

(No Model.)

B. S. KENNEDY.
HUB.

No. 464,366.

Patented Dec. 1, 1891.

Fig. 1.

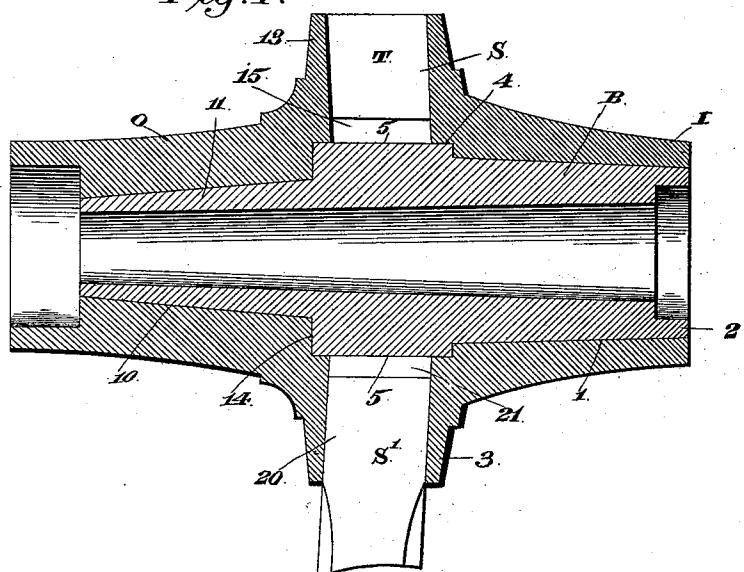


Fig. 2.

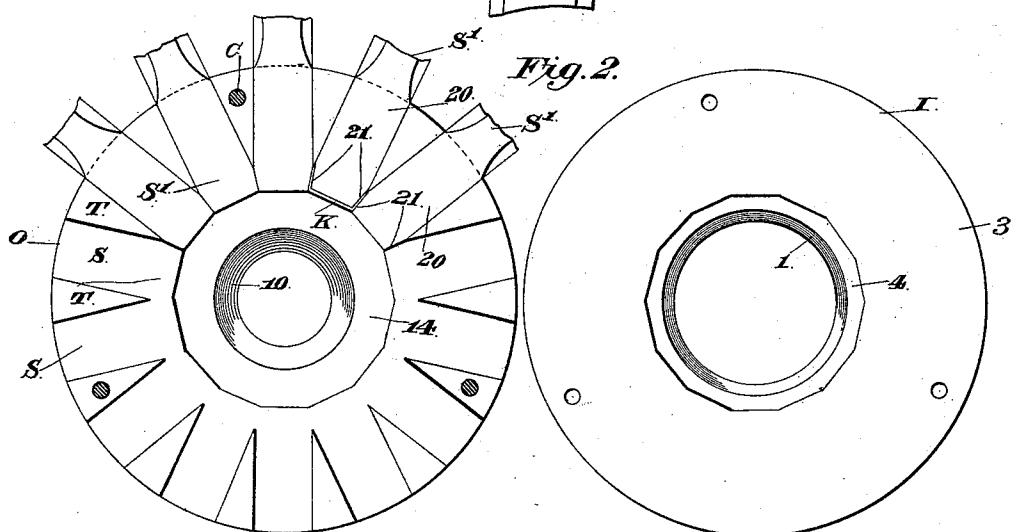
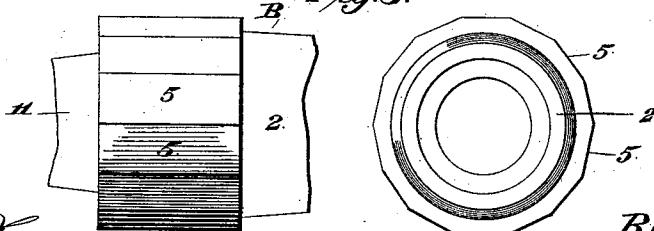


Fig. 3.



Witnesses

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By his Attorneys,

Invenfor

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UNITED STATES PATENT OFFICE.

BERRYMAN S. KENNEDY, OF NEW ALBANY, INDIANA.

HUB.

SPECIFICATION forming part of Letters Patent No. 464,366, dated December 1, 1891.

Application filed July 7, 1891. Serial No. 398,698. (No model.)

To all whom it may concern:

Be it known that I, BERRYMAN S. KENNEDY, a citizen of the United States, residing at New Albany, in the county of Floyd and 5 State of Indiana, have invented a new and useful Hub and Boxing, of which the following is a specification.

This invention relates to carriages and wagons, and more especially to the hubs used 10 therein, and the object of the same is to effect certain improvements in devices of this character.

To this end the invention consists in the specific details of construction, hereinafter 15 more fully described and claimed, and as illustrated on the sheet of drawings, wherein—

Figure 1 is a central longitudinal section of this improved hub, showing one spoke therein. Fig. 2 is an elevation of the inner end of 20 the outer member of the hub and the adjacent end of the inner member of the hub, showing several spokes in the former member. Fig. 3 is a side and inner end elevation of the box for the hub.

Referring to the said drawings, the letters O and I designate, respectively, the outer and inner members of the hub.

B is the box; S', the spokes; K, the keys for tightening the latter; T, the triangular blocks 30 on the outer member, forming the spoke-sockets S, and C the connecting-bolts for the two members, these parts being of the following specific construction.

The inner member I has a large cylindrical bore 1 for the cylindrical inner end 2 of the box B, or this end may be slightly tapered, as shown. At the outer end of this member is a wide flange 3, projecting outwardly almost at right angles to the axial line of the hub—40 that is to say, it stands on a line inclining very slightly outwardly beyond a transverse line through said axis, for a purpose to be explained hereinafter. At the angle of the outer face of the flange 3 with the bore 1 is formed a shoulder 4, whose radial face is plane, but whose inwardly-facing face is polygonal, as shown in Fig. 2, to receive the faces 5 of the enlarged central portion of the box B, the inner corner of this portion resting in this shoulder, as will be clear.

The outer member O has an outwardly-tapering bore 10, to receive the tapering outer

end 11 of the box B, and this member also has an outwardly-projecting flange 13 at its inner end, and also a shoulder 14 with polygonal faces, for receiving the faces 5 of the box, the same as the inner member. The flange 13 of this member is parallel with that of the other member, so that when the spokes S are clamped between these flanges the 60 proper dish will be given to the wheel, as shown in Fig. 1. Projecting inwardly from the inner face of the flange 13 are the triangular blocks T, which do not extend to the polygonal face of the shoulder 14, thereby 65 leaving an annular space 15 inside the points or angles of these blocks. The adjacent faces of the blocks are not on strict radial lines from the axis of the hub, but stand truly parallel, and the blocks extend inwardly 70 from the flange 14 a distance equal to the greatest thickness of the inner ends of the spokes. The letter C designates bolts, which connect the flanges of the two members of the hub, their bodies passing through the 75 blocks, as seen.

The spokes S' are connected in any suitable manner with the felly of the wheel, as will be understood, and their inner ends 20 are rectangular and of a size to pass between 80 two of the blocks T. The corners of the longest faces at the inner ends of the spokes are beveled, as shown at 21.

The keys K are of metal and of approximate U shape, their flat bodies being of some 85 thickness and their upwardly-extending ends quite thin, and the length of each key is equal to the length of each block.

In assembling the parts of this improved hub, the spokes are first put into the felly 90 at their outer ends and their inner ends are placed between the blocks of the outer member, this member being at that time raised above the plane of the felly. The box B is then put in place, with its outer tapered end 95 11 in the bore 10 of the outer member and the faces 5 of its enlarged central portion engaging the polygonal face of the shoulder 14, and bearing against the inner ends of the various spokes S'. The felly is then raised to 100 or nearly to the plane of the spoke-sockets, whereby the spokes will be tightened in the hub and will be caused to bear very forcibly upon the box. The inner member I is then

applied, its polygonal-faced shoulder 4 engaging the inner end of the enlarged central portion of the box, and the connecting-bolts C hold the parts together, the polygonally-faced 5 shoulders 4 and 14 preventing the turning of the box within the hub members. At this time the adjacent faces of the flanges, by reason of the fact that they incline slightly toward the outer end of the hub from a true 10 transverse plane, will give the wheel the proper dish by holding each spoke at the proper angle, and the felly will prevent the spokes from moving outwardly. When any spoke becomes loose, the inner member of the hub 15 is removed, the spoke slipped outwardly between the two blocks T, and one of the keys K placed around the inner end of the spoke. The inner ends, it will be seen, pass through the spoke-sockets S and into the annular space 20 15, their beveled corners 21 standing normally in contact with each other; but as soon as one spoke is slipped outwardly and the key K applied to its inner end, it will be obvious that the body of the key will interpose between the end of the spoke and one of the faces 5 of the box B, while the ends of the key will rest against the beveled corners 21 of the spokes next adjacent. By this means no loosening of parts is permitted, even after 25 30 one or more spokes have been tightened by the keys. This improved hub is manufactured preferably of metal, and may be used upon carriages and wagons of all styles. The box may have sunken ends for the reception 35 40 of a shoulder on the axle-spindle at its inner end and a nut thereon at its outer end; and various other changes in the details of construction may be made without departing from the spirit of my invention.

40 What is claimed as new is—

1. The herein-described hub, the same comprising outer and inner members detachably connected and having shoulders at the adjacent ends of their bores, which shoulders have 45 polygonal inwardly-facing faces, spokes clamped between said members, and a box having an enlarged central portion with a polygonal exterior engaging said shoulders, the ends of the box passing through said 50 members, as set forth.

2. The herein-described hub, the same comprising outer and inner members having shoulders at the adjacent ends of their bores, which shoulders have polygonal inwardly-facing faces, triangular blocks on one member, 55 means for connecting the members so as to

leave spoke-sockets between said blocks, spokes passing into said sockets with their ends aligning with the polygonal faces of said shoulders, and a box having an enlarged polygonal central portion, its center engaging the inner ends of the spokes and its ends engaging said polygonal shoulders, as set forth. 60

3. The herein-described hub, the same comprising outer and inner members, triangular blocks on one member, means for connecting the members so as to leave spoke-sockets between said blocks, spokes passing into said sockets and having flat inner ends, and an independent box having an enlarged central 70 portion with a polygonal exterior bearing against said ends, as set forth. 75

4. The herein-described hub, the same comprising two members having outwardly-projecting flanges at their meeting ends, triangular blocks projecting from one flange toward the other and having truly parallel adjacent faces, the inner ends of the blocks extending part way toward the bore of the members, so as to leave an annular space inside 80 said ends, spokes having rectangular inner ends passing between said parallel faces and beveled at their inner corners, said beveled corners standing in said annular space and in contact with the adjacent spokes, and means 85 for clamping the members together, as set forth.

5. The herein-described hub, the same comprising two members having outwardly-projecting flanges at their meeting ends, triangular blocks projecting from one flange toward the other and having truly parallel adjacent faces, the inner ends of the blocks extending part way toward the bore of the members, so as to leave an annular space inside said ends, 90 spokes having rectangular inner ends passing between said blocks and beveled at their adjacent corners, U-shaped keys whose bodies cover the inner ends of certain spokes and whose tips are reduced and stand between the beveled corners, a box within the members, against which the inner ends of the spokes bear, and means for clamping the parts together, as set forth. 95

In testimony that I claim the foregoing as 105 my own I have hereto affixed my signature in presence of two witnesses.

BERRYMAN S. KENNEDY.

Witnesses:

SUSSANNAH JONES,
HENRY ROLF.