No. 681,629. Patented Aug. 27, 1901.

C. A. DAHLHAUS.

VEHICLE AXLE.

(Application filed Nov. 30, 1900.)

(No Model.)

FIG. 1.

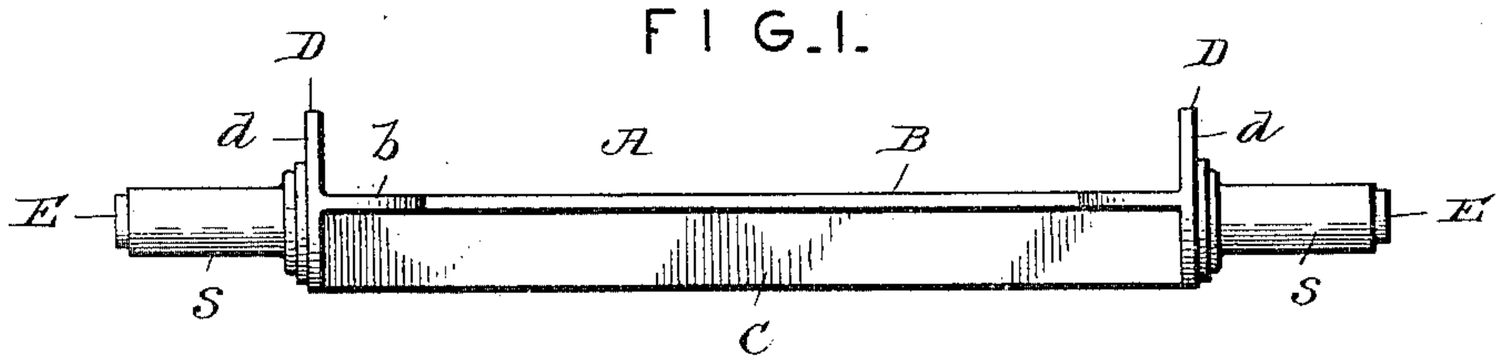


FIG. 2.

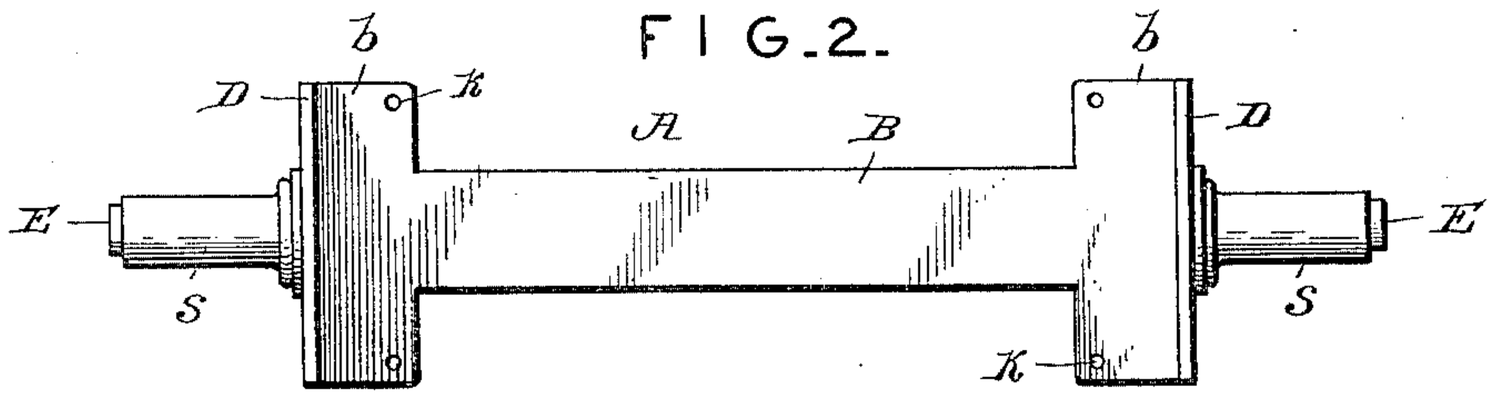


FIG. 3.

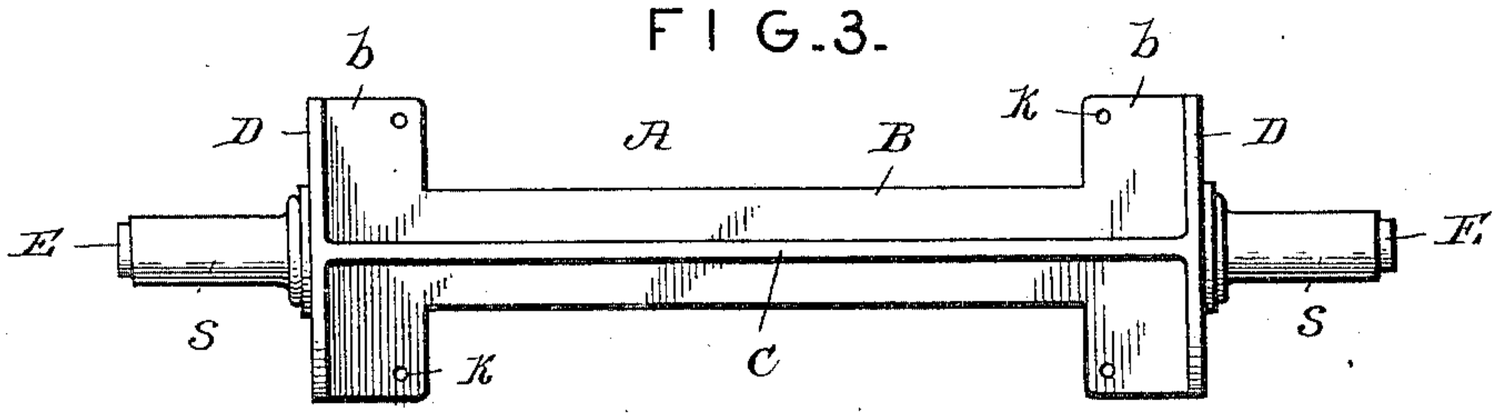


FIG. 4.

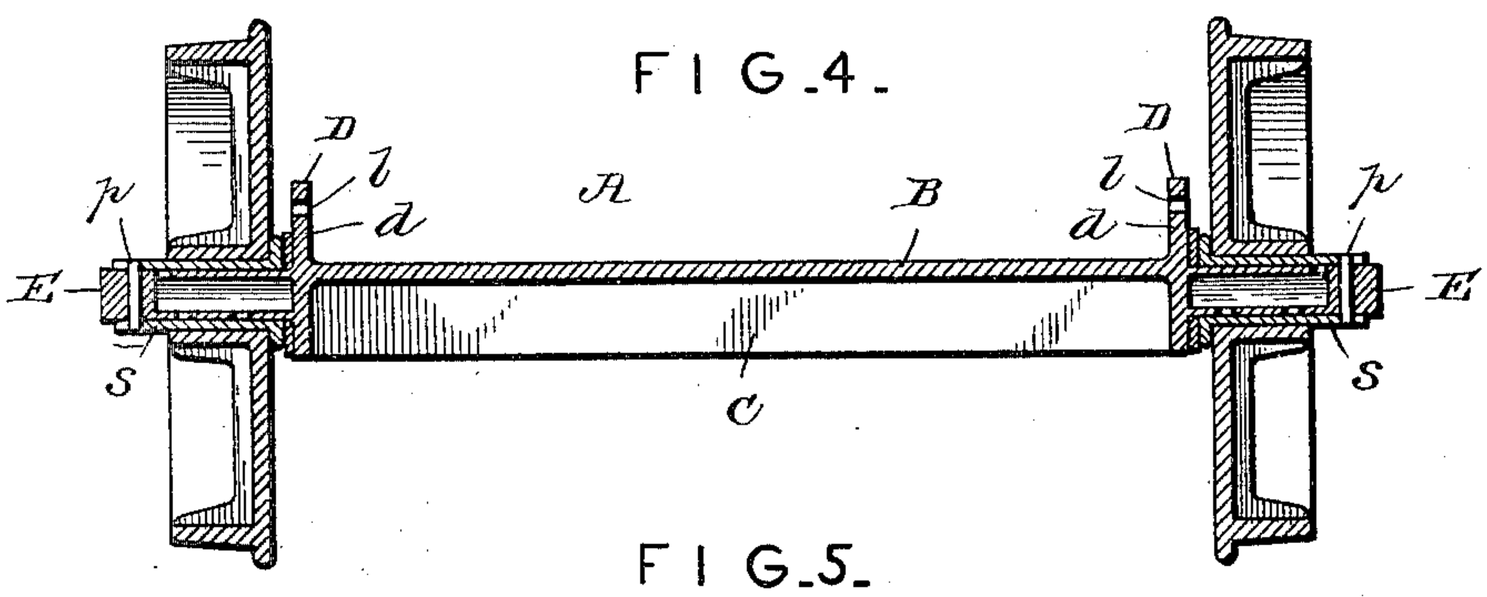
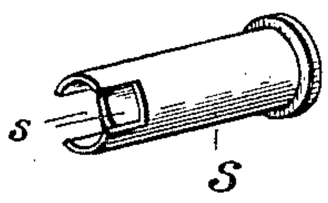


FIG. 5.



ATTEST.

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UNITED STATES PATENT OFFICE.

CHARLES A. DAHLHAUS, OF BRAZIL, INDIANA.

VEHICLE-AXLE.

SPECIFICATION forming part of Letters Patent No. 681,629, dated August 27, 1901.

Application filed November 30, 1900. Serial No. 38,323. (No model.)

To all whom it may concern:

Be it known that I, CHARLES A. DAHLHAUS, having declared my intention to become a citizen of the United States, a resident of Brazil, in the county of Clay and State of Indiana, have made a certain new and useful Invention in Vehicle-Axles; and I declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it appertains to make and use the invention, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

Figure 1 is a side elevation of my axle. Fig. 2 is a top plan view of the same. Fig. 3 is a bottom plan view of the same. Fig. 4 is a central longitudinal section through my axle with the wheels in place thereon. Fig. 5 is a detail view of spindle-sleeve S.

The invention relates to axles for mining cars and vehicles; and it consists in the novel construction and combinations of parts, as hereinafter set forth.

In the accompanying drawings the letter A designates the longitudinal body of the axle, which is T form in cross-section, the upper or flat portion B being in the horizontal plane, while the lower portion C projects downward from the median line of said upper portion, forming a flange or rib thereof and extending from end to end, joining the transverse vertical end flanges D D. These transverse flanges project below and above the flat upper portion B of the body. At its end portions the flat upper portion B is widened or made of greater breadth by means of lateral reinforcements or enlarged bearings *b b*, which join the end flanges D D, which are also wider than the main portion of the body of the axle. The spindles E project from the outside faces of the vertical flanges D D, each spindle having its root or shoulder at that portion of the flange D which covers the junction of the longitudinal under rib C with the flat portion of the body. The upper line of each spindle is, however, extended in about the plane of the upper surface of the flat portion B of the body in such a manner that the upper portion *d* of the transverse flange D projects above the spindle. The lateral extensions or reinforcements *b b* of the flat body portion are provided with perforations *k* for the passage of bolts or screws, whereby the axle may be secured to the proper part of the car or its frame or gear. So, also, the transverse upwardly-projecting flanges D may be provided with perforations *l* for the same purpose. The angle between the transverse flange D and the enlargement of the flat portion of the body is a right angle, and an angular seat or bearing is thereby formed to receive the angle of the car body or frame in a solid and secure manner. The spindles E are hollow and are designed to serve as oil cups or reservoirs, perforations being made through the walls thereof to enable the oil to pass to the surface. Each spindle is provided with a spindle-sleeve S, which is designed to take the wear of the wheel. The spindle-sleeve is held in position by means of a linchpin or other fastening at *p*, the end of the sleeve being provided with notches or openings *s* to engage the ends of the linchpin and permit the oil to to pass. This axle is made in one piece, of malleable iron or of any suitable metal, except the spindle-sleeve, and forms a very strong and durable support for the body of the car.

Having described the invention, what I claim, and desire to secure by Letters Patent, is—

An integral metallic axle to be cast in one piece, and consisting of the narrow body portion of T form in cross-section, and having a planular upper surface, said body having at both end portions thereof lateral horizontal extensions at both sides, said body having also vertical upward extensions at the terminations thereof, the spindles on the same level as the lower or vertical portion of said body, and the vertical web portions connecting said spindles and body, and in the same plane as said upward extensions, substantially as specified.

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

CHARLES A. DAHLHAUS.

Witnesses:

ROBERT D. HENDRIX,

S. P. GANTZ.