J. SUMMERS.

Hub.

No. 14,678. Patented Apr. 15, 1856.

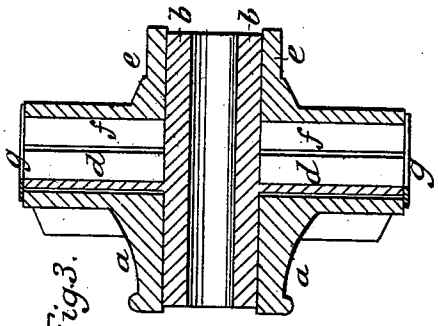


Fig. 3.

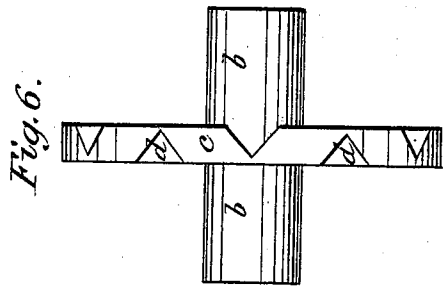


Fig. 6.

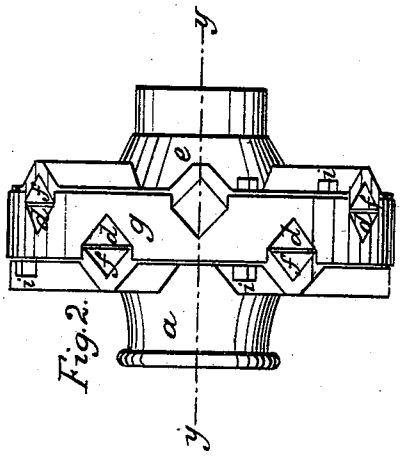


Fig. 2.

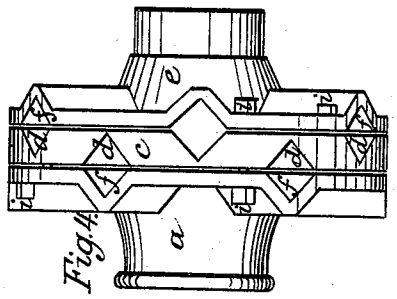


Fig. 4.

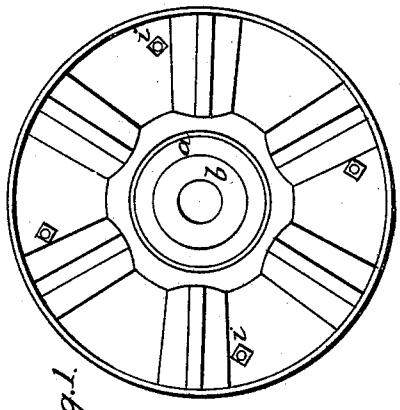


Fig. 1.

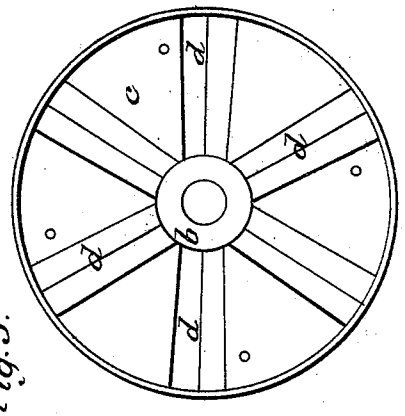


Fig. 5.

# UNITED STATES PATENT OFFICE.

JOSEPH SUMMERS, OF RALEIGH COURT HOUSE, VIRGINIA.

## WHEEL-HUB.

Specification of Letters Patent No. 14,678, dated April 15, 1856.

*To all whom it may concern:*

Be it known that I, JOSEPH SUMMERS, of Raleigh Court House, in the State of Virginia, have invented a new and Improved Hub for the Wheels of Carriages, &c.; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, Figure 1 being an end view of said hub; Fig. 2, a side view; Fig. 3, a section in the line *y y* of Fig. 2; Fig. 4, a side view of the hub after the band *g* has been removed therefrom, and Figs. 5 and 6 are views of the centrally flanched pipe-box detached from the other parts of the hub.

Similar letters indicate corresponding parts in all the figures.

My improved wheel-hub is composed of the flanched pipe-box *b*, *c*, *d*, the flanched half-hubs *a*, *h*, and *e*, *f*, the embracing band *g*, and a suitable number of connecting screws *i*, *i*, substantially as represented in the drawings.

The flanch *c*, which radiates from the center of the pipe-box *b*, and is cast in one piece therewith, has a series of alternating flaring grooves *d*, *d*, cast in opposite sides thereof. The flanched half-hubs *a*, and *e*, fit on to the ends of the pipe-box *b*, and the flanches which radiate from the inner ends of said half-hubs, correspond in size with the flanch from the center of the pipe box. Flaring grooves *f*, *f*, corresponding in size and shape with the grooves *d*, *d*, in the sides of the pipe-box flanch *c*, are formed in the inner sides of the half-hub flanches in such positions that they can be brought exactly opposite the said grooves in the pipe-box flanch; and when secured in said positions, they form angular holes for the reception of the spokes of the wheel—as shown in the drawings.

A notched metallic band *g*, is shrunk on the periphery of the pipe-box flanch *c*,—which band is of sufficient width to embrace the flanches from the half-hub pieces *a*, and *e*, and prevent the dust from working in between the said central and side flanches. The respective parts of my improved hub are united to each other by means of a suitable number of screw bolts *i*, *i*.

The inner ends of the spokes to be placed in my improved hub, should be made of such a size that they will not allow the central and side flanches of the hub to be brought in contact with each other at first.

Sufficient spaces should be left between said flanches to enable the spokes to be afterward tightened whenever they may work loose from the effects of seasoning, or from any other cause; the spaces between the central and side flanches of the hub should not however, be ever wide enough to extend beyond the protection of the dust-excluding embracing band *g*.

The flaring shape of the grooves in the central and side flanches of the hub, enable them, when brought opposite each other and acted upon by the screw bolts, to embrace the spokes in the firmest and most secure manner.

The band *g*, serves to exclude the dust from the spaces between the flanches of the hub at the same time that it gives a smooth appearance to the periphery of the hub.

Any ornamental shape can be given to the exterior surfaces of the half-hubs and their flanches that may be desired.

What I claim as my invention and desire to secure by Letters Patent, is—

My improved wheel-hub, composed of the pipe box *b*, and its radially grooved central flanch *c*, combined with the half-hubs and their radially grooved flanches, and with the embracing band *g*, substantially as herein set forth.

The above specification of my improved hub for the wheels of carriages, &c., signed and witnessed this 4th day of Feb., 1856.

JOS. SUMMERS.

Witnesses:

Z. C. ROBBINS,

MCCLINTOCK YOUNG, Jur.