

(No Model.)

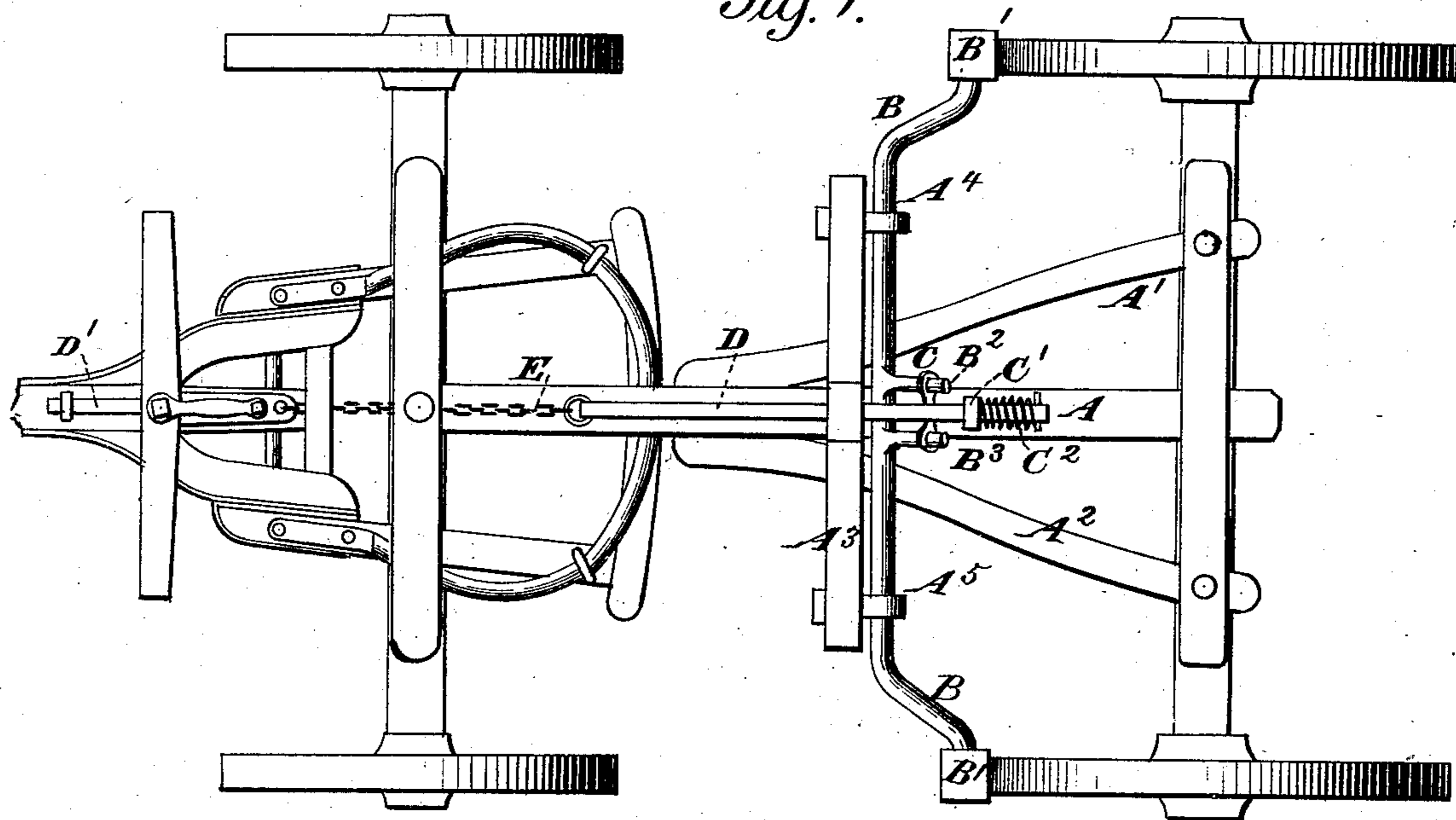
E. I. BURTON.

AUTOMATIC WAGON BRAKE.

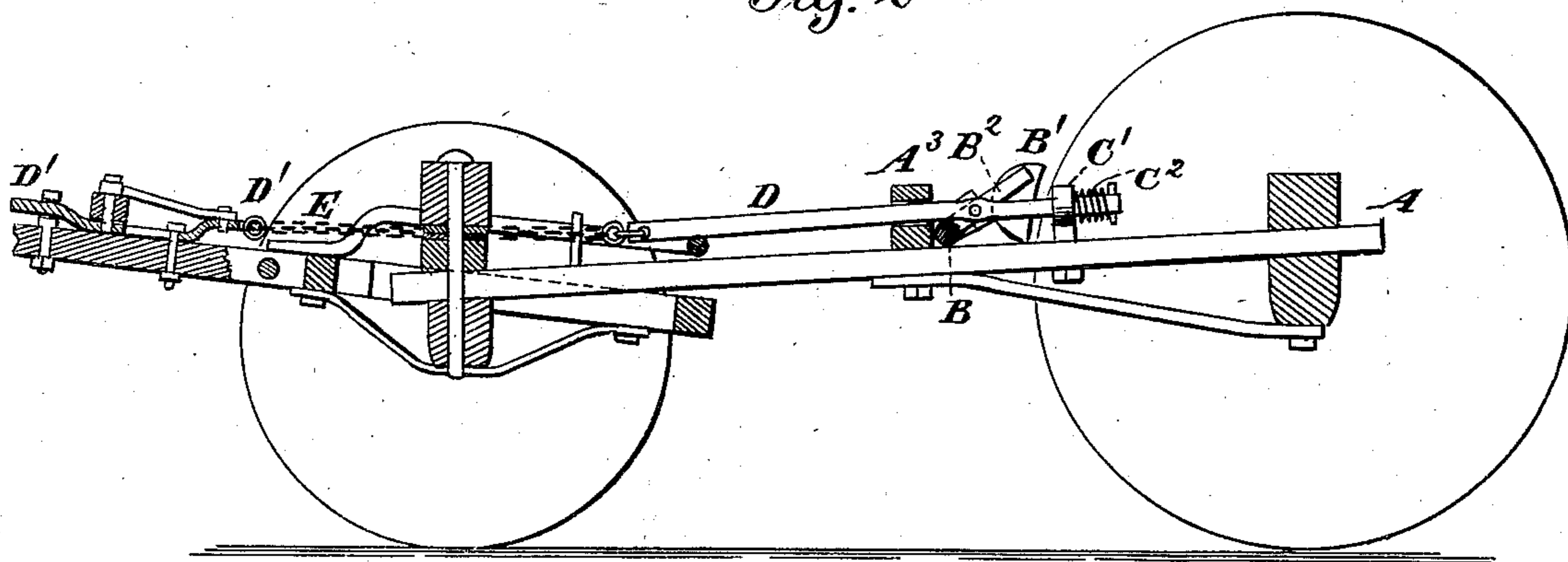
No. 255,140.

Patented Mar. 21, 1882.

*Fig. 1.*



*Fig. 2.*



*Witnesses.*  
*A. Ruppert,*  
*C. M. Connell*

*E. I. Burton*  
*Inventor.*  
*Holloway & Blanchard*  
*Atty*

# UNITED STATES PATENT OFFICE.

EDMOND I. BURTON, OF WASHINGTON, IOWA, ASSIGNOR OF ONE-HALF TO  
WILLIAM R. ADAIR, OF SAME PLACE.

## AUTOMATIC WAGON-BRAKE.

SPECIFICATION forming part of Letters Patent No. 255,140, dated March 21, 1882.

Application filed November 7, 1881. (No model.)

*To all whom it may concern:*

Be it known that I, EDMOND I. BURTON, a citizen of the United States, residing at Washington, in the county of Washington and State of Iowa, have invented certain new and useful Improvements in Automatic Wagon-Brakes; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters or figures of reference marked thereon, which form a part of this specification.

My invention relates to wagon-brakes; and the object of my improvements is to provide an automatically-operating brake consisting of novel devices and combinations thereof, by means of which the application of the brake-shoes to the wheels is applied upon the cessation of the force applied to move the vehicle forward, as will be more fully explained hereinafter. I attain this object by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a plan view of the running-gear of a wagon having my improved brake applied thereto, it showing the parts in position for operation and their connection with the double-tree, by which the shoes of the brake are released from contact with the wheels, and the mechanism for applying them to the wheels when force ceases to be applied to the double-tree; and Fig. 2 is a sectional elevation, showing the parts above referred to and their arrangement upon the running-gear.

Similar letters refer to similar parts in both of the views.

The drawings show, in plan and in section, the running-gear of a wagon, which may be of any approved form of construction, it being provided with the usual number of wheels and axles, a reach for connecting the forward and rear wheels and their axles, suitable bolsters, hounds, and a tongue.

The above-named parts do not constitute any part of my invention, and hence need not be described here more particularly than by saying that they may be of any form desired or preferred by the constructor.

My improvement consists of a brake to be applied to any form of running-gear of a wagon, the parts being constructed and combined substantially as follows:

To the reach A and to the hounds A' A<sup>2</sup>, which are attached to the rear axle, there is secured a transverse bar, A<sup>3</sup>, it being provided near its outer ends with eyebolts A<sup>4</sup> and A<sup>5</sup>, through which passes the brake-shaft B, the ends of which are curved or bent rearward and upward and provided with nuts for holding the brake-shoes B' B' in position thereon. The object accomplished in bending the shaft B rearward and upward is to permit the brake-shoes to be applied to the rear wheels in such a manner that the friction caused by such application shall have a tendency to increase the force with which they are applied when the wagon is moving forward and no strain is upon the double-tree, and to release the wheels from such action when it is being moved backward.

From the central portion of the shaft B there extend rearward two arms, B<sup>2</sup> and B<sup>3</sup>, they being upon the same plane as are the bent ends of said shaft, or inclined upward at about the same angle. Upon these arms is placed a cross-head, C, the ends of which are provided with apertures through which the arms pass, the head moving freely on said arms.

For the purpose of applying the shoes to the wheels there is provided a sliding rod, D, to which the cross-head C is attached, placed transversely to the shaft B, the rear end of which rests in a support, C', attached to the reach A. To the rear end of this rod there is applied a spring, C<sup>2</sup>, in such a manner that as the pull of the team upon the rod is released the spring in its effort to extend will cause the cross-head to move up upon the arms B<sup>2</sup> and B<sup>3</sup>, and thus press the brake-shoes B' B' upon the wheels, they being removed therefrom by the reapplication of force to the double-tree, which movement is effected in the following-described manner:

To the forward end of rod D there is attached a chain or rope, E, which extends to and is connected with a sliding bar, D', which is made to move in bearings secured upon the tongue of the wagon. To this sliding bar the double-tree is attached by a bolt or other suit-

able fastening. The rear end of the bar  $D'$  is bent upward, as shown in Fig. 2, and provided with an aperture, in order that the forward end of the rope or chain  $E$  may be secured thereto, so that the application of force to the double-tree may cause the rod  $D$  to be moved forward, and thus release the brake-shoes from their hold upon the wheels, and at the same time compress the spring, so that upon arriving at a point where it is desirable to apply the brakes it may be done by causing the team to cease drawing upon the double-tree.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In an automatic wagon-brake, the combination of the bent shaft  $B$ , having upon it arms  $B^2$  and  $B^3$  and brake-shoes  $B'$ , the rod  $D$ , cross-

head  $C$ , and spring  $C^2$ , the parts being arranged substantially as described, whereby the brake-shoes are released from the wheels in backing the wagon, substantially as set forth.

2. In an automatic wagon-brake, the combination of the double-tree, the sliding bar  $D'$ , the rope or chain  $E$ , the rod  $D$ , the spring  $C^2$ , and the bent shaft  $B$ , carrying upon its ends brake-shoes  $B'$ , the parts being arranged substantially as shown and described, and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

EDMOND I. BURTON.

Witnesses:

A. S. FOLGER,

P. P. INK.