

(No Model.)

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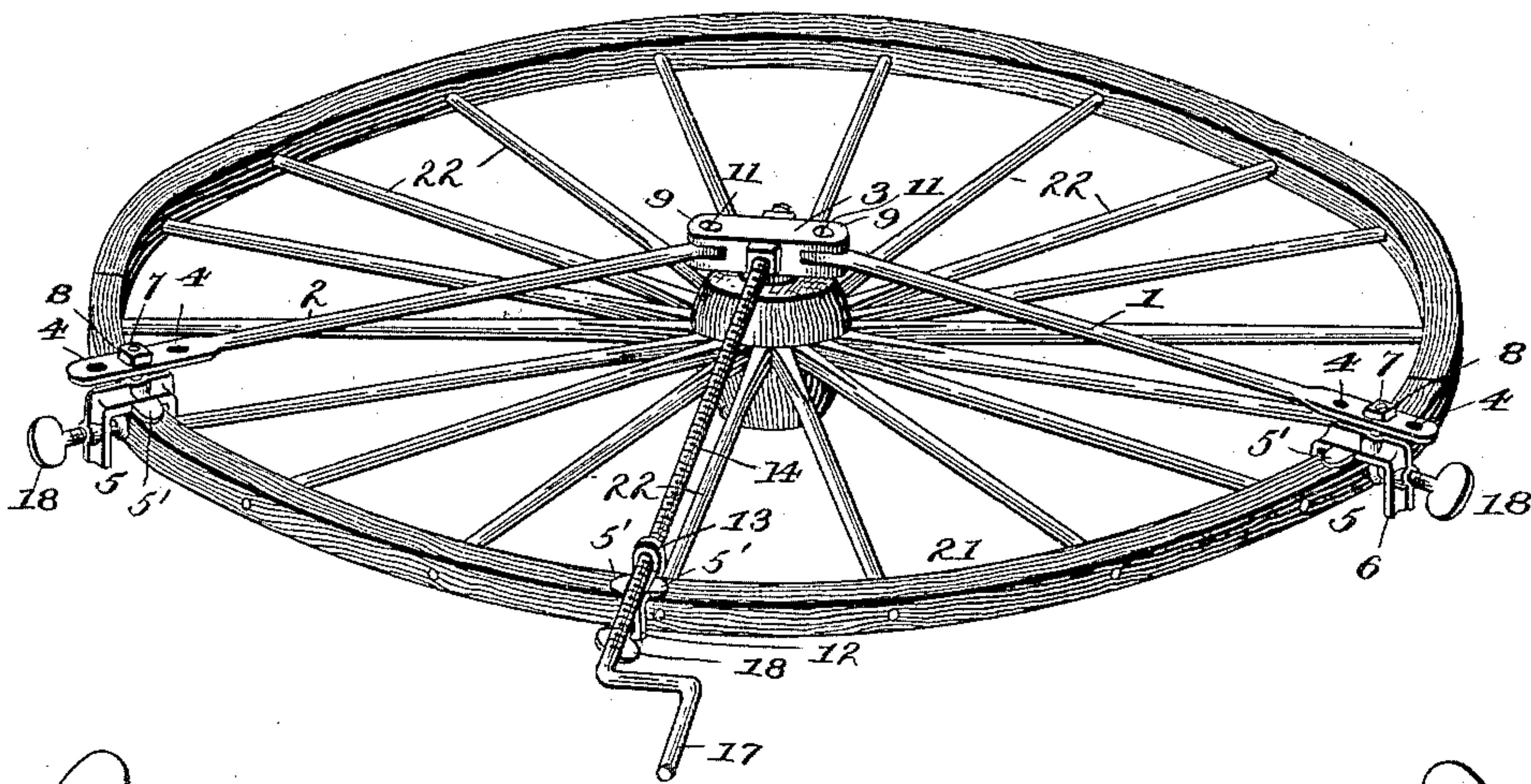
W. H. CLAWSON.

DEVICE FOR CONTRACTING AND EXPANDING VEHICLE RIMS.

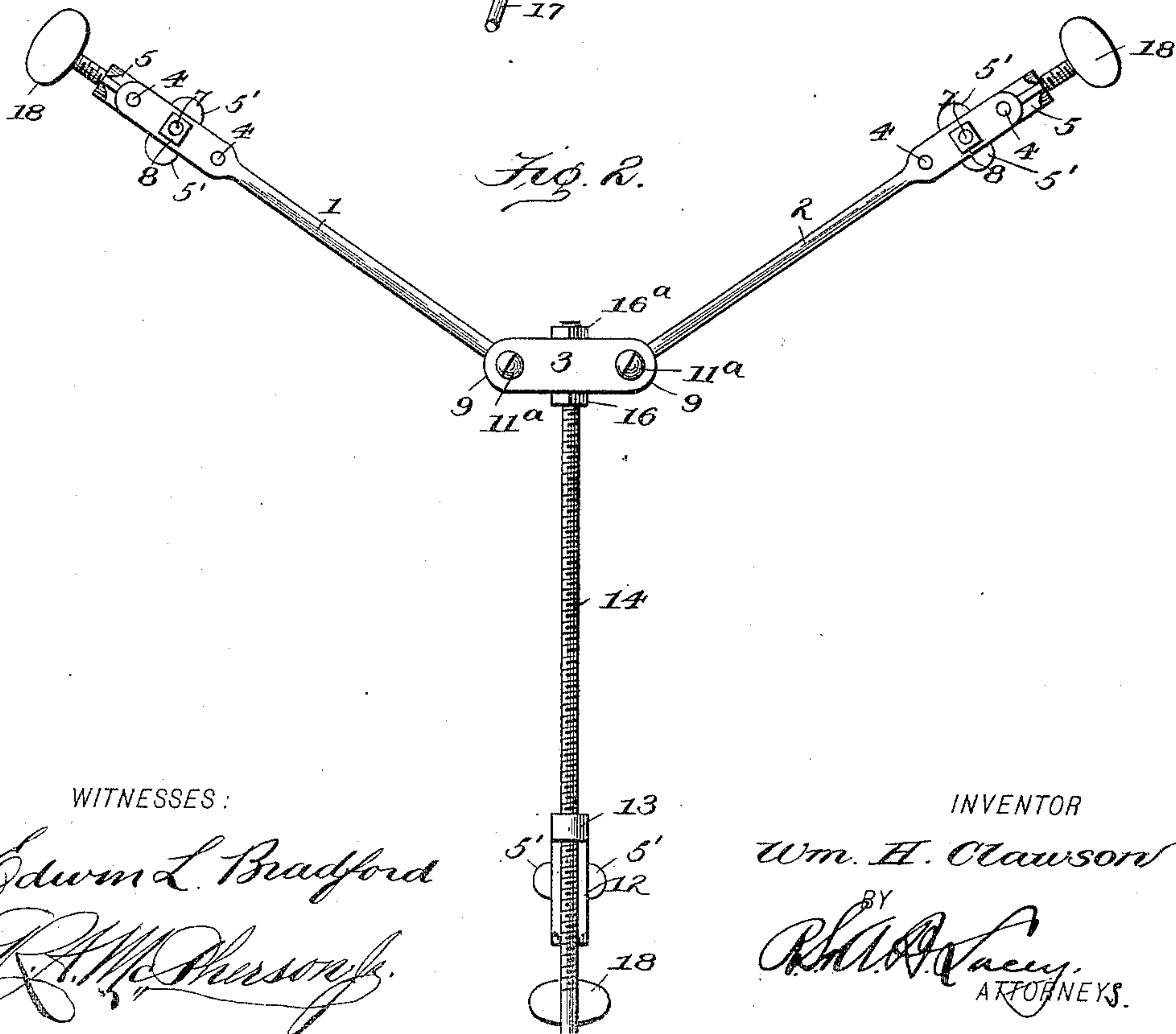
No. 604,654.

Patented May 24, 1898.

*Fig. 1.*



*Fig. 2.*



WITNESSES:

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2 Sheets—Sheet 2.

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Fig. 3.

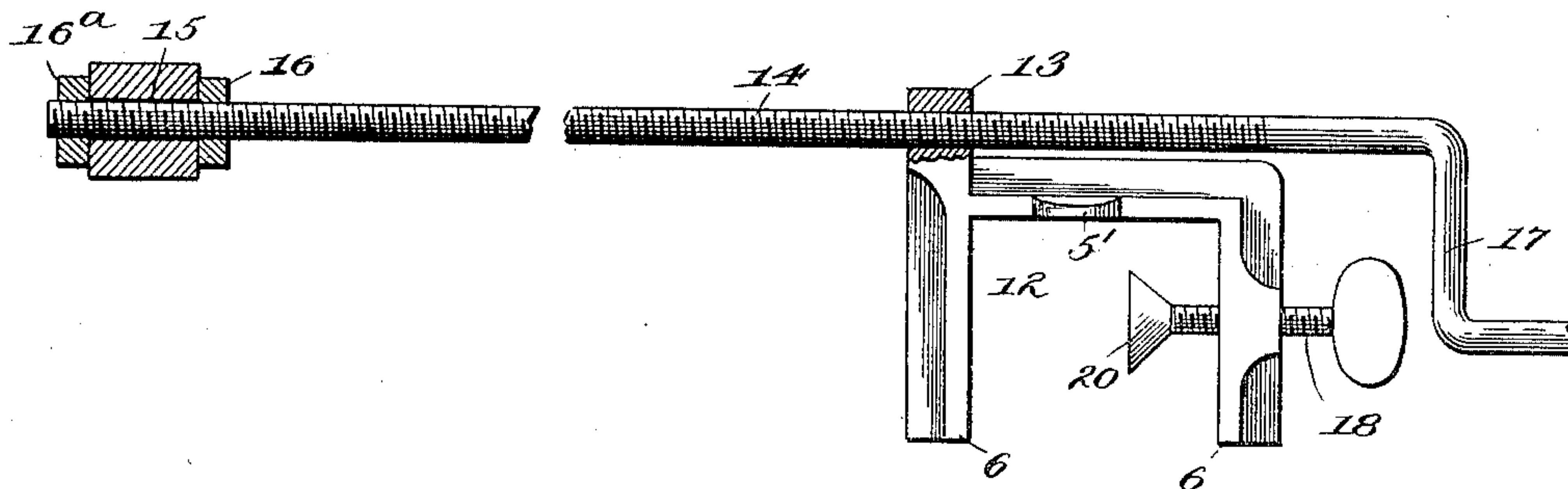


Fig. 4.

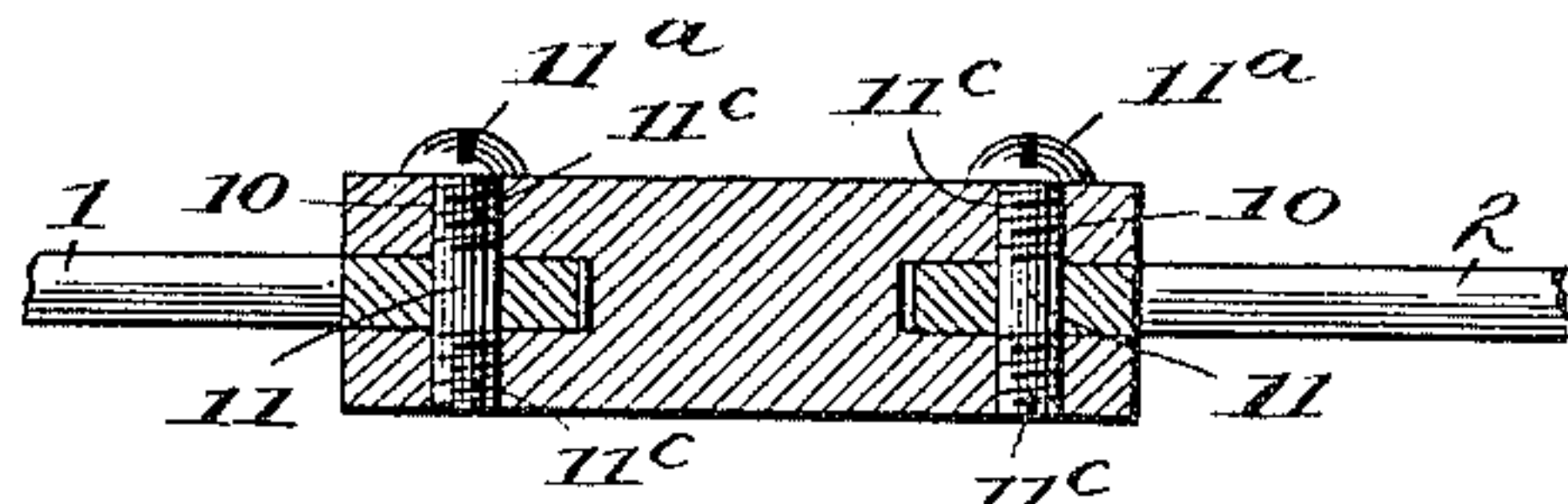
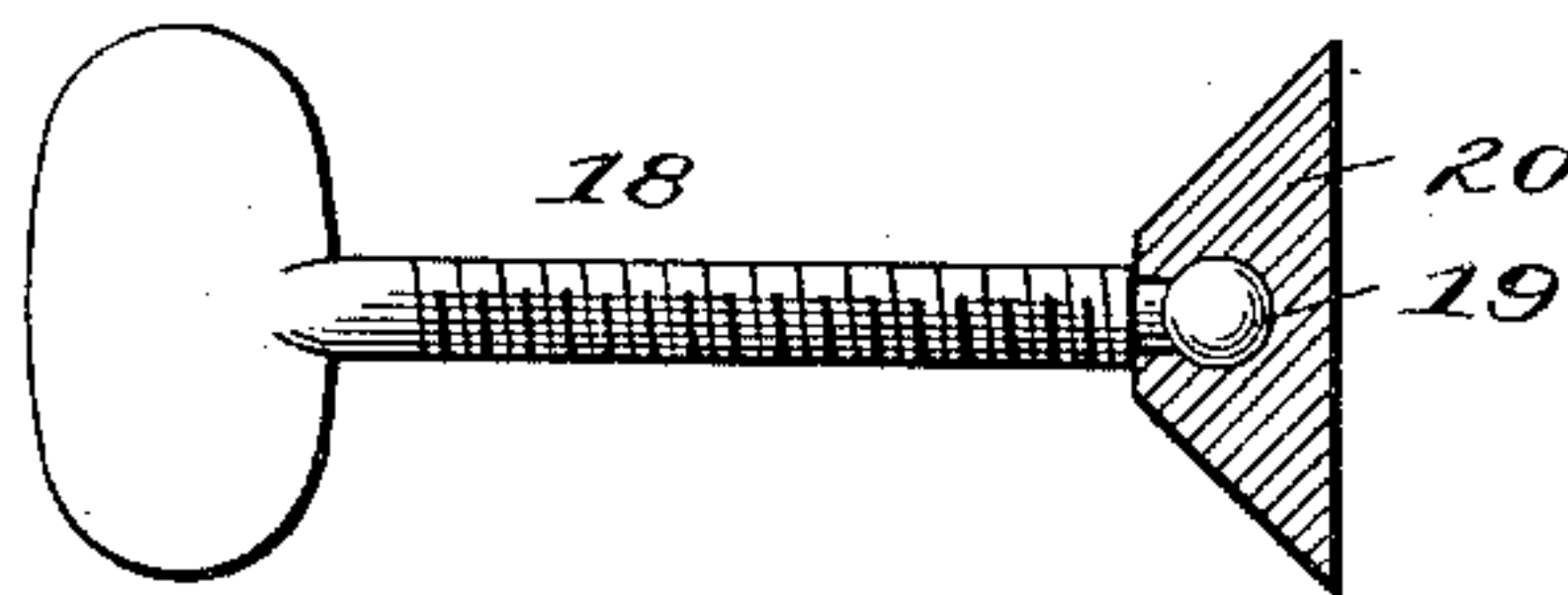


Fig. 5.



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# UNITED STATES PATENT OFFICE.

WILLIAM H. CLAWSON, OF ROB ROY, INDIANA.

## DEVICE FOR CONTRACTING AND EXPANDING VEHICLE-RIMS.

SPECIFICATION forming part of Letters Patent No. 604,654, dated May 24, 1898.

Application filed August 27, 1897. Serial No. 649,748. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM H. CLAWSON, a citizen of the United States, residing at Rob Roy, in the county of Fountain and State of Indiana, have invented certain new and useful Improvements in Devices for Contracting and Expanding Vehicle-Rims; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in devices for contracting and expanding the rims of vehicle-wheels, and its object is to provide a novel and simplified construction of device of this character whereby the operation of setting the rim upon the spokes or removing the same therefrom may be readily and quickly accomplished.

With this and other objects in view the invention consists in the novel constructions, combinations, and arrangements of parts hereinafter more fully described, and particularly set forth in the appended claims.

In the accompanying drawings, illustrating the invention, Figure 1 is a perspective view of a vehicle-wheel having my invention applied to the rim thereof. Fig. 2 is a perspective view of the device removed. Fig. 3 is a longitudinal sectional view of the expanding-head, bearing-clamp, and attached parts, taken on the line of the screw-shaft; Fig. 4, a detail sectional view of the expanding-head, and Fig. 5 an enlarged detail sectional view of one of the clamping-screws and socketed head.

Referring now more particularly to the accompanying drawings, 1 2 represent the movable arms of the rim expanding and contracting device, which are pivoted at their inner ends to a wedge-block or expanding-head 3 and provided at their outer ends with a series of orifices 4. Each of said arms carries a clamp 5, provided with pendent parallel clamping-arms 6 and a pivot-bearing 7, adapted to engage either of the orifices 4, and threaded at its extremity to receive a nut 8 to hold it in position thereon.

The wedge-block or expanding-head 3 is bifurcated at each end to receive the inner ends of the expanding-arms, and the arms 9 of the bifurcation are formed with alined threaded

openings 10 for the reception of a pivot-bolt 11, on which the inner end of the arm is pivoted, said pivot-bolt being provided with a screw-head 11<sup>a</sup> and having its shank threaded at its upper and lower extremities 11<sup>c</sup>.

12 designates a bearing-clamp of substantially the same construction as the arm-clamps 5, but provided with a bearing-lug 13, having a threaded orifice in which operates a screw-shaft 14. This shaft has its inner end fitted within a transverse smooth-surfaced opening 15 in the wedge-block and provided in rear thereof with a fixed abutting head or collar 16 and a nut 16<sup>a</sup>, engaging its threaded extremity, whereby said shaft is enabled to move back and forth without disconnection from the block and at the same time turn freely within the opening 15. The outer end of the shaft is formed with a crank-handle 17, by which it may be operated.

The clamps 5 12 are each provided with a clamping-screw 18, operating in a threaded orifice in its outer pendent arm and formed at the inner end of its shank with a ball 19, fitted within the socket of a conical clamping-head 20, the base of which is adapted to bear against the periphery of the wheel-rim 21.

In operation the clamps 5 12 are placed in position to straddle the edge of the rim, the clamp 12 arranged at one side and the clamps 5 at diametrically opposite sides about centrally of the rim and transversely with relation to the said clamp 12, and then the clamping-screws are operated to cause the clamps to tightly grip the rim. By now operating the screw-shaft 14 to the right the arms 3 will be moved outwardly and the rim expanded until it can be conveniently removed from the spokes 22, and by imparting a reverse movement to the shaft the rim may be contracted and set upon the spokes with ease and facility. The provision of the orifices 4 enables the clamps 5 to be adjusted for operation upon wheel-rims of different sizes, as will be readily understood.

The clamps 5 are each provided with lips or ears 5' to prevent lateral or sidewise tilting when applied to the rim.

I desire it understood that I do not limit my invention to the specific construction and arrangements of parts herein shown and described, but reserve to myself the right to



make such changes and modifications as fairly fall within the spirit and scope of my invention.

Having thus fully described my invention, what I claim as new and useful, and desire to secure by Letters Patent of the United States, is—

1. An apparatus of the class described, comprising, in combination, a wedge-block or head, a pair of expanding and contracting arms pivoted thereto, clamps adjustably connected with the free ends of said arms and provided with pendent, parallel arms adapted to straddle a wheel-rim, a clamping-screw operating in one of the parallel arms of each clamp and adapted to bear against the periphery of the wheel-rim, a bearing-clamp also provided with parallel arms and a clamping-screw, and a screw-shaft operating in said bearing-clamp and connected with said wedge-block or head, substantially as described.

2. An apparatus of the class described, comprising, in combination, a wedge-block or head 3, expanding and contracting arms 1 2 pivoted at their inner ends thereto and provided at their outer ends with a series of orifices 4, a pair of clamps 5 each provided with pendent, parallel arms 6 adapted to straddle a

wheel-rim, a pivot-bearing adapted to engage either one of the said series of holes 4 in the said arms 1 2 and a clamping-screw, a bearing-clamp 12 provided with similar parallel flanges and a clamping-screw and also with a bearing-lug, and a screw-shaft operating in said bearing-lug and connected with said wedge-block or head, substantially as described.

3. An apparatus of the class described, comprising, in combination, a wedge-block or head, a pair of expanding and contracting arms pivoted thereto and carrying adjustable clamps formed with pendent flanges or arms adapted to straddle and engage the inner and outer faces of a wheel-rim and with lateral lips or ears adapted to bear upon the side of the rim, a bearing-clamp, and a screw-shaft operating in the bearing-clamp and connected with said wedge-block or head, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM H. CLAWSON.

Witnesses:

W. G. McMASTER,  
ALBERT SCHOONSON.