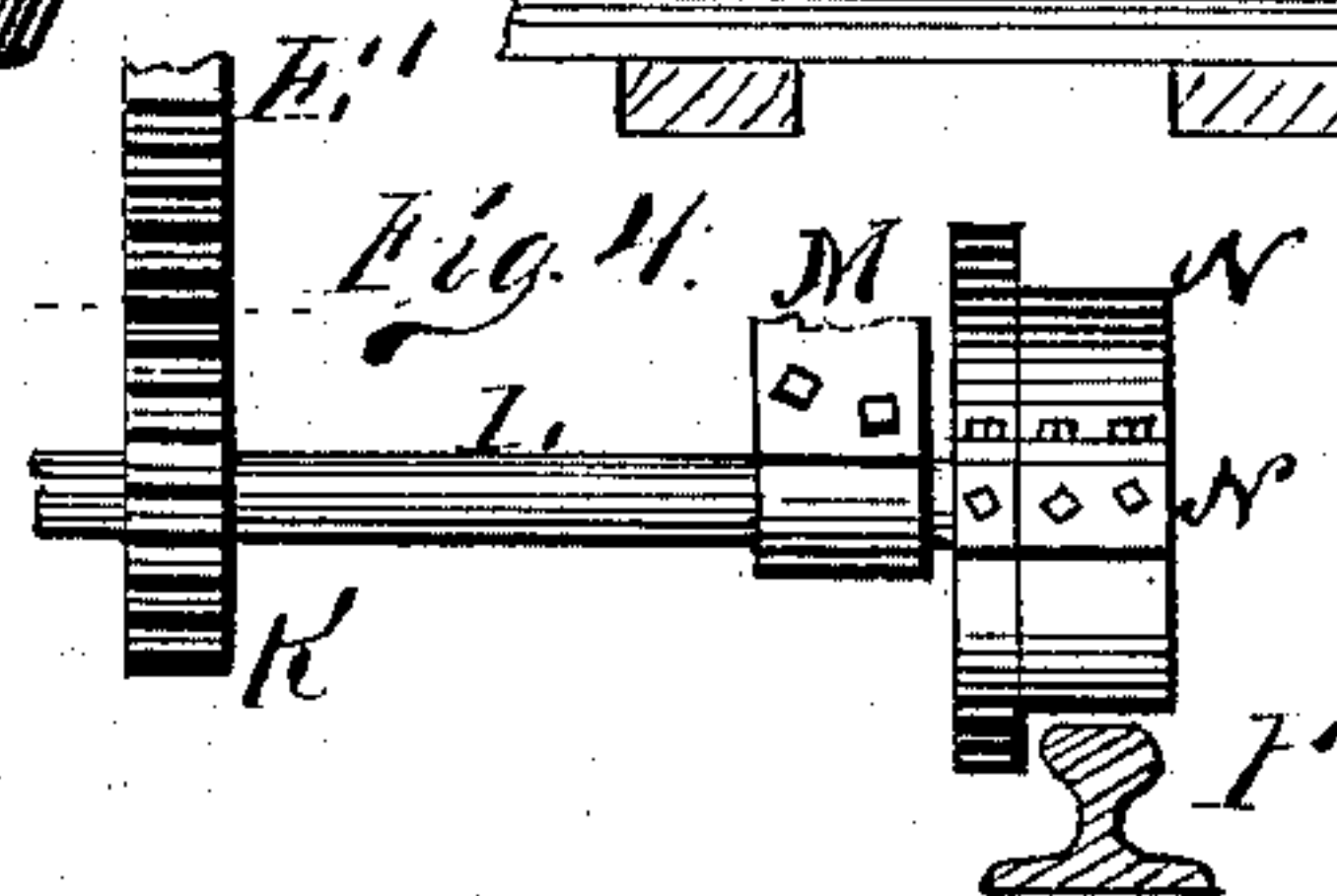
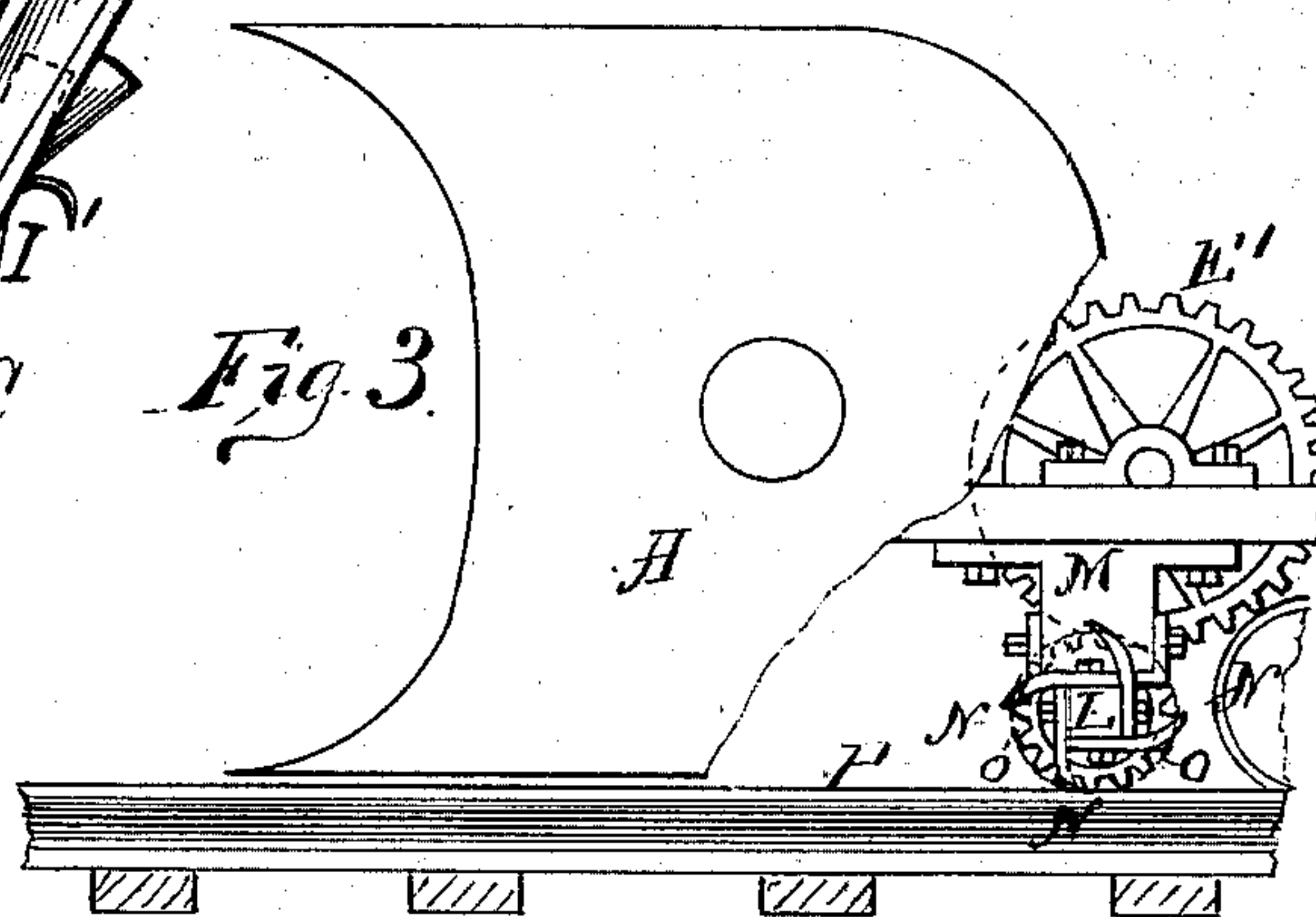
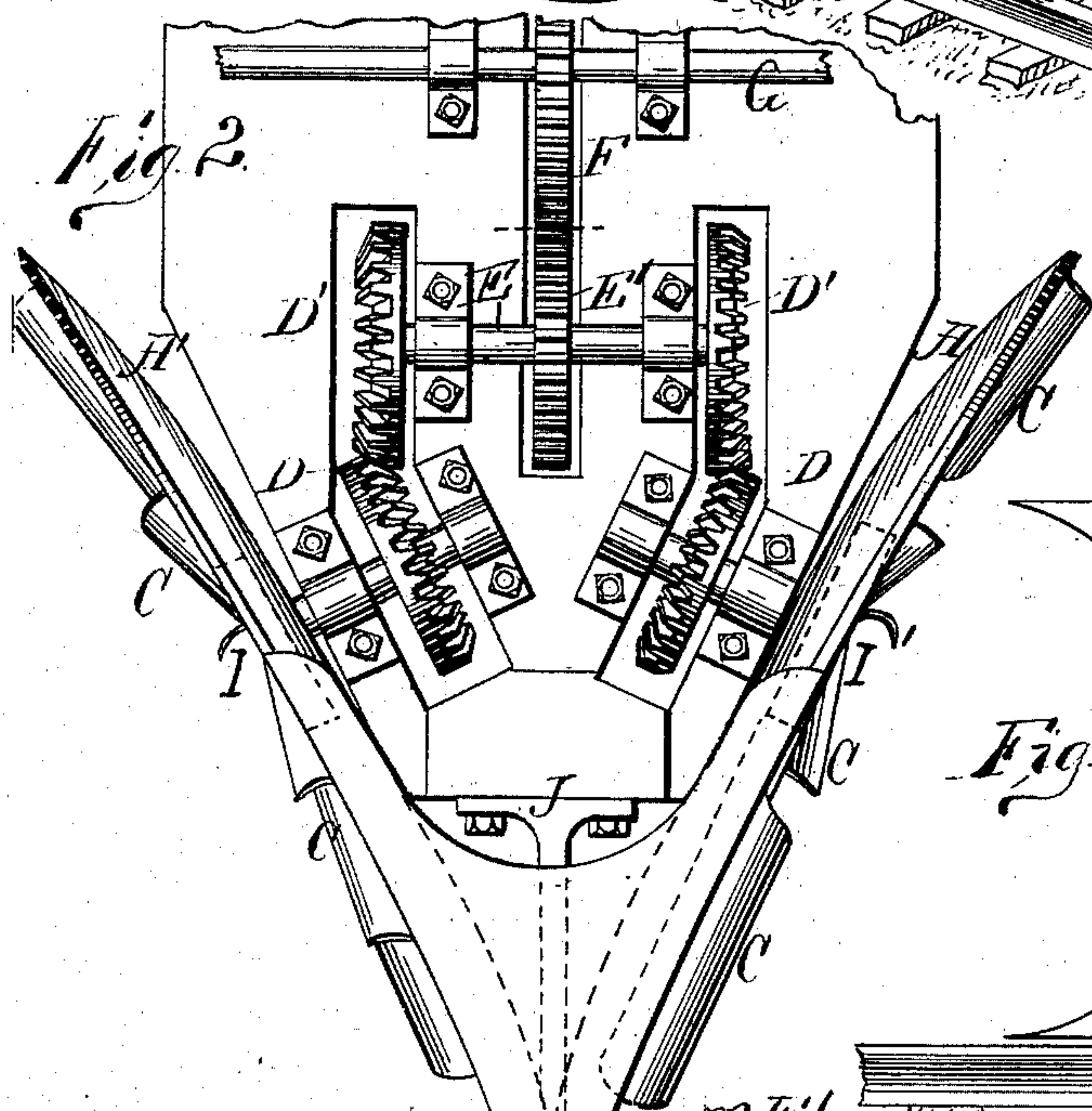
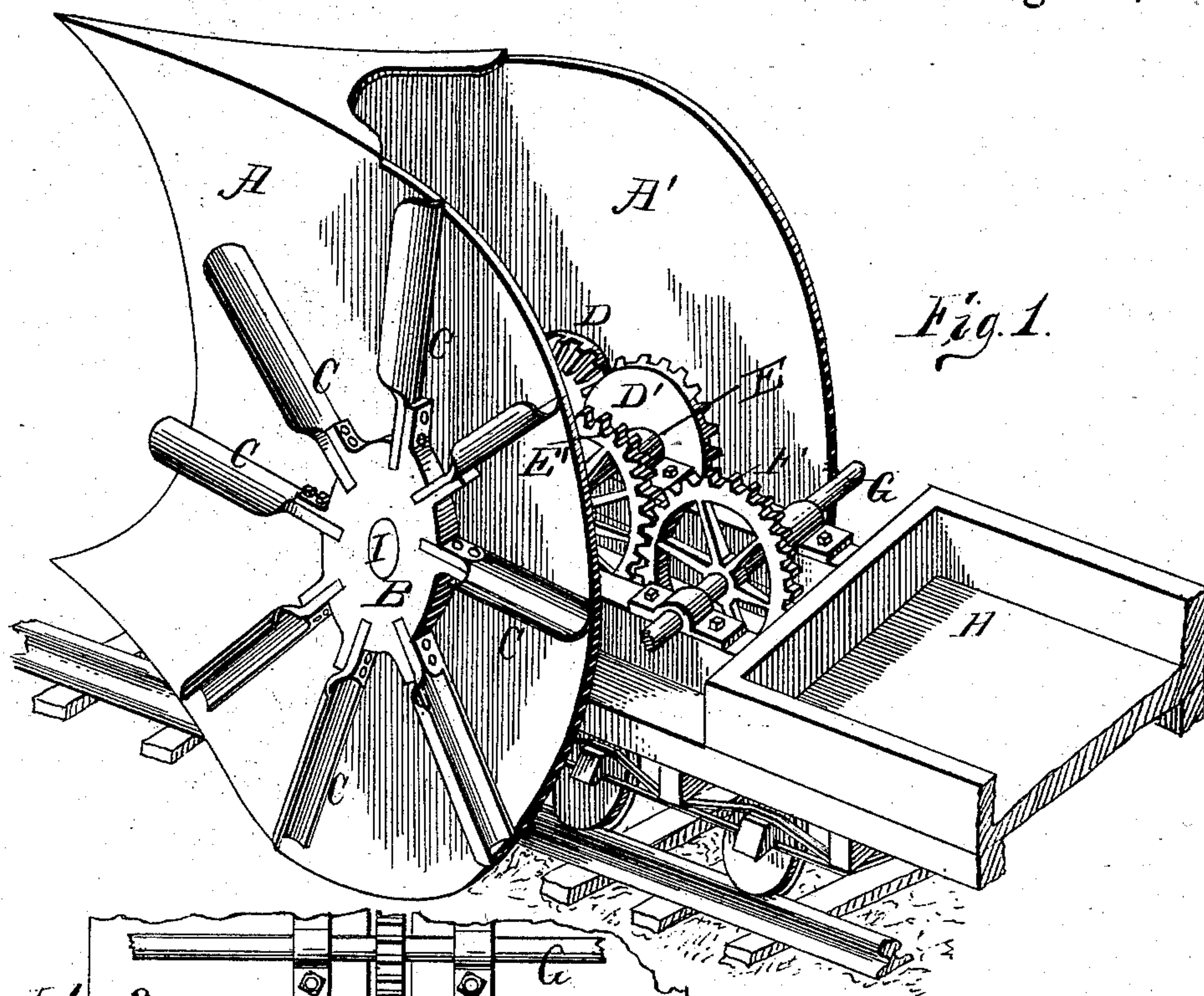


(No Model.)

L. MORGAN.
SNOW PLOW.

No. 283,011.

Patented Aug. 14, 1883.



Witnesses:
E. J. Asmus
J. R. Suttrame

Inventor:
Lyman Morgan
By E. J. Asmus
Attorney.

UNITED STATES PATENT OFFICE.

LYMAN MORGAN, OF PORT WASHINGTON, WISCONSIN.

SNOW-PLOW.

SPECIFICATION forming part of Letters Patent No. 283,011, dated August 14, 1883.

Application filed December 9, 1881. (No model.)

To all whom it may concern:

Be it known that I, LYMAN MORGAN, of Port Washington, in the county of Ozaukee and State of Wisconsin, have invented certain new and useful Improvements in Snow-Plows; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to snow-plows employed to remove snow from railroad-tracks; and it constitutes an improved device for removing the snow whenever that forms an obstruction, and also for removing the ice, which at times incrusts the rails and renders them so smooth as to prevent travel.

Figure 1 is a view in perspective of my improved device represented placed upon the track. Fig. 2 is a plan view of the same. Fig. 3 is a view of the device employed to remove the ice-crust from the rails, and Fig. 4 is a view in detail of the same device.

Like letters of reference are used to denote similar parts throughout.

A A' are the shares of the snow-plow, shaped and arranged as shown in the drawings, and supported on a strong frame-work, H, which is mounted upon wheels running on the track in the usual well-known manner.

G is a shaft running transversely across the frame, driven by suitable actuating mechanism, and provided with the large gear-wheel F, which drives the gear E', and through it the gear-wheels D' D', which are keyed upon the same shaft. The gear-wheels D' D' serve to drive the pinions D D, which are keyed upon the shafts I I', which are held in strong bearings and lie in a direction at right angles to the general direction of the shares. Strong hubs B are keyed to the exterior ends of the shafts I I', just outside the face of the shares, and to these are attached the strong scoops or arms C C C, located and shaped as shown in Fig. 1. Underneath the shaft E, and parallel with it, is located a shaft, J, provided with a gear, K, which is driven by the gear-wheel E', and mounted in bearings M, attached to the frame-work of the plow and

depending therefrom. On the outside ends of shaft J are firmly attached the curved cutters N N in such manner that when they are revolved they will sweep the top of the rails and cut therefrom all adhering ice or frozen snow. In use power is applied in any suitable manner to shaft G, and the plow caused to advance along the track to be cleared by means of the same or a separate power, and the scoops C C caused to revolve in the same direction as the supporting-wheels of the plow. At the same time the cutters N N are swiftly revolved and caused to cut the ice on the rails. The movement of the arms C C causes them to act like shovels, cutting into, scooping up, and casting aside the snow in their pathway, cutting thereby a pathway for the front of the plow. The cutting and moving of the snow is accomplished by the revolving scoops, while the shares keep the snow from being lodged upon or between the rails. As nothing revolves but the scoops C C and the hub B, a great amount of friction, produced when revolving concave disks are employed for an analogous purpose, is prevented. The shape of the scoops or arms C C is also important, as that shown in the drawings is the best, causing least friction and performing the work most effectually.

I claim—

1. In a snow-plow, the combination of the shares A A', hubs B, scoops or arms C, radially attached to said hubs, shafts I I', pinions D, and mechanism, substantially as described, for actuating the same, as set forth.

2. In a snow-plow, the combination, with the shaft G and gear F, of the gears E' and K, and shaft L, having curved cutters N, substantially as and for the purpose set forth.

3. A snow-plow having shaft G, gears F and E', shaft E, gears D and D', shafts I I', having hubs B keyed thereon, scoops or arms C, radially attached to said hubs, shares A A', gear K, and shaft L, having cutters N, substantially as and for the purpose set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

LYMAN MORGAN.

Witnesses:

E. H. BOTTUM,
E. G. ASMUS.