A. McKELLAR.

Vehicle-Wheel Hub.

No. 222,294. Patented Dec. 2, 1879.

Fig. 1.

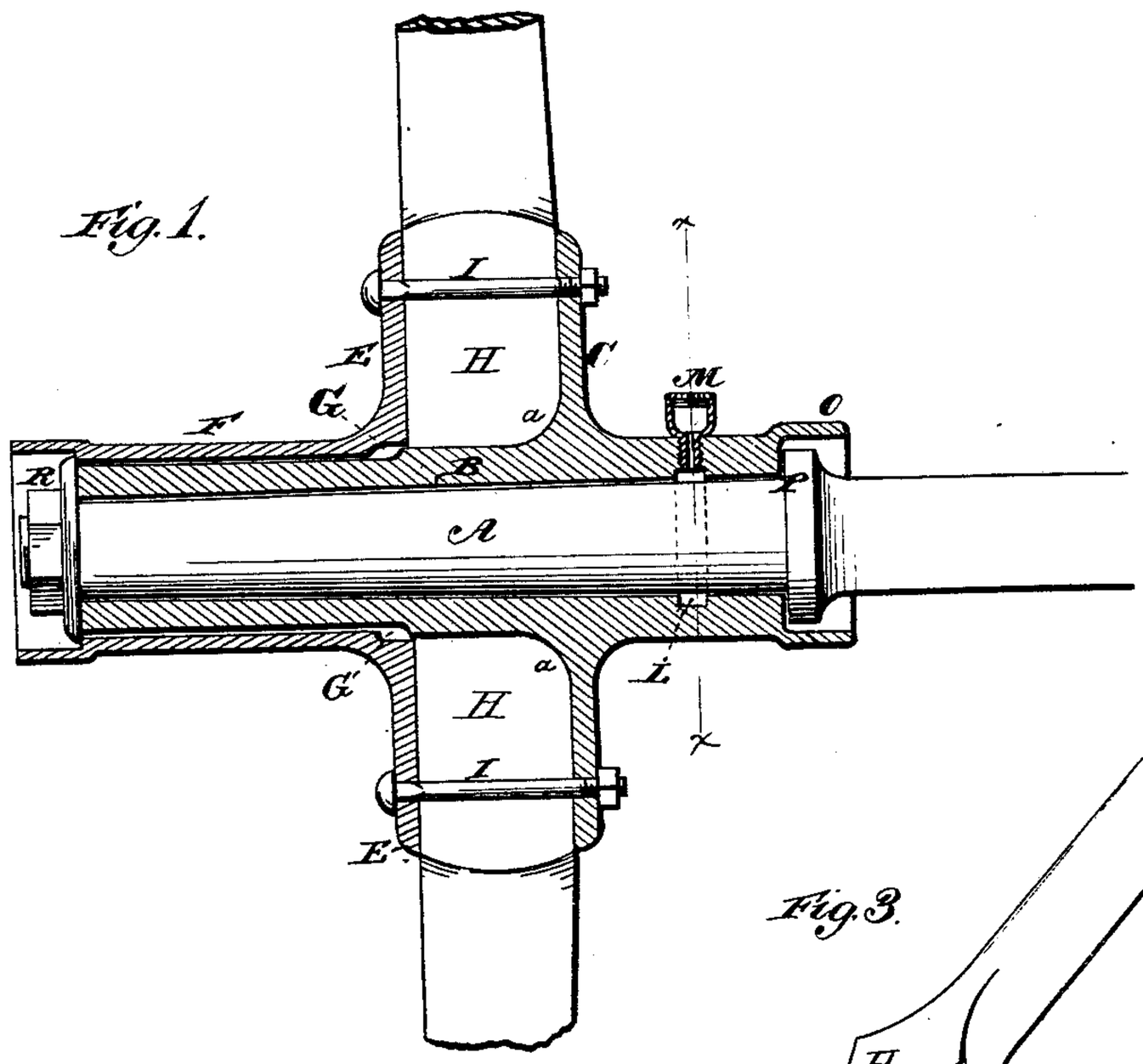


Fig. 3.

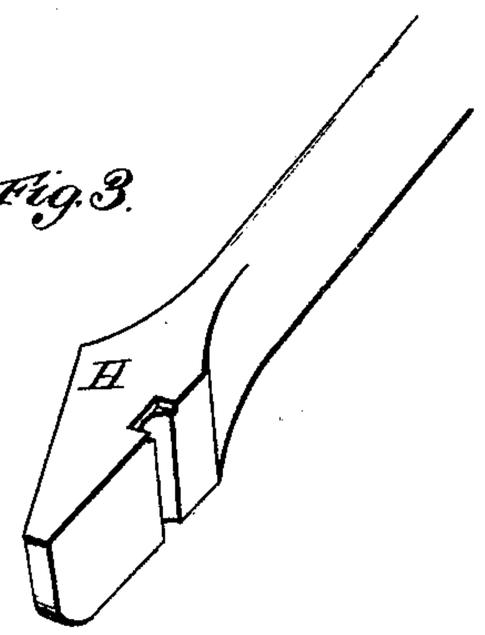
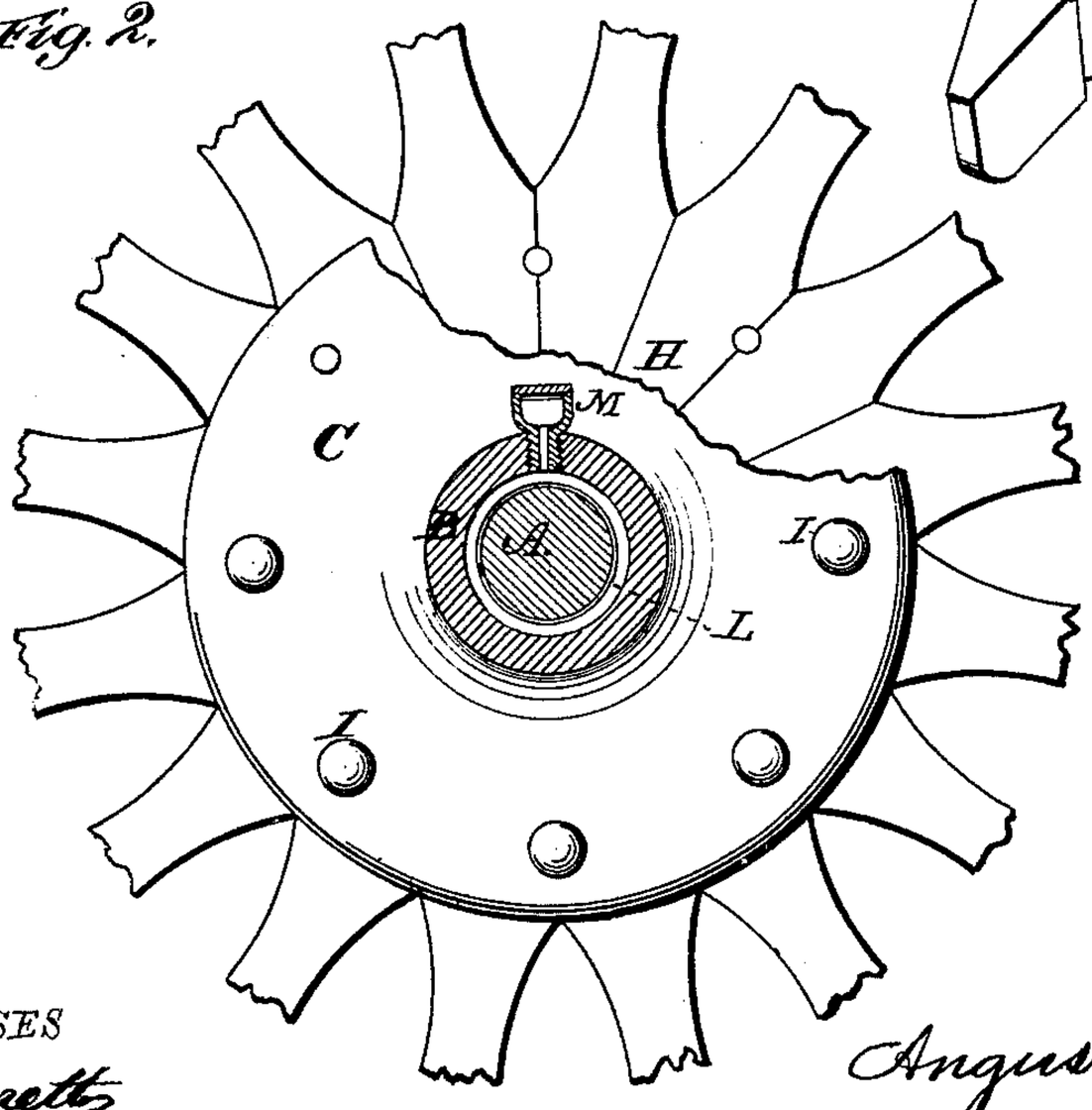


Fig. 2.



WITNESSES

Robert Everett

H. Clay Smith.

By

INVENTOR

Angus McKellar

Gilmore, Smith & Co.

ATTORNEYS.

UNITED STATES PATENT OFFICE.

ANGUS McKELLAR, OF CAMP DOUGLAS, NEAR SALT LAKE CITY, UTAH TERRITORY.

IMPROVEMENT IN VEHICLE-WHEEL HUBS.

Specification forming part of Letters Patent No. **222,294**, dated December 2, 1879; application filed March 15, 1879.

To all whom it may concern:

Be it known that I, ANGUS MCKELLAR, of Camp Douglas, near Salt Lake City, in the county of Salt Lake and Territory of Utah, have invented certain new and useful Improvements in Vehicle-Hubs; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

The object of my invention is to provide an improved vehicle-wheel hub of the class in which the axle-box is provided with a fixed radial flange and the spoke-tenons are confined between such flange and another which forms an integral part of a detachable sleeve that is screwed on or otherwise secured to the axle-box.

My improvements pertain to the construction and arrangement of certain parts, as hereinafter set forth and claimed.

In the accompanying drawings, Figure 1 is a central lengthwise section of my improved wheel-hub applied to an axle-arm and having fragments of spokes attached. Fig. 2 is a cross-section on line *x x* of Fig. 1. Fig. 3 is a perspective view of one of the spoke-tenons.

The axle arm or journal A is provided with a fixed circular collar, P, and its reduced outer end is screw-threaded to receive the nut R, in the usual manner. The axle-box B is constructed integrally with the radial circular flange C, and the spoke-tenons are secured by means of bolts I between such flange C and a flange, E, constituting an integral portion of the detachable sleeve F. The latter is slipped over the outer end of axle-box B, and held in place thereon by said bolts I and nut R. The sleeve F is also adjusted by the same bolts I toward flange C, so as to take up shrinkage of the spoke-tenons and clamp them tightly. A recess is formed at G to allow such adjustment. The lubricant for the axle is received into an annular groove or chamber, L, having feed-cup M.

In this class of wheels great regard is had to symmetry of appearance, compactness of form, and such distribution of material as will secure maximum strength with minimum size and weight of parts. This object I have had especially in view in the construction of my wheel-hub.

It has been the practice heretofore to brace or strengthen the circular flange of the axle-box by thickening it at the base on the outer side, the inner side being continued straight down to a point opposite to or below the base of the flange. This destroys the desired appearance or neat form of the hub, and renders it clumsy and ill-proportioned. The flange is also not thus braced so as to best resist the severe lateral strain or thrust necessarily incident to use, and which may break the flange or produce the accident known as "dishing."

In my hub I avoid a square angle on the inner side of the flange C, and brace it by forming the base portion *a* on a curved line. In other words, I form a buttress of curvilinear outline at the point *a*. The thickness of the axle-box B is not, however, materially, if at all, reduced contiguous to such brace *a*, so that the butts of the spoke-tenons may have a firm support which is at right angles to their longer axis. By this construction the brace or buttress *a* is concealed from view, and so placed as to better resist the leverage of the spokes due to lateral thrust of the axle.

The spoke-tenons H have one corner rounded to correspond to the form of brace *a*, which shape also facilitates inserting and driving a spoke between the flanges C E when the flange E is screwed up, as shown in Fig. 1.

What I claim is—

1. In a wheel-hub, the box B, having the flange C formed integral with it, said flange being provided with the curvilinear buttress or brace *a* on the inner side, and the portion of the axle-box contiguous to such buttress being

at right angles to said inner side of the flange, and of equal thickness, or nearly so, with the part of the box which is exterior to the flange, as shown and described, for the purpose stated.

2. The combination, with the axle-box B, having flange C constructed with the curved buttress *a*, located on the inner side, of the spokes having tenons H, which are rounded at one corner, as shown and described.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

ANGUS McKELLAR.

Witnesses:
CHAS. W. STRAYNER,
JOS. J. DAYNES.