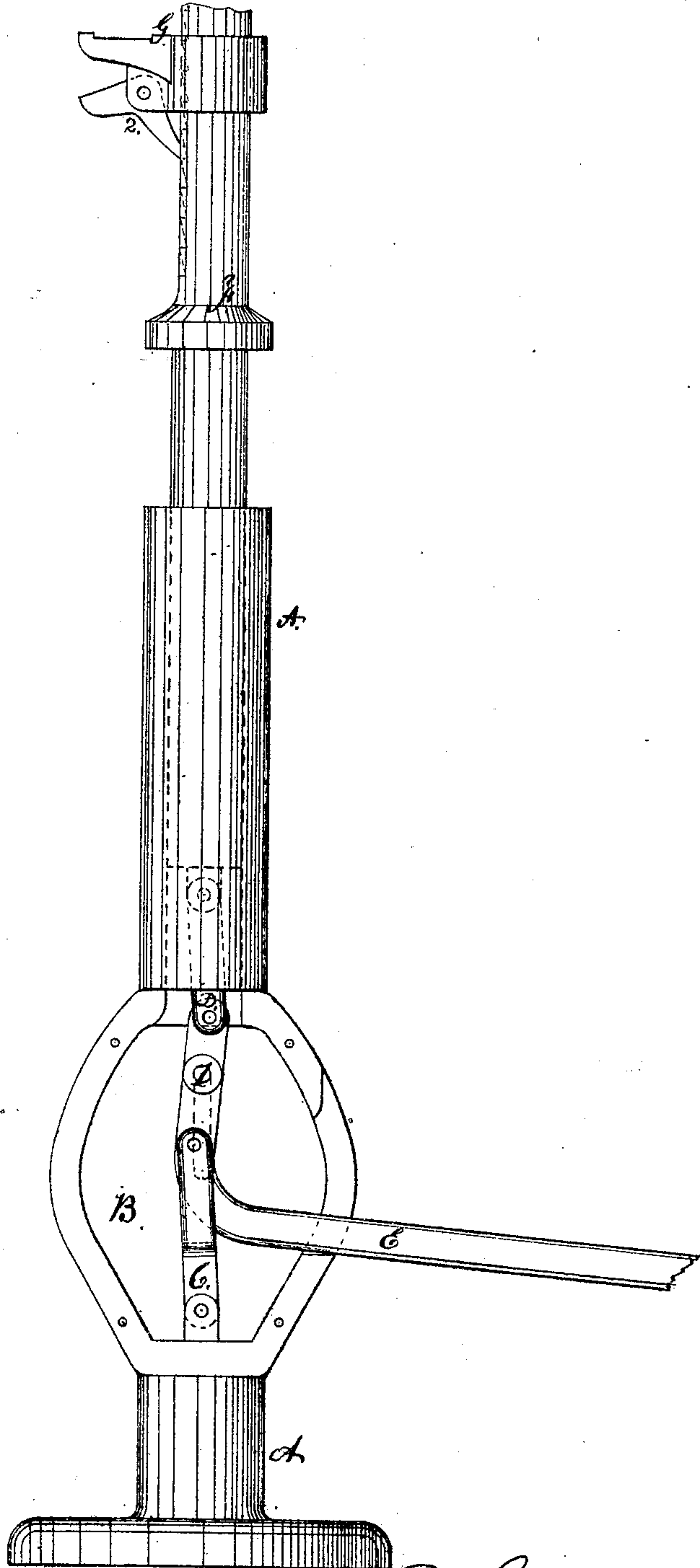
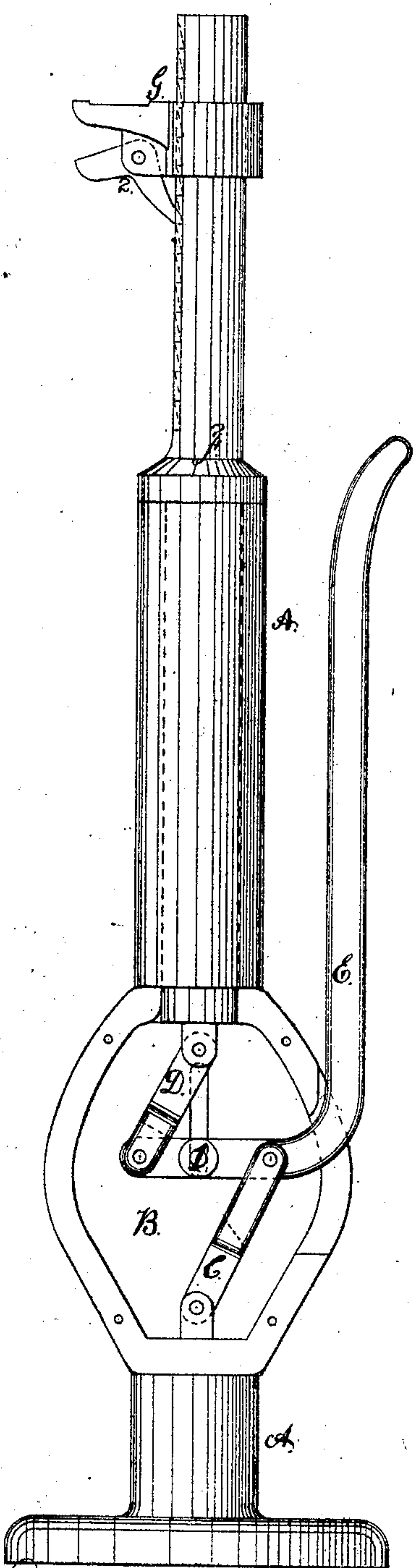


A. E. GODDARD.

Improvement in Lifting Jack.

No. 121,774.

Patented Dec. 12, 1871.



James E. Redfield
& Son } Witnesses

Alfred C. Greeland
Inventor

UNITED STATES PATENT OFFICE.

ALFRED E. GODDARD, OF ESSEX, CONNECTICUT.

IMPROVEMENT IN LIFTING-JACKS.

Specification forming part of Letters Patent No. 121,774, dated December 12, 1871.

To all whom it may concern:

Be it known that I, ALFRED E. GODDARD, of Essex, in the county of Middlesex and State of Connecticut, have invented certain Improvements in Lifting-Jacks, of which the following is a specification:

This invention relates to that class of lifting-jacks for vehicles, in which the power is applied to a lever working through toggle-bars to an adjustable bracket under the axle-tree; and the object of this invention is to give great power in the operation of lifting, and when brought to a certain point becomes self-sustaining; also, in combination therewith, an adjustable bracket on the lifting-rod, whereby the apparatus can be easily adapted to the various heights of the axle-tree or loads to be raised.

Figure 1 is a side elevation of said jack with the cap or cover on the lever-chamber removed to show the arrangements of the parts before the operation of lifting is performed. Fig. 2 is a similar view, but showing the position of the several parts sustaining the load, or when the act of lifting has been performed.

A A represents the hollow iron column for supporting the working parts. At B is a plane-sided chamber of sufficient size to receive the toggle-bars C and D, which are connected to the actuating-lever E, as shown in the drawing. F is the lifting-rod or plunger working vertically from the chamber B up through the interior of the column A, and extends to a sufficient distance above the column to receive a strong bracket-supporting sleeve G, and also to permit of said sleeve being moved up and down upon it for several inches, according to the variable heights of vehicle axles. The actuating lever E, as shown in Fig. 1, is bent to nearly or quite a right angle

where it enters the chamber B, and when at rest the handle portion will be about in a vertical position or along the side of the column A, and the part in the chamber B will then be in a horizontal position, as shown in Fig. 1. At a point about in the center of chamber B is a stud, 1, firmly fastened in and through the inner end of lever E, and the ends of said stud extend through slots in the sides of chamber B, said slots being sufficiently long to permit the entire throw of the levers or lifting motion of the jack. Said stud 1 serves as a fulcrum to the lever E to force the toggle-bars C and D in a right line, or even a little beyond it, as shown in Fig. 2, so that they will sustain the load without any outside pressure upon the handle E. The toggle-bar C is pivoted at its lower end to an eye-stud in the bottom of the chamber B, and the other end is pivoted to the lever E at any desired point toward the handle necessary for giving sufficient motion to the plunger F. The other toggle-bar, D, is pivoted at its lower end to the inner extremity of the lever E, and its upper end is attached to the lower end of the plunger. The bracket at G is held in any position upon the plunger F by a pawl, 2, which holds the bracket up to the axle, or nearly so, before the lifting from the lever E begins, and thereby takes up what would otherwise be lost motion.

I claim—

In a lifting-jack for vehicles, the combination of the lifting mechanism, either with or without an adjustable bracket, as described and for the purposes set forth.

ALFRED E. GODDARD.

Witnesses:

JARED E. REDFIELD,
C. S. HOUGH.

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