

(No Model.)

J. KELLER.  
CAR BRAKE.

No. 579,829.

Patented Mar. 30, 1897.

Fig. 1

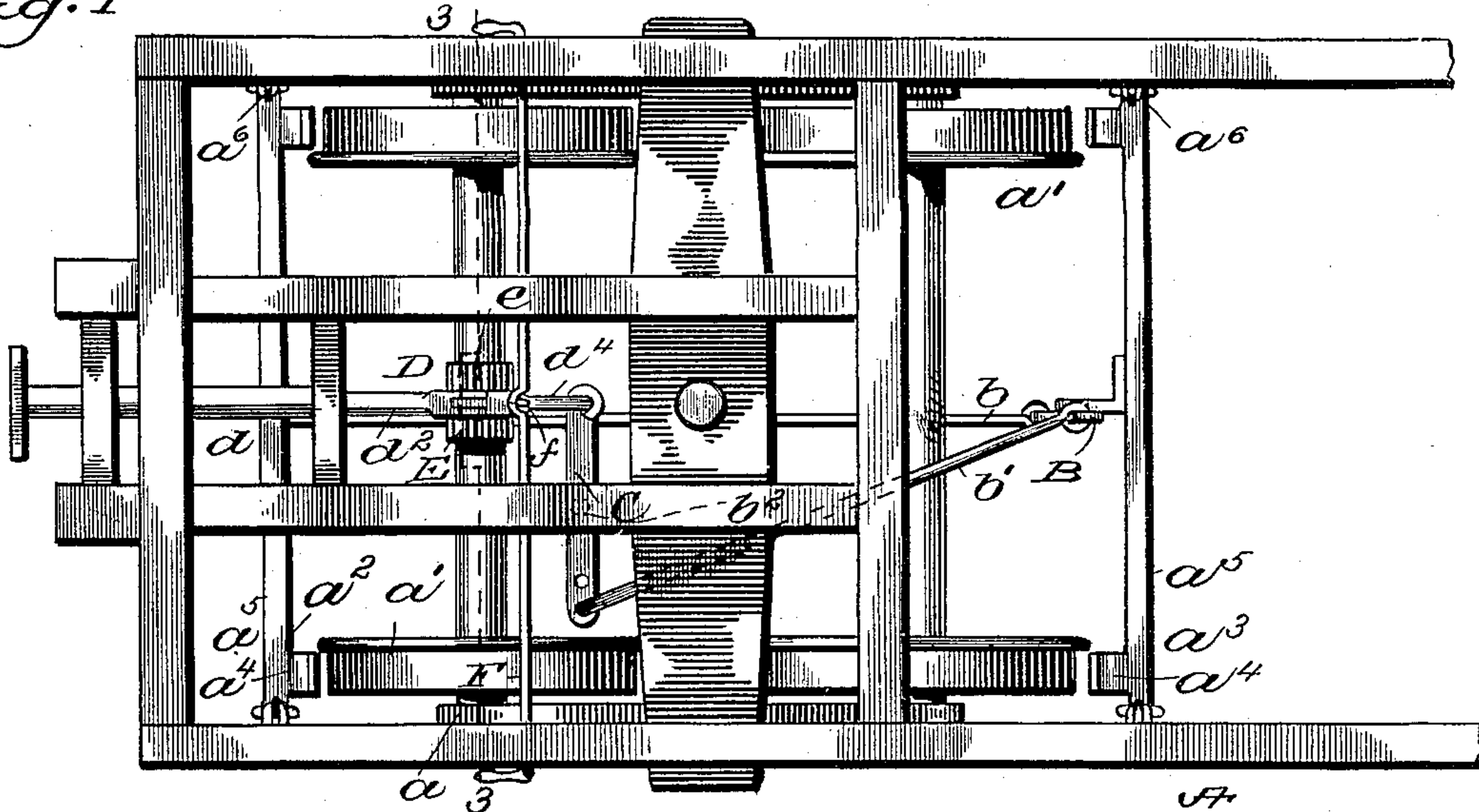


Fig. 2.

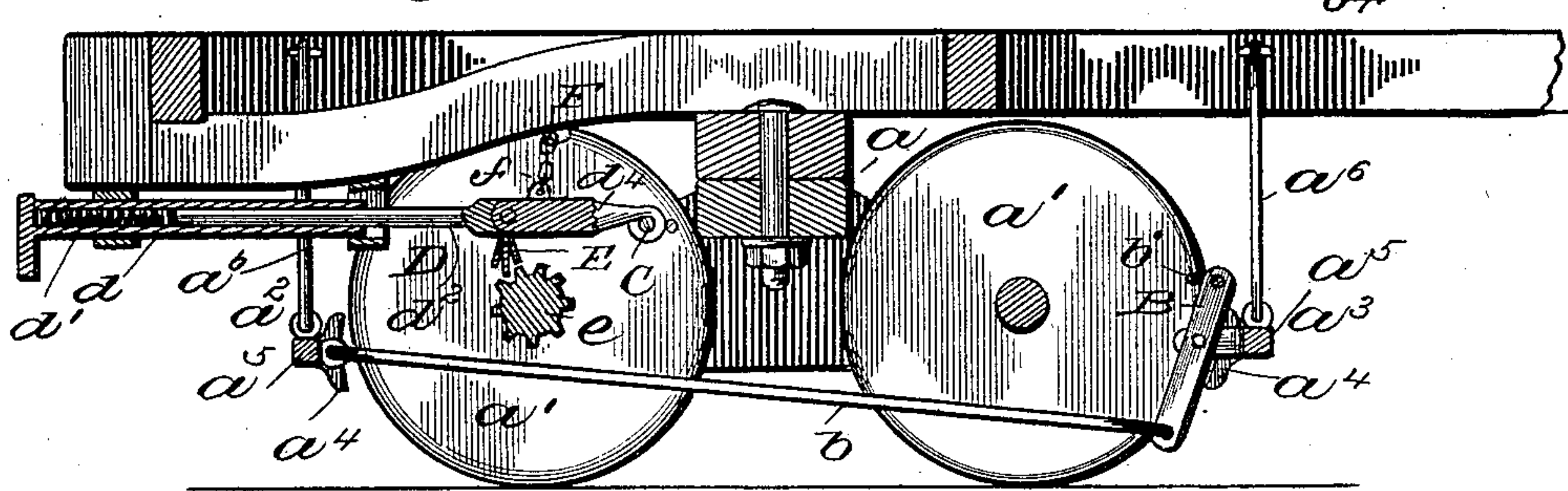


Fig. 3a

Fig. 3.

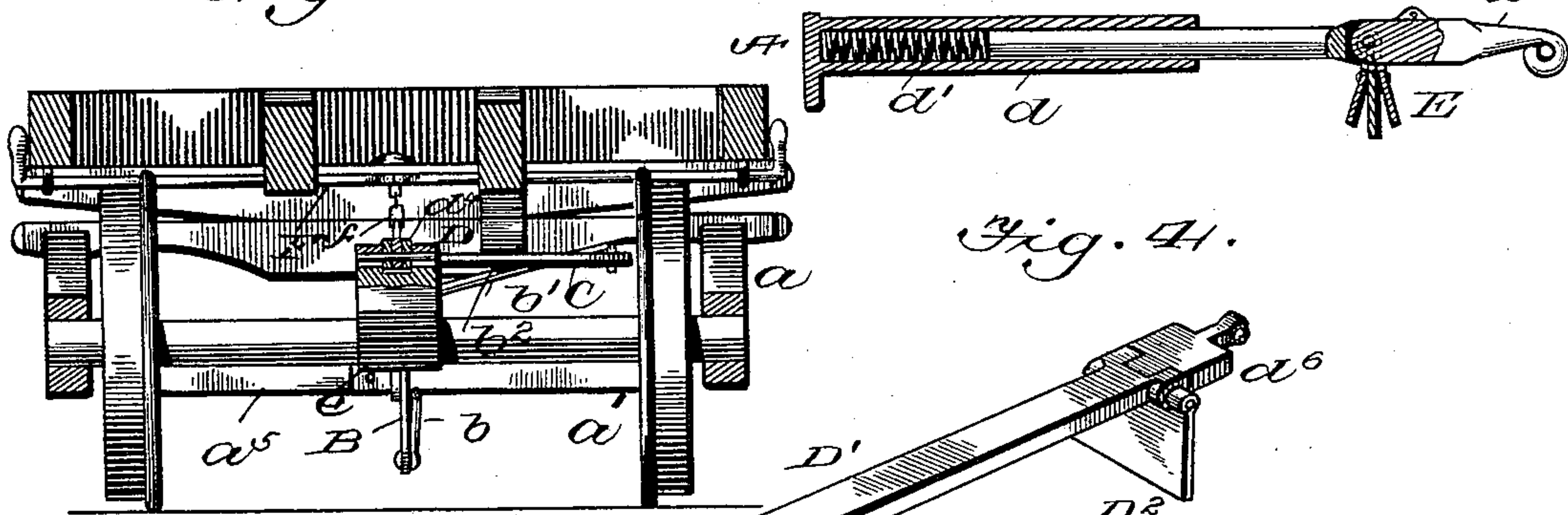
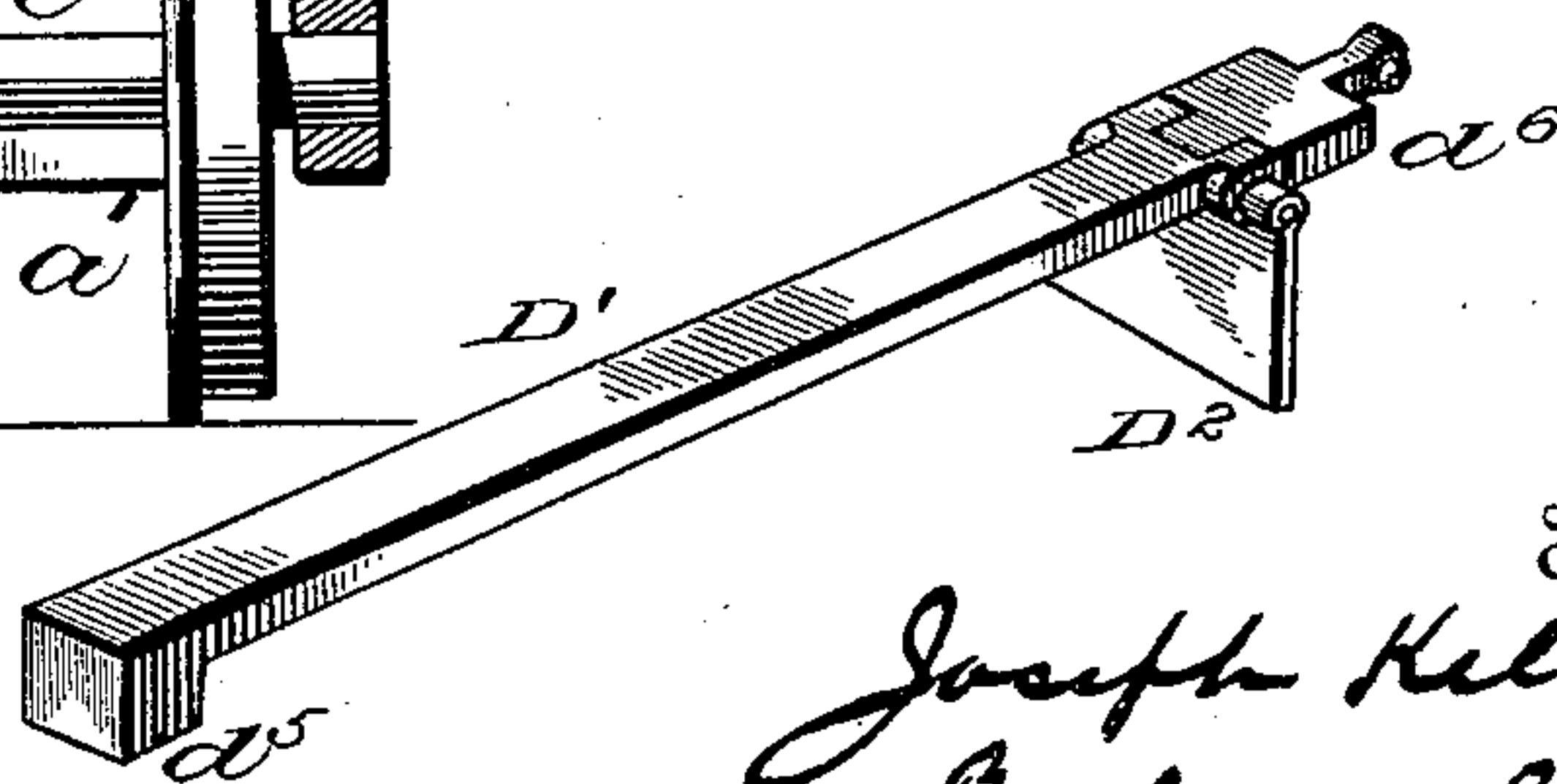


Fig. 4.



Witnesses

John D. Smith  
Grafton A. McCall

Inventor

Joseph Keller,  
By James L. Pugh, Jr.,  
Attorney



# UNITED STATES PATENT OFFICE.

JOSEPH KELLER, OF LAURY'S, PENNSYLVANIA.

## CAR-BRAKE.

SPECIFICATION forming part of Letters Patent No. 579,829, dated March 30, 1897.

Application filed November 5, 1896. Serial No. 611,136. (No model.)

*To all whom it may concern:*

Be it known that I, JOSEPH KELLER, of Laury's, in the county of Lehigh and State of Pennsylvania, have invented certain new and useful Improvements in Car-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.

This invention contemplates certain new and useful improvements in car-brakes, having reference to that class in which the application of the brakes is effected upon two cars striking together.

The object of the invention is to simplify the construction, insure the unsetting of the brakes upon restarting the cars, and to promote the general efficiency and serviceability of the brake.

The invention will be hereinafter fully set forth, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a plan view showing my improvements, a portion only of the car-frame being indicated. Fig. 2 is a longitudinal sectional view on line 2 2, Fig. 1. Fig. 3 is a transverse sectional view on line 3 3, Fig. 1. Fig. 3<sup>a</sup> is an enlarged longitudinal sectional view of the brake-operating device. Fig. 4 is a slight modification.

Referring to the drawings, A designates a portion of a car-frame, *a* the truck, and *a'* the wheels thereof. The truck has forward and rearward brakes *a*<sup>2</sup> and *a*<sup>3</sup>, the shoes *a*<sup>4</sup> being fast on cross-beams *a*<sup>5</sup>, which are dependently supported from the car-frame by short rods or links *a*<sup>6</sup>. To the center of the rear brake-beam is connected an upright lever B, fulcrumed at its center. To the lower end of this lever is connected one end of a rod *b*, which at its forward end is connected to the center of the front brake-beam. To the upper end of this lever is connected a rod *b'*, which at its forward end is attached to the outer end of a horizontal lever C, fulcrumed at *b*<sup>2</sup> to the car-frame. The inner end of this lever is almost on a central longitudinal line of the car-frame between the bumpers.

Extending longitudinally beneath the car is a device D for effecting the automatic application of the brakes upon two cars striking

together. It consists of a cylindrical casing *d*, inclosing a spiral spring *d'* and a rod *d*<sup>2</sup>. The outer end of said casing is flattened and ordinarily lies outside of the vertical plane of the car-bumpers. To the rear end of rod *d*<sup>2</sup> is pivoted one end of a hook *d*<sup>4</sup>, the other end of which is attached to the inner end of lever C. When in its normal position, any rearward movement of casing *d* will force rearward the hook *d*<sup>4</sup>, which will turn lever C on its pivot and thus apply the brakes. In Fig. 4 this device is shown as consisting of a solid bar D', having its forward end *d*<sup>5</sup> thickened. To its rear end is pivoted a member *d*<sup>6</sup>, which is joined to the end of lever C. In both instances the hook *d*<sup>4</sup> and the pivoted member *d*<sup>6</sup> are so jointed that they permit only of an upward movement at the point of union with the longitudinally-movable rod or bar. Normally these parts lie on a direct line with the rod or bar, occupying a horizontal position.

Depending from rod *d*<sup>2</sup> at the point of articulation of hook *d*<sup>4</sup> are three plate-tongues E, the center one thereof extending lower down than the others. In lieu of three plate-tongues, which I preferably employ, but one tongue D<sup>2</sup> may be used. (See Fig. 4.) These tongues are designed to be engaged by cogs *e* on the center of the front axle. In restarting a car after the brakes have been once applied the cogs upon engaging with the tongue or tongues will raise the brake-applying device at the jointed union, throwing the parts out of a horizontal line and releasing the brakes.

F is a crank-rod extended transversely across the car-frame above the truck and at its center is connected by a chain *f* to the hook *d*<sup>4</sup>, adjacent to the pivot thereof. By means of this crank-rod the hook and tongues can be readily elevated to prevent application of the brakes in backing the cars.

It will be understood that as soon as the cars assume their normal relative positions the spring-pressed casing is again forced forward, releasing rearward pressure on the brake-lever C.

The advantages of my invention are apparent. The spring-pressed device serves to normally keep the brakes unapplied, but as soon as it is forced rearward the brakes will act against the wheels. In restarting the car



the cogs engaging the depending tongue or tongues will raise the device at its pivot or joint with the hook or member, releasing rearward pressure on the levers. The advantage  
5 of employing three tongues of unequal length is that if the cogs should miss one tongue or the latter should slip therefrom they will engage the adjoining tongue, thus insuring the elevation of the brake-applying device.

10 I claim as my invention—

1. The combination with the frame, the brakes, and the truck, one of the axles of which is provided with cogs, of a longitudinally-movable rod, a lever connected to said  
15 brakes and to which said rod is attached, tongues depending from said rod designed to engage said cogs, and the spring-pressed casing inclosing said rod, substantially as set forth.

20 2. The combination with the frame, the brakes, and the truck, one of the axles of which is provided with cogs, of a longitudinally-movable rod, a lever connected to said brakes and to which said rod is attached, a  
25 series of tongues depending from said rod adjacent to the connection with said hook, said tongues being designed to engage said cogs, and a spring-pressed casing inclosing said rod, substantially as set forth.

3. The combination with the frame, the 30 brakes, and the truck, one of the axles of which is provided with cogs, of a longitudinally-movable rod, a lever connected to said brakes, a hook pivoted to said rod and engaging said lever, a spring-pressed casing in- 35 closing said rod, tongues depending from said rod designed to engage said cogs, and the crank-rod connected to said hook, substantially as set forth.

4. The combination with the frame, the 40 brakes, and the truck, one of the axles of which is provided with cogs, of a longitudinally-movable device, a member pivotally connected to the rear end thereof, and limited in its downward movement, a pivoted tongue 45 depending from said pivoted member designed to be engaged by said cogs, a lever adjacent to said member and pivotally connected thereto, and connections between said lever and said brakes, substantially as set 50 forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

JOSEPH KELLER.

Witnesses:

HENRY W. SMITH,

R. W. LEIBERT.