

P. F. WHITE.  
VEHICLE-AXLE.

No. 188,708.

Patented March 20, 1877.

Fig. 1.

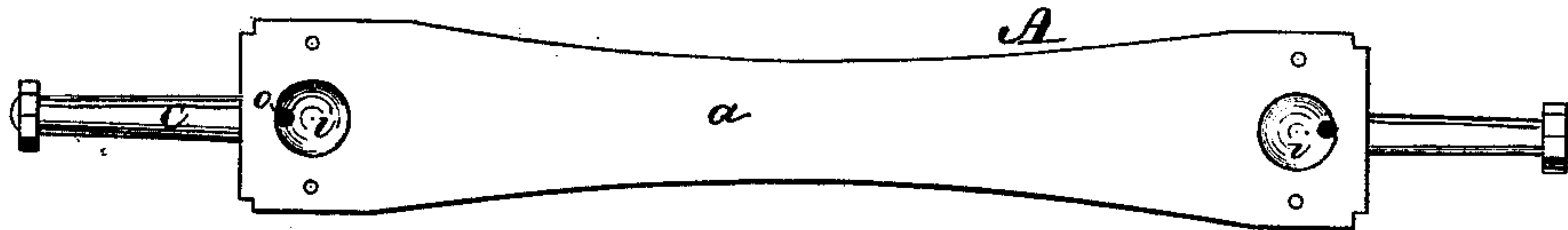


Fig. 2.

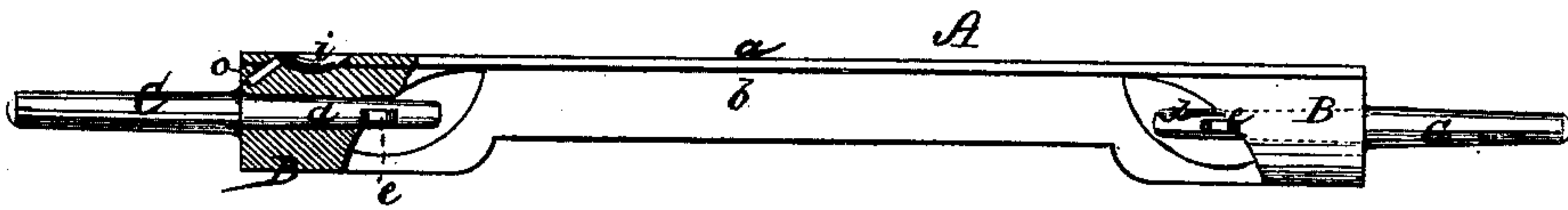


Fig. 3.

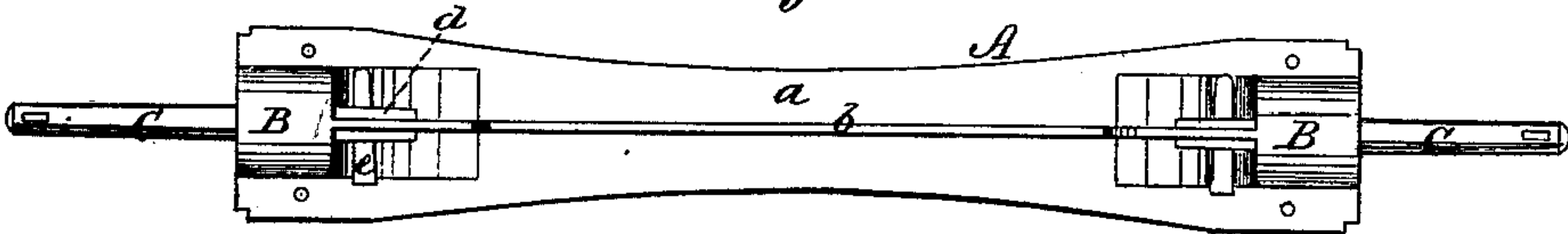


Fig. 4.

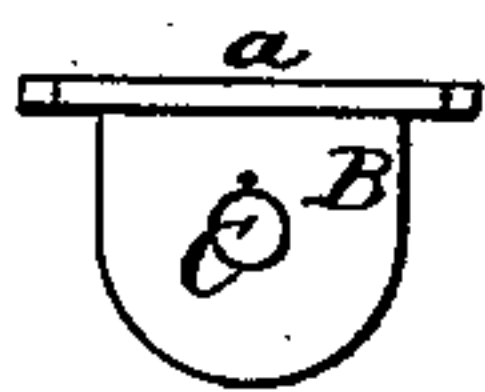


Fig. 5.



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PATRICK F. WHITE, OF WESTERN PORT, MD., ASSIGNOR TO HIMSELF AND  
HARRY CRAWFORD BLACK, OF SAME PLACE.

## IMPROVEMENT IN VEHICLE-AXLES.

Specification forming part of Letters Patent No. **188,708**, dated March 20, 1877; application filed  
January 24, 1877.

*To all whom it may concern:*

Be it known that I, PATRICK FRANCIS WHITE, of Western Port, in the county of Alleghany and State of Maryland, have invented a new and useful Improvement in Axles; and I do hereby declare that the following is a full, clear, and exact description of the same:

The invention relates to an improvement in the class of vehicle-axles which are  $+$ -shaped in transverse section; also, in that class whose arms or journals are made detachable.

The improvement consists in the form or construction of the body of the axle, and the manner of connecting therewith the socket or bearing-blocks for the journals, the whole forming the integral axle proper.

In the accompanying drawing, forming part of this specification, Figures 1 and 3 are, respectively, top and bottom plan views of my improved axle. Fig. 2 is a side view, with part of one of the journal-bearings broken away. Fig. 4 is an end view, and Fig. 5 a cross-section of the axle.

The flat part *a* of the axle forms a broad rest for the body of the mining-car, or other vehicle, and holes are formed in it to receive

screws or screw-bolts for attaching the axle to the same. The part *a* extends over the upper side of the blocks B, and the latter are rigidly connected thereto, and also to the notched or recessed ends of the rib *b*, so that the blocks and bars *a b* are inseparable parts, and form together the integral body of the axle, ready for use and for attachment of the journals by the means above described.

For convenient lubrication of the journals C I provide an oil-cavity, *i*, in each end of the axle-plate *a*, and a passage, *o*, leading therefrom through the respective ends of blocks B in proximity to the shoulders of the journals.

What I claim is—

As an article of manufacture, the body of the axle, formed of the horizontal top plate *a* and subjacent rib *b*, and the blocks B, provided with holes or sockets for the journal-arms, and attached to the under side of the plate *a*, and the notched or recessed ends of said rib, all as shown and described, for the purpose specified.

PATRICK FRANCIS WHITE.

Witnesses:

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