

No. 733,999.

PATENTED JULY 21, 1903.

I. B. RICHARDS & G. H. GILMAN.

CAR UNLOADING PLOW.

APPLICATION FILED MAR. 5, 1903.

NO MODEL.

2 SHEETS—SHEET 1.

Fig. 1.

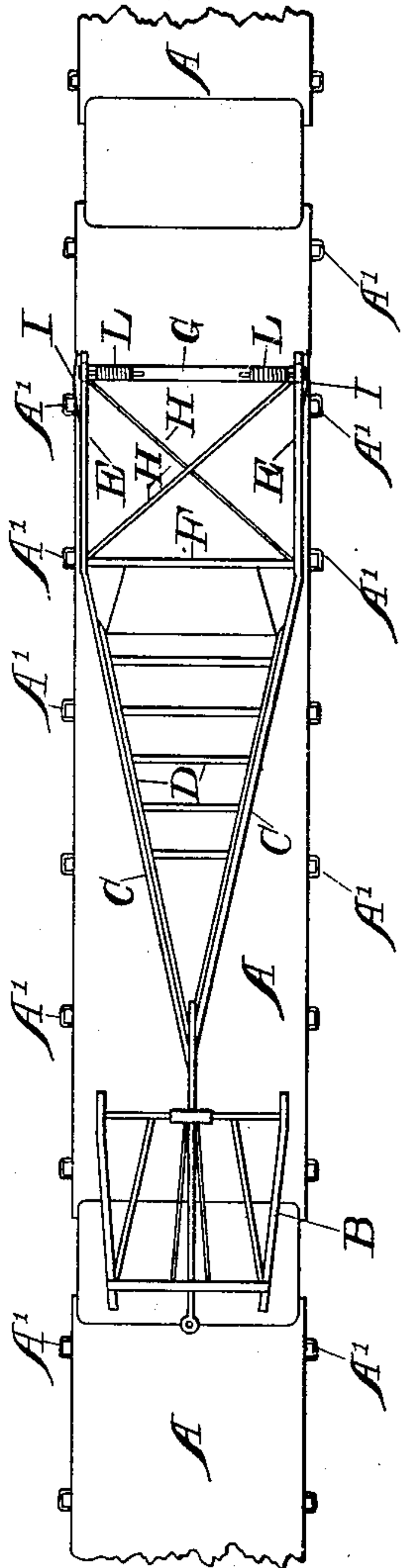
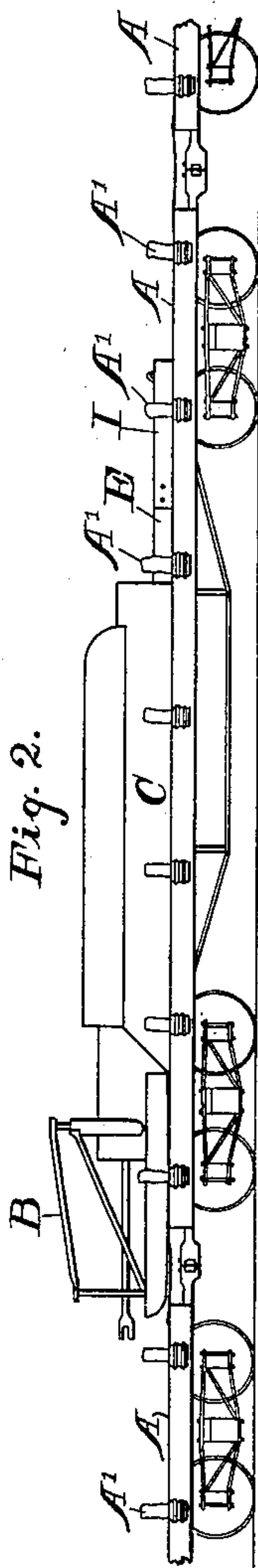


Fig. 2.



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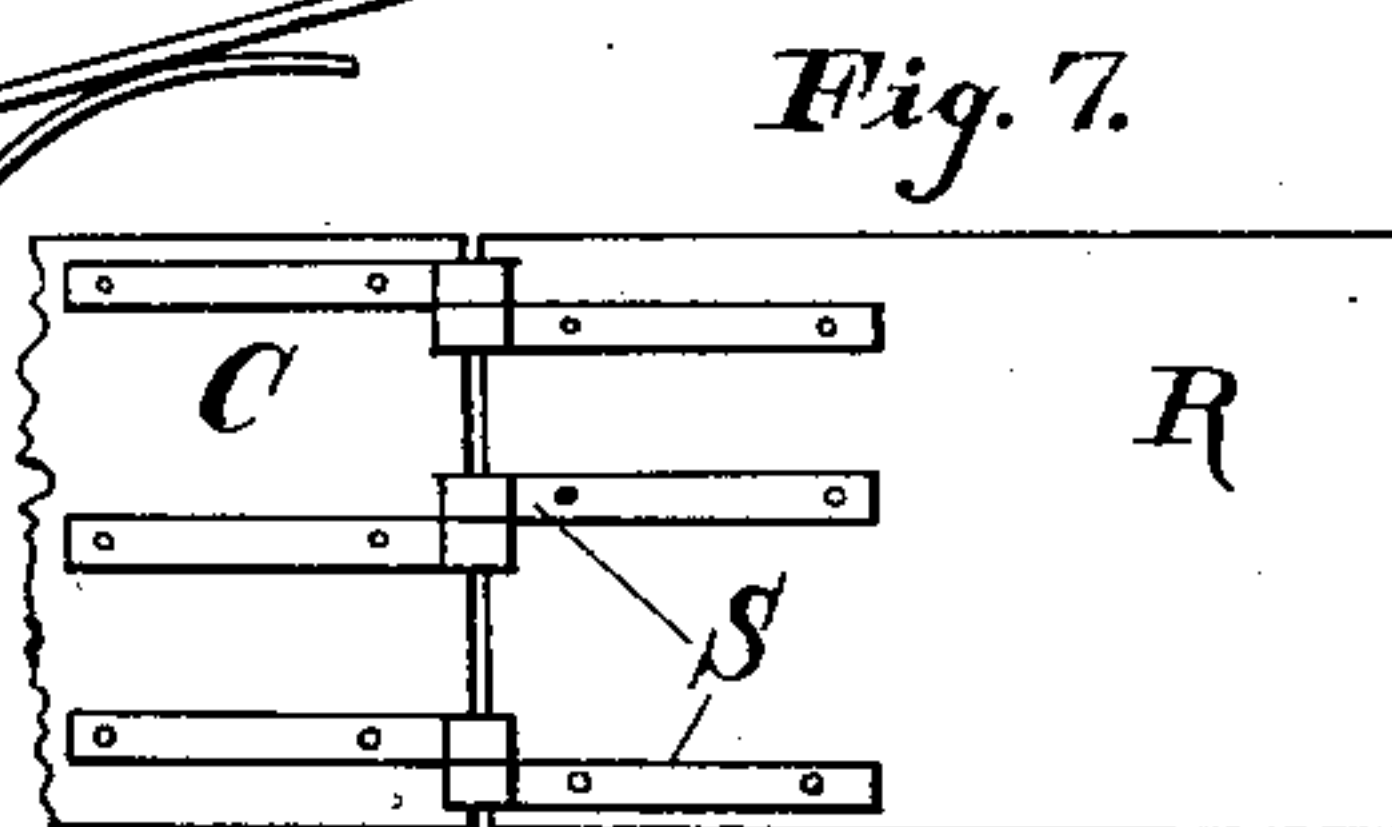
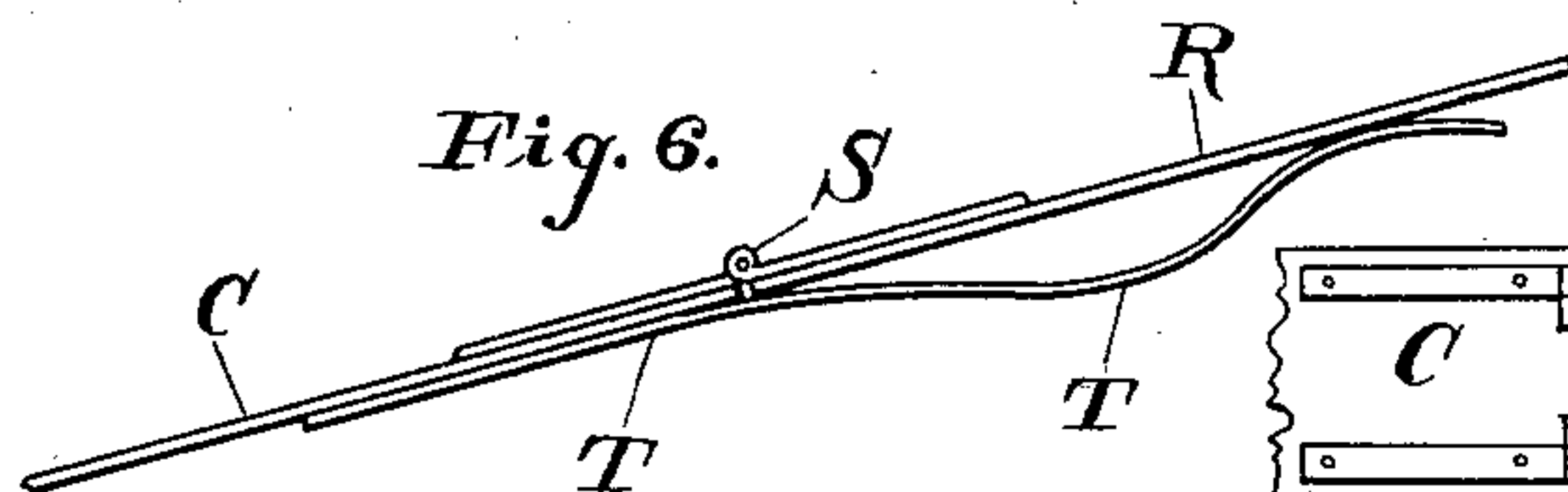
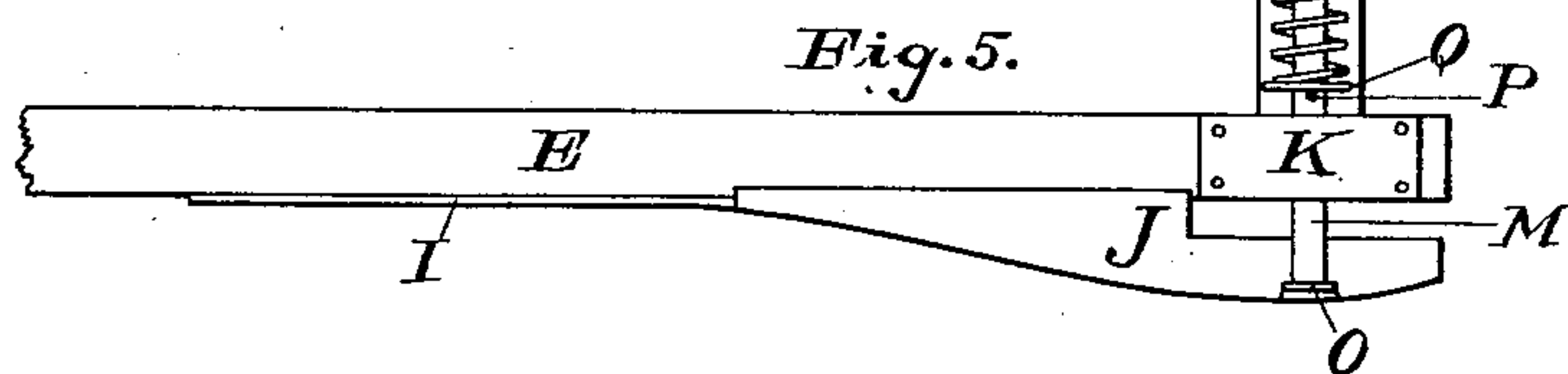
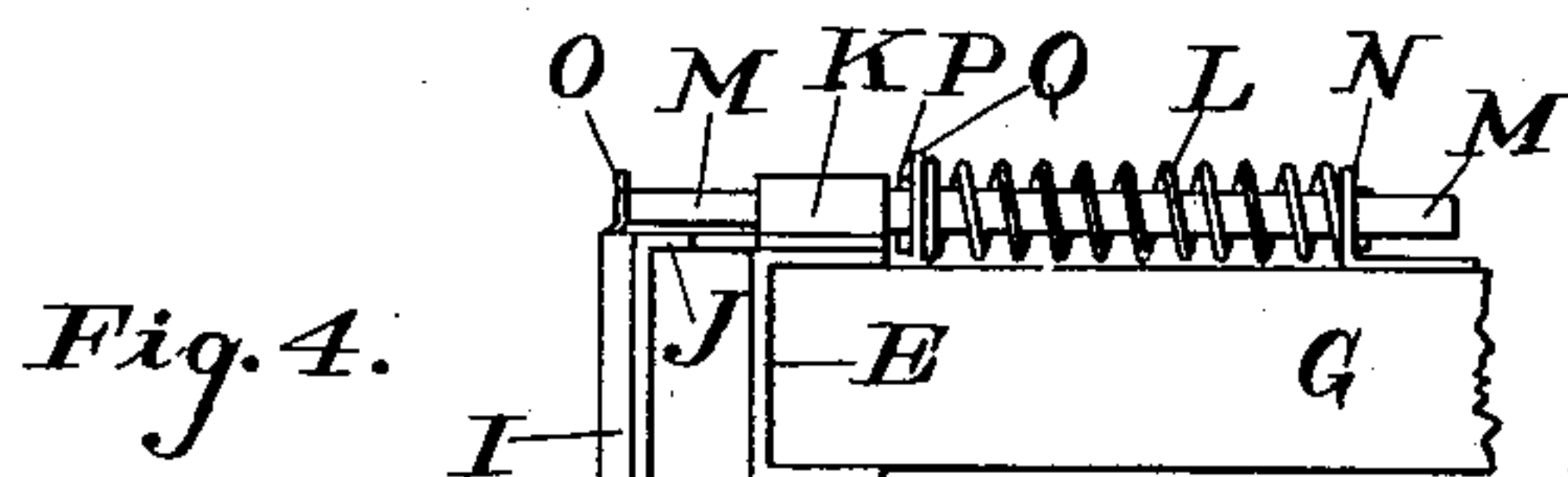
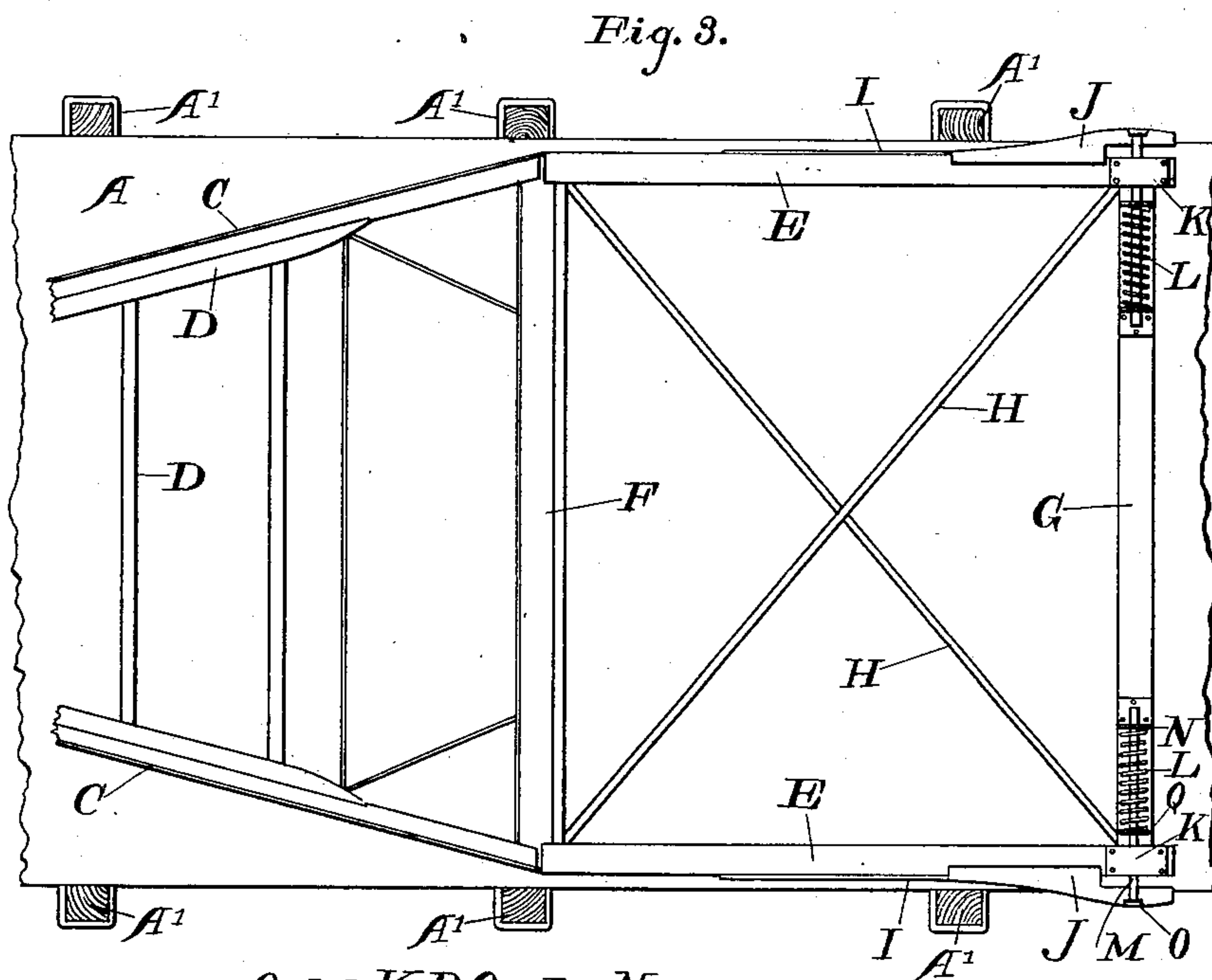
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# UNITED STATES PATENT OFFICE.

IRA B. RICHARDS AND GEORGE H. GILMAN, OF TACOMA, WASHINGTON.

## CAR-UNLOADING PLOW.

SPECIFICATION forming part of Letters Patent No. 733,999, dated July 21, 1903.

Application filed March 5, 1903. Serial No. 146,338. (No model.)

*To all whom it may concern:*

Be it known that we, IRA B. RICHARDS and GEORGE H. GILMAN, citizens of the United States, residing at Tacoma, in the county of Pierce and State of Washington, have invented a new and useful Improvement in Car-Unloading Plows, of which the following is a specification.

Our invention relates to improvements in plows for unloading a train of gravel, dirt, &c., being more particularly an attachment on said plow whereby the work partially performed by the plow is completed by our attachment, which is so constructed that stones, dirt, &c., will not block the plow by becoming wedged either between the plow and the stakes on the car or in the moving parts of our attachment. We attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a plan, and Fig. 2 an elevation, of a plow mounted on the cars and having our device attached thereto. Fig. 3 is an enlarged plan of our device attached to a plow. Fig. 4 is a rear elevation, and Fig. 5 is a plan, of the operating portions of our device. Fig. 6 is a plan, and Fig. 7 a side elevation, of a modified form of our device.

Similar letters of reference refer to similar parts throughout the several views.

It has been found necessary in plows of this character to construct the plow narrower than the space between the stakes on the sides of the car in order to prevent stones, &c., from wedging between the plow and the stakes. The result of this construction is that considerable dirt, &c., is left along one or the other or both edges of the platform of the car.

A represents the platforms of the flat-cars, and A' the side stakes thereon.

B represents the draft-gear, C the sides, and D the framework and cross-braces, of an ordinary plow of this character. To the rear of the plow is secured the frame of our attachment, consisting of two parallel side pieces E, so spaced that their outer surfaces are as far apart as are the outer surfaces of the ends of the sides C, a forward bar F being also a part of frame D of the plow, a rear bar G joining the rear ends of the bars E, and the cross-braces H extending across the frame-

work from corner to corner thereof and making it stiff. To the sides of the bars E are secured the wings I by rivets or other means, placed near their forward ends. These wings are bent outward from the bars E and are of a shape similar to that shown in Figs. 3 and 5, being also provided with the flanges J, which extend over the tops of the bars E and prevent any of the gravel, dirt, &c., from entering the space between the parts E and I, and thus interfering with the freedom of their action. A portion of this flange J is cut away, as indicated, to allow it to move inward without interfering with the block K, secured to the upper surface of bar E. The wings I are to a certain extent springs; but we have found it advisable to supplement their action by helical springs L. The rod M passes through the box K and through the plate N, secured to the rear bar G, and presses against the lug O, secured to or being a part of the wing I or the flange J thereof. The pin P passes through the rod M. The spring L is compressed between the plate N and a washer Q on the rod M, said washer being held in place by the pin P, so that when the wing I is pressed inward by the stakes A' it compresses the spring L between the parts N and Q.

The modified form shown in Figs. 6 and 7 is particularly adapted for that class of plows in which the dirt, &c., is all unloaded on one side of the train instead of on both sides, as in the plow illustrated, though it could also be applied to the latter form instead of the device described above.

To the side C of the plow is hinged the wing R by any suitable hinge, as shown at S. To the inner side of C or to the frame thereof is secured the spring T, so shaped that it presses against the rear or inner side of wing R and tends to keep it in approximate alignment with the side C, so that when said wing R is pressed inward by the stakes A' the spring T is bent, and when R has passed the stake it is immediately pushed by the spring, so as to clear off all the dirt on the side of the car and between the stakes.

What we claim, and desire to secure by Letters Patent, is—

1. In an unloading device the combination of a plow adapted to unload a portion of the material, of a follower secured to said plow,

and of spring-actuated wings secured to said follower and adapted to unload the remainder of said material.

2. In an unloading device the combination  
5 with a plow adapted to unload a portion of the material, of a frame secured to the rear end of said plow and having parallel sides, of wings secured to said parallel sides and extending outward therefrom and adapted to  
10 unload the remainder of said material, and of springs secured to said frame and pressing said wings outward from said frame.

3. In an unloading device, the combination  
15 with a plow adapted to unload a portion of the material, of a frame secured to rear end of said plow and having parallel sides, of

wings secured to said parallel sides and extending outward therefrom, of lugs attached to said wings, bearing-blocks secured to said frame, bars passing through said bearing- 20 blocks and engaging the inner side of said lugs, and means for pressing said bars outward against said lugs.

In testimony whereof we have signed our names to this specification in the presence of 25 two subscribing witnesses.

IRA B. RICHARDS.  
GEORGE H. GILMAN.

Witnesses:

FRED. J. SHAW,  
W. H. OPIE.