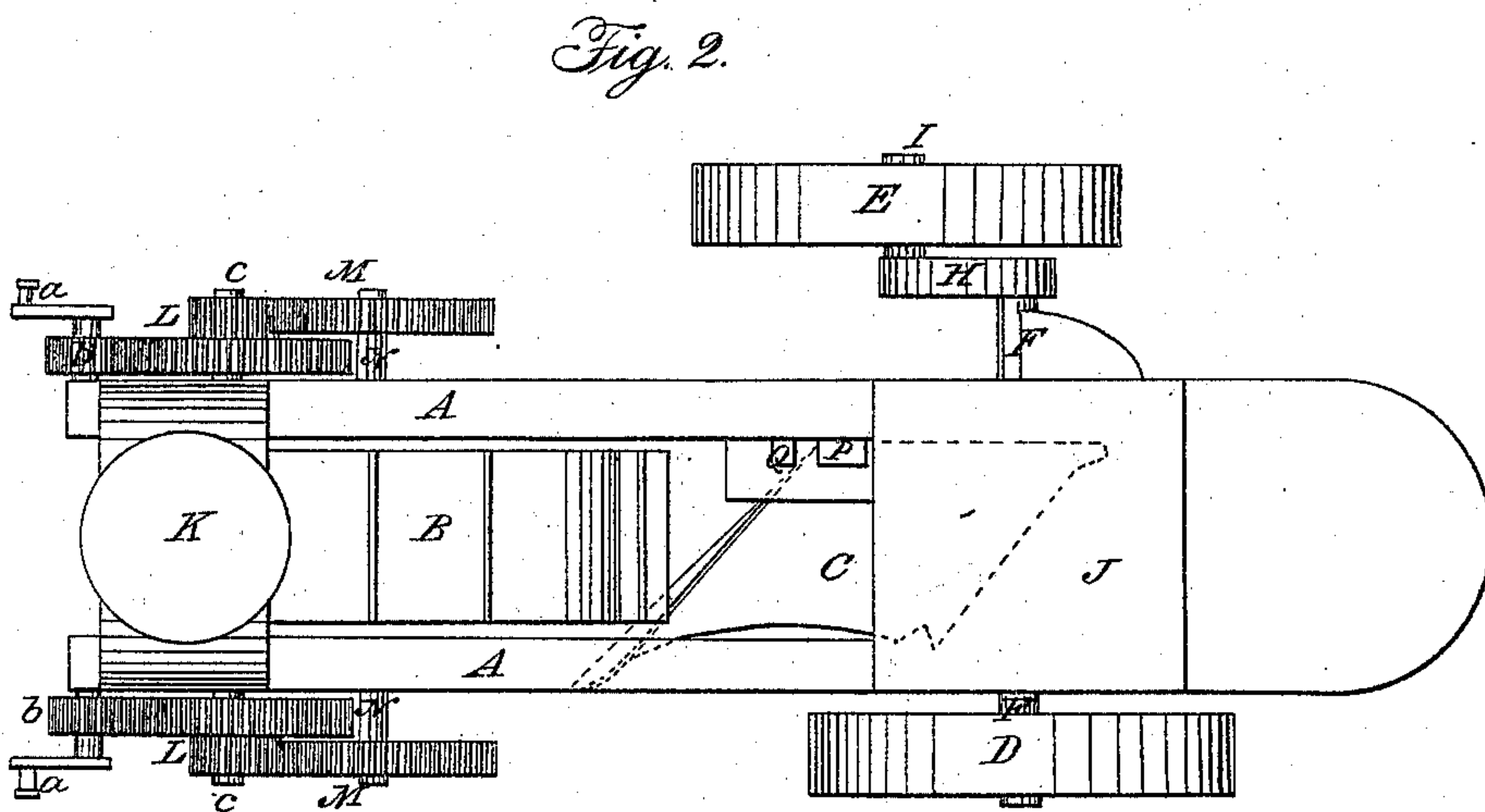
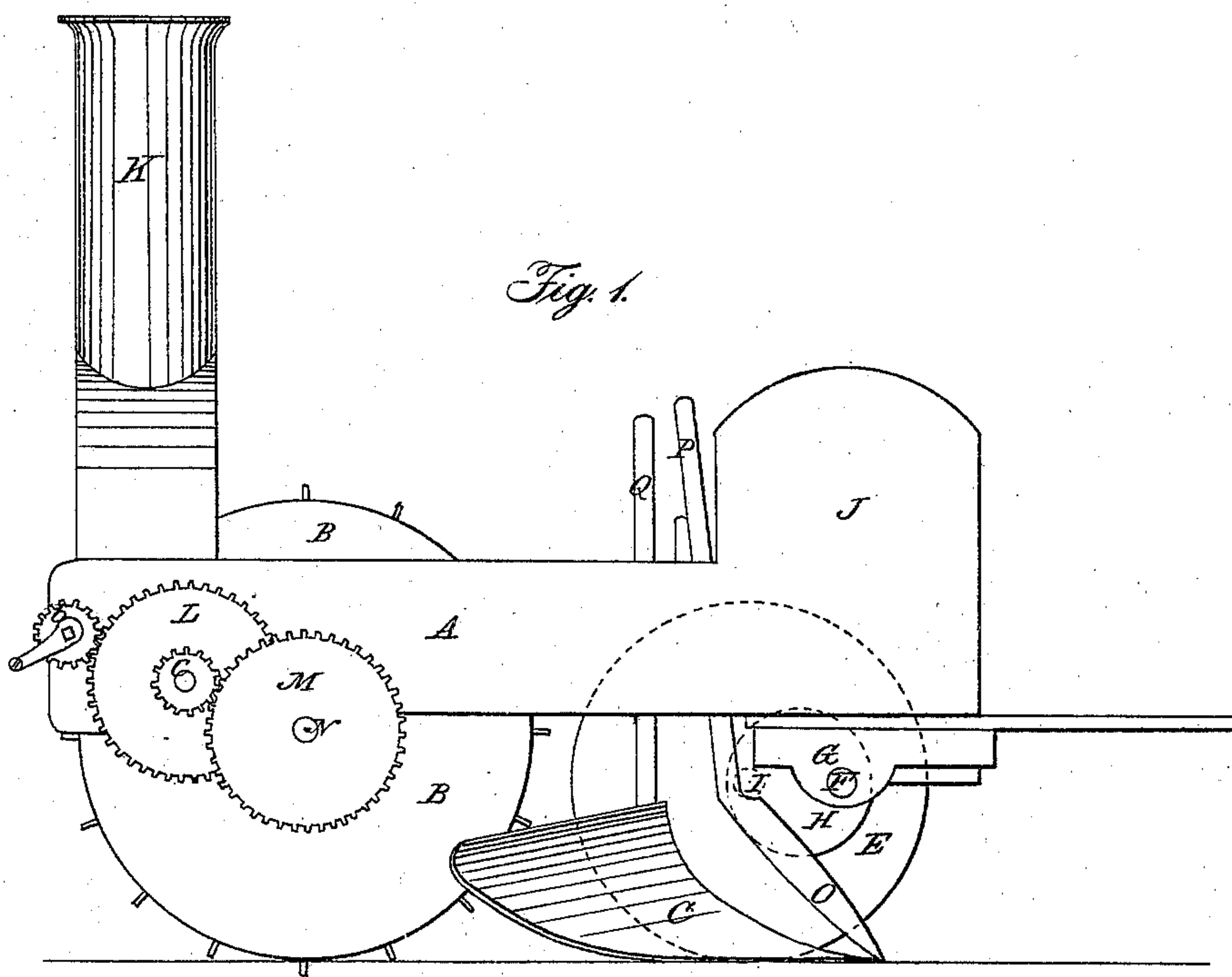


D. B. SPENCER.

Steam Plow.

No. 16,937.

Patented Mar. 31, 1857.



UNITED STATES PATENT OFFICE.

DAVID B. SPENCER, OF PARKERSBURG, VIRGINIA.

IMPROVEMENT IN STEAM-PLOWS.

Specification forming part of Letters Patent No. **16,937**, dated March 31, 1857.

To all whom it may concern:

Be it known that I, DAVID B. SPENCER, of Parkersburg, in the county of Wood and State of Virginia, have invented certain new and useful Improvements in Steam Land-Carriages for Propelling Plows, &c.; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part thereof, in which—

Figure 1 represents a side view of the machine with one of its front wheels removed to show the parts behind it. Fig. 2 represents a top plan thereof.

The nature of my invention relates, first, to the placing of the single wheel of a three-wheeled carriage in the rear thereof and allowing it to run in the bottom of the furrow turned by the plow propelled by said carriage; and, secondly, to the so hanging of the pair of wheels in front as that the boiler and frame shall preserve their horizontal position, whether the machine runs upon level or uneven ground, as will be explained.

To enable others skilled in the art to make and use my invention, I will proceed to describe the same with reference to the drawings.

A represents the frame of the carriage, which is supported in rear by a single wheel, B, centrally placed between the sides of said frame. This wheel B is armed with lugs or projections, which take into the ground to prevent said wheel, which is the sole driving-wheel, from slipping on the ground. The wheel B runs in the bottom of the furrow turned by the plow C, which is in advance of it, and it thus has a hard, smooth, and even surface to run upon, which it would not have on the natural or plowed surface. The front part of the frame A is supported upon the two wheels D E, which are hung upon an axle, F, which has a turning or rocking motion in its boxes or bearings G. The wheel D is arranged upon one end of the axle in the usual well-known manner. On the other end of the axle there is arranged a cam or eccentric, H, (or it may be a crank,) in which is supported a journal, I, upon which the other wheel, E, is hung, and which throws said wheel far enough to one side to run in the furrow turned by the previous round of the machine. The driving-wheel B runs in the furrow that is being turned, and thus all the wheels avoid the fresh-plowed ground, and

consequently avoid much friction and loss of power in propelling the machine. The object in hanging one of the wheels E eccentrically with regard to the other one, D, is that on the first round of the plow these wheels run on level ground, (it being as yet unbroken,) but on the next round the wheel E runs in the furrow, and would be lower than the other one, and thus incline the frame and boiler to that side; but instead of doing so the axle F merely rolls in its bearings and compensates for the unevenness of the ground, and still preserves the horizontal position of them.

On the front of the frame A, over the supporting-wheels D E, is placed the furnace and boiler J, of any of the usual well-known kinds, for generating steam, and the after portions of the frame may be boiler or flue space, connecting at the extreme rear end with the exit-pipe K by side flues leading into it. The engines (one or two) may be attached to the sides of the boiler or to the frame, as may best suit the builder, and the connecting-rods of said engine or engines may be attached to the cranks *a a*, which are on the shafts or journals carrying the pinions *b b*, said pinions gearing with the wheels L L, which in turn carry pinions *c c*, taking into the gear-wheels M M on the axle N, which is the axle of the main driving-wheel B, and thus the power of the engines may be communicated to the sole driving-wheel B.

O is a colter in advance of the plow C, and the shank P of the colter, as well as the stock Q of the plow, may extend up through the frame of the machine, and there secured to hold them at the requisite distance at which they are to penetrate the soil.

Any form or size of plow may be used, it being only essential that it should be in advance of the main driving-wheel, so that said wheel shall run on the hard, smooth ground in the bottom of said furrow.

The axle of the front wheels is or may be attached to a fifth-wheel or turning frame, so that they may be turned to the right or left to guide the machine in its proper path, the after part of the machine following the direction of the front wheels.

The devices for turning or giving direction to the front wheels may be of any of the well-known kinds.

Having thus fully described the nature of my

invention, what I claim therein as new, and desire to secure by Letters Patent, is—

1. The use of the single wheel at the rear of the carriage as the sole driving-wheel, and running in the bottom of the furrow turned by the plow, substantially in the manner described.

2. Hanging the two supporting-wheels eccentrically on the same turning or rocking axle, so that, whether the machine runs upon level

ground or with one wheel higher or lower than the other, the frame and boiler shall still preserve their horizontal positions, as herein set forth.

D. B. SPENCER.

Witnesses:

A. B. STOUGHTON,
THOS. H. UPPERMAN.