

(No Model.)

C. H. METZ.
JACK FOR TRUING WHEELS.

No. 557,001.

Patented Mar. 24, 1896.

Fig. 2.

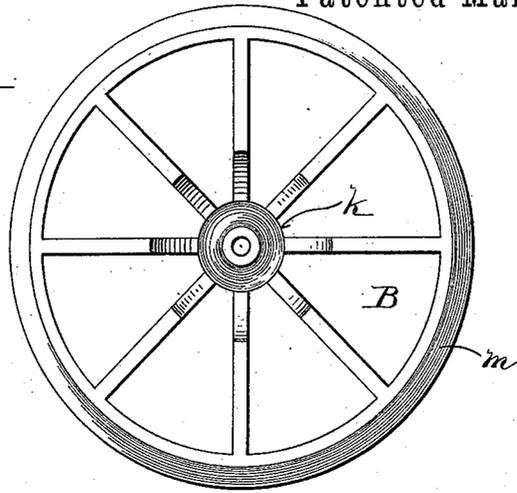


Fig. 1.

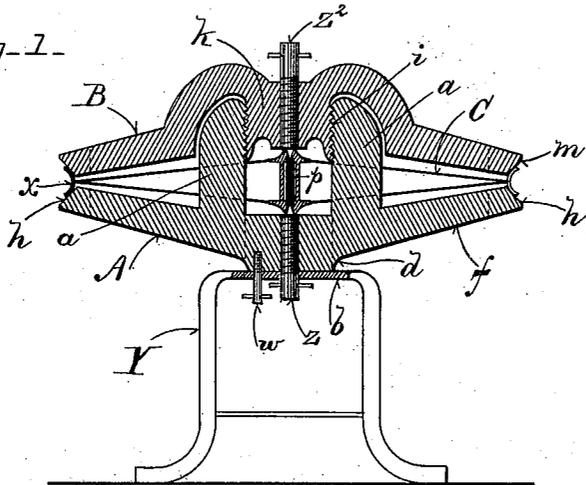
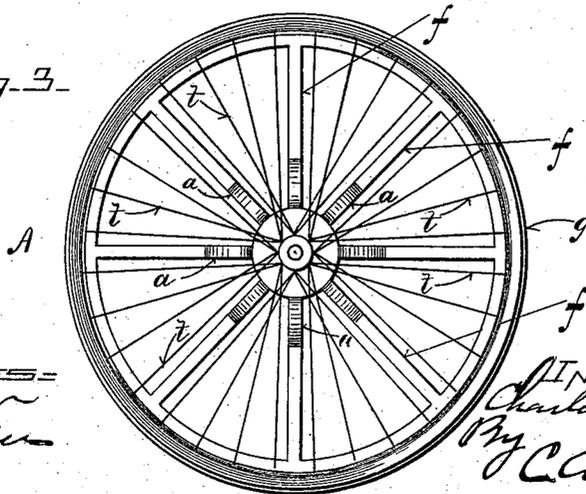


Fig. 3.



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JACK FOR TRUING WHEELS.

SPECIFICATION forming part of Letters Patent No. 557,001, dated March 24, 1896.

Application filed January 5, 1894. Serial No. 495,761. (No model.)

To all whom it may concern:

Be it known that I, CHARLES H. METZ, of Highlandville, in the county of Norfolk, State of Massachusetts, have invented certain new and useful Improvements in Jacks for Truing Wheels, of which the following is a description sufficiently full, clear, and exact to enable any person skilled in the art or science to which said invention appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

The object of the invention is to securely and accurately locate the rim of a wheel and its hub while the spokes thereof are being adjusted and secured in the rim.

Figure 1 is a vertical transverse section of my improved truing-jack; Fig. 2, a top plan view of the upper jaw or member; and Fig. 3, a like view of the lower jaw, showing the wheel in position.

Like letters of reference indicate corresponding parts in the different figures of the drawings.

Much difficulty is experienced in truing the rims of bicycles or similar wheels where the spokes are taken up by screw-sockets, this ordinarily being accomplished by mounting the wheel on centers at the hub, tightening the spokes separately and rotating the wheel rapidly to observe the variations. Such work requires skilled labor and a considerable expenditure of time in effecting the desired result.

My invention is designed particularly to furnish a jack whereby the wheel-rim may be trued by inexperienced persons with much more accuracy and far quicker than by the means ordinarily employed.

In carrying out my invention I make use of means which will be readily understood by all conversant with such matters from the following explanation.

In the drawings, Y represents the base or support of the jack and may be of any suitable form, its top *b* being faced up to allow the jack members to rotate readily thereon.

The lower jack member, A, comprises a circular frame, centrally through the hub *d* of which a screw-center *z* is turned. From the hub spokes *f* project radially, their outer

ends being connected by a rim *g*. This rim *g* has its edge at *h* beveled inwardly at an angle of about forty-five degrees, as best shown in Fig. 1. From each spoke *f* there are vertically-arranged radial projections *aa*, which will pass between the spokes of the bicycle-wheel C when it is adjusted thereon. These projections are interiorly tapped and screw-threaded at *i* concentric with the screw-center *z*, and the beveled rim *h* is also concentric therewith.

The jack member B has a hub *k*, which is threaded to enter the threaded socket *i*, and a screw-center *z*² is turned into said hub in alignment with the center *z*. The periphery or rim *m* of the member B is turned concentrically with the screw-centers and beveled inwardly at right angles, or approximately so, to the corresponding edge *h* of the companion member A. To hold said member A from revolving a pin *w*, passing through the base Y, enters a suitable socket in said member.

In the use of my improvement a rim *x* of the bicycle-wheel is placed on the beveled face *h*, and the hub *p* of said bicycle-wheel is disposed between the two centers *z z*². By turning down the jack member B the rim will be forced outward between the two beveled surfaces *h m* and concentrically with the hub-center. The spokes *t* of the bicycle-wheel having been previously placed loosely into the wheel are drawn up by the ordinary screw-nipples which pass through the rim *x*. The hub and rim being rigidly held in the jack, it is substantially impossible to drive the nipples beyond their proper place, so that when they are all turned up the rim may be released from the jack and all parts thereof be concentric.

The work is greatly facilitated by removing the pin *w* and rotating the jack in order to bring the succeeding nipples in front of the operator. The bevels *h m* on the peripheries of the jack member are not essential to its proper working in all cases. I therefore do not confine myself to beveling said members in the manner shown, as any means which will apply radial force to the wheel-rim equally at all points and hold the wheel-hub rigidly at the common center may be employed without departing from the spirit of my invention.

The two members of my jack may be connected at more than one point without departing from my broad invention, and I intend to cover such a construction in my claims. Such a structure is specially described and claimed in my pending application, Serial No. 561,660.

Having thus explained my invention, what I claim is—

- 10 1. In a wheel-truing jack, the combination of a member having a centering device to support the wheel-hub, and means for exerting a spreading action on the wheel-rim; a second member, having a centering device and
- 15 having means for supporting the wheel-rim against such pressure, and positive mechanism for causing said members to approach and recede from each other and for maintaining them in parallelism during their operation on the wheel.
- 20 2. In a wheel-truing jack, a movable member provided with a centering-screw to engage the wheel-hub, and with means for exerting a spreading action on a wheel-rim, and a centrally-disposed operating device whereby said spreading means are caused to hold the periphery of the wheel-rim equidistant at all points from the center of the hub.
- 25 3. A wheel-truing jack, having two members with peripheries for supporting the wheel-rim, and with central hubs having centering devices for the hub of the wheel, and a centrally-disposed connection between said members.
- 30 4. A wheel-truing jack, consisting of two members having centering devices for supporting the wheel-hub and peripheries for supporting the wheel-rim, and positive mechanism for causing said peripheries to approach and recede from each other in parallel planes.
- 40 5. In a wheel-truing jack, two members

having centering devices for supporting the wheel-hub and peripheries for exerting outward pressure on the wheel-rim, and mechanism for causing said members to approach and recede from each other, and for maintaining them in parallelism during their operation on the wheel.

6. A truing-jack for wheel-rims comprising two circular members arranged concentrically, one of said members being socketed to receive a threaded projection on the companion member and the peripheries of both members being beveled, substantially as described.

7. In a truing-jack for wheel-rims, a base in combination with a circular member beveled peripherally and mounted to rotate on said base; a companion member having a threaded projection working in a socket in said first member and concentrically therewith; and screw-centers in the axial line of both of said members, substantially as and for the purpose set forth.

8. In a truing-jack for wheel-rims, the member, A, having the beveled edge, *h*, and projections, *a*, interiorly screw-threaded in combination with the member, B, having the beveled edge, *m*, and threaded hub, *k*, turned into said projection.

9. In a truing-jack the member, A, having the beveled edge, *h*, and projections, *a*, interiorly screw-threaded in combination with the member, B, having the beveled edge, *m*, and threaded hub, *k*, turned into said projection and the screw-centers, *z*, *z*², in said members all being arranged to operate substantially as described.

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