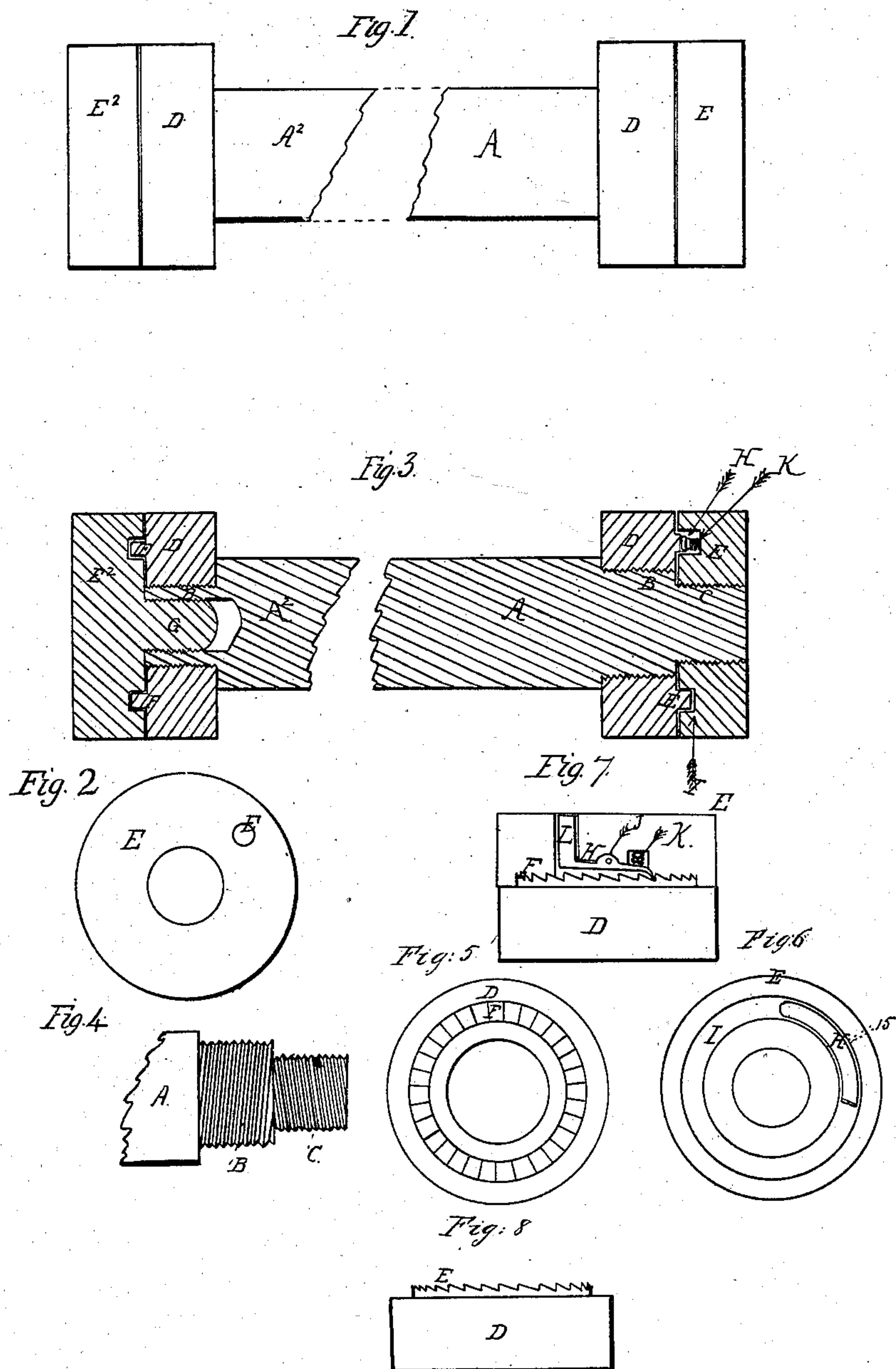


E. P. HOYT.
SECURING CARRIAGE WHEELS TO AXLES.

No. 33,251.

Patented Sept. 10, 1861.



Witnesses:

Charles L. Buntz

James C. Cooper

Inventor:

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UNITED STATES PATENT OFFICE.

EZRA P. HOYT, OF NEW YORK, N. Y.

IMPROVEMENT IN SECURING CARRIAGE-WHEELS TO AXLES.

Specification forming part of Letters Patent No. 33,251, dated September 10, 1861.

To all whom it may concern:

Be it known that I, EZRA P. HOYT, of the city, county, and State of New York, have invented a new and Improved Mode of Securing Hub on Axle-Trees of Wagons and other Vehicles, and for other Purposes; and I do hereby declare the following to be a full description of the same.

The nature of my invention consists in the use of a right-and-left screw formed on the end of the axle-tree, in combination with a right-and-left nut, so that the reversal of motion of the axle-tree to unscrew the inside nut causes the screwing up of the outer nut, and thus prevents the possibility of the wheel getting off the axle-tree; but to describe my invention more particularly I will refer to the accompanying drawings, forming a part of this specification, the same letters of reference, wherever they occur, referring to like parts.

Figure 1 is a side view of the axle-tree with nuts attached. Fig. 2 is an end view. Fig. 3 is a longitudinal cut section of the axle-tree, showing at the left side of the figure a modified application of the right and left screw-threads. Fig. 4 is a detached view of the end of the axle-tree. Fig. 5 is a plan view of the inner face of the inside screw-nut. Fig. 6 is a plan view of the inner face of the outside nut. Fig. 7 is a side elevation of the nuts, showing in skeleton the spring pawl or detent for engaging into the ratchet on the inside nut. Fig. 8 is a side elevation of the inside nut.

Letter A is the axle-tree, having a right and left screw B and C cut on its end. At the end of the axle A², Fig. 3, the outer nut E² is formed with a tap G, which is inserted into a female screw formed in the end of the axle. Under some circumstances this mode of securing the nuts to the end of the axle-tree may be desirable; but I do not esteem it the best, though embracing the same principles of

operation as exhibited at the opposite end of the axle-tree, and have therefore referred to it in this connection to cover it as a part of my complete device.

Letter D is the inside nut. On its inner face is formed a circular ratchet F, into which engages a spring-pawl H, secured in an annular groove I in the inner face of the outer nut E. This pawl is worked on a center pin J, passing through the side of the nut, and has at the back of it, in a suitable recess, a small spring K, so as to keep the point of the pawl always in contact with the ratchet. For the purpose of liberating the pawl from its contact with the ratchet-teeth, a stem L is formed on its back end, so as to extend through the face of the nut, and which is operated by a wrench, having a suitable device attached thereto, at any time when the nut is to be taken off.

The operation of the pawl and ratchet is to lock the two nuts together and thus prevent any independent action in either of the nuts. It will thus be seen that not only the security of the right and left nuts is obtained by an independent device, but that by the operations of the ratchet and pawl the combined actions of both are secured as one device immovably fixed against separating the parts, unless the detent-pawl is released from the ratchet.

Having now described my invention and its operation and mode of construction, I will proceed to set forth what I claim and desire to secure by Letters Patent of the United States—

The combination of the right and left hand screw-nuts D and E, made and operating in the manner set forth, and for the purposes hereinbefore described.

EZRA P. HOYT.

Witnesses:

CHARLES L. BARRITT,
JAMES G. COOPER.