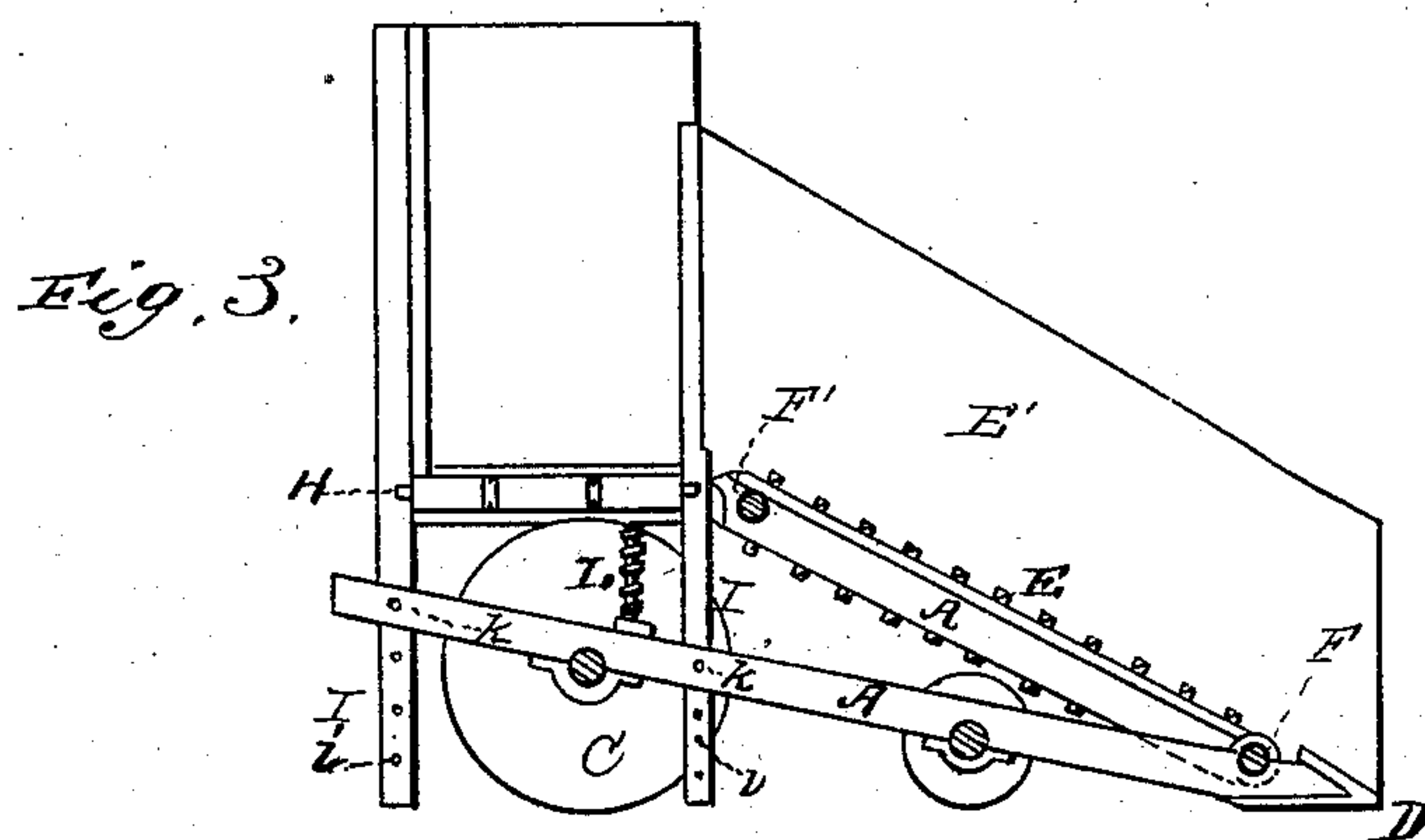
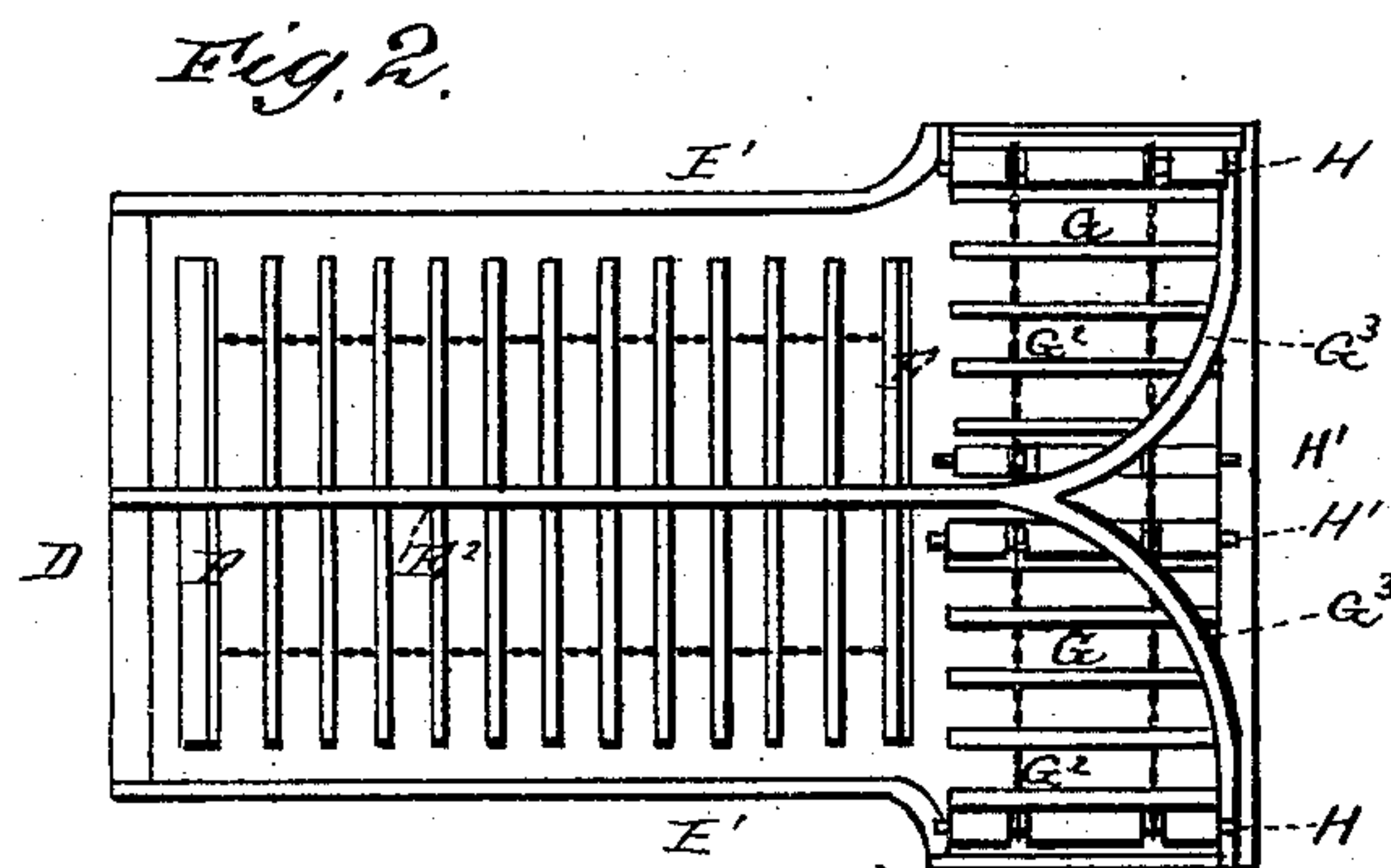
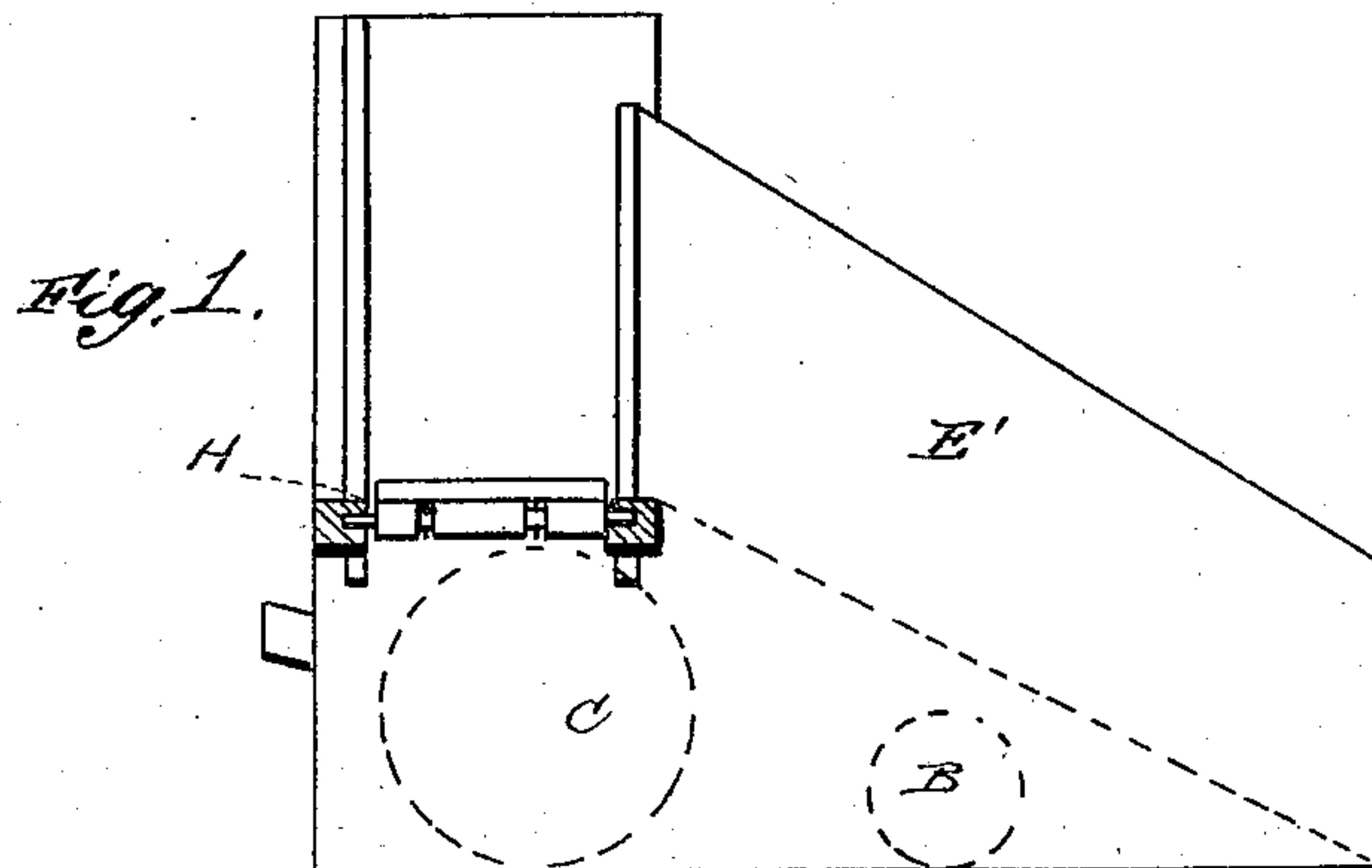


(No Model.)

F. W. MENZE.  
SNOW REMOVER.

No. 275,401.

Patented Apr. 10, 1883.



WITNESSES

*Wm. H. Bates*  
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# UNITED STATES PATENT OFFICE.

FRIEDRICH W. MENZE, OF WEST BAY CITY, MICHIGAN, ASSIGNOR OF ONE-HALF TO KARL GUSTAV ADOLPH KUSCH, OF SAME PLACE.

## SNOW-REMOVER.

SPECIFICATION forming part of Letters Patent No. 275,401, dated April 10, 1883.

Application filed December 9, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, FRIEDRICH WILHELM MENZE, a resident of West Bay City, county of Bay, and State of Michigan, have invented a new and useful Snow-Remover, of which the following is a specification.

This invention relates to improvements in snow-plows, and has for its object the removal of snow from railroad-tracks, the plow being attached to the front of a locomotive in any suitable manner; and the invention consists in the novel construction and arrangement of parts as will be hereinafter more fully described and shown.

In the accompanying drawings, which fully illustrate my invention, Figure 1 shows a side elevation. Fig. 2 is a front view. Fig. 3 is a plan or top view of same.

A A is the frame-work, at the rear end of which is the pair of large wheels C, and near the forward end are journaled the pair of small wheels B, all of which wheels run on the rails and support and carry the snow-plow.

Secured to the forward or front end of the frame-work A A is a cutter, D, made in the form of an acute angle, and having its lower surface raised just above the track and its upper face inclined in the plane of the superior surface of the frame-work A. This cuts and loosens the snow from the mass on the track and delivers the same upon an inclined slatted apron, E, which passes over a lower shaft, F, in the frame-work at the lower end near the cutter, and over another and higher shaft, F', in the upper part of the frame-work. This apron E is inclosed within side walls, E', attached to and rising from the frame-work, which prevent the snow escaping laterally on its way up the incline, and a central wall or partition, E<sup>2</sup>, divides the mass of snow, so that it is delivered in two volumes on the lateral discharge-aprons G<sup>2</sup>. As the volume of snow on each side of the central wall, E<sup>2</sup>, is driven up the incline by the locomotive forcing the cutter into the mass of snow it will strike against the curved rear wall, G<sup>3</sup>, and be deflected outwardly in a lateral direction and be carried by the delivering-aprons G<sup>2</sup> to the side of the plow, where it will be discharged. The entire operation is automatic.

The rear portion of the frame-work is con-

structed so as to form a platform, G, for the support of the lateral discharge-aprons G<sup>2</sup>, which receive and discharge the snow when it reaches the highest point to which the front apron, E, is capable of carrying it. This platform is divided in the center by a double curved rear wall, G<sup>3</sup>, and the platform supports the pair of slatted discharge aprons or carriers, G<sup>2</sup>, which pass over rollers or shafts H H', shorter than the shafts F F' and at right angles to the same, for the purpose of delivering the snow at each side of the track from the platform or receptacle G. The rear wall, G<sup>3</sup>, is strengthened by suitable braces. The rear portion of the frame-work has also legs or extensions I I, in which are made holes i, and the under or lower portion of said frame-work, in which the wheels are journaled, have also holes K K therein to receive pins or bolts as well as an adjusting-screw, L, extending from the same to the lower part or bottom of the platform G, by which means the lower portion of the frame-work carrying the wheels can be adjusted to make a deeper or shallower cut, as desired, the point of articulation of the frame-work A being upon the lower shaft, F.

The operation of my invention is as follows: when the plow is attached to the front of a locomotive, and the proper adjustment or pitch given to the cutter or forward end of the plow, the snow is, by the motion of the locomotive, detached from the mass by means of the cutter, and is carried upon the endless slatted apron, which lies longitudinally with the plow until it reaches and passes into the receptacle or rear end of the plow, where it is deflected by the curved rear wall upon the slatted aprons therein, which are placed at right angles to the front apron, the partition in the plow and receptacle dividing the mass of snow, and as the snow on each side of the central wall or partition is carried to the top of the incline it strikes against the curved rear wall and is turned in a lateral direction and is received upon the side delivery aprons or carriers and by them discharged.

The inner rollers, H' H', are higher than the outer rollers, H H, which increases the discharging power of the delivery-aprons by inclining them outwardly, and the divided mass of snow is forced along in such a manner as



to deliver it upon the sides of the track from each of the aprons in the receptacle, the same operation being continuously repeated during the running of the engine. Thus, it will be  
5 seen that as the cutter of the plow enters the snow a mass of the same will be detached and forced within the side walls and divided by the central wall, thence carried by the inclined apron or carrier up to the receptacle, when,  
10 striking against the curved rear wall, it will be forced laterally upon the side or delivery aprons or carriers, and thence discharged at the sides of the plow, and as long as the plow is forced into the mass of snow the elevation  
15 and discharge of the obstructing snow will be continued.

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

20 1. The frame-work A A, adjustable by means of the perforations K K, *i i*, and pins or bolts, and screw L, and provided with the wheels or rollers B and C, and the cutter D, all combined, arranged, and operating substantially  
25 as described.

2. In a snow-plow, the combination of the frame-work A A, provided with the wheels B and C, cutter D, and adjusting-screw L, with the slatted endless apron E, rollers F F', and platform G, all as hereinbefore shown and de- 30 scribed.

3. As a snow-removing attachment to a locomotive or railway engine, the combination of the frame-work A A, wheels B C, cutter D, aprons E G<sup>2</sup>, screw L, and shafts F F' H H', 35 constructed as hereinbefore set forth.

4. In a snow-plow, the combination of the frame-work A, provided with wheels B C, cutter-edge D, side walls, E', central wall, E<sup>2</sup>, with the inclined apron E, curved rear wall, G<sup>3</sup>, and 40 the lateral delivery aprons or carriers G<sup>2</sup>, all as shown and described.

5. In a snow-plow, the combination of the frame-work A A, inclined carrier E, rollers F F', curved rear wall, G<sup>3</sup>, delivering-aprons G<sup>2</sup>, and 45 rollers H H', all as hereinbefore described.

FRIEDRICH WILHELM MENZE.

Witnesses:

FREDRICK AUGUSTUS MEYERS,  
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