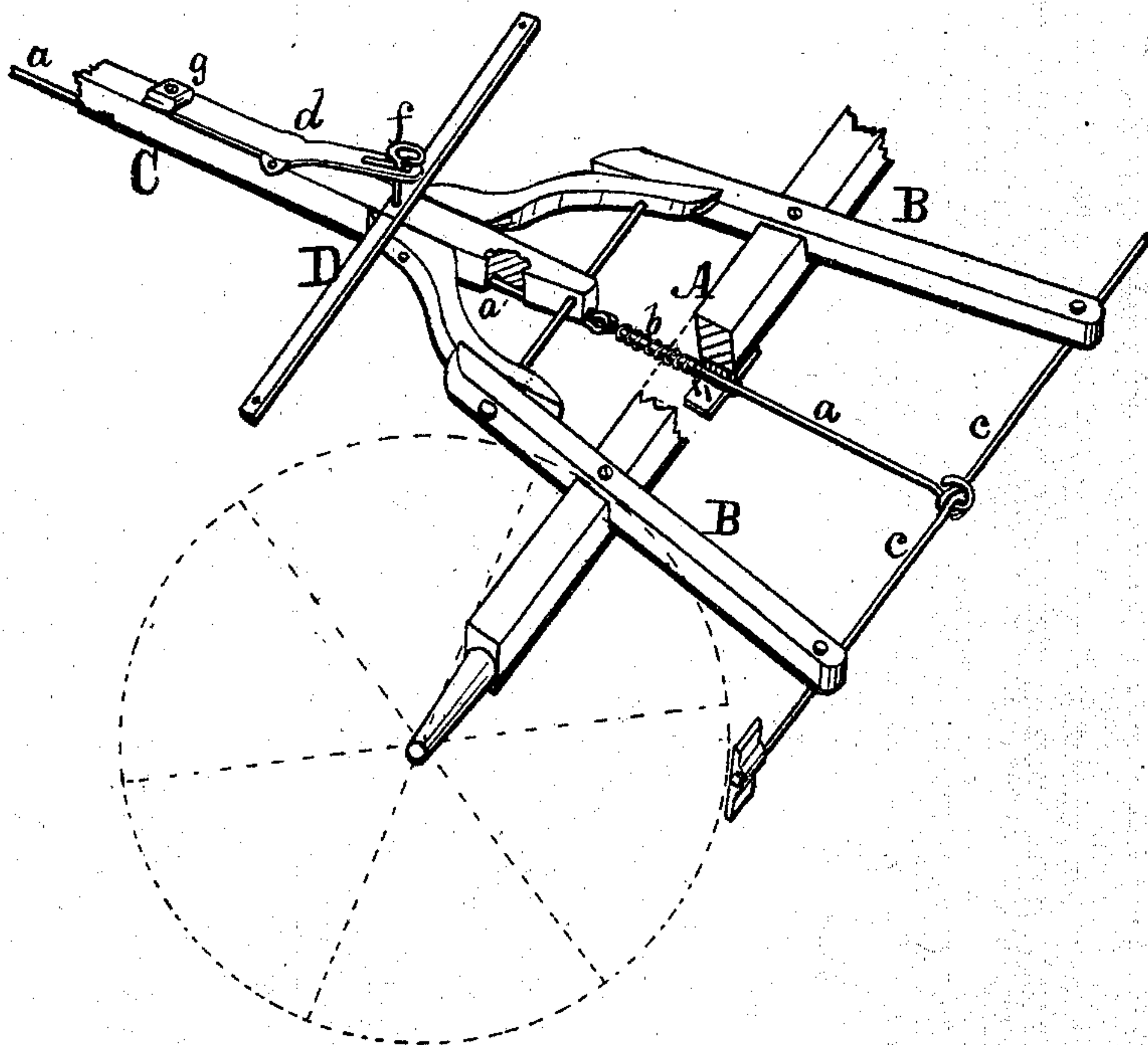


**B. W. COE.**  
**Wagon-Brakes.**

No. 144,443.

Patented Nov. 11, 1873.



*Witnesses.*

*J. A. Webster*  
*A. R. Fulton.*

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# UNITED STATES PATENT OFFICE.

BENJAMIN W. COE, OF DES MOINES, IOWA.

## IMPROVEMENT IN WAGON-BRAKES.

Specification forming part of Letters Patent No. 144,443, dated November 11, 1873; application filed August 30, 1873.

*To all whom it may concern:*

Be it known that I, BENJAMIN W. COE, of Des Moines, in the county of Polk and State of Iowa, have invented a Combined Wagon-Brake and Tongue-Support, of which the following is a specification:

My invention is an automatic wagon-brake, formed by combining a rod with a wagon-tongue and with levers pivoted to the hounds in such a manner that it will perform the functions of a brake and also of a tongue-support.

My drawing is a miniature perspective view, illustrating the construction and operation thereof.

A represents the front axle of a wagon; B B, the hounds. These common parts of a wagon may vary in material, form, and size, and can be joined together in any suitable way. C is the pole or tongue, of ordinary form, excepting that it has a continuous groove on the under side designed to admit and retain a rod in such a manner that they will mutually support and strengthen each other. Any suitable means of securing the rod in this groove may be used; or the tongue may be hollow, to admit the passage and operation of the rod. *a a a* is the metal rod, which may vary in size, passing through the tongue C. Its front end is formed and adapted to connect with the horses by means of a yoke and straps. At the rear end of the pole it has a hinge-joint formed in any suitable manner. It passes through or under the center of the axle A, and is connected therewith by means of a staple, loop, eye, or plate, in such a manner that it will have free longitudinal play. *b* is a coil-spring encircling the rod and extending from the hinge-joint rearward to and against the axle A, and gives elasticity to the movement of the rod, and returns the rod forward when the rearward pressure is removed. The rod *a* extends rearward and terminates in a connection with two pivoted levers. *c c* are levers, pivoted to the hounds B B in any suitable manner by which they can be secured thereto and fulcrums formed

at the points of connection. Their inner ends are coupled to the rod *a* by means of any suitable links or hinge-joints that will afford sufficient flexibility for their operation. Shoes of any form desired may be attached to the outer ends to bear against the front wagon-wheels. *d* is a bent stay-plate, hinged at its center to the top surface of the tongue for the purpose of operating the pin *f*, which secures the double-tree D and locks the rod *a* to make the brake inoperative whenever desired. Its front end is secured to the tongue by the spring or elastic catch *g*, or its equivalent.

In the practical use of my invention, the coil-spring *b*, in combination with the rod *a*, constantly supports the tongue A. In descending a grade, where the horses must hold back, their resistance will be applied to the rod *a*, and that rod will operate the levers *c c*, and these will augment the force and apply it to the front wheels.

A simple and complete automatic wagon-brake is thus formed and operated.

To make the brake inoperative for the purpose of backing the wagon with the horses, an opening or catch is provided in or on the rod *a*, and so placed relative to the position of the pin *f* that the pin may be allowed to drop into the hole or catch and lock the rod rigidly to the tongue A. This can readily be accomplished by pressing down the rear and elevated end of the stay-plate *d*, which is held up by means of the catch *g*. By continuing the rod *a* to the rear and forming suitable connections brakes may be applied to the rear wheels.

I claim as my invention—

1. The combination of the plate *d*, spring *g*, and tongue C, in the manner and for the purposes described.

2. The jointed rod *a a*, coil-spring *b*, and pivoted levers *c c*, combined with the axle A, hounds B B, and tongue C, substantially as, and for the purpose described.

BENJAMIN W. COE.

Witnesses:

J. F. BAKER,  
J. W. GROSH.