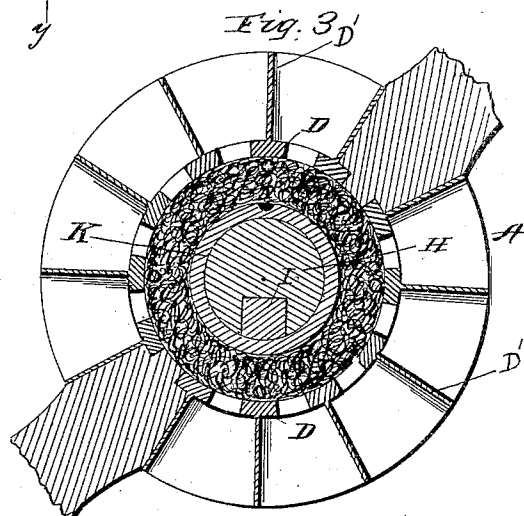
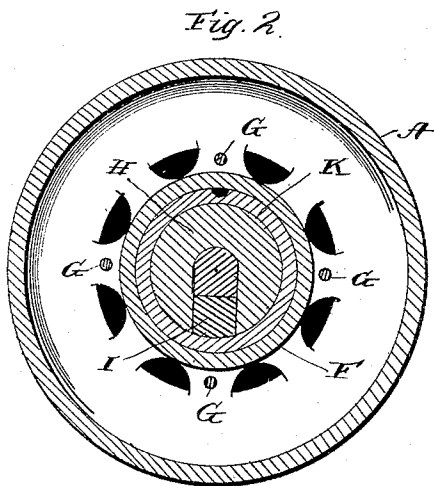
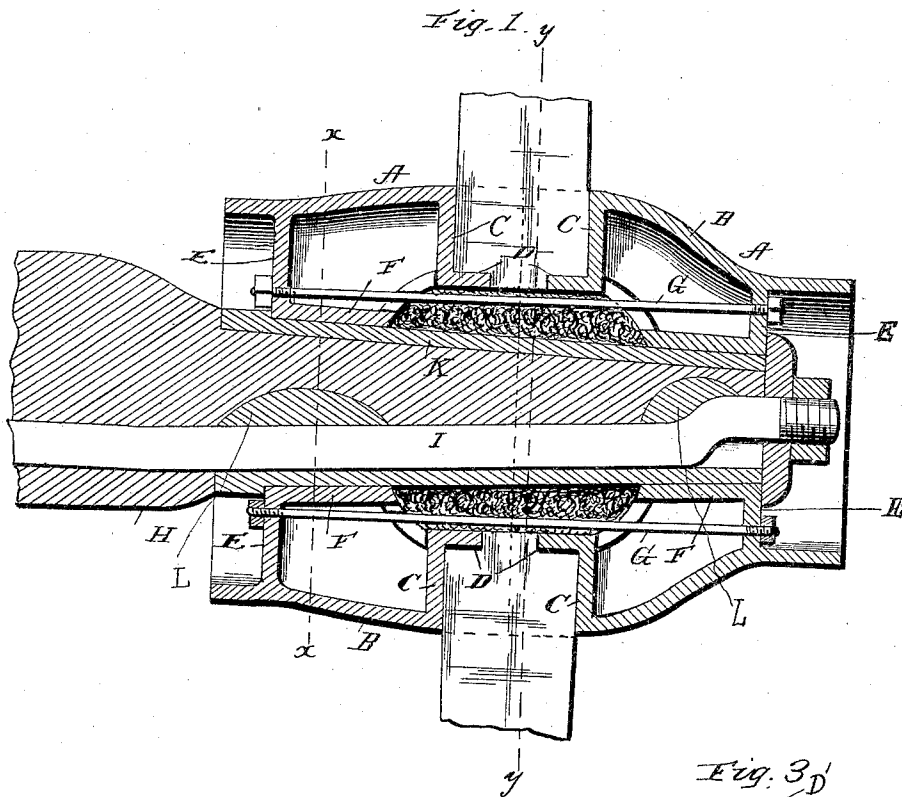


(No Model.)

W. H. SULLENBERGER.
WAGON WHEEL.

No. 443,125.

Patented Dec. 23, 1890.



Witnesses
J. A. Raeder
J. C. Turpin

Inventor
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UNITED STATES PATENT OFFICE.

WILLIAM H. SULLENBERGER, OF OMAHA, NEBRASKA, ASSIGNOR OF ONE-HALF TO DAVID R. KNIGHT, OF SAME PLACE.

WAGON-WHEEL.

SPECIFICATION forming part of Letters Patent No. 443,125, dated December 23, 1890.

Application filed May 23, 1890. Serial No. 352,878. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. SULLENBERGER, a citizen of the United States, residing at Omaha, in the county of Douglas and State of Nebraska, have invented certain new and useful Improvements in Wagon-Wheels; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention has relation to improvements in wheel-hubs; and it consists in the construction, novel combination, and adaptation of parts hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a vertical longitudinal sectional view of a portion of an axle-tree and hub in position thereon. Fig. 2 is a transverse sectional view of the same, taken on the line *xx* of Fig. 1; and Fig. 3 is a transverse sectional view taken on the line *yy* of Fig. 1, spokes of the wheel being shown in position.

In carrying out my invention I form the hub in two transverse sections and connect said sections together by longitudinal bolts, as will be presently described. These sections A of the hub are of the usual shape and are so formed, as will be presently described, as to form a chamber between their inner and outer walls for the reception of an oil or other lubricant for the lubrication of the spindle of the axle.

B indicates the outer wall of the sections, which is of a curvature and length consistent with the size of the hub. The inner end wall of the respective sections is provided upon its inner edge with inwardly-directed flange-lugs D, placed at suitable intervals, as better shown in Fig. 3, to form a seat between them for the reduced inner ends of the spokes which rest thereon, and for which they afford a base when the sections of hub are brought together to confine the spokes. Formed integral with and extending radially from the lug-flanges D are partitions D', which form the several sockets for the spokes when the sections have been joined.

E indicates the outer end walls of the sections, which connect the outer and inner walls of the sections. These outer end walls E are

provided at suitable points with screw-threaded apertures to receive the connecting-bolts of the sections.

F indicates the inner walls or boxing of the sections which bears upon the spindle of the axle. These walls F, which extend inwardly to a point opposite the inner edge of the inner end walls C, are preferably chilled in the casting of the section, so as to render them better able to stand the friction. An opening is thus left between the inner ends of the inner end walls and the inner wall of the section, whereby the lubricant in the lubricant-chamber is allowed to pass therefrom into the absorbent-chamber upon the absorbent material therein.

G indicates the longitudinal connecting-bolts of the hub, which pass through the screw-apertures of the outer end walls of the sections and connect them together. These bolts G are provided with nuts upon their ends, and it will be seen that by tightening the same the sections are brought closer to each other and the spoke confined between the same more tightly clamped.

It is obvious that a suitable aperture may be provided in the outer wall of the sections for the introduction into the chamber of lubricating material.

H indicates an axle-tree, which may be of any ordinary or approved construction, having a recess in its bottom for the reception of a metallic bracing or strengthening rod I. This rod I, which is preferably of a size in the proportion illustrated, is preferably straight, except at its ends, where it is bent up and made round and threaded for the reception of a nut which secures the hub upon the axle.

K indicates a metallic sleeve or spindle, which is placed upon the axle-tree and upon which the hub turns. This spindle K, which is preferably chilled in casting to withstand the frictional wear, is provided upon its periphery with a longitudinal groove for the distribution of the lubricant received from the absorbent of the hub, and it is also provided at its inner end with a shouldered portion to keep the hub in place and prevent lateral play thereof.

Before placing the sleeve K upon the axle-tree I fill in any cavities around the rod I

with Babbitt metal, as illustrated at L, or, if desired, an extra axle-box may be provided beneath the sleeve K, having apertures through which the Babbitt metal may be poured.

- 5 In operation, when the lubricant has been placed in the chambers for the reception thereof and the absorbent in the recess between the sections, they are bolted together, as has been described, when the wheel is ready
10 to be placed upon the spindle of the axle.

By the construction described it will be seen that the objectionable necessity of greasing the axle frequently in the old way is dispensed with, as by my improvements one
15 charge of lubricant lasts a long time, and the danger of the boxing of the wheel becoming hot is entirely obviated.

Having described my invention, what I claim is—

- 20 1. In a wheel-hub, substantially as described, the combination, with the two hollow sections adapted to carry a supply of lubricant and having their inner or boxing walls curved outward at their meeting ends to form a
25 receptacle for an absorbent material when the sections have been joined, of the flange-lugs D, projecting inwardly at intervals from the lower edge of the inner end walls and adapted to receive between them the reduced ends of
30 the spokes and to seat the shouldered portion thereof, and the partitions D', formed inte-

gral with and extending radially from the said lug-flanges, adapted to confine the spokes between them, substantially as and for the purpose specified.

- 35 2. The combination, with an axle-tree and the brace-rod I, seated in the lower side thereof and bent upward adjacent to its ends and threaded on said ends to receive securing-nuts for the hubs, of the said hubs, consisting, 40 essentially, of the two hollow sections adapted to carry a supply of lubricant and having their boxing-walls curved outward at their inner or meeting ends to form a receptacle for an absorbent material when the sections 45 have been joined, the flange-lugs D, projecting inwardly at intervals from the lower edge of the inner end walls and adapted to receive between them the reduced ends of the spokes and to seat the shouldered portion thereof, 50 and the partitions D', formed integral with and extending radially from the said lug-flanges, adapted to confine the spokes between them when the sections have been brought together and secured by the longitudinal se- 55 curing-bolts, substantially as specified.

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

WILLIAM H. SULLENBERGER.

Witnesses:

JOHN FUHS,

HANS J. WINTHERLICH.