

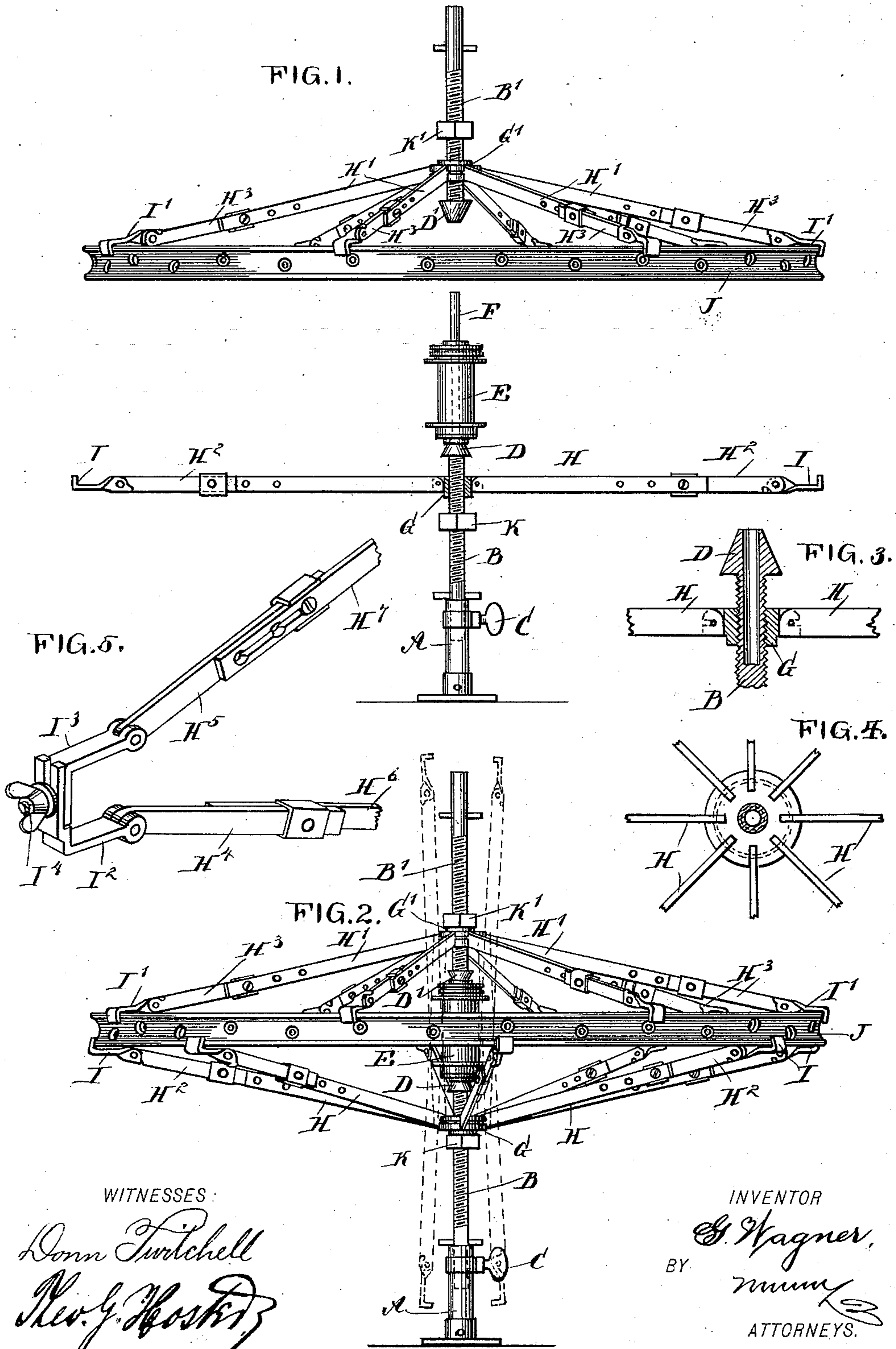
No. 607,718.

Patented July 19, 1898.

G. WAGNER.
TRUING DEVICE.

(Application filed Jan. 3, 1898.)

(No Model.)



UNITED STATES PATENT OFFICE.

GEORGE WAGNER, OF ST. PAUL, MINNESOTA, ASSIGNOR TO HIMSELF AND
HENRY J. HADLICH, OF SAME PLACE.

TRUING DEVICE.

SPECIFICATION forming part of Letters Patent No. 607,718, dated July 19, 1898.

Application filed January 3, 1898. Serial No. 665,323. (No model.)

To all whom it may concern:

Be it known that I, GEORGE WAGNER, of St. Paul, in the county of Ramsey and State of Minnesota, have invented a new and Improved Truing Device, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved truing device which is simple and durable in construction, more especially designed for use in the construction and repairing of bicycles and other wheels, and arranged to readily fit any sized wheel to hold the rim firm and perfectly round.

The invention consists of novel features and parts and combinations of the same, as will be fully described hereinafter and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of the improvement with parts in section and with the upper spindle and braces carrying the wheel-rim detached. Fig. 2 is a like view of the improvement, showing the rim and hub of the wheel securely held in the device. Fig. 3 is an enlarged sectional side elevation of part of the lower spindle, the hub, holder, and braces. Fig. 4 is a sectional plan view of the same, and Fig. 5 is an enlarged perspective view of a modified form of the rim-attaching device carried by the extension-braces.

The improved truing device is mounted on a standard A, adapted to be fastened to a bench or other support and in which is mounted to turn loosely the lower end of a threaded spindle B, adapted to be fastened in place in the standard by a set-screw C.

On the upper end of the spindle B is secured a cone-shaped bearing D for engagement with one end of the hub E of the wheel under treatment, the other end of the said hub being adapted to be engaged by a similar cone-shaped bearing D', held on the lower end of a spindle B', similar to the spindle B, and adapted to turn loosely on a rod F, carried centrally in the upper end of the spindle B and extending through the hub thereof, as indicated in Fig. 1.

On the spindles B and B' are mounted to

screw nuts G G', respectively, on the sides of which are pivoted braces H H', respectively, preferably formed at their outer ends with extensions H² H³, carrying attaching devices I I', respectively, in the form of hooks for hooking onto the peripheral surface of the wheel-rim J to be connected in the usual manner by spokes with the hub E, mounted between the cones D D'. Jam-nuts K K' screw on the spindles B B', respectively, to securely lock the nuts G G' in place after the proper adjustment is made for holding the hub E in proper position relatively to the rim J, carried by the braces and their attaching devices I I'.

The attaching devices I I' may be differently constructed. For instance, as shown in Fig. 5, the extensions H⁴ H⁵ of the braces H⁶ H⁷ carry pivotal L-shaped arms I² I³, respectively adapted to be fastened together at their outer overlapping ends by bolts I⁴, the said L-shaped arms passing completely around the outer peripheral face of the wheel-rim to extend over the sides thereof, as will be readily understood by reference to the said figure. The extensions H² H³ and H⁴ H⁵ are adjustably held on the braces according to the size of the rim under treatment, the extension being made sufficiently long to embrace the usual run of wheels made use of in bicycles.

The operation is as follows: The upper spindle B', with its braces, is lifted over the rod F, and then the rim J is engaged by the attaching devices I' of the braces H', so as to support the said rim, the braces extending downwardly and outwardly from the nut G', as shown in Figs. 1 and 2. The hub E for the wheel is placed on the rod F and rests with its lower end on the cone-shaped bearing D, and then the spindle B' is passed upon the rod F, so as to engage with its cone D' the upper end of the hub E. The operator now swings the lower brace H upward to connect the attaching devices I with the rim, preferably between the adjacent attaching devices I', already on the rim. (See Fig. 2.) Should the attaching devices I not reach to or engage the rim J at the first attempt, then the spindle B is turned to screw the nut G up or down accordingly on the spindle B to cause the

hooks to properly engage the rim J to get the hub exactly in the center of the rim, the operator measuring from the flange of the hub to the outside edge of the nuts G G' to make the distances alike by screwing the spindles B B' correspondingly in the nuts G G', so that both sides are exactly alike, and then the jam-nuts K K' are screwed against the nuts G G' to lock the same in place. The device is now in position for receiving the spokes and connecting the rim J with the hub E.

In placing the lower braces H in position the operator preferably first uses two diametrically-arranged braces, and then continues with such oppositely-arranged braces until all are connected with the rim J. In placing the spokes in position the operator begins with two spokes on the lower flange of the hub E, and then places one in the top of the flange and the other from below, so that an exact tension is obtained between the spokes. The remaining spokes are similarly attached, and then all are equally tightened and the attaching devices I I' removed from the rim by turning the spindles B B' accordingly to screw the nuts G G' toward each other.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

1. In a truing device, the combination of a standard forming a support, a threaded spindle mounted in the standard and projecting upward therefrom and having a bearing at its top, a rod carried by the threaded spindle and projecting upwardly above the bearing, a second threaded spindle carried on the upper end of the rod and having a bearing at its lower end, a nut screwing on each spindle, and braces carried by the nuts and extending outward therefrom.

2. In a truing device, the combination of a support, a threaded spindle carried vertically thereon, a nut screwing on the threaded spindle, braces pivotally mounted on the nut and projecting radially therefrom, a rod carried at the upper end of the spindle and projecting above the same, a second threaded spindle carried on the upper portion of the rod, a

nut working on the second threaded spindle, and braces pivotally connected to the second nut and projecting radially therefrom.

3. In a truing device, the combination of two threaded spindles, a rod connected with each and extending between the same, the rod serving to carry the hub of the wheel, a bearing carried at the inner end of each spindle, the bearings serving to engage the said hub of the wheel, and braces carried on each spindle to coact with the rim of the wheel.

4. In a truing device, the combination of two spindles, a rod connecting the spindles, a bearing carried at the inner end of each spindle, braces adjustably carried on each rod and projecting radially therefrom, extensions respectively for the braces by which to adjust the length thereof, and attaching devices carried by the extensions and adapted to engage with the rim of the wheel.

5. In a truing device for vehicle-wheels, the combination of a threaded spindle, a second threaded spindle longitudinally alined with the first spindle, the spindles being adapted to engage the respective ends of the hub of the wheel, and braces carried on each spindle and strained thereby, whereby to coact with the rim of the wheel.

6. In a truing device for vehicle-wheels, the combination of a threaded spindle, a second threaded spindle longitudinally alined with the first spindle, the spindles being adapted to engage the respective ends of the hub of the wheel, a nut working on each threaded spindle, and braces carried by each nut to coact with the rim of the wheel.

7. In a truing device for vehicle-wheels, the combination of two threaded spindles longitudinally alined with each other and adapted to engage the respective ends of the hub of the wheel, and braces carried on each threaded spindle and strained thereby, the braces having attaching devices at their outer ends and said devices engaging the outside of the rim of the wheel.

GEORGE WAGNER.

Witnesses:

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