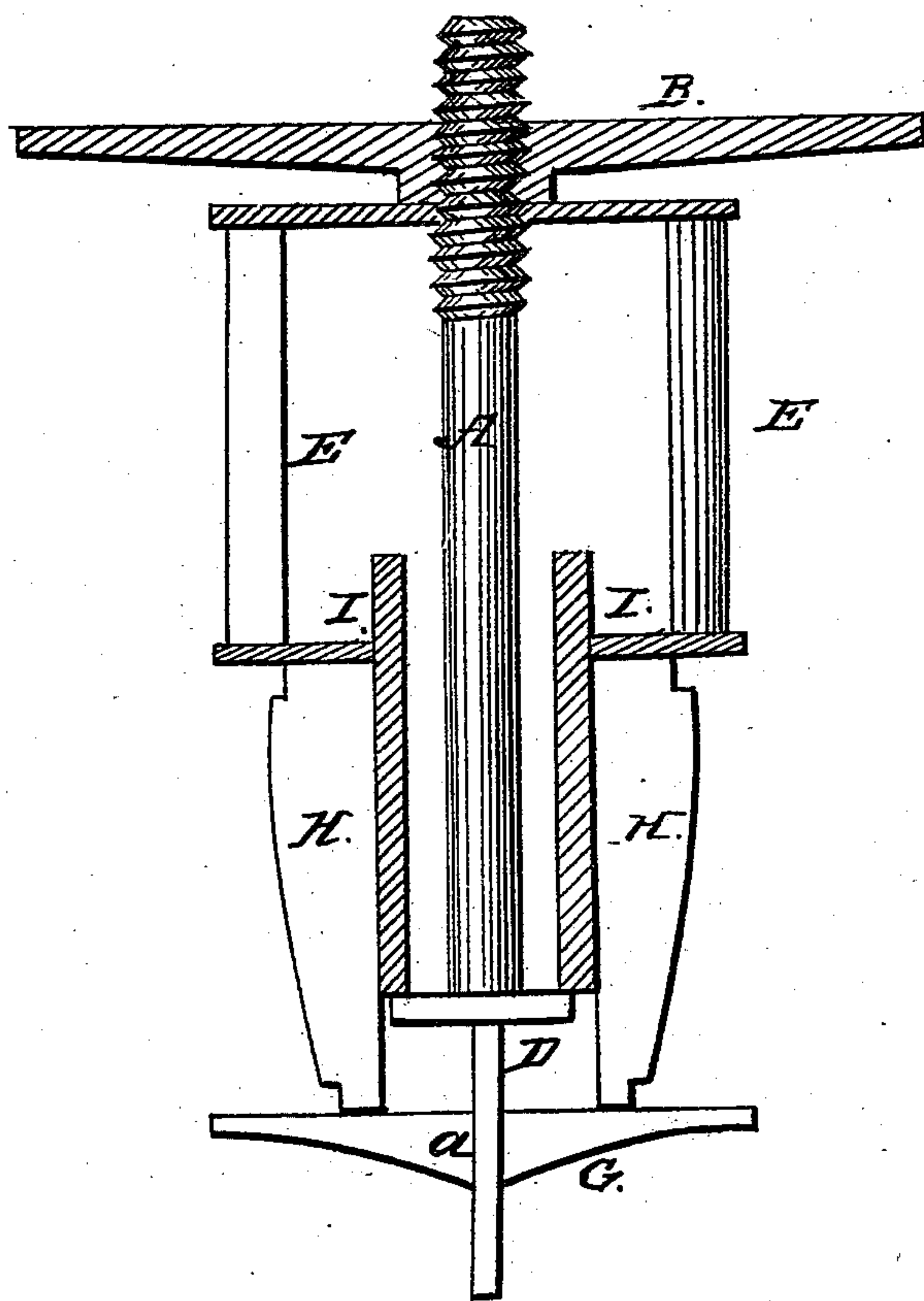


C. SEARLE.

Removing Axle Boxes from Hubs.

No. 93,911.

Patented Aug. 17, 1869.



Witnesses:  
Jas. H. Waller  
G. E. Sullivan

Inventor.  
Charles Searle

# United States Patent Office.

CHARLES SEARLE, OF BROOKLYN, NEW YORK.

*Letters Patent No. 93,911, dated August 17, 1869.*

## IMPROVED APPARATUS FOR REMOVING AXLE-BOXES FROM CARRIAGE-HUBS.

The Schedule referred to in these Letters Patent and making part of the same.

*To all whom it may concern:*

Be it known that I, CHARLES SEARLE, of the city of Brooklyn, in the county of Kings, and State of New York, have invented a new and improved Apparatus for Removing the Boxes from the Hubs of Vehicles; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making part of this specification.

The nature of my invention consists in the employment and use of a screw, applied in such a manner as to readily remove a box that has been firmly secured in the hub, a great desideratum to manufacturers and those who repair carriages or vehicles of any description.

The common method of removing boxes, after having been once set, is by using the sledge or hammer, and driving them out, which always injures them more or less, and often breaks them in pieces.

But by my invention I am able to entirely overcome all this difficulty and danger of injuring and breaking, by readily removing them from the hub in the safest and most expeditious manner.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

The figure is a longitudinal sectional elevation of my improved apparatus.

Letters of like name and kind refer to like parts in the drawings.

A represents a straight shaft or rod of iron, of suitable size and length, on the upper end of which is a screw, upon which works the lever-nut B, which is also made of iron of suitable or corresponding dimensions with the shaft or rod A.

Near the lower end of the said rod A is rigidly secured a collar, b, of a size sufficient to cover the area of the end of the box to be removed.

E represents the frame or support, which forms a bearing for the screw-nut while in operation. It may be made of iron, wood, or other suitable material, and of any desired form, but I prefer to make it with two

annular disks, placed at a proper distance apart, and secured in their positions by means of a suitable number of posts, as represented in the drawings at E E.

G is a cross-bar, which may be made of either wood or iron, that serves the purpose of a guide to the lower end of the shaft or rod A, by the lower end of the said rod A being made square, and passing through the mortise a, in the cross-bar G, in such a manner as to allow the rod to pass freely up and down, and at the same time prevents the rod from turning round when in the act of removing a box, by operating the screw-nut.

H is a hub of ordinary or common form, as generally used in vehicles designed for various purposes, in which has been secured a box, I, and is represented as partially removed by means of the apparatus, which is accomplished in the most rapid and perfect manner, by putting the wheel, in which is the box designated to be removed, in a suitable and convenient position upon the floor, with the small end of the box down, and pass the rod or shaft A through the box, and passing the frame E over the said rod, and letting the said frame rest upon the hub, and turning the screw-nut, the box is removed without injury to either the box or hub.

Having thus described my invention,

What I claim as new, and desire to secure by Letters Patent of the United States, is—

1. The rod or shaft A, provided with the collar b, for the purposes herein set forth, and substantially as described.

2. The cross-bar G, provided with the mortise a, which serves the purpose of a wrench, to prevent the rod from turning, also as a guide while the screw is being operated, substantially as herein described, and for the purposes set forth.

3. The frame E, in combination with the rod or shaft A and screw-nut, substantially as herein described.

CHARLES SEARLE.

Witnesses:

JAS. H. WALTERS,  
F. E. SILLIMAN.