JOHN MONK.

Improvement in Metallic Hubs for Wheels.

No. 121,462. Patented Dec. 5, 1871.

Fig. 1.

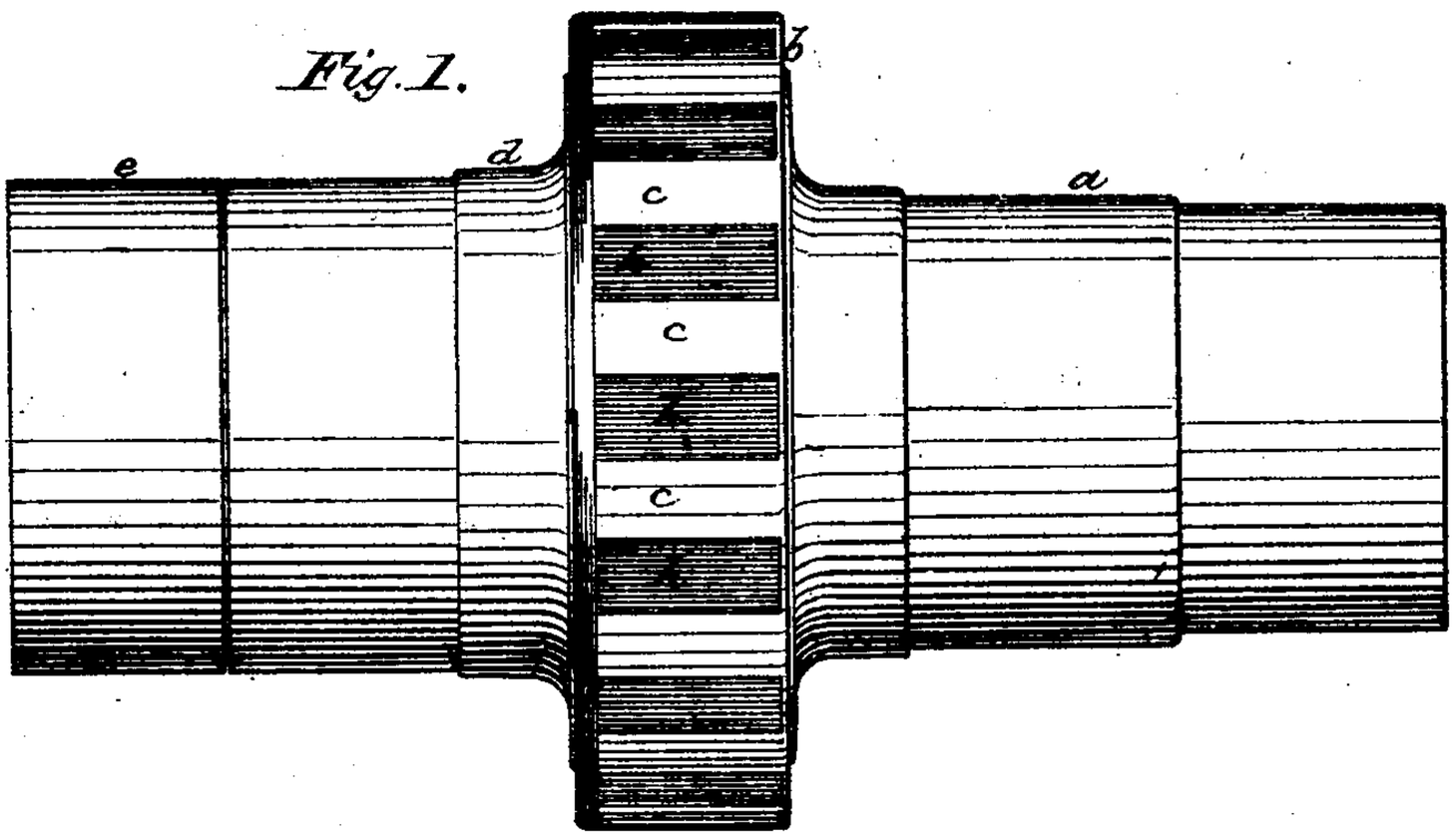


Fig. 2.

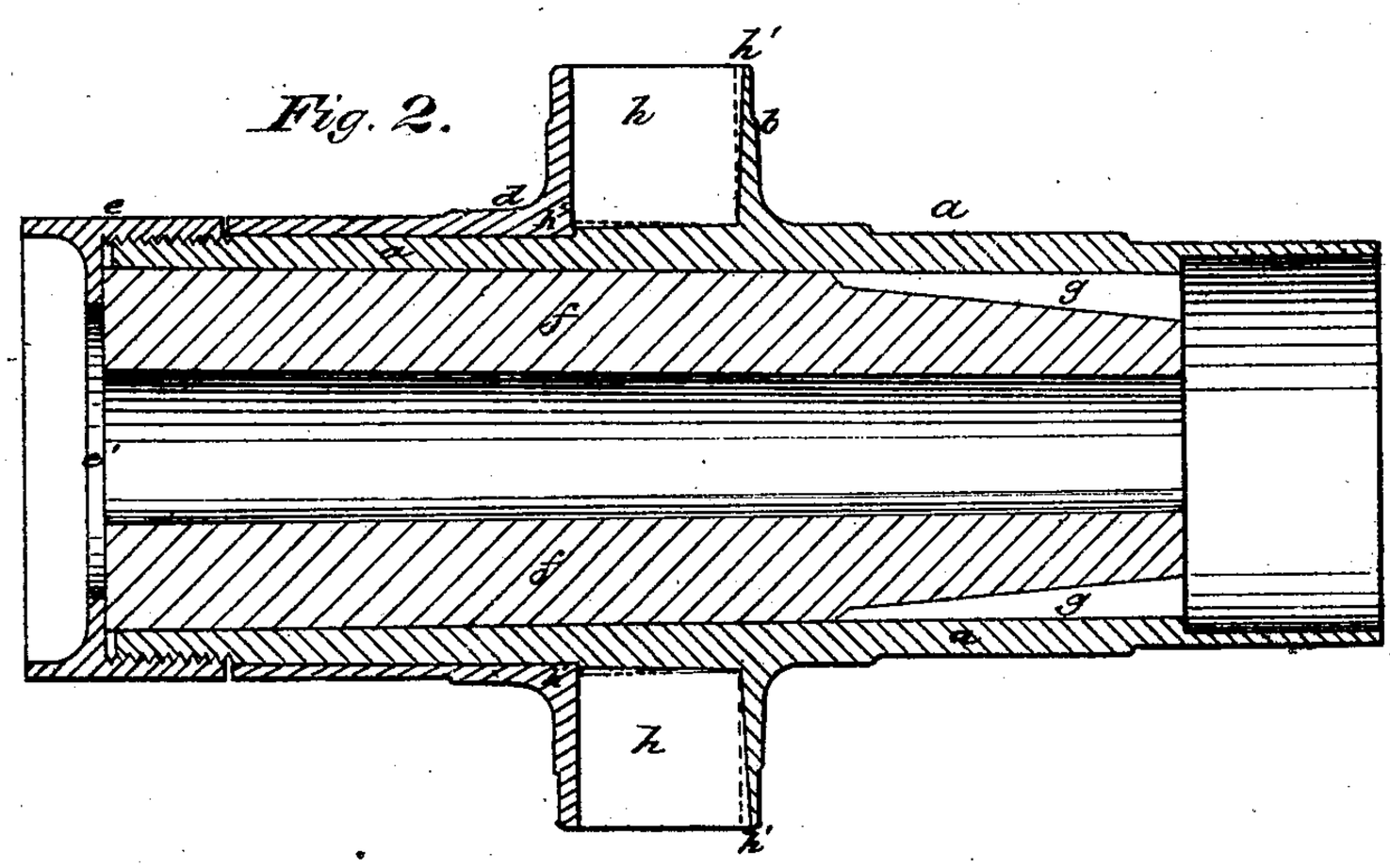
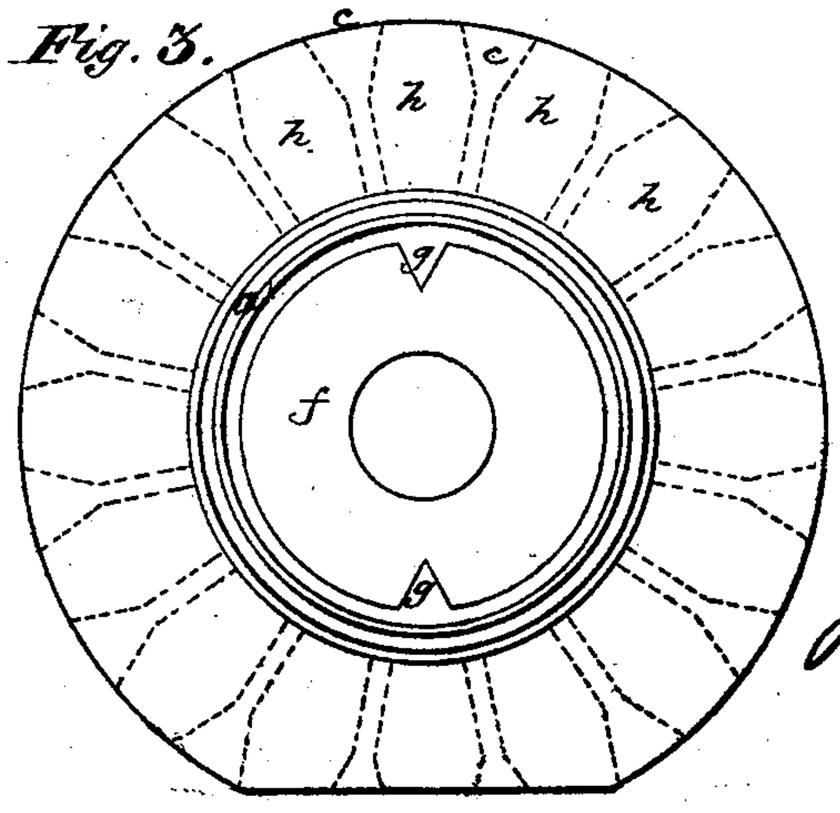


Fig. 3.



Witnesses:
A. T. Pregent
F. C. Brecht

Inventor:
John Monk

UNITED STATES PATENT OFFICE.

JOHN MONK, OF NORWICH, CONNECTICUT.

IMPROVEMENT IN METALLIC HUBS FOR WHEELS.

Specification forming part of Letters Patent No. 121,462, dated December 5, 1871.

To all whom it may concern:

Be it known that I, JOHN MONK, of the city of Norwich, in the county of New London and State of Connecticut, have invented certain new and useful Improvements in Metallic Hubs for the Wheels of Vehicles; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawing and to the letters of reference marked thereon.

The first part of my invention relates to the construction of metallic hubs for the wheels of vehicles, embodying such devices as shall render them readily adjustable to any required form or size of axle; and the second part to the dishing of wheels with metallic hubs, so that they may resist lateral pressure.

In the drawing, Figure 1 represents a longitudinal view of a hub embodying my invention. Fig. 2 shows a longitudinal section of the same; and Fig. 3, a transverse section.

In Fig. 1, *a* represents a metallic sleeve, extending the entire length of the hub, cast with a circular plate or collar, *b*, having lateral flanges *c c c*, between which the spokes are fitted. At the opposite end of these lateral flanges, and upon the sleeve, is a movable collar or flange, *d*, as shown in Figs. 1 and 2, the sides of which press against the edges of the spokes upon the inner side thereof, securing them firmly in position. Hitherto the great practical difficulty attending the construction of such wheels has been to secure the requisite amount of dish, and at the same time to give to the spokes a breadth of bearing sufficient to resist effectually the lateral pressure when the wheel is in motion. This I accomplish in my invention by means of the peculiar-shaped mortises into which the spokes are inserted. The sides of the mortises toward the outer end of the hub are beveled, as shown at *h*, in Fig. 2, from the bottom or base of the same upward and outward to the top of mortises *h h*, or to the height of collar *b*, thus causing the spokes to incline outward to the extent required, and giving them a firm bearing upon such beveled sides the whole depth of such mortises. These bevels, as above described, necessitate a corresponding beveling of the lower ends of the tenons of the spokes in order to conform to the shape of the base or bottom of the mortises upon which the spokes rest; but in practice I still further increase this breadth of base-bearing of the spokes by beveling the bottom of the mortises from the inner end of the same upward and outward to the opposite side of the same to the extent required, and then beveling the end of the spokes in conformity therewith. When the spokes are thus inserted the movable collar *d* is pressed up against the edges of the same, and fully secured in such position by means of the screw-cap *e*. Within the metallic sleeve *a* is a wooden center, *f*, which is of a circular taper form, corresponding to the interior shape of the sleeve, and secured from turning therein by V or other-shaped flanges, as shown at *g g*, in Figs. 2 and 3. When this wooden center is driven into the sleeve these flanges penetrate the surface of the same their entire depth, thus securing them firmly. In lieu of such flanges the interior of the metallic sleeve may be corrugated, and by means thereof, when the wooden center is driven in, may be retained in position in like manner. This center is prevented from drawing or being driven out by the circular flange *e'* in screw-cap *e*, as shown in Fig. 2, which is screwed up firmly against the same. The object of this wooden center is to admit of the adjustability of wheels constructed as above described to any desired or required form or size of axle, by means of boxes inserted therein in the ordinary manner.

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

1. The construction of a metallic hub with its sleeve-collars, wooden center, screw-cap, and flanges, substantially as shown and described, as and for the purpose hereinbefore set forth.

2. The devices for dishing spokes in wheels with metallic hubs, and giving to them the requisite bearing by means of beveled mortises and beveled spokes corresponding thereto, substantially as described, as and for the purpose herein set forth.

JOHN MONK.

Witnesses:
ALONZO HUGHES,
D. P. COWL.

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