No. 860,247. PATENTED JULY 16, 1907.

T. J. REID.

VEHICLE HUB.

APPLICATION FILED JULY 27, 1906.

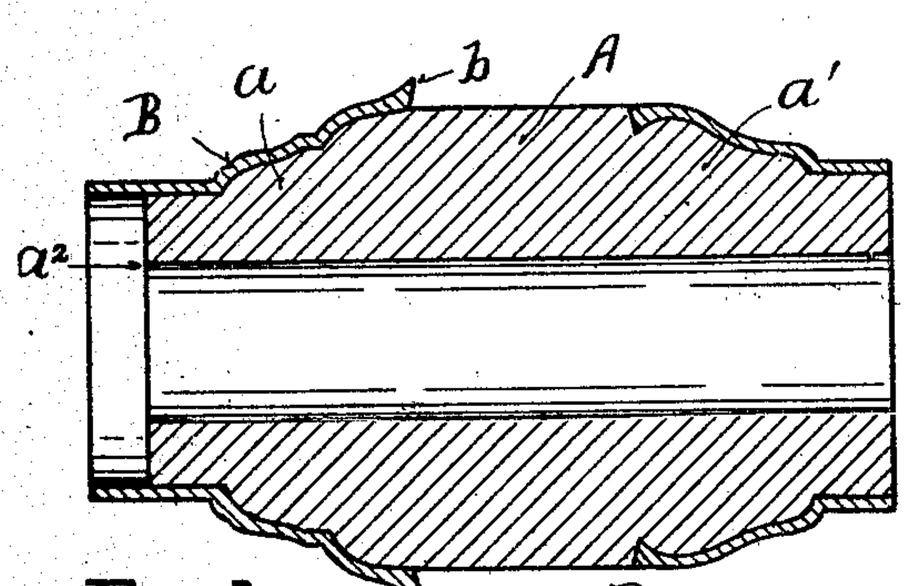


Fig. 1.

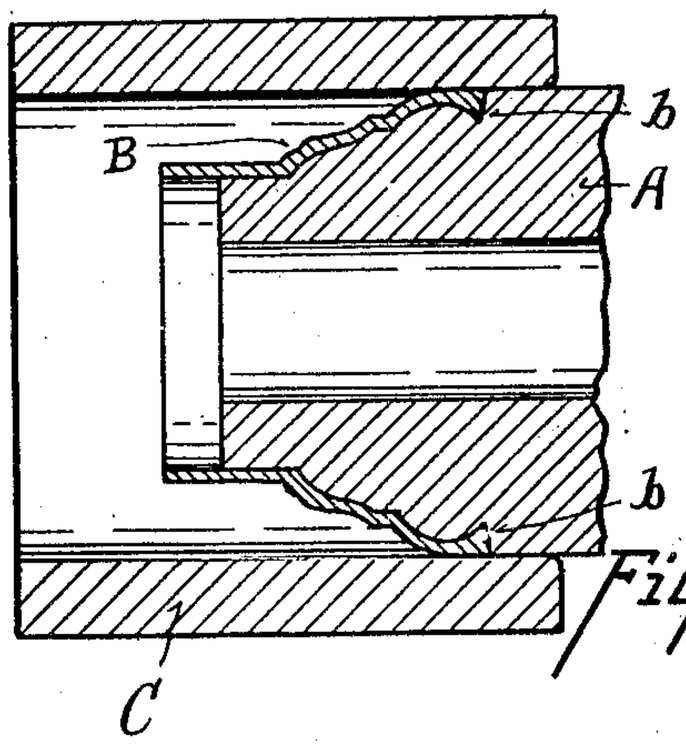


Fig. 2.

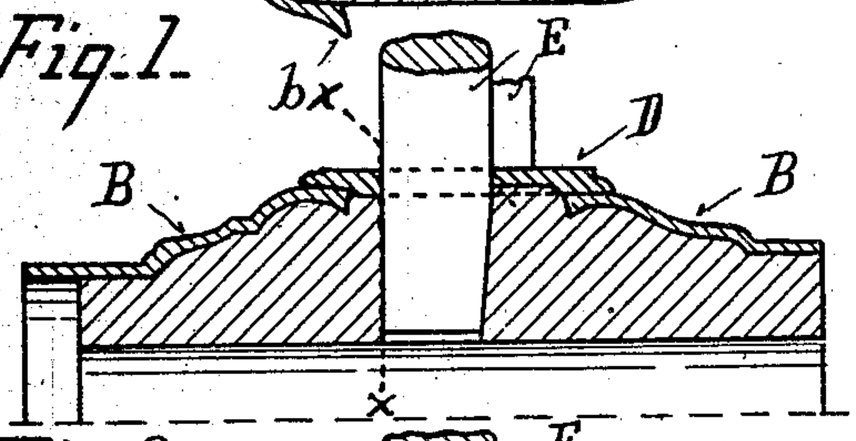


Fig. 3.

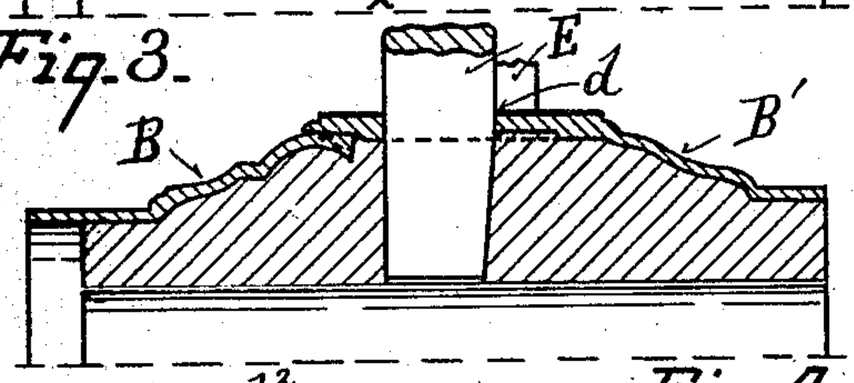


Fig. 4.

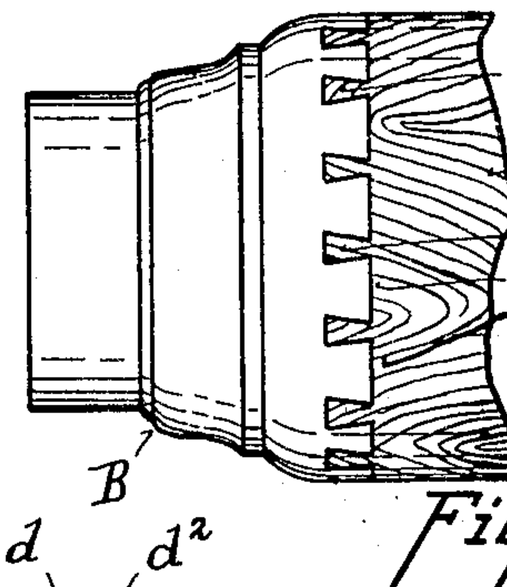


Fig. 6.

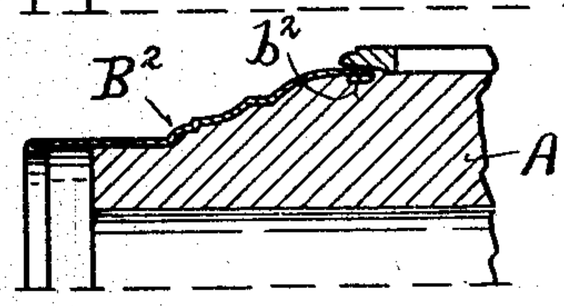


Fig. 5.

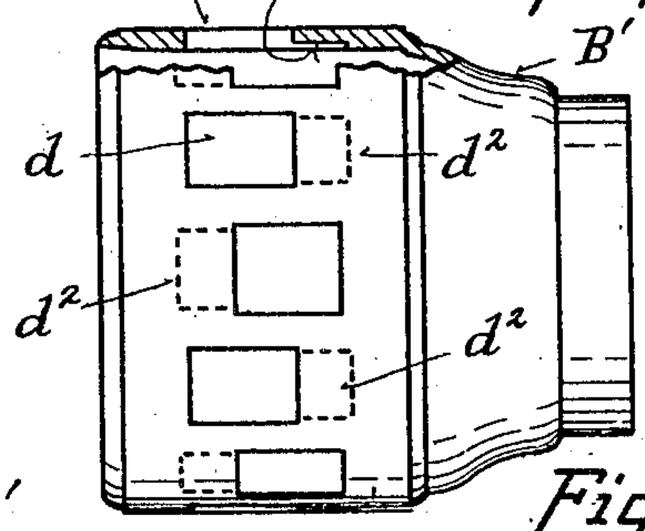
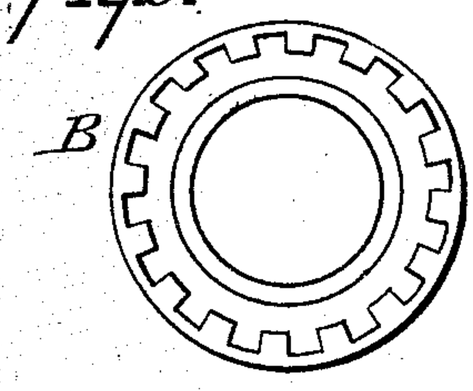


Fig. 7.

Fig. 9.



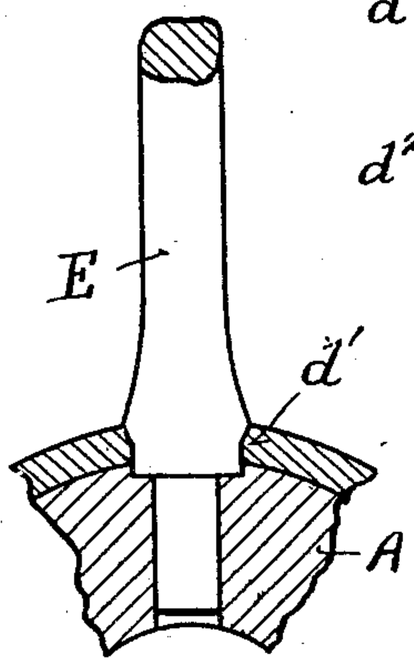


Fig. 8.

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VEHICLE-HUB.

No. 860,247. Specification of Letters Patent. Patented July 16, 1907.

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To all whom it may concern:

Be it known that I, THOMAS J. REID, a citizen of the United States of America, and a resident of Columbus, county of Franklin, State of Ohio, have invented certain new and useful Improvements in Vehicle-Hubs, of which the following is a specification.

The object of my invention is a simple and effective means of locking a metallic shell in place upon a wooden core, such as a hub. This object is attained by the means described in the specification and illustrated in the accompanying drawings, in which

Figure 1 is a sectional view of a wooden hub showing one end of the shell compressed in place and the other end preparatory to being compressed into place. Fig. 2 is a sectional view of one end of the hub showing the end of the hub and shell and the die for compressing the same in section. Fig. 3 is a sectional view of one half of the hub after the shells, the central band and the spokes have been secured in place. Fig. 4 is a view similar to Fig. 3 but of a modification. Fig. 5 is a sectional view of another modification. Fig. 6 is an elevation of one end of the hub and of the shell. Fig. 7 is a detail elevation of the shell shown upon the right hand end of Fig. 4, the upper part of the shell being broken out and shown in section. Fig. 8 is a sectional view taken upon line x—x of Fig. 3. Fig. 9 is a detail end view of a modified form of shell.

Referring to the parts: Wooden hub, A, has the usually tapered ends, a, a', and a central bore, a^2.

In the modification shown in Fig. 1, the conical shell, B, has an enlarged ridge, b, at its enlarged end. The internal diameter of the enlarged end is the same as that of the wooden hub, A. The large end of the shell, B, has a series of notches, b', cut into it, the edges of which notches before the shell is compressed upon the wooden hub are parallel. These notches, b', may be made clear through the shell as shown in Fig. 6, or may be cut merely in the inner face and not extend through the outer face, as shown in Fig. 9. This shell is adapted to be placed upon the hub, A, as shown upon the left of Fig. 1, so that the ridge, b, projects outward. Then a cylindrical die, C, whose inner diameter is equal to that of the diameter of the hub, A, is forced over the shell, B, which operation carries the ridge, b, inward and compresses it into the wood as shown in Fig. 2. This operation of compressing the large end of the shell, B, likewise closes or contracts the mouths of the notches, b', so that the wood of the hub is likewise compressed or gripped by these notches, as shown in Fig. 6.

In the modification shown in Figs. 1 and 3 shells, B, are thus compressed upon each end of the hub, A, and a central ring, D, is forced over the central part of the hub. Ring, D, has a series of staggered spoke holes, d, whose longitudinal sides, d', are beveled as shown in Fig. 8. Upon the inner face of the ring, D, at alternate ends of the holes, d, a series of recesses, d^2, are formed. When the ring, D, is forced upon the wooden hub, it is seen that the wood thereof will swell outward into these recesses, d^2 and thereby form an additional means of holding the ring upon the hub.

The spokes, E, when placed in the perforations, d', will have their sides compressed between the beveled edges as shown in Fig. 8, which forms an effective means for holding the spokes in place.

In the modification shown in Fig. 4, instead of having the shell, B, and the ring, D, in two pieces, as shown in Fig. 3, I have formed one of the shells, B, integral with the ring, D. In this modification, shell, B, upon the left is secured in place first as aforedescribed and then the shell, B′, is forced over the other end. The shells, B, as thus aforedescribed, are of a form adapted to be made from malleable iron or steel.

In Fig. 5 I have illustrated a modification adapted for use with bands of stamped metal. In this modification the shell, B^2, has its inner end, b^2, turned inward to form a ridge similar to ridge, b, of shell, B. Then this shell is placed upon the hub, A, and is compressed by means of a die, C, in a manner as aforedescribed.

What I claim is:

1. The combination of a wooden hub and upon the hub a conical shell having a thickened portion at its large end, a series of notches with contracted mouths cut into the large end the thickened portion of the shell having been compressed into the wood of the hub which is displaced thereby and compressed into said notches.

2. The combination of a wooden hub with tapering ends, conical shells at whose ends are enlarged annular ridges the internal diameter of said ends having been the same as that of the diameter of the hub and the ridges having been compressed into the wood of the hub, and a central ring with staggered spoke-holes and a series of indentations upon its inner face at alternate ends of the spoke holes into which the wood of the hub projects.

3. As a new article of manufacture a shell band consisting of a tapering shell having an outwardly extending wedge-shaped ridge at its large end which is to be turned inward in fastening the shell upon the hub.

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