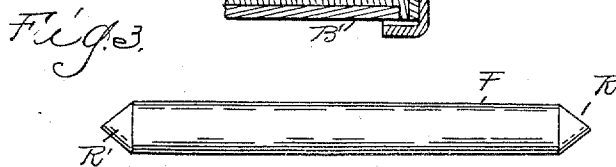
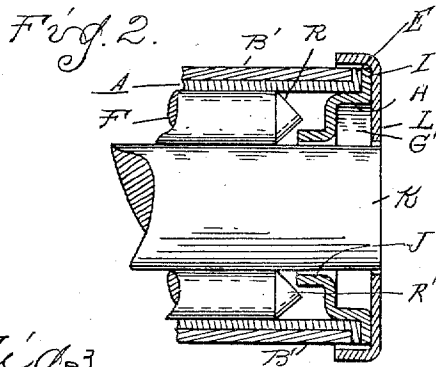
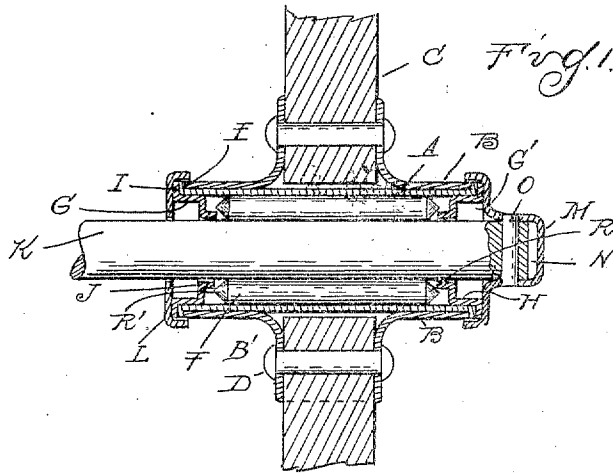


J. F. VOGEL.
HUB CONSTRUCTION.
APPLICATION FILED FEB. 7, 1916.

1,207,449.

Patented Dec. 5, 1916.



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UNITED STATES PATENT OFFICE.

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HUB CONSTRUCTION.

1,207,449.

Specification of Letters Patent.

Patented Dec. 5, 1916.

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To all whom it may concern:

Be it known that I, JOSHUA F. VOGEL, a citizen of the United States of America, residing at Toledo, in the county of Lucas and State of Ohio, have invented certain new and useful Improvements in Hub Construction, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention relates to hub construction and more particularly to a hub construction for wheels such as are adapted for use on toy wagons and the like.

15 It is among the objects of the invention to obtain a simple construction which is provided with a retained roller bearing, the parts being so arranged that they can be readily attached to and detached from the vehicle.

20 The invention further resides in various details of construction and combinations and arrangements of parts as will more fully hereinafter appear.

25 In the drawings: Figure 1 is a longitudinal section through the hub; Fig. 2 is a fragmentary view on an enlarged scale showing the manner of retaining the rolls; and Fig. 3 is an enlarged sectional view through one of the rolls detached.

30 In the particular construction of the invention shown in the drawings, A designates the cylinder or barrel of the hub, and B and B' the flanged sleeves which engage the barrel upon opposite sides of the spokes

35 C. The latter are secured in place between the flanged sleeves by any suitable means, such as the rivets D. The barrel preferably has its opposite ends turned over the ends of the sleeves B and B', as shown at E. 40 Within the barrel is positioned a plurality of rolls, F, which are held in position by retaining members G and G'. Each of the latter is provided with a cylindrical portion H that fits within the barrel and a flange I for

45 overlapping the end of the barrel. They also have an inwardly-extending flange J that underlaps the ends of the rolls.

50 As shown in detail in Fig. 3 the cross-sectional area of the rolls at their ends are reduced. In the present construction more specifically the ends of the rolls are tapered as indicated at R and R'. A hub constructed as above described is self-contained and can be easily mounted upon the axle K, the

load being carried by the roller bearings. 55 In addition to retaining the rollers in position the retainers G and G' also serve to hold the lubricant in the hubs around the rolls. Caps L and M are preferably employed at the opposite ends to exclude the 60 dust, the inner cap L being apertured for the passage of the shaft K. At the opposite end the outer cap is cupped at M to receive the end of the shaft to which it is attached by a bolt or cotter-pin O, or other 65 suitable means. Both caps have flanges overlapping the barrel and preferably forming a dust-proof joint therewith. It will also be apparent that the novel arrangement of the rollers with tapered ends in connection with the flanges of the retainers will 70 limit the endwise movement of the rolls. The invention, however, is not limited to the details of construction except as specified in the appended claims. 75

What I claim as my invention is:—

1. A wheel hub, comprising a barrel, a series of rolls therein, retainers for said rolls at opposite ends of the barrel, each of the retainers having a portion fitting within 80 the barrel, a flange overlapping the end of the barrel and an inwardly-extending flange underlapping the ends of the rolls, the underlapped ends of the rolls being tapered.

2. A wheel hub, comprising a barrel, a series of rolls therein, a retainer for said rolls at one end of the barrel, said retainer having a portion fitting within the barrel, a flange overlapping the end of the barrel, and an inwardly-extending flange underlapping 90 the end of the rolls, the underlapped ends of the rolls being tapered.

3. A wheel hub, comprising a barrel, a series of rolls therein, a retainer for said rolls at one end of the barrel, said retainer 95 having a portion fitting within the barrel, a portion exterior to the barrel engaging the adjacent end thereof, and an inwardly extending flange underlapping the ends of the rolls, the underlapped ends of the rolls being 100 tapered.

In testimony whereof I affix my signature in presence of two witnesses.

JOSHUA F. VOGEL.

Witnesses:

WILLIAM J. SCHNEIDER,
J. WEIR COOVER.