

(No Model.)

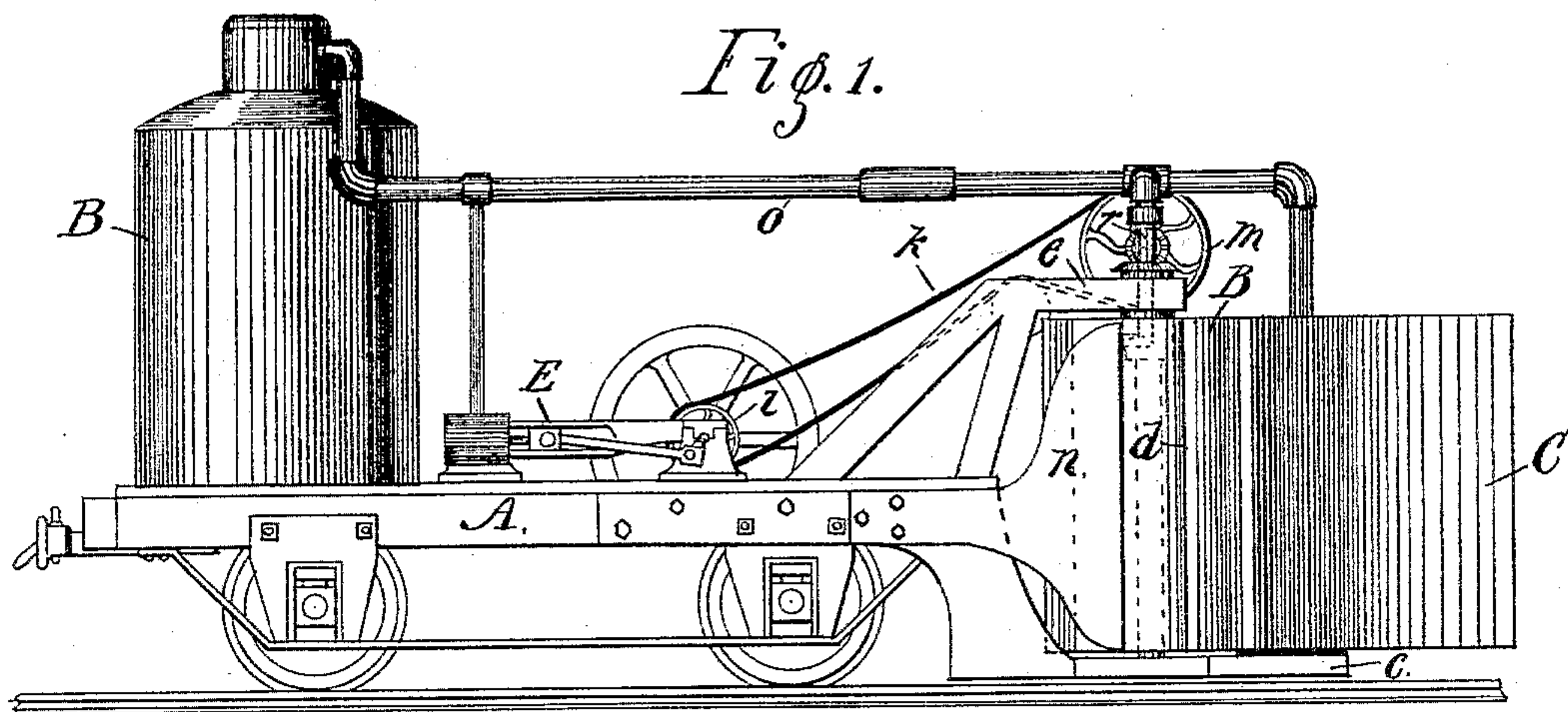
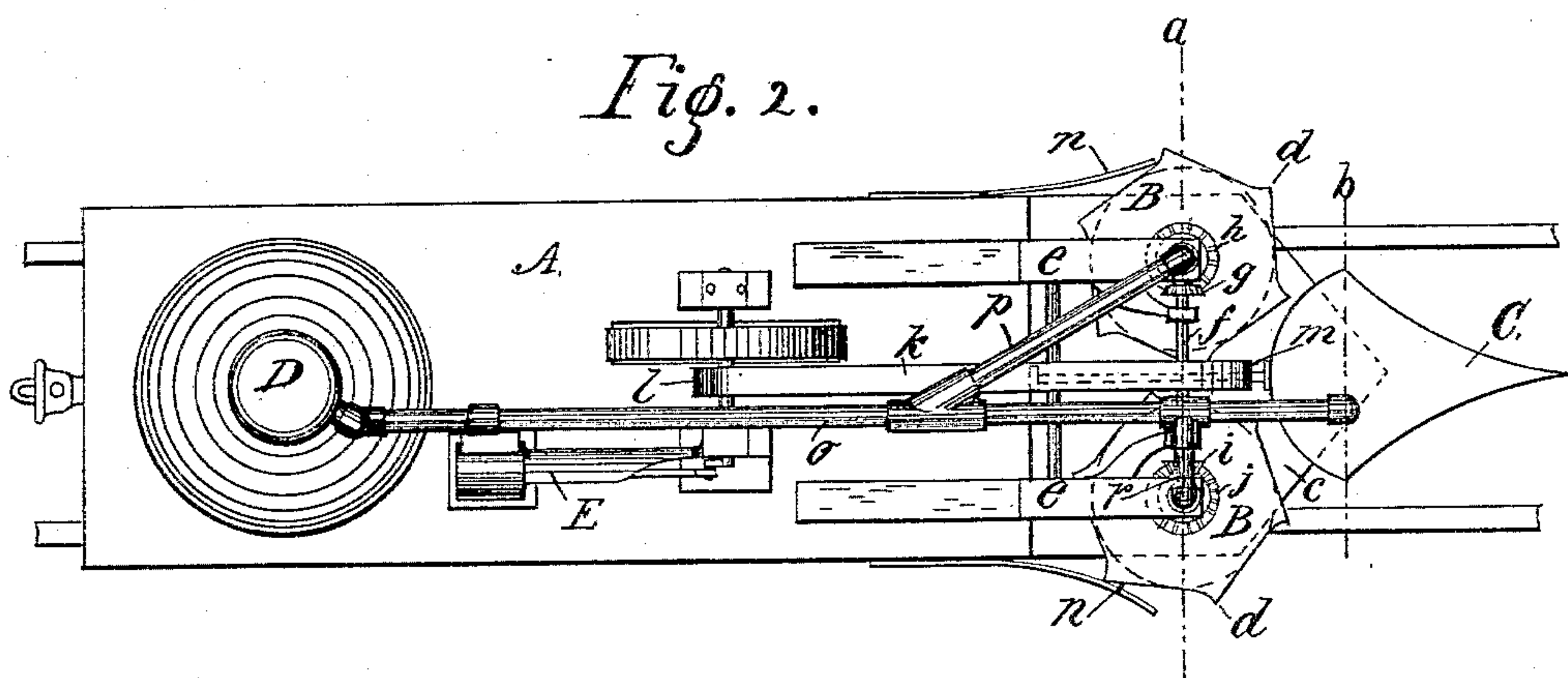
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J. E. TWINAME.

SNOW PLOW.

No. 331,849.

Patented Dec. 8, 1885.



WITNESSES:

O. P. Hood.

Frank A. Jacob.

INVENTOR:

James E. Twiname
By H. P. Hood
Att.

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Fig. 3.

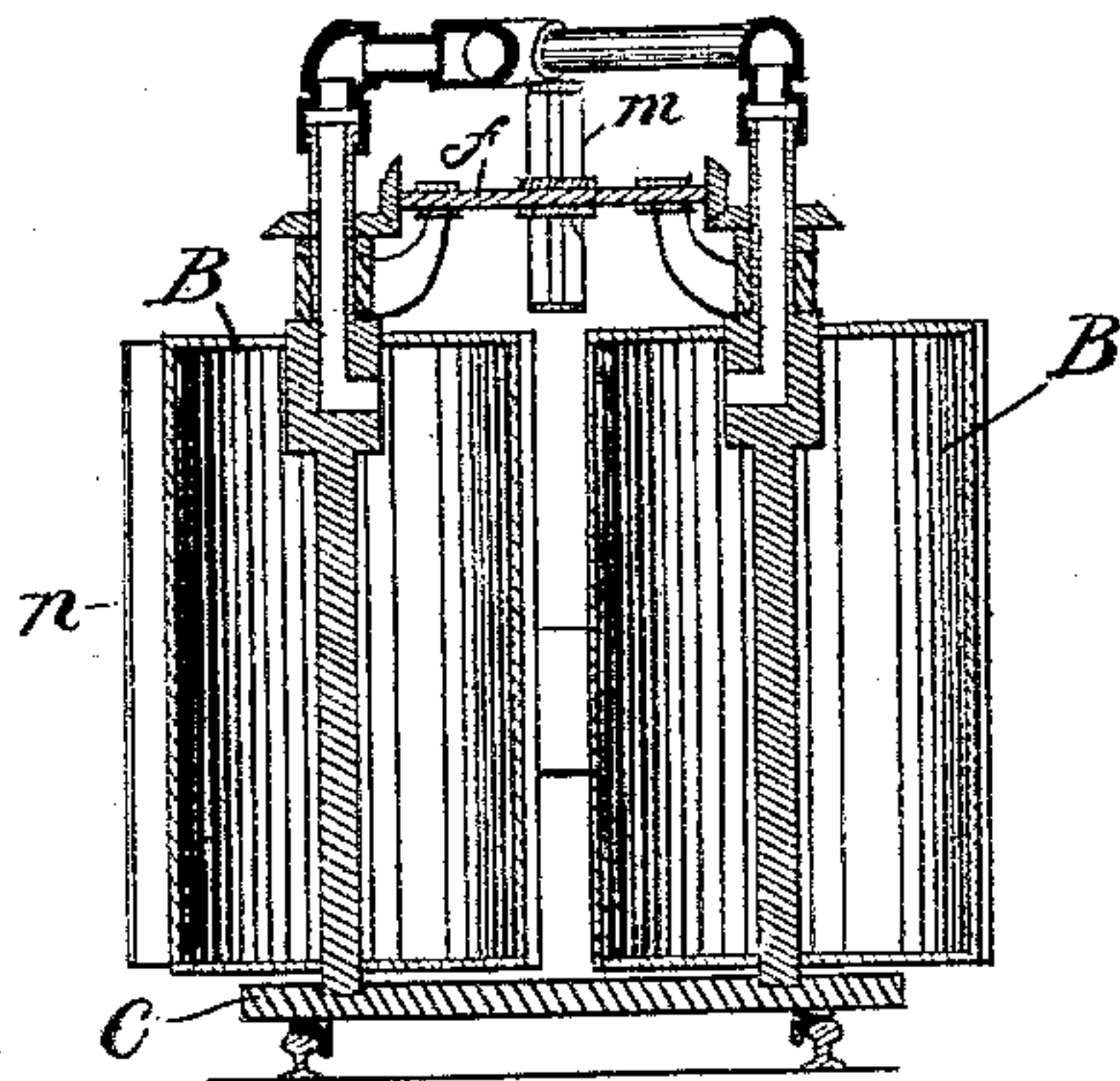
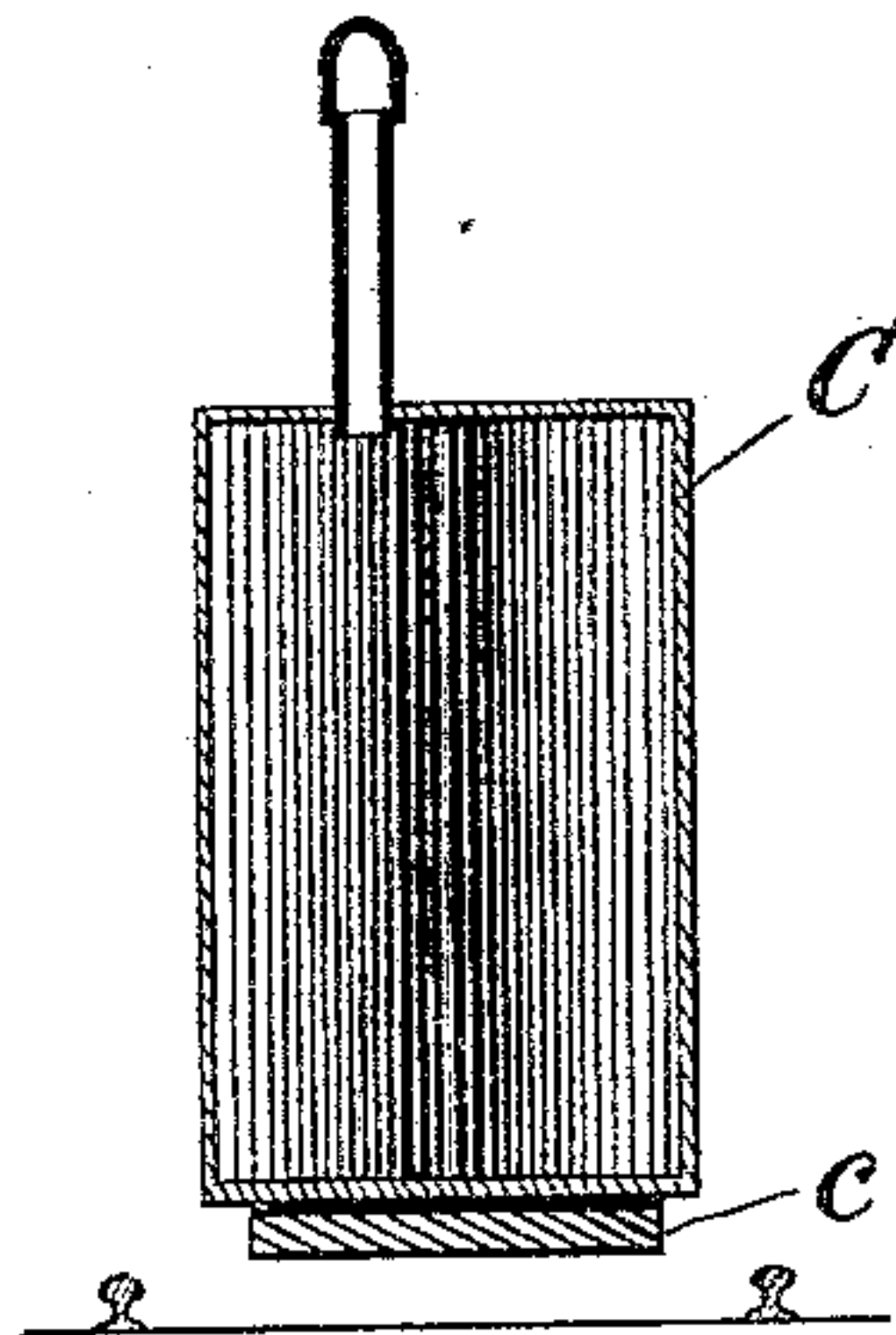


Fig. 4.



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UNITED STATES PATENT OFFICE.

JAMES E. TWINAME, OF INDIANAPOLIS, INDIANA.

SNOW-PLOW.

SPECIFICATION forming part of Letters Patent No. 331,849, dated December 8, 1885.

Application filed July 17, 1885. Serial No. 171,866. (No model.)

To all whom it may concern:

Be it known that I, JAMES E. TWINAME, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented a new and useful Improved Snow-Plow, of which the following is a specification.

My invention relates to an improvement in that class of snow-plows which operate to remove successive portions of snow by means of vertical cylinders provided with cutters or scrapers, and arranged to be revolved in contact with a snow-bank in front of a locomotive.

The objects of my improvement are to cause the plow to enter the snow-bank easily, to deflect the snow to that portion of the peripheries of the revolving cylinders which is near the outside of the track on which the plow moves, and to prevent the snow from adhering to the deflector and to the cylinders, all as hereinafter fully described.

The accompanying drawings illustrate my invention.

Figure 1 represents a side elevation. Fig. 2 is a plan; Fig. 3, a vertical section at *a*, Fig. 2; Fig. 4, a similar section at *b*.

A is a car having a platform, *c*, which is arranged to just clear the top surface of the track-rails. Mounted upon said platform are a pair of vertical cylinders, B B, each having a series of projecting teeth or cutters, *d d*, which extend the entire length of the cylinders. Said cylinders are arranged to revolve in opposite directions in suitable bearings in the platform, and in brackets *e e* erected on the car, the motive power being a steam-engine, E, mounted on the car. Motion is communicated to the cylinders by means of a horizontal shaft, *f*, bevel gear-wheels *g h* and *i j*, and a belt, *k*, passing over the driving-pulley *l* on the engine and pulley *m* on the shaft *f*. Forward of and arranged centrally between the cylinders B B is a wedge-shaped deflector, C, of the same height as the cylinders. Said deflector is permanently secured to the platform, and is for the purpose of making an opening in the snow-bank and directing the snow to the cylinders.

In operation the car A is coupled in front of a locomotive, and the engine E having been started, the car is pushed forward by the locomotive into the snow-bank, the wedge-shaped deflector C entering easily and forcing the snow to each side until the revolving cyl-

inders B B engage the bank and cut away successive portions, which are carried backward and thrown to the side of the track by the cutters and the spring-scrapers *n n*.

For the purpose of causing the deflector to enter the snow-bank easily, and to prevent the snow from adhering to the surfaces of the deflector and cylinders, said deflectors and cylinders are made hollow and practically steam-tight, and their interiors are connected by pipes *o*, *p*, and *r* with the source of steam-supply, which may be the boiler D, mounted on the car A, or the boiler of the locomotive which propels the car. Steam having been admitted to the cylinders and the deflector, their surfaces are heated to the desired temperature.

I am aware that in this class of snow-plows vertical cylinders having scrapers on their peripheries and arranged to revolve have before been used; and I am also aware that said cylinders have been made hollow with perforations in their sides, through which steam has been ejected against the snow for the purpose of melting it; and I do not claim, broadly, the use of the said cylinders, or the use of steam in connection therewith.

I claim as my invention—

1. In a snow-plow, the combination of the following elements, namely: a car, a pair of hollow cylinders, each having an inclosed steam-space, and a series of exterior cutters supported upon and arranged to revolve vertically in front of said car, a hollow wedge-shaped deflector having an inclosed steam-space supported by the car and arranged in front of and between said cylinders, a motor mounted on said car, a train of belts, shafts, and gear-wheels connecting said motor with said cylinders, whereby the cylinders are revolved, and a steam-generator connected with said cylinders and deflector, whereby said cylinders and deflector are heated, all combined and arranged to co-operate substantially as and for the purpose specified.

2. In a snow-plow, the combination of a car, a hollow vertical wedge-shaped deflector supported by and arranged in front of said car and having an inclosed interior steam-space, and a steam-generator connected with said deflector, whereby the deflector is heated substantially as and for the purpose specified.

Witnesses: JAMES E. TWINAME.

H. P. HOOD,
O. P. HOOD.