

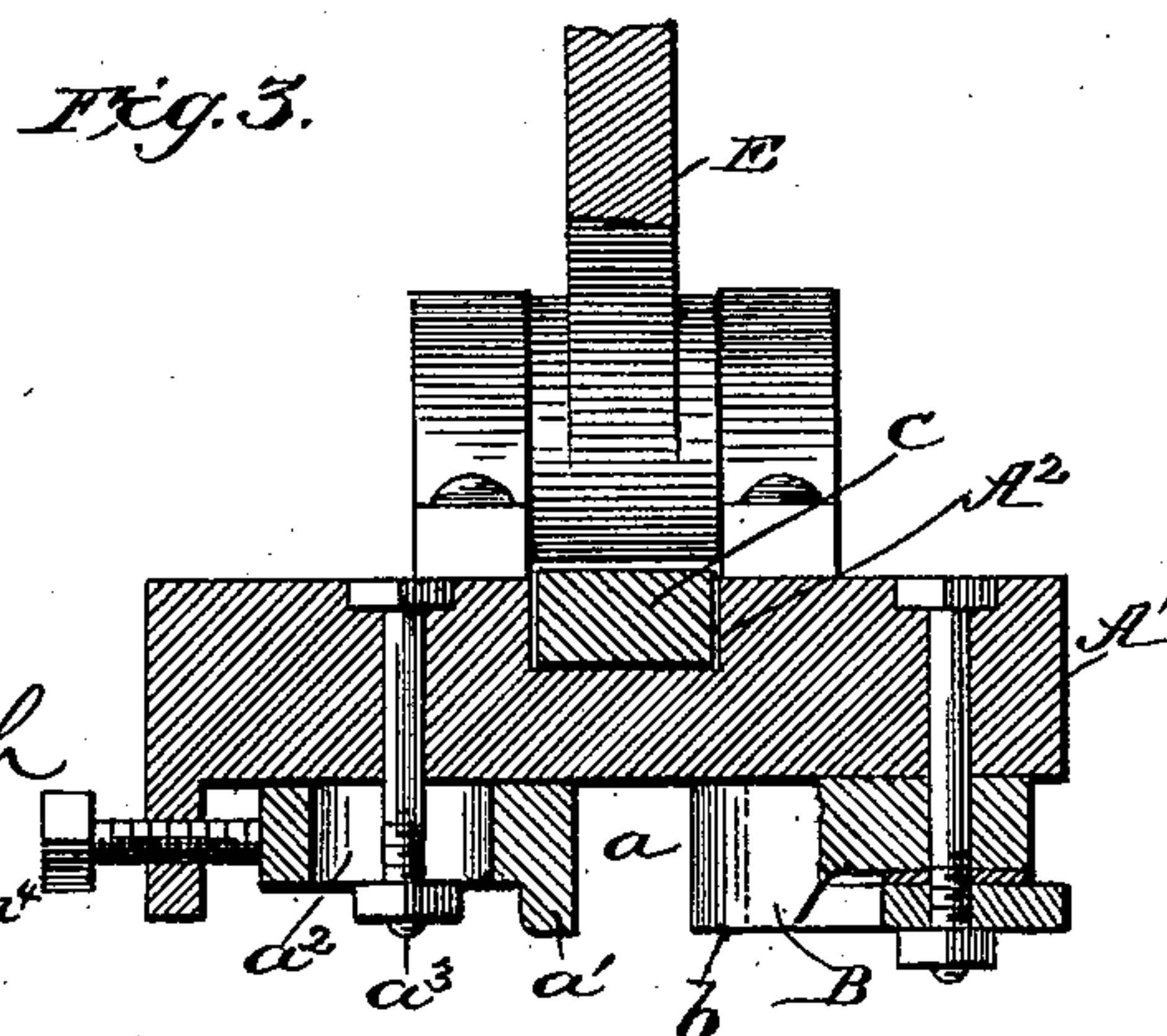
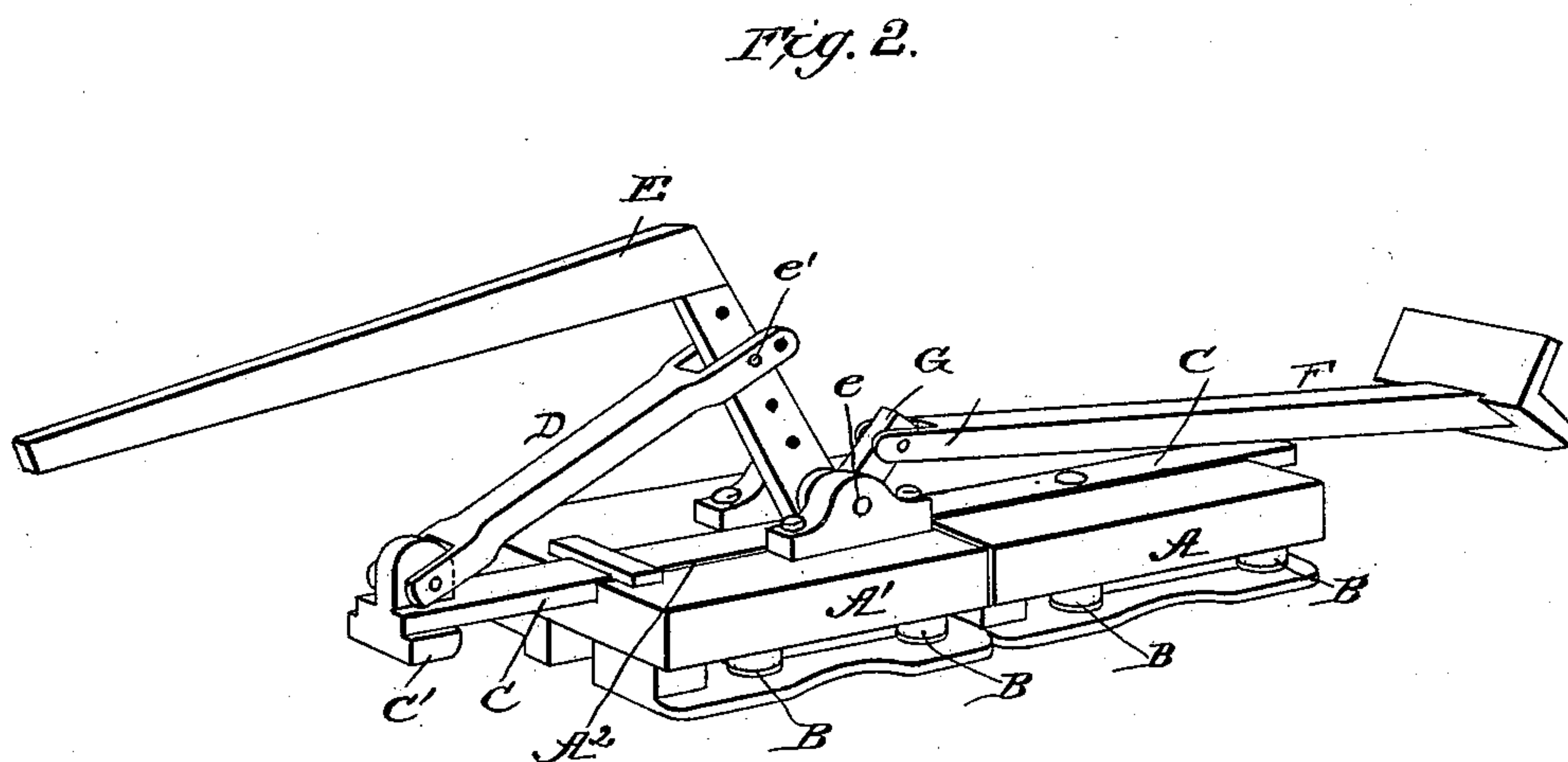
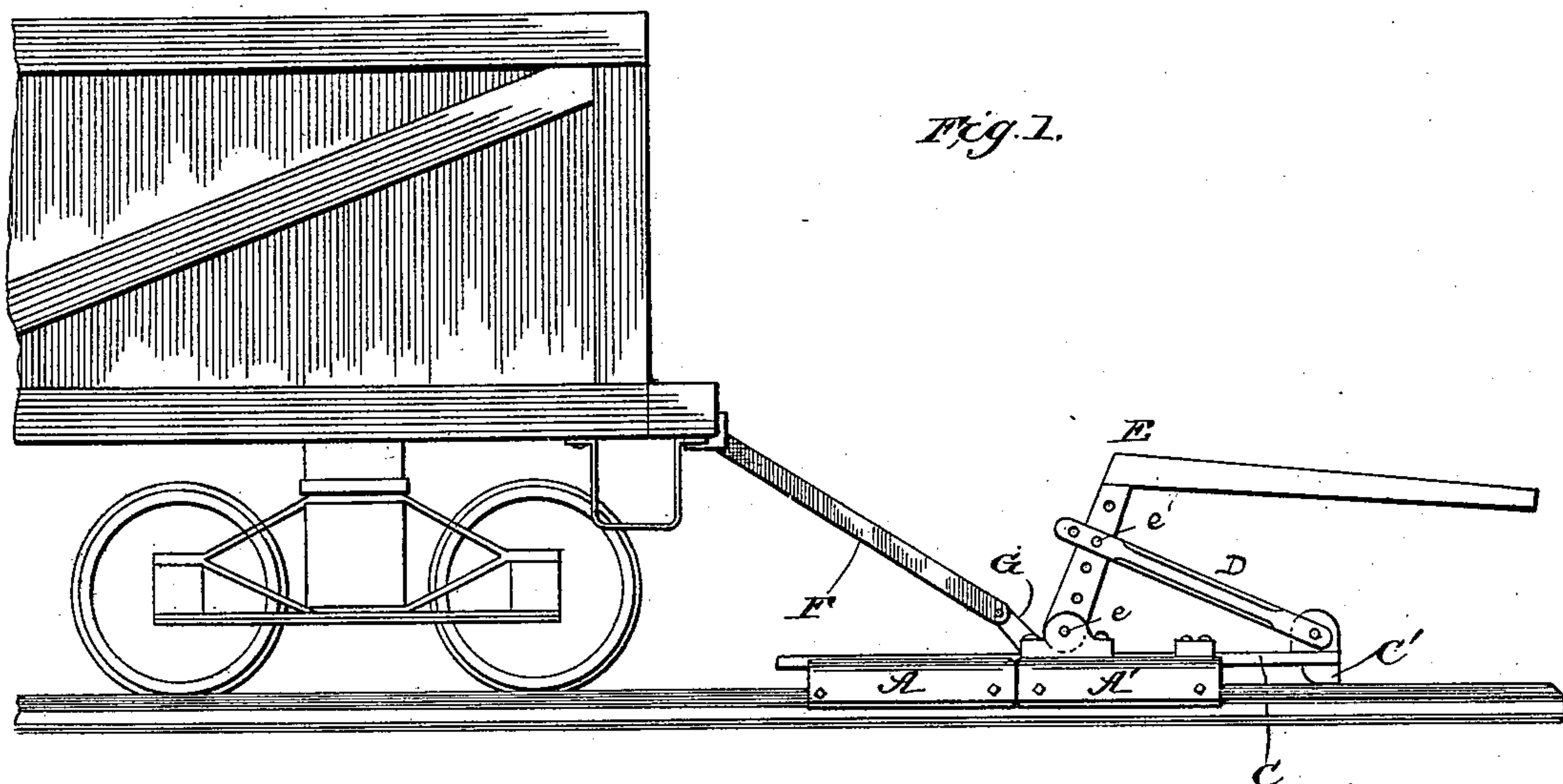
(No Model.)

2 Sheets—Sheet 1.

J. C. CHRISMAN.
CAR PUSHER.

No. 405,012.

Patented June 11, 1889.



WITNESSES:

Fred G. Dietrich
P. B. Surpin, Jr.

INVENTOR:

Joseph C. Chrisman.

BY

Wm. L. C.

ATTORNEYS.

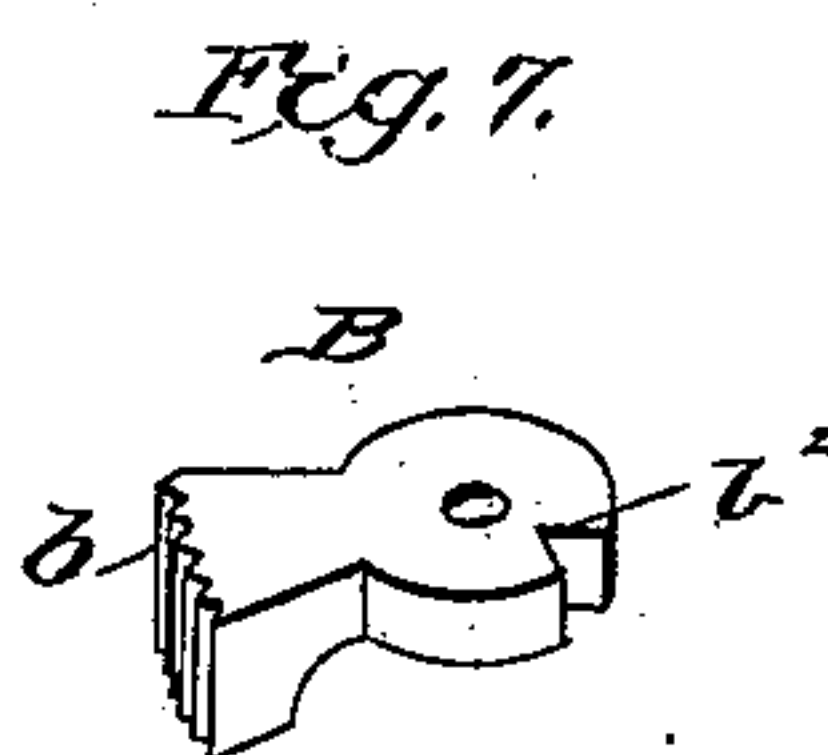
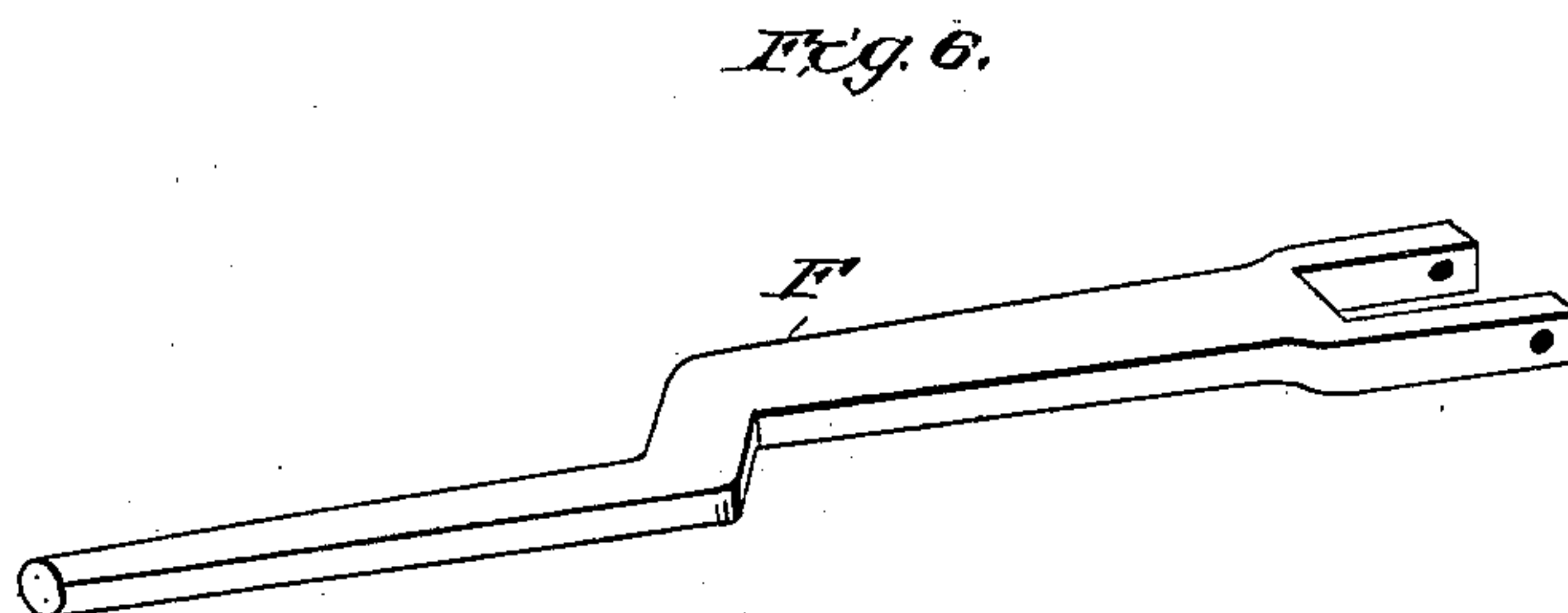
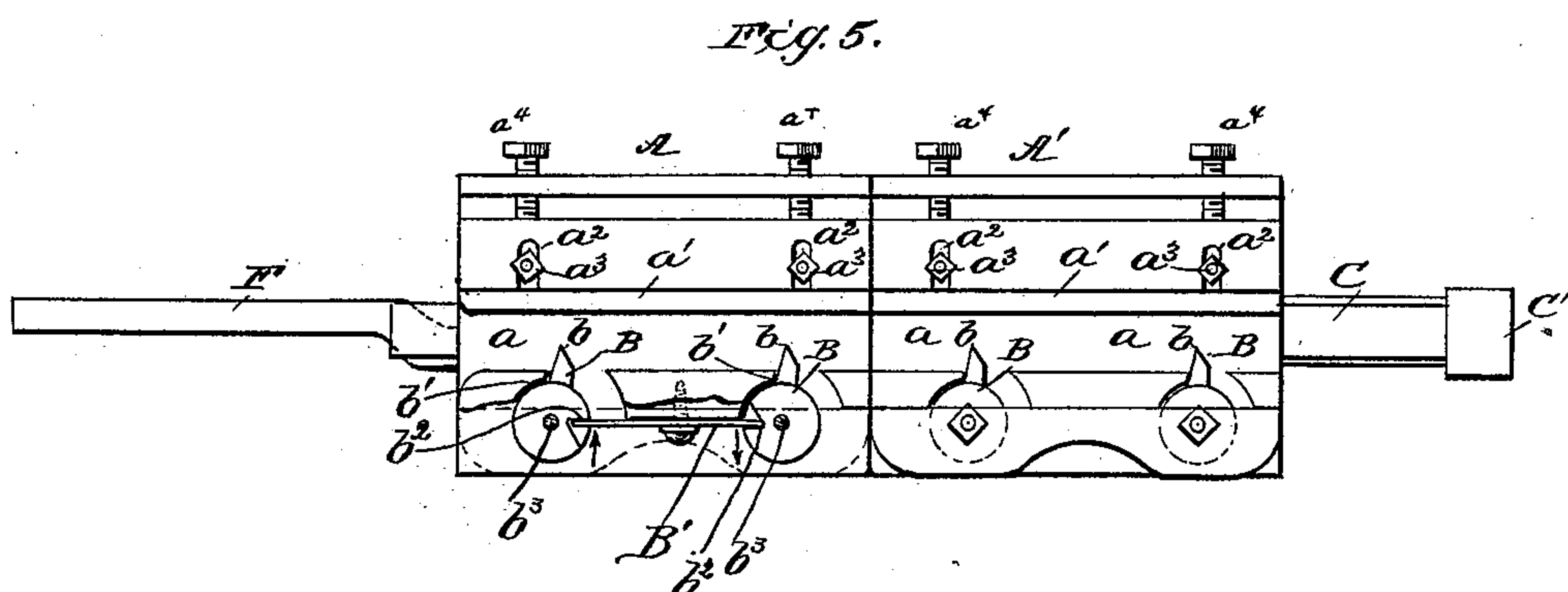
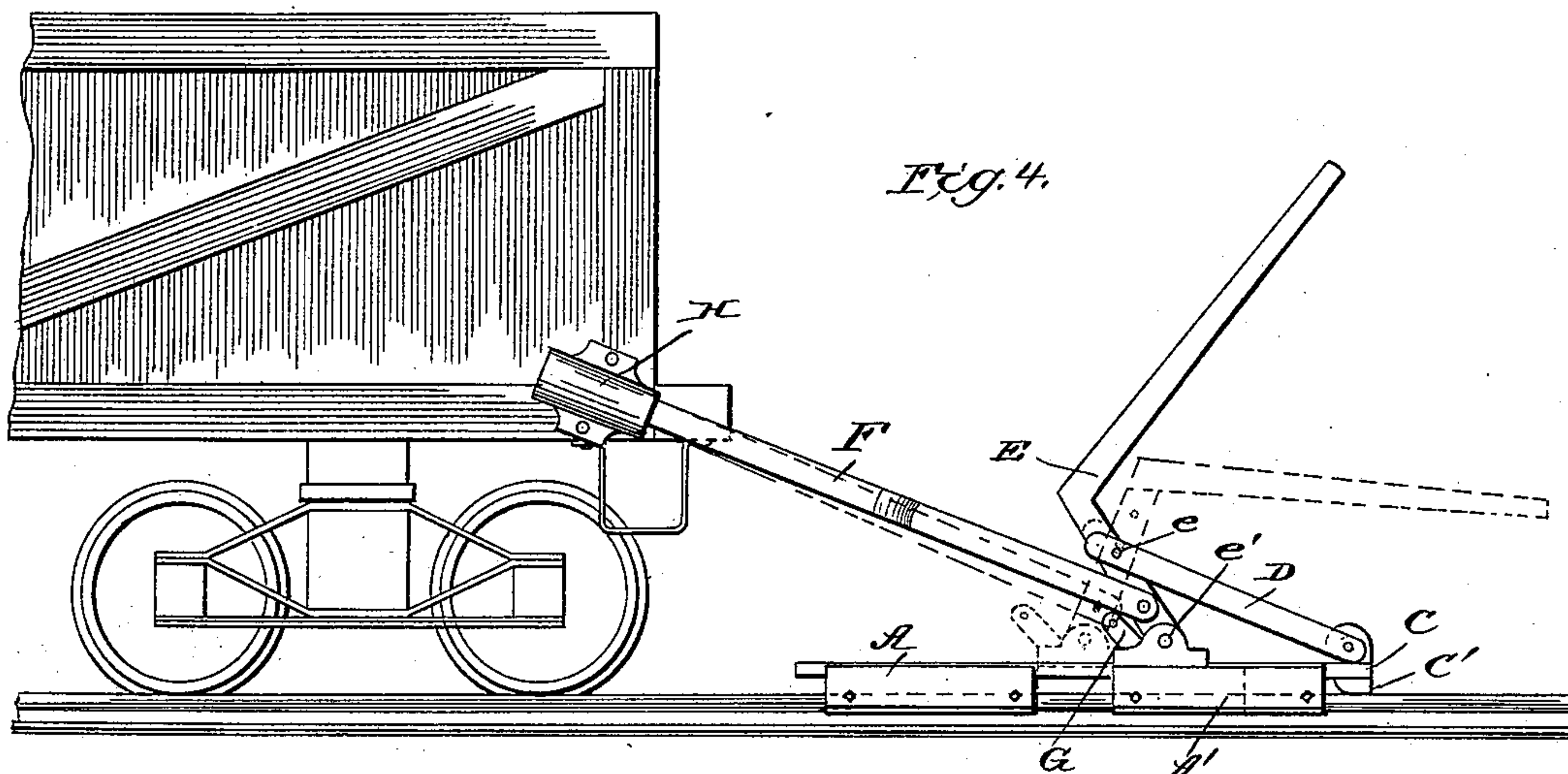
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2 Sheets—Sheet 2.

J. C. CHRISMAN.
CAR PUSHER.

No. 405,012.

Patented June 11, 1889.



WITNESSES:
Fred G. Dieterich
P. B. Surpin

INVENTOR:
Joseph C. Chrisman
BY *Wm. L. C.*
ATTORNEYS.

UNITED STATES PATENT OFFICE.

JOSEPH C. CHRISMAN, OF SEWELL DEPOT, WEST VIRGINIA, ASSIGNOR OF TWO-THIRDS TO B. H. MYLES AND WM. H. TAYLOR, OF SAME PLACE.

CAR-PUSHER.

SPECIFICATION forming part of Letters Patent No. 405,012, dated June 11, 1889.

Application filed March 16, 1889. Serial No. 303,614. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH C. CHRISMAN, of Sewell Depot, in the county of Fayette and State of West Virginia, have invented a new and useful Improvement in Car-Pushers, of which the following is a specification.

My invention is an improved pusher intended especially for use in pushing cars in coal-mines, as well as ordinary railroad-cars.

The invention consists, broadly, in a car-pusher having a base formed of two independently-movable foot-sections adapted to slip in one direction along the rail and to clamp, as against any movement therealong in the reverse direction, a slide-bar connected with one of such sections and sliding through the other, lever-connections between the latter section and the slide-bar, and the push bar or rod.

The invention consists, further, in certain features of construction and novel combinations of parts, as will be hereinafter described, and pointed out in the claims.

In the drawings, Figure 1 is a side view of my invention as in use. Fig. 2 is a perspective and Fig. 3 a cross-sectional view of same. Fig. 4 is a side view of the invention as when in use in a coal-bank. Fig. 5 is a bottom plan view of the device. Fig. 6 is a detail view of the push-bar, and Fig. 7 is a detail view of a somewhat different form of gripper.

My improved pusher comprises two independently-movable foot-sections $A A'$, which for convenience of reference I shall term, respectively, the "front" and "rear" sections, a connection between said sections, lever mechanism, and the push-bar. These sections $A A'$ are alike in general construction, being made so they may move freely along the rail in one direction, but will clamp and be held against movement in the reverse direction along such rail. The said sections being in the main features alike, the description of one will answer for both. In the under side of each of these sections is formed a way a for the track-rail, one side of such way forming a bearing and being adjustable laterally, whereby to fit the way a to rails of different widths. This side bearing is shown as a bar a' , having slots a^2 for the guide-

screws a^3 , and operated by screws a^4 , turning in the framing of the section, as shown. At the opposite side of way a from bar a' , I provide a gripper or grippers B , having points b , arranged to project into way a and pressing against stop-walls b' , which hold the points in such arrangement that they form, practically, ratchets, permitting the section to slide along the rail in one direction, but clamping it on the rail and preventing any movement of said section in the reverse direction.

A slide-bar C is secured at its forward end to the section A and extends back through a way A^2 in the section A' and projects in rear of section A' , as shown. At its rear end the bar C has a block or depending portion C' , which bears on the rail. To this slide-bar near its rear end I pivot one end of the fulcrum-bar D , to the opposite end of which I fulcrum, at e , the lever E , which is pivotally connected at e' to the rear section A' . Now, it will be seen that the bar C , being attached to and forming practically a part of section A , the fulcrum-bar may be described, broadly, as pivotally connected with the said front section A .

By means of the described construction it will be seen that as the lever is operated the front section will be pushed forward, and the rear section be brought up thereto, so that the movement of the lever will effect a movement of said foot-pieces along the rail, so that the attachment of the push-bar F to one of such foot-pieces may operate to move the car. When desired to apply this power close to the rail, the push-bar F may be secured to the supporting bar or block G on section A' when it is desired to exert great power, as when the car is hard to move, such arrangement giving single motion and great power, while for securing a quicker operation the push-bar may be pivoted to the lever and rested on the block G .

The form of lever shown is preferred for use in coal-banks, while for use on railroads outside a straighter lever may be preferred. In coal-banks it is preferred to provide a socket H on the car and form the free end of the push-bar to enter said socket.

It will be understood that the grips may be

serrated, as shown in Fig. 7; but I usually find that the pointed grips shown in the other figures efficiently serve the desired purpose.

The grippers B B are spring-actuated, being pivoted at b^3 to the framing and formed with shoulders b^2 for engagement by the ends of spring-bar B'. This spring-bar is secured between its ends between the grippers B, and engages at its ends with shoulders b^2 , exerting an inward tension on one and an outward tension on the other shoulder, as will be understood from the arrows in Fig. 5.

Having thus described my invention, what I claim as new is—

15 1. A car-pusher, substantially as described, comprising independent foot-sections adapted to slide freely along the rail in one direction and provided with grippers or clamps whereby to prevent their movement along said rail in
20 a reverse direction, the lever mechanism, and connections, all being substantially as described, whereby the foot-sections may be operated in the manner and for the purposes set forth.

25 2. In a car-pusher, substantially as described, the combination of two foot-sections and a connection therebetween, such sections being formed with a way for the track-rail and having clamp mechanism by which to grip
30 the rail and prevent the movement of the sections in one direction therealong, all substantially as and for the purposes set forth.

3. In a car-pusher, a foot-section having a way for the rail, provided at one side of such
35 way with a clamp or clamps adapted to permit the movement of the section along the rail in one direction and to prevent its movement in the reverse direction, and provided at the opposite side of the way with an adjustable bearing, whereby the section may be
40 adapted to rails of different widths, substantially as set forth.

4. In a car-pusher, the combination of the

front and rear foot-sections adapted to slide
freely forward along the rail and to be clamped 45
as against rearward movement, the slide-bar secured to the front section and extended in rear of the rear section, the fulcrum-bar pivoted at one end to the slide-bar, the lever pivoted to said fulcrum-bar and to the rear foot-
50 section, and the pusher-bar, all substantially as and for the purposes set forth.

5. In a car-pusher, the front and rear foot-sections adapted to slide in one direction and clamp as against movement in opposite direc-
55 tion on the rail, a fulcrum-bar connected at one end with the front section, the lever pivotally connected with the rear section and fulcrumed to the fulcrum-bar, and the push-bar, all substantially as set forth. 60

6. In a car-pusher, the combination of the foot-section frame, the grippers pivoted therein near its opposite ends and on the same side of the way for the rail, and the spring-
65 bar extended between said grippers and arranged to operate the same, substantially as set forth.

7. The combination, in a car-pusher, of the front foot-section, the rear foot-section, a slide-
70 bar secured to the front section extended rearwardly beyond the rear section and constructed at its rear end to bear on the rail, the fulcrum-bar pivoted at one end to said slide-bar near its rear end, the lever, and the push-
75 bar, all substantially as set forth.

8. In a car-pusher, the combination, with the front foot-section and the rear foot-section, of the lever, the block or support G, and the push-bar adapted for connection with either the lever or the support G, substantially as
80 set forth.

JOSEPH C. CHRISMAN.

Witnesses:

W. L. WILSON,
W. COLLINS.