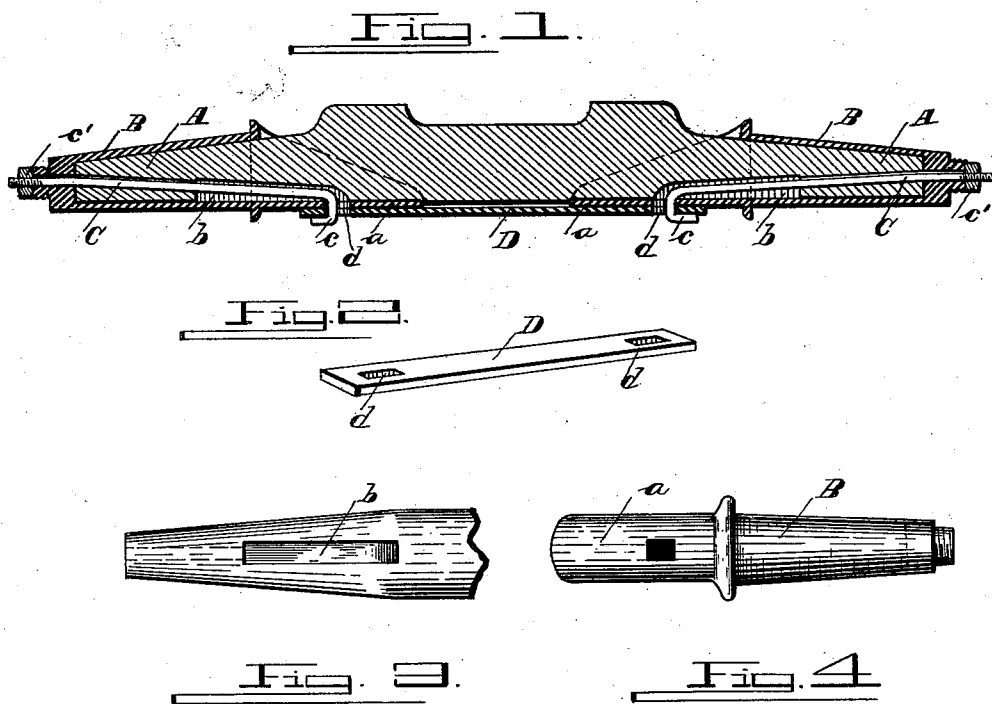


(No Model.)

J. MALLON.
WAGON AXLE.

No. 466,307.

Patented Dec. 29, 1891.



Witnesses
E. W. Levitt.
Jas. L. Mansfield.

Inventor
James Mallon.
By his Attorney W. Alexander

UNITED STATES PATENT OFFICE.

JAMES MALLON, OF SOUTH BEND, INDIANA, ASSIGNOR TO THE BIRDSELL MANUFACTURING COMPANY, OF SAME PLACE.

WAGON-AXLE.

SPECIFICATION forming part of Letters Patent No. 466,307, dated December 29, 1891.

Application filed September 15, 1891. Serial No. 405,804. (No model.)

To all whom it may concern:

Be it known that I, JAMES MALLON, of South Bend, in the county of St. Joseph and State of Indiana, have invented certain new and useful Improvements in Wagon-Axles; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification.

This invention relates to improvements in the axles of vehicles of that class in which metallic skeins are employed; and its objects are to provide for securing the skeins upon the ends of the axle and at the same time bracing and strengthening the axle between the skeins, as more fully hereinafter explained.

The invention consists of an axle bored and recessed longitudinally at its ends, suitable skeins fitted over the ends of the axle and beveled at their inner ends, so as to form extensions which cover the recess and support the under side of the axle, clamping-rods extending through the boxes and recesses and provided with clamping-nuts at their outer ends and downwardly-extending hooks at their inner ends, and a flat truss-bar slotted near its ends, which bear closely against the under side of the inwardly-extended portions of the skeins, which are slotted for the passage of the hooks, as more fully hereinafter explained.

In the accompanying drawings, forming part of this specification, and in which the same letters of reference indicate like parts, Figure 1 represents a longitudinal vertical sectional view of the axle, the skeins, clamping-rods, and truss-bar in position. Fig. 2 represents a detached view of the flat truss-bar. Fig. 3 is a detail bottom view of one end of the axle. Fig. 4 is a detail bottom view of one of the skeins.

Referring to the drawings, the letter A indicates an ordinary axle having its ends tapered, as usual, for the reception of the skeins B. The said skeins are also tapered, so as to closely fit the ends of the axle, and are beveled at their larger or inner ends, so as to form extensions *a*, for the purpose hereinafter explained.

The ends of the axle are bored longitudinally and provided with recesses *b* in their lower portions, extending from the bored portions inwardly toward, but not midway of, the axle.

The letter C indicates two clamping-rods, which are screw-threaded at their outer ends and pass in an oblique direction through the bores and recesses, the inner ends of said rods being bent downwardly into the form of hooks *c* and the outer ends being provided with screw-clamping nuts *c'*, which bear against the outer ends of the skeins.

The letter D indicates a flat truss or brace bar of metal, which is slotted near its ends, as indicated by the letter *d*, so as to engage the hooked ends of the clamping-bars before mentioned. The said bar when in place sets closely under the extended portions of the skeins, which are slotted for the passage of the hooked ends of the clamping-bars.

The parts constituting my invention are assembled as follows: The clamping-rods are first properly inserted in the longitudinal bores and recesses before mentioned. The skeins are then forced upon the ends of the axle and the hooked ends of said bars passed through the slots in the skeins. The truss-bar is then applied with its slots over the hooked ends projecting through the slots in the skeins. The screw-nuts are then tightened up, drawing the truss-bar closely against the skeins and drawing the skeins forcibly and securely to their seats.

It will be perceived that as constructed the truss-bar sets closely against the skeins and is clamped securely thereto, so as to be comparatively inexpressed to obstructions, which might injure it or strain the parts, while the recess being entirely covered offers no lodgment for mud or dust, which would rot the axle and corrode the clamping-rods. Moreover, the clamping-rods by passing through the slots in the skeins and truss-bar, bind the same together in the most secure manner, so as to strengthen and brace the axle as well as bind the skeins.

I am aware that axle-skeins have heretofore been connected by truss-rods extending under the axle and clamping-rods extending

obliquely through longitudinal passages in the axle. Such I do not claim, broadly; but

What I do claim, and desire to secure by Letters Patent, is—

5 1. The combination, with the longitudinally recessed and bored axle, of the skeins having rearward extensions covering the recesses, the threaded and hooked clamping rods and nuts, and the slotted clamping-bar engaging the
10 said hooks, substantially as specified.

2. The combination, with the axle recessed and bored as described, of the axle-skeins having slotted extensions at their larger ends, the clamping-rods extending through the
15 bores and recesses and having their hooked ends extending through the slots in the skeins, slotted truss-rod, and the clamping-nuts

whereby the parts are secured together, substantially as described.

3. The combination, with the recessed and 20 bored axle, of the slotted skeins having rearward extension, the slotted truss-bar bearing closely against the lower extended portions of the skeins, and the clamping-rod whereby the said truss-bar and skeins are securely fast- 25 ened together and to the axle, substantially as set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

JAS. MALLON.

Witnesses:

JAMES DUSHANE,
O. P. BIRDELL.