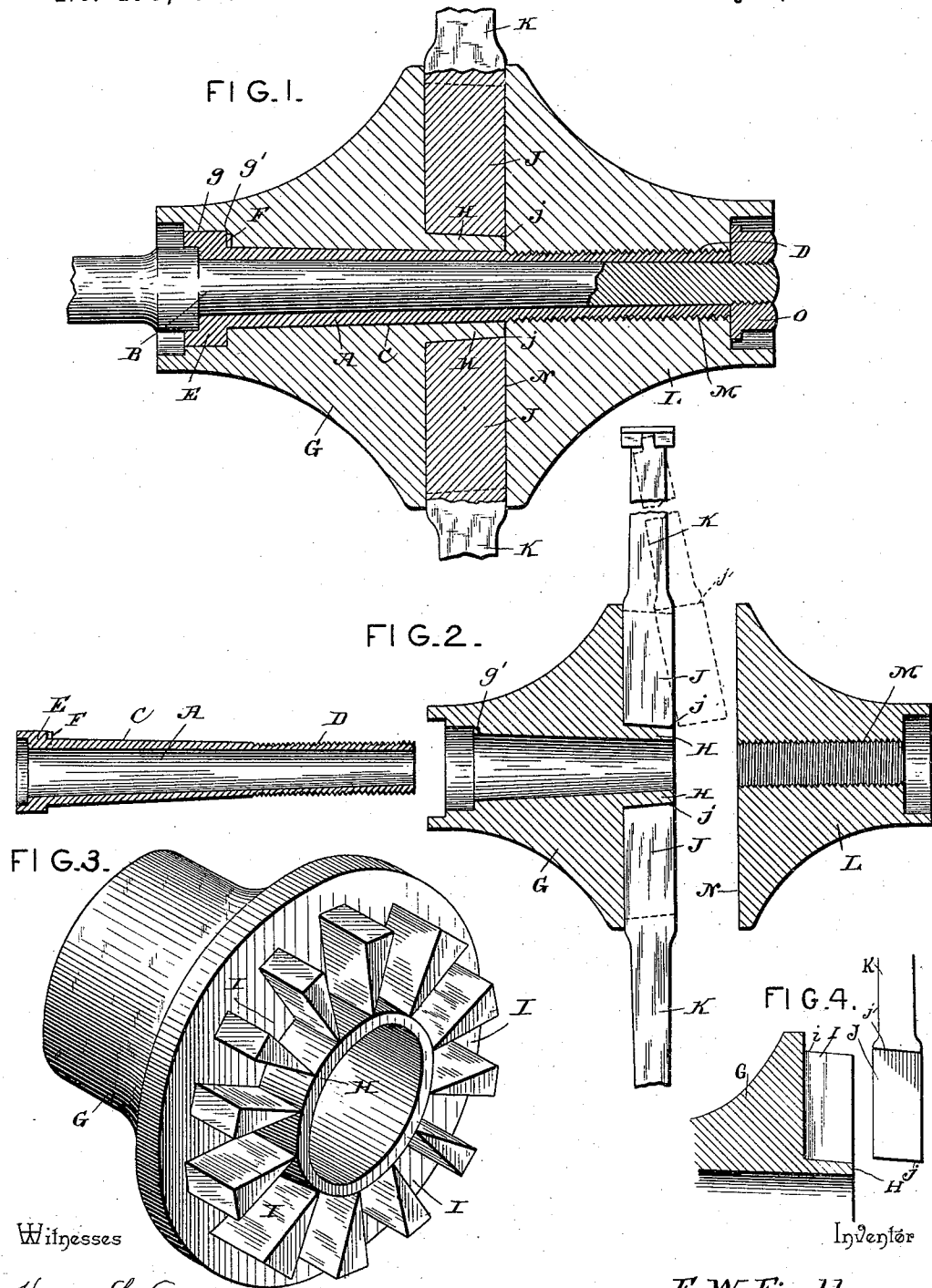


(No Model.)

F. W. FIEDLER.
VEHICLE HUB.

No. 478,277.

Patented July 5, 1892.



UNITED STATES PATENT OFFICE.

FREDERICK W. FIEDLER, OF SCRANTON, PENNSYLVANIA.

VEHICLE-HUB.

SPECIFICATION forming part of Letters Patent No. 478,277, dated July 5, 1892.

Application filed February 29, 1892. Serial No. 423,179. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK W. FIEDLER, a citizen of the United States, residing at Scranton, in the county of Lackawanna and State of Pennsylvania, have invented a new and useful Hub, of which the following is a specification.

This invention relates to vehicle-wheels; and it has for its object to provide an improved hub for vehicle-wheels constructed of comparatively few parts and in such a manner that in the event of a spoke breaking a new one can be substituted without taking off the rim of the wheel or disturbing the other parts of the wheel at all, and one which is also so constructed that a worn-out or broken axle-box can be readily replaced without interfering with the other parts of the wheel.

It is also intended by this invention to provide a sectional hub which when connected together will tend to force the spokes toward the rim of the wheel, which point is of essential importance when replacing new spokes into the wheels.

With these and many other objects in view, which will readily appear as the nature of the invention is better understood, the same consists in the novel construction, combination, and arrangement of parts hereinafter more fully described, illustrated, and claimed.

In the accompanying drawings, Figure 1 is a vertical sectional view of my improved hub. Fig. 2 is a similar view of the parts disassembled and illustrating the method of inserting spokes therein. Fig. 3 is a detail in perspective of the rear mortise-carrying hub-section. Fig. 4 is a detail sectional view of one of the spoke-mortises and spokes.

Referring to the accompanying drawings, A represents an axle-box interiorly tapered to accommodate the ordinary axle B and exteriorly tapered, as at C, the inner half of its length, while the other half is exteriorly threaded, as at D. The said axle-box A is further provided with the inner collar E, and directly in front of said collar is a projecting lug or stop-pin F, which prevents the axle-box from turning in the hub, to be described. The rear solid hub-section G is provided with a tapered bore to snugly fit the inner tapered portion of the axle-box, and is provided with the inner recessed shoulder g, taking over the

collar E of said axle-box, and is further provided within said shoulder with the notch or recess g', receiving the locking-lug F, which prevents the inner hub-section from turning on the axle-box or the axle-box turning in said hub-section. The inner solid hub-section G is further provided with an integral exteriorly-tapered flange H, which forms a continuation of the inner bore of said hub-section, and a tapered base for each one of the radial series of receiving-mortises I formed on said hub-section directly over the exteriorly-tapered flange H. The said mortises are designed to receive the tenons J of the spokes K, which tenons are provided with lower beveled ends j, which are inclined to correspond with the exterior taper of the integral flange H, forming the base of the mortise in which the spoke-tenon is inserted. When inserting the spokes of the wheel in the first instance or replacing new spokes when the old ones have become broken, the outer ends of the spokes are first inserted in the felly and then the beveled tenons thereof laterally inserted into one of the mortises I as far as it can be placed by hand, as illustrated in Fig. 2. The front solid hub-section L is now placed in position. The said solid front hub-section L is provided with an interiorly-threaded bore M, which engages the exteriorly-threaded outer end of the axle-box A, and with a flat inner face N, which as the said section is screwed in position over the threaded end of the axle-box will contact with the projecting edges of the tenons of the spoke or spokes just inserted and force the same tightly into the mortise and, on account of the bevel thereof, outwardly toward the felly, whereby the said spoke or spokes are tightly forced in position and the entire wheel braced. The extreme outer end of the axle-spindle B receives the ordinary binding-nut O, which impinges against the outer ends of the front hub-section and the axle-box to hold the same in position upon the axle, while at the same time being partly concealed from view and out of the way.

It is thought that it can be readily seen that the various parts of the herein-described hub can be removed without disturbing the other parts, whereby broken spokes can be readily replaced without taking off the rim of the wheel, by simply unscrewing the front of the

hub and taking out the broken spoke and replacing it, as already described; also, a worn-out axle-box can be easily replaced without disturbing the wheel. This is only accomplished by the few parts employed in constructing the hub and the manner in which the same are assembled.

The construction and many uses of the herein-described hub are now thought to be apparent without further description. At this point it is well to observe that the walls I' of the mortises I have their upper ends beveled or inclined at the same angle to correspond with the bevel of the flange H, which receives the lower beveled ends j of the spoke-tenons. It is of course understood that the shoulders j' of the spoke-tenons rest upon the top of the mortise-walls I', and in order to insure a perfect fit when the spoke-tenons are inserted in said mortises the said shoulders j' are beveled correspondingly to the top beveled or inclined ends i of said walls.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

In a hub, the combination, with the axle, of the axle-box having its rear half exteriorly tapered and its outer half exteriorly screw-threaded, the rear hub-section having an exteriorly-tapered bore fitting the rear half of said axle-box and provided with a projecting exteriorly tapered or inclined flange, and a radial series of mortises arranged over said flange, which forms the base for said mortises, the solid front hub-section having an exteriorly-threaded bore engaging the threaded half of said axle-box and a flat inner face working over the open edges of the mortises, and a securing-nut engaging the outer threaded end of the axle-spindle and bearing directly against the outer end of the axle-box and the outer face of the front hub-section, substantially as set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

FREDERICK W. FIEDLER.

Witnesses:

F. F. GIBBS,
J. J. MCCARTY.