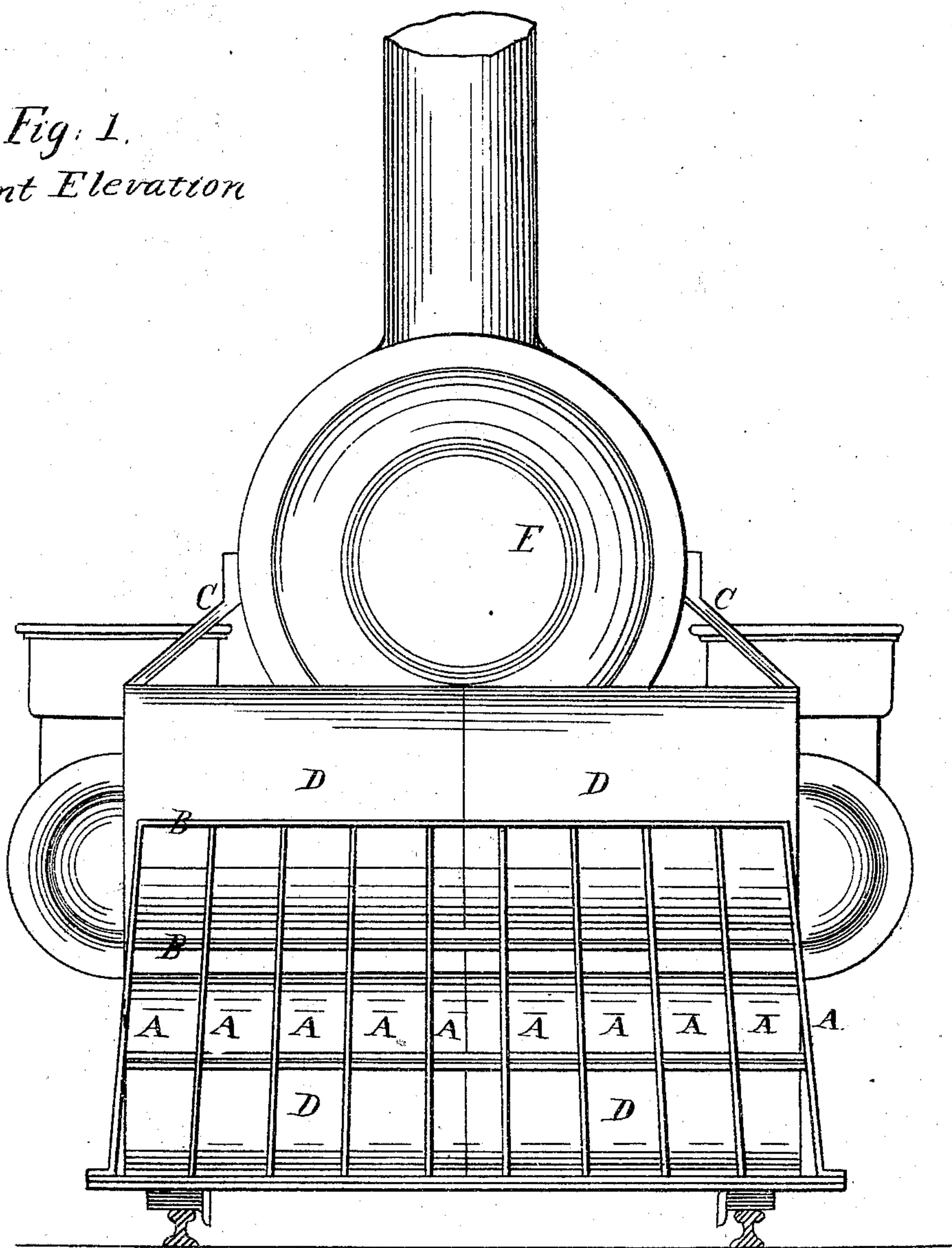


G. Place
Snow Plow

No. 74844

Patented Feb. 25. 1868

Fig. 1.
Front Elevation



Witnesses:

Chas Place
C. A. Kemery

Inventor:

George Place

G Place Snow Plow

No. 74844

Patented Feb 25. 1868

Fig. 2.

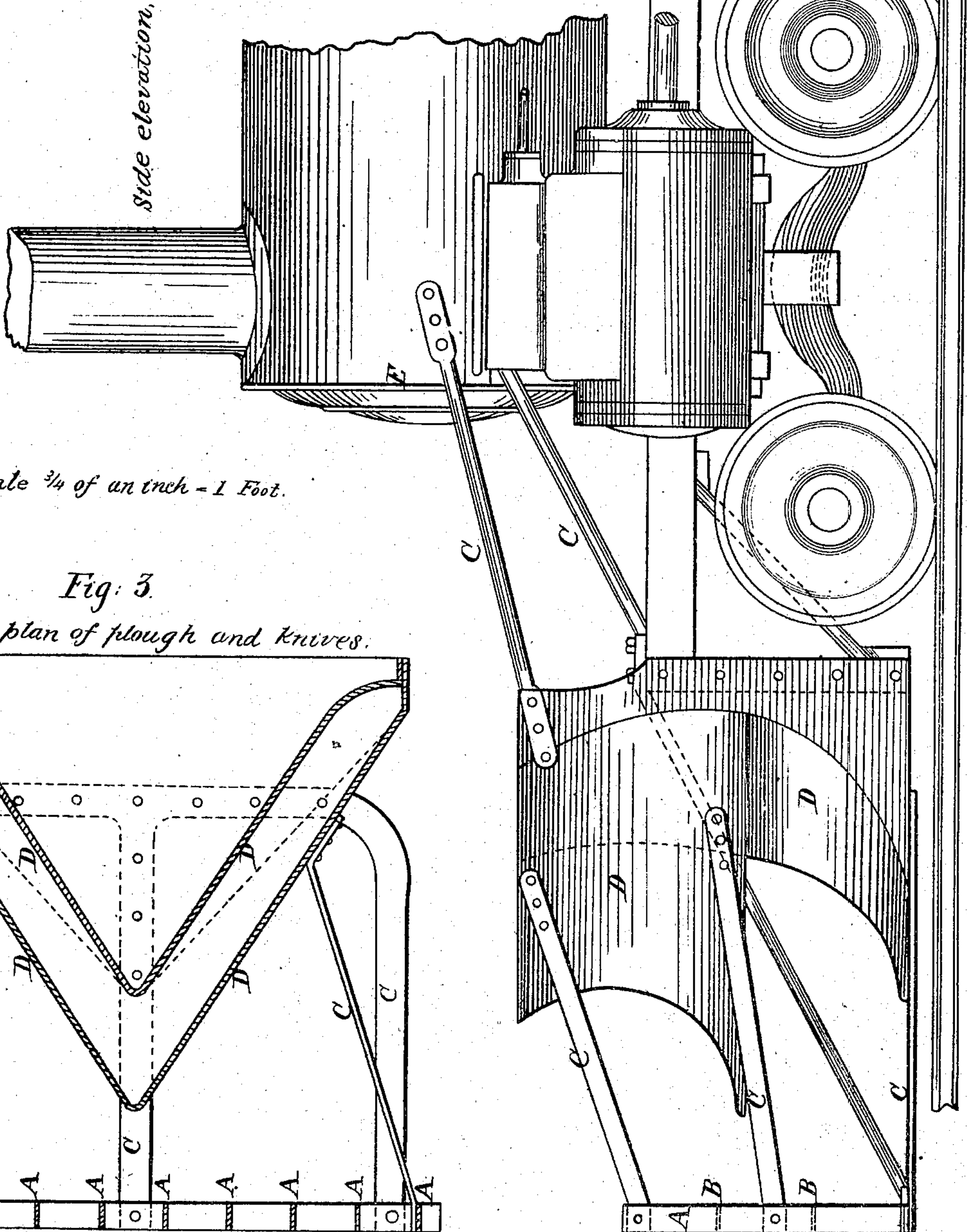
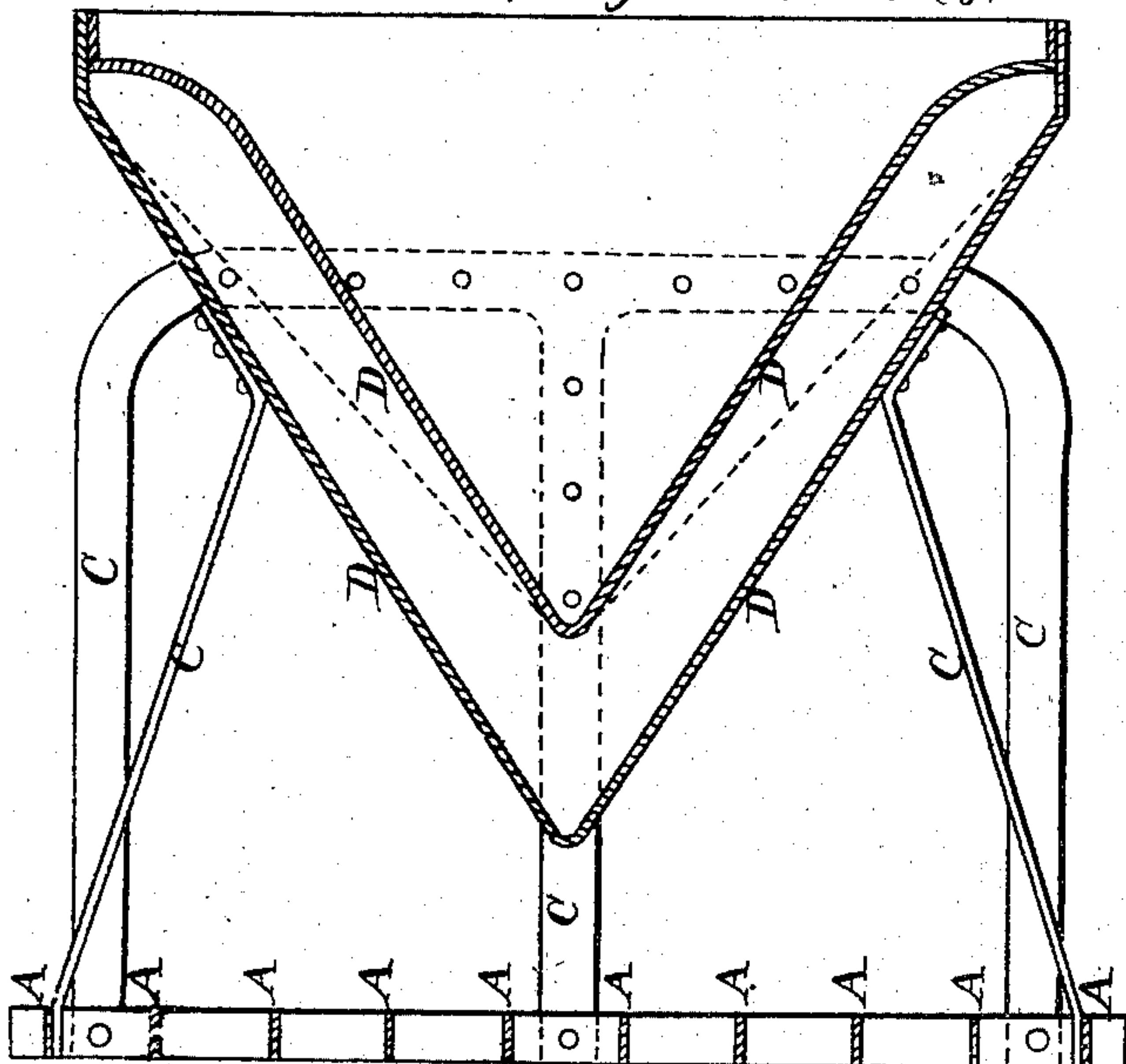


Fig. 3.

Sectional plan of plough and knives.



Witnesses:

Chas Place
C. A. Emery

Inventor:

George Place

G. Place
SNOW PLOW

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Fig. 2.

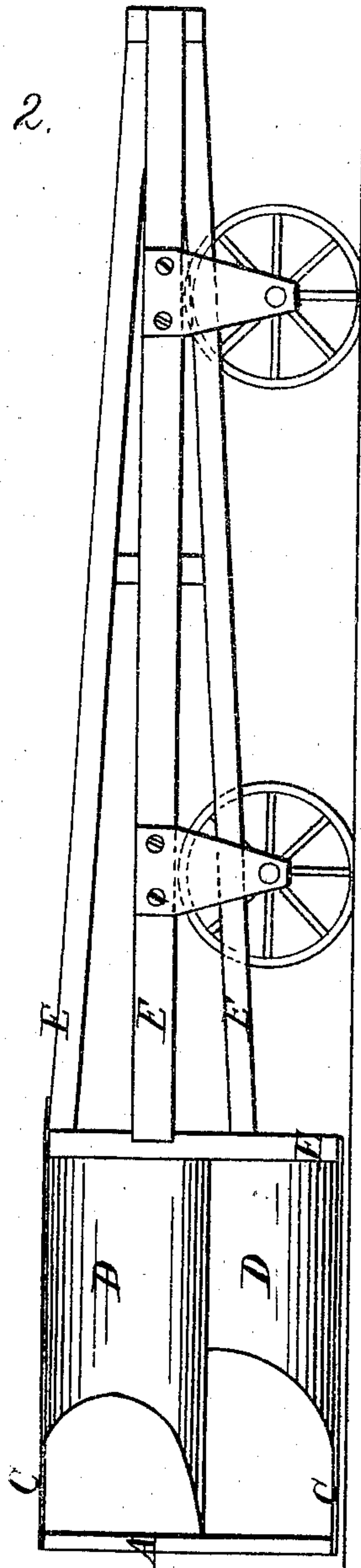


Fig. 3.

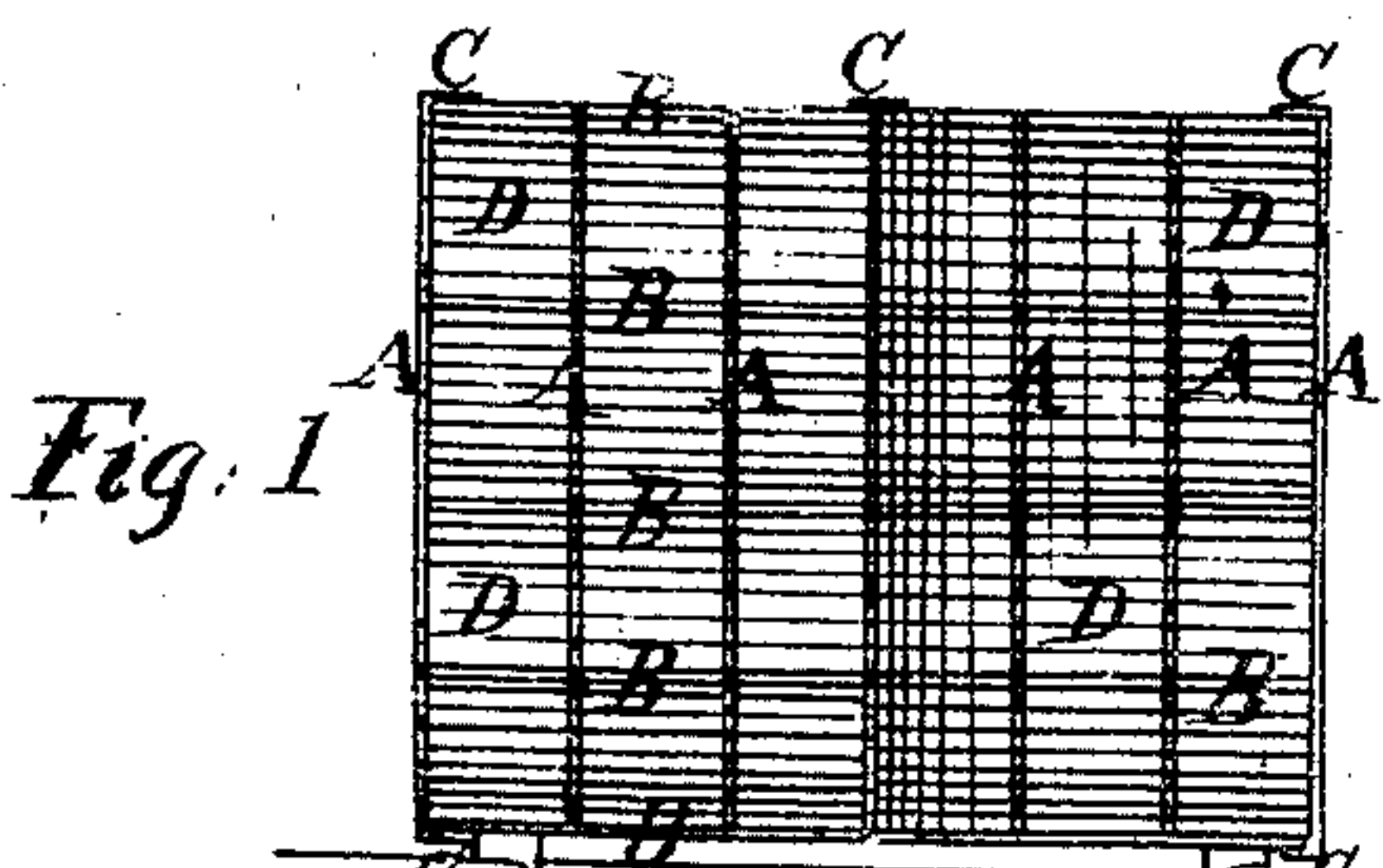
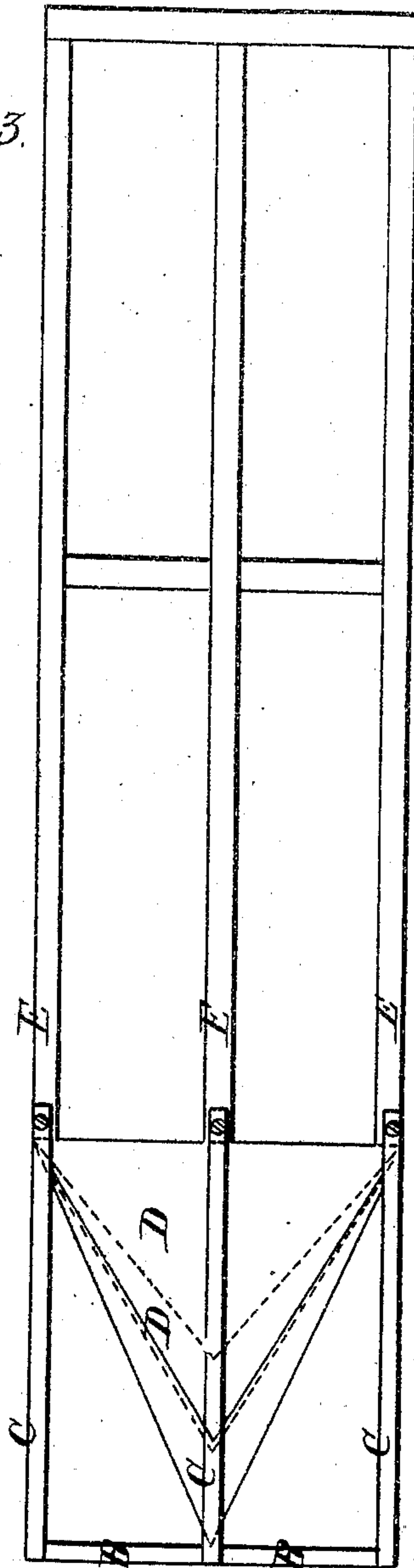


Fig. 1.

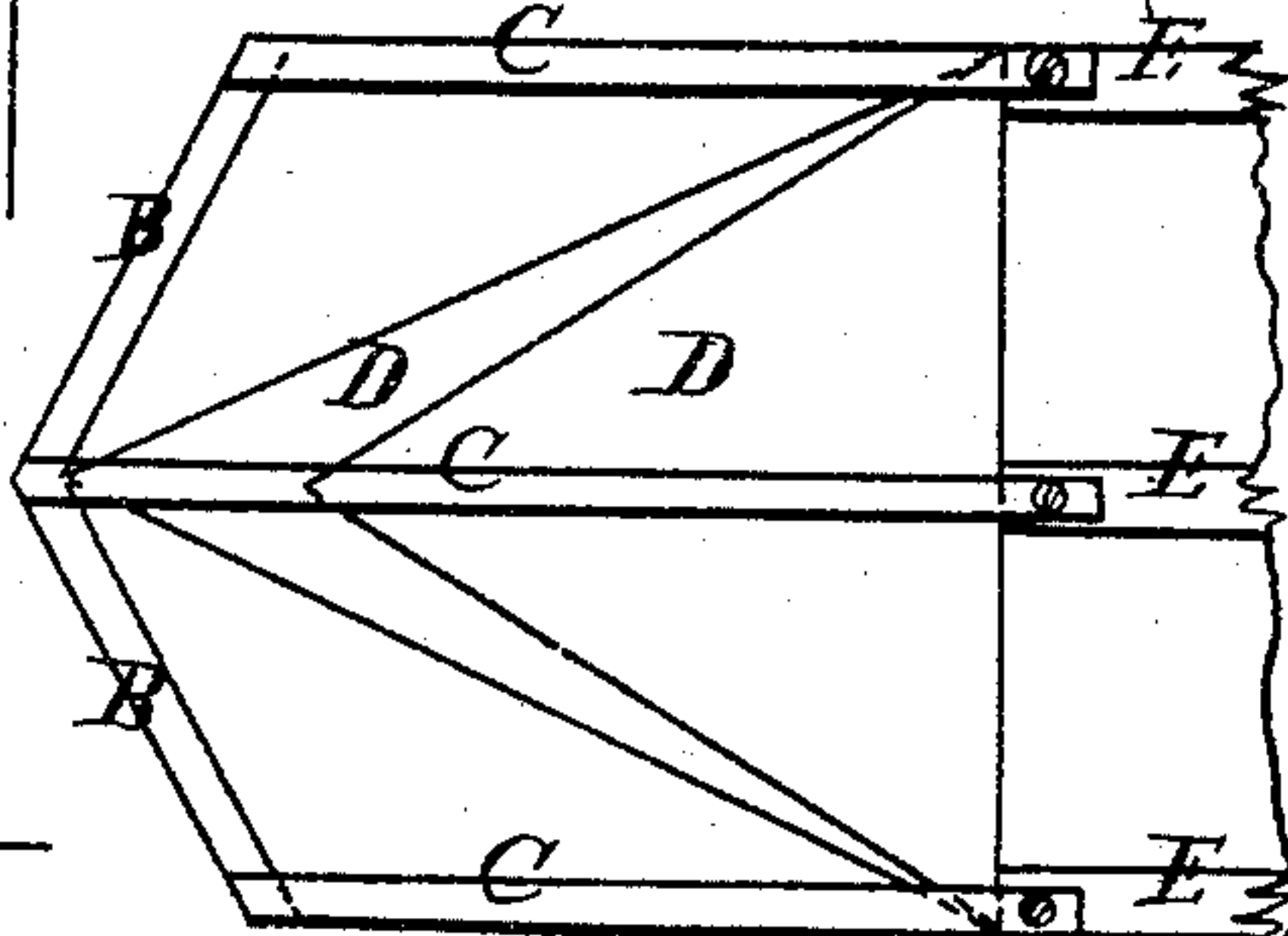


Fig. 4.

Witnesses
Charles Place
C. W. Henry

Inventor
George Place

United States Patent Office.

GEORGE PLACE, OF NEW YORK, N. Y.

Letters Patent No. 74,844, dated February 25, 1868.

IMPROVED SNOW-PLOUGH.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, GEORGE PLACE, of the city of New York, in the county and State of New York, have invented a new and improved machine for the purpose of clearing the snow off of railroads, which machine I entitle a Combined Snow-Breaker and Snow-Ploughs; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The nature of my invention consists of two distinct features or parts, to wit, first, in providing a set of knives or breakers, to cut or break the snow up in front of a locomotive or car; and second, in providing a set of two or more ploughs, arranged, one over the other, in a way so that the upper and forward plough or ploughs will move, from over the track, the upper layer or layers of snow before the lower plough has reached the same position of advancement that the upper plough or ploughs have, thus leaving for the lower plough only a part of the snow to remove.

To enable others to make use of my invention, I will proceed to describe the precise construction and operation of the whole machine.

In the accompanying drawings, like letters of reference represent like parts.

Plate 1. Figures 1 and 2 show a front and side elevation, respectively, of the knives or breakers, and the combined snow-ploughs attached to the front part of the locomotive, while Figure 3 shows a sectional plan of the knives or breakers and the ploughs.

Plate 2 shows, in figs. 1, 2, and 3, respectively, a front and side elevation and plan of the knives and ploughs complete, combined and attached to a car, which may be an ordinary platform-car, or we may build a car expressly therefor, the car being pushed forward by locomotives on steam-roads, or drawn by horses on horse-railroads, or otherwise. Figure 4 shows a plan of the knives and ploughs only, where the knives are arranged in a different way.

A A A and B B B, &c., are vertical and horizontal knives or breakers, which may or may not be made sharp. They are fastened by the pieces C C C, &c., to the front of the locomotive E E, &c., or to the pieces E E, &c., of the car provided therefor.

D D D, &c., are the snow-ploughs, and may be one, two, or three, as we require. I prefer, usually, two ploughs, set one over the other, the upper one being set considerably in advance of the lower one, and if three are used, the upper one, which I designate as the third plough, must be set in advance of the middle one, which I call the second plough, and the middle or second plough must be set in advance of lower or first plough.

The action of this machine is this: The locomotive or car E E, &c., with the knives A A, B B, &c., and ploughs D D, &c., attached thereto, is moved along over the road by horse steam, or other power, forcing the knives A A, B B, &c., through the hard, stiff snow, and cutting or breaking the snow up in chunks or pieces, so that the ploughs D D, &c., may more easily be moved through the snow for the purpose of clearing it off the track; and for the purpose of still further reducing the work of the ploughs, I prefer to use two or three ploughs, arranged one above another, as shown in the drawings. The uppermost plough is set considerably in advance of the others, so as to clear the snow off the track down to a point even with the plane of its base, or even with its lower cutting-edge, so the ploughs below it will have less to do, and the lower plough will, in any case, only have to remove so much of the snow as lies below the lower cutting-edge of the mould-board of the plough next above it.

The mould-board of the second, or second and third ploughs, if three are used, should be shaped so as to throw off the snow easily, and in such a way as to be as much as is practicable out of the way of the snow which is being thrown out by the lower plough. For this purpose, the rear of the mould-board may be raised up higher at the bottom than it otherwise would be. The mould-boards may be curved, and made of wood or metal. I prefer boiler-iron, bent to required form and suitably supported.

The knives A A, &c., may be set vertically, or inclined as we wish, with their edges in one plane, as shown in fig. 3, or in two planes, as shown in fig. 4, or in such other position as practice shall prove best.

The knives A and B are best made of thin iron or steel plates, suitably supported, or of flat bars.

The supports C C, &c., are best made of bars of iron, either flat or round.

The knives may be used either with or without the ploughs, but I prefer to use them with ploughs, which become necessary whenever there is much snow in the way. We may use with the knives one plough or several, as I have described.

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

The combination and arrangement of the knives A A and B B in sections, when combined with one or more ploughs, attached to the truck-frame, and with the frames E E E of the truck, in the manner and for the purpose therein described.

GEORGE PLACE.

Witnesses:

A. H. EMERY,
CHAS. PLACE.