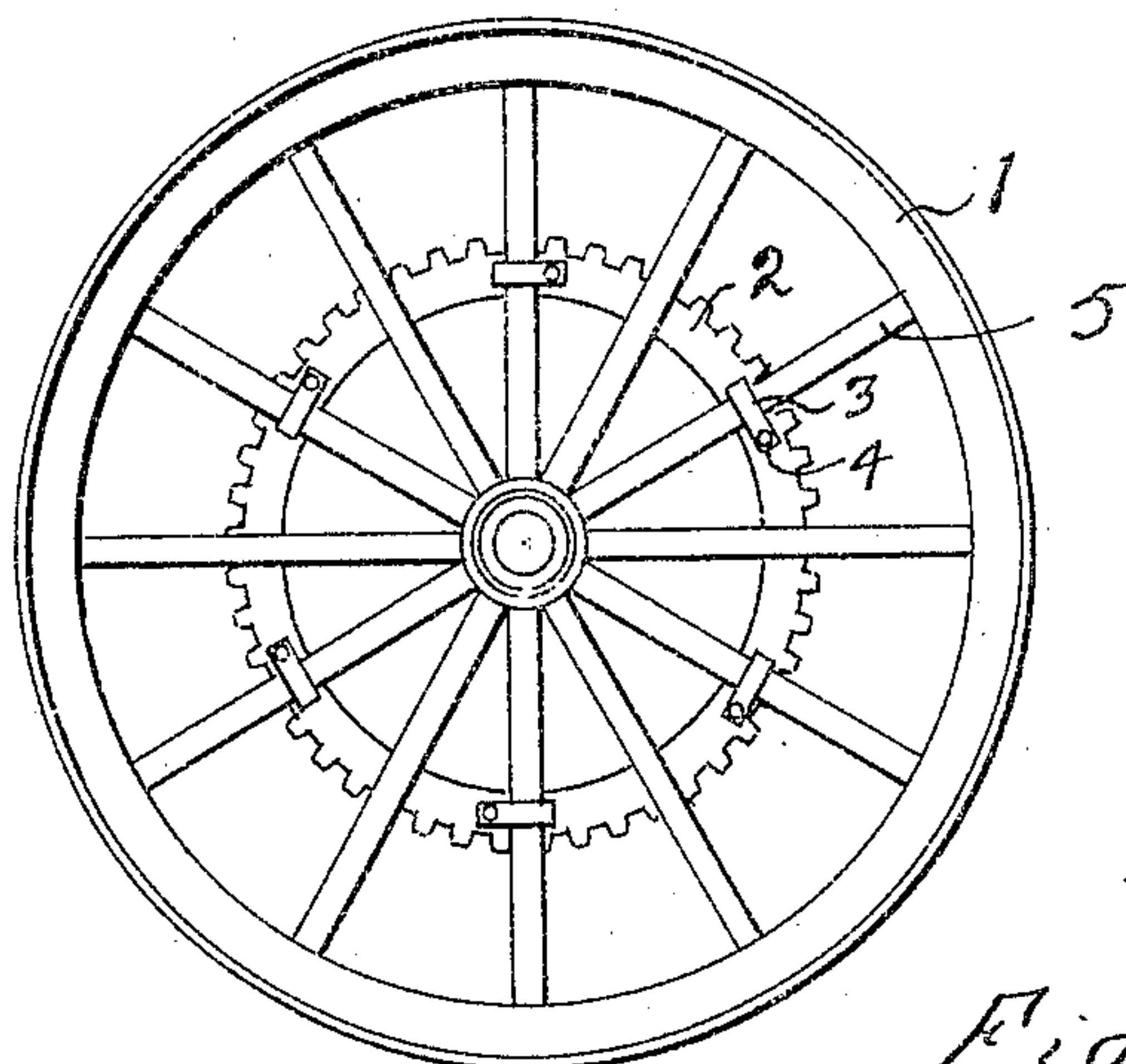


Fig. 1.

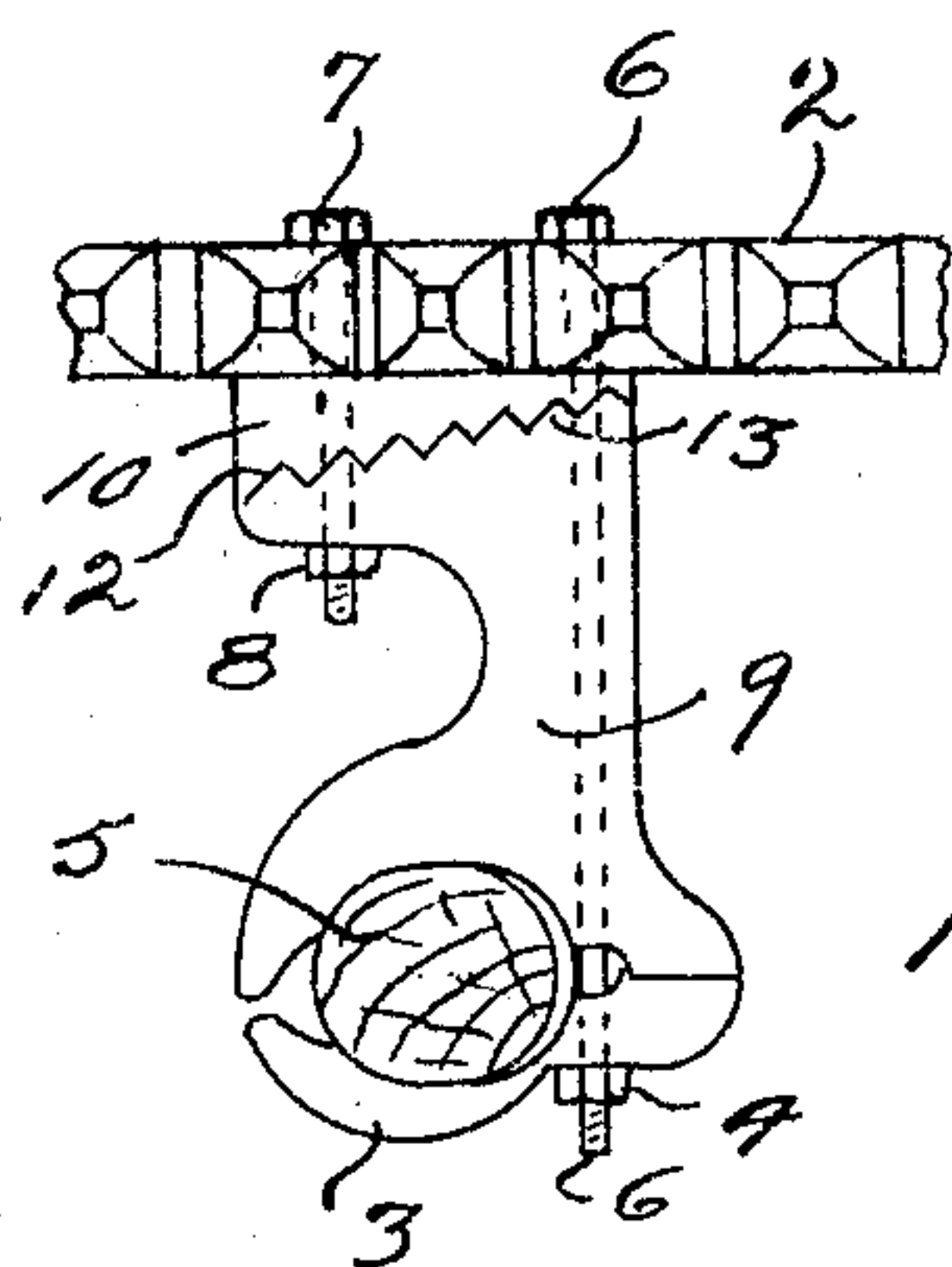


Fig. 2.

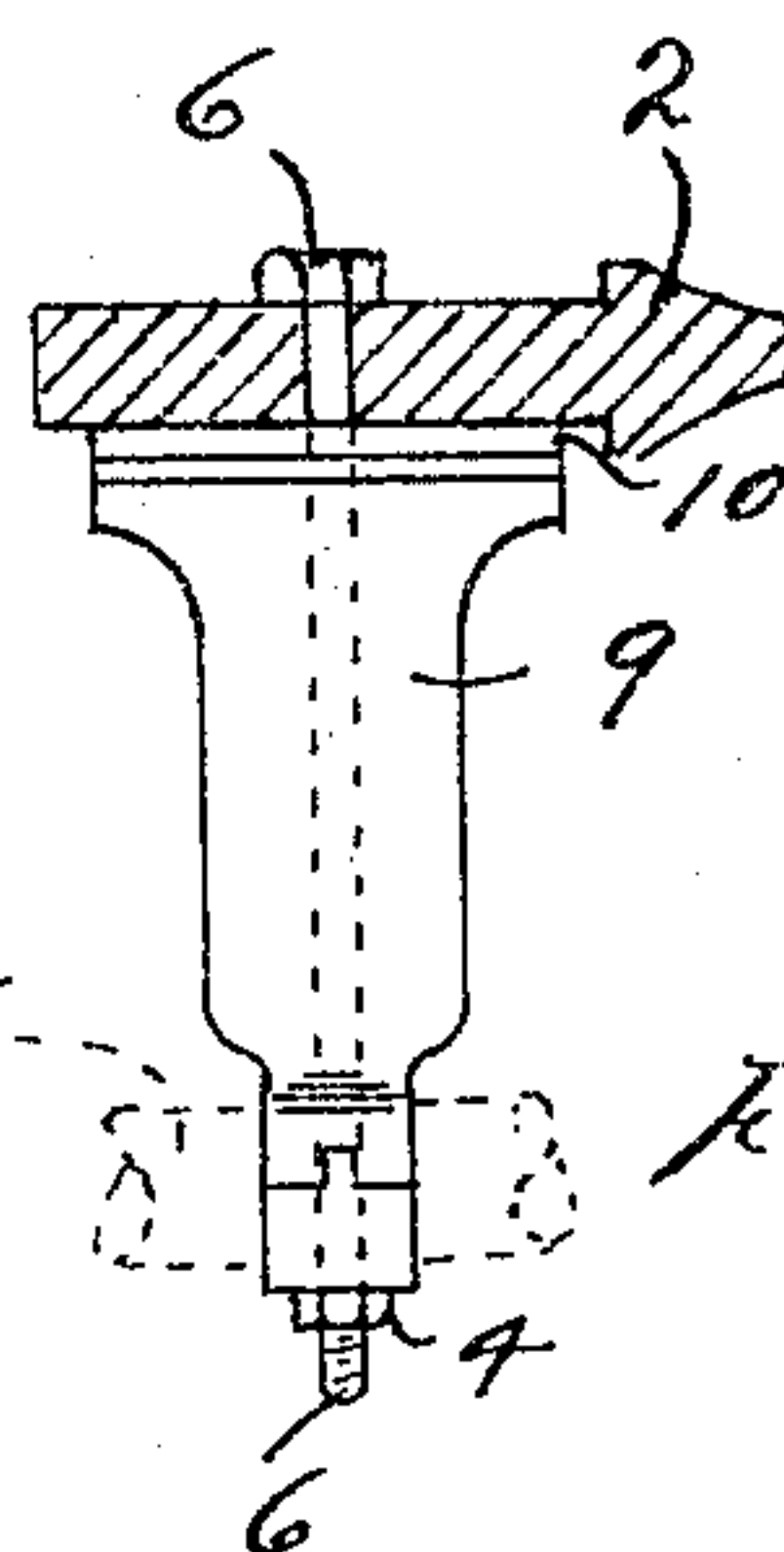


Fig. 3.

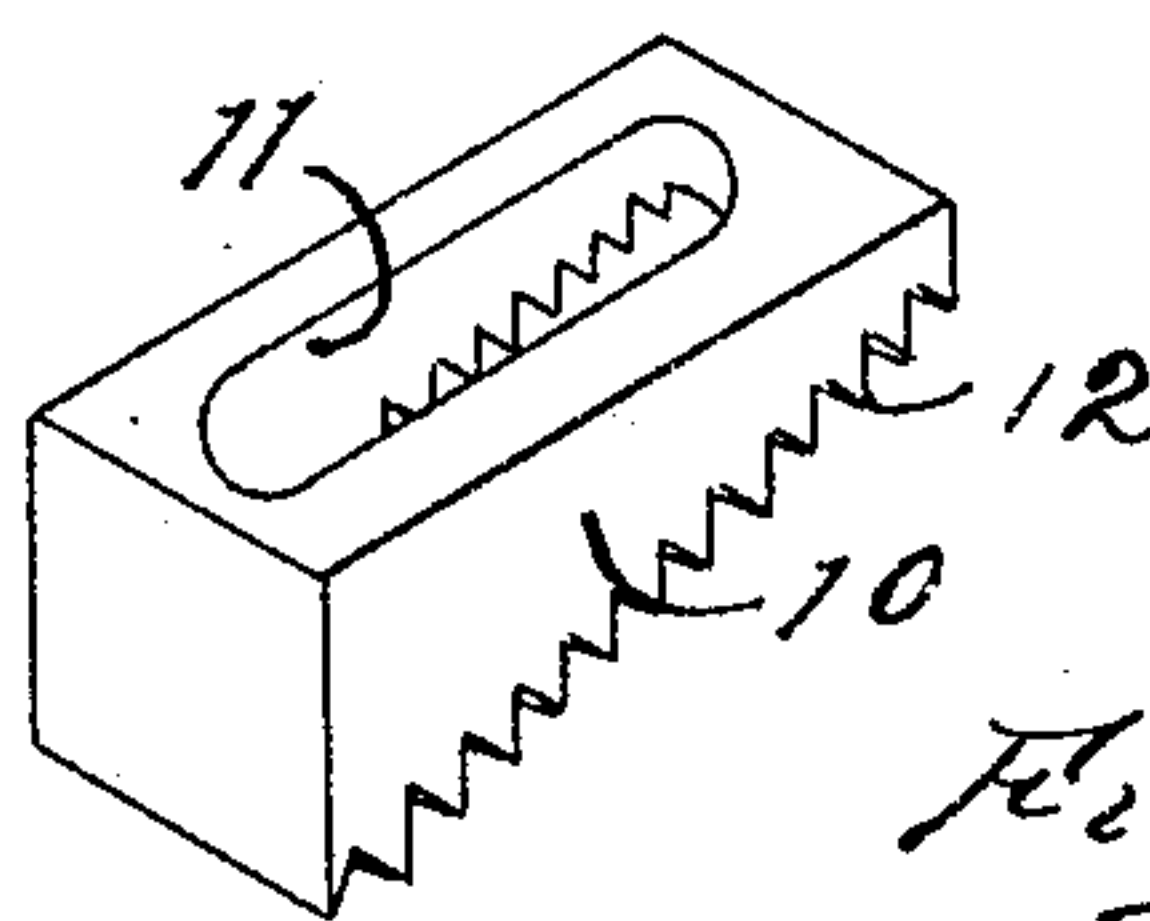


Fig. 4.

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# UNITED STATES PATENT OFFICE.

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## ADJUSTABLE CLAMP.

962,620.

Specification of Letters Patent.

Patented June 28, 1910.

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*To all whom it may concern:*

Be it known that I, CLINTON C. BUTLER, a citizen of the United States of America, and a resident of Waterloo, Blackhawk county, Iowa, have invented certain new and useful Improvements in Adjustable Clamps, of which the following is a specification.

My invention relates to improvements in adjustable clamps, and the object of my improvement is to provide means for connecting a sprocket-rim to a driving-wheel detachably, said means capable of transversal adjustment. This object I have accomplished by the means which are hereinafter fully described and claimed, and which are illustrated in the accompanying drawings, in which:

Figure 1 is a side elevation of a driving-wheel to whose spokes a sprocket-rim is detachably connected by means of my improved adjustable clamps. Fig. 2 is an enlarged detail of my improved adjustable clamp as connecting a spoke to a broken portion of a sprocket-rim, the spoke being shown in transverse section. Fig. 3 is a view of the parts shown in Fig. 2, taken in a direction at right-angles thereto, the sprocket rim being shown in section. Fig. 4 is a perspective detail view of the dentated and slotted block which engages the sprocket-rim.

Similar numbers refer to similar parts throughout the several views.

I have shown an ordinary form of wagon carrying-wheel 1, whose hub and felloes are connected by means of the radiating spokes 5. A sprocket-rim 2 is adapted to be located near to the inner face of said wheel, concentric therewith, but spaced apart therefrom adjustably by the improved means now to be described. These means consist of a plurality of cooperating spacing and clamping-bodies 10, 9, and 3, the body 10 contacting with the rim, the body 9 contacting with and fitting the outer contour of the body 10, and the adjacent faces of the bodies 9 and 3 being shaped into opposed jaws or clips adapted to detachably receive between them one of the spokes 5. The contours of the adjacent faces of said jaws are hollow to fit the outside of the spoke, while on one side of the spoke the meeting faces of the jaws are made to mate each other with a tongue-and-groove connection to prevent sidewise displacement. The block 10 has a longitudi-

nal slot 11. The sprocket-rim 2, and the blocks 9 and 3 are orificed in line with said slot 11, to permit of the passage therethrough of bolts 6 and 7, the bolt 7, however, passing only through said rim and the blocks 10 and 9, and provided with a removable fastening nut 8, while the bolt 6, which also secures the jaw-member 3 about the spoke 5, has a fastening-nut 4 upon it. The slot 11 permits of some adjustment of the block 10 along the rim 2.

The outer face of the block 10 lies slantingly toward the plane of the adjacent face of the rim 2 as also does the adjacent face of the block 9, the adjacent faces of these blocks, however, being transversely corrugated at 12, such corrugations being of like shape and mating, so that said blocks may be adjusted lengthwise with respect to each other and thereby held in their adjusted position when the blocks are connected together by said bolts 6 and 7.

The connecting-means described are so located with reference to the spokes held by them, as to have their tongue-and-groove connected parts lie in advance of the spokes in the direction of rotation of the latter, which connection and the bolt 6 afford a more secure buttress and support to resist the thrust of the spokes.

It is obvious, that when the block 10 is adjusted lengthwise along the block 9, the slanting connection between them effects an adjustment of the rim away from or nearer to the spokes according as the blocks are shifted relative to each other. The means described therefore permit of adjusting the spacing apart of the rim and spokes as desired to suit the necessity of the situation.

Having described my invention, what I claim as new, and desire to secure by Letters Patent, is:

1. In combination, two spaced-apart bodies, and connecting-means for adjustably securing them together, comprising a block contacting one body, another block contacting with said first-mentioned block, the first-mentioned block being adjustable along the second-mentioned block, a jaw-piece adapted to detachably grasp the other body between it and the second-mentioned block, and means for detachably connecting all of said elements rigidly together.

2. In combination, two spaced-apart bodies, and connecting-means for adjustably se-



curing them together, and for adjustably spacing them apart, comprising a block contacting one body, another block fitted slantwise to the said first-mentioned block, the first-mentioned block being adjustable along the second-mentioned block, a jaw-piece adapted to detachably grasp the other body between it and the second-mentioned block, and means for detachably connecting all of said elements rigidly together.

3. In combination, a driving-wheel provided with spokes, a sprocket- or gear-rim, and means for adjustably connecting said wheel and rim, composed of pairs of detachable jaws grasping certain of said spokes between their members, one member of each pair of jaws having a slanting surface, a block contacting with said rim and adjacent to the jaw-member having a slanting face, the said block being beveled to fit such slanting face, and adjustable lengthwise therealong, and securing means for detachably connecting together said jaw-members, their inclosed spokes, said blocks and said rim in rigid union.

4. In combination, a driving-wheel provided with spokes, a perforated sprocket- or gear-rim, and means for adjustably connecting said wheel and rim, comprising slotted blocks contacting with said rim and placed opposite certain spokes of said wheel, a perforated jaw-member contacting with each block, another perforated jaw-member detachably claspings a spoke between itself and the first-mentioned jaw-member, and removable bolts passed through the perforations in said rim, said blocks and said jaw-members, for adjustably connecting them together.

5. In combination, a driving-wheel provided with spokes, a perforated sprocket- or gear-rim, and means for adjustably connecting said wheel and rim, comprising slotted blocks contacting with said rim and placed opposite certain spokes of said wheel, a perforated jaw-member contacting with each block, another perforated jaw-member detachably claspings a spoke between itself and

the first-mentioned jaw-member, the contacting surfaces of said first-mentioned jaw-member and block being slantwise relative to said rim, and removable bolts passed through the perforations in said rim, said blocks and said jaw-members, for adjustably connecting them together.

6. In combination, a driving-wheel provided with spokes, a perforated sprocket- or gear-rim, and means for adjustably connecting said wheel and rim, comprising slotted blocks contacting with said rim and placed opposite certain spokes of said wheel, a perforated jaw-member contacting with each block, another perforated jaw-member detachably claspings a spoke between itself and the first-mentioned jaw-member, the contacting surfaces of said first-mentioned jaw-member and block being slantwise relative to said rim and the contacting slantwise surfaces having like-shaped mating rugae, and removable bolts passed through the perforations in said rim, said blocks and said jaw-members, for adjustably connecting them together.

7. In combination, a driving-wheel provided with spokes, a perforated sprocket- or gear-rim, and means for adjustably connecting said wheel and rim, comprising slotted blocks contacting with said rim and placed opposite certain spokes of said wheel, a perforated jaw-member contacting each block, another perforated jaw-member detachably claspings one of said spokes between itself and the first-mentioned jaw-member, said jaw-members having a tongue-and-groove connection to prevent lateral displacement of one from the other, and removable bolts passed through the perforations in said rim, said blocks and said jaw-members for adjustably connecting them together.

Signed at Waterloo, Iowa, this 7th day of July, 1909.

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Witnesses:

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