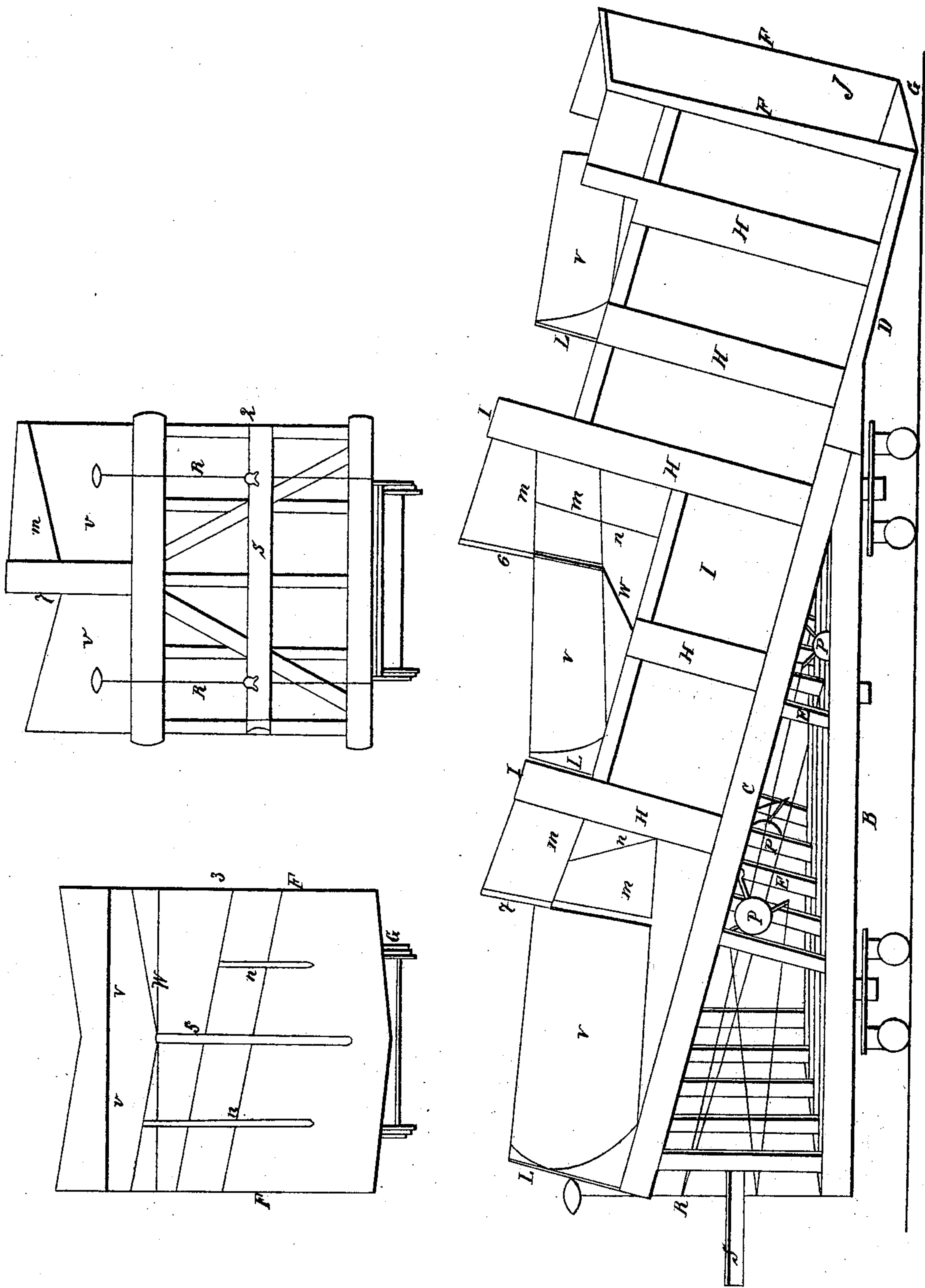


F. L. KNAPP.
Car-Track Clearer.

No. 19,426.

Patented Feb. 23, 1858.



UNITED STATES PATENT OFFICE.

FRANKLIN L. KNAPP, OF GASPORT, NEW YORK.

SNOW-PLOW.

Specification of Letters Patent No. 19,426, dated February 23, 1858.

To all whom it may concern:

Be it known that I, FRANKLIN L. KNAPP, of Gasport, in the county of Niagara and State of New York, have invented a new and useful Machine for Taking the Snow Up and Throwing it from the Railroad-Track, which may be called a "Machine Snow-Plow;" and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a perspective view—Fig. 2 a back view—Fig. 3 a front view.

The letter B the lower sills—C the upper sills—E the braces from the lower to the upper sills—D the iron sills which are bolted at the back end into the forward ends of both the upper and lower sills—F, F, the knives that cut the snow in a perpendicular direction—G the knife that cuts the snow in a horizontal direction—H H H H H the posts that are bolted to the upper outside sills—I, I, the grooves cut into the inner side of the third and fifth posts on the side of the frame—J the walls confining the snow on the frame.

The figures 5, 6, and 7 are central posts which are framed and bolted to the central upper sills.

L, L, L, L, L, are upright plates of which the two first pairs are bolted to the girts and the last pair to the platform of the machine.

M, M, M, M, are gates.

N, N, N, N, are levers to raise and fall the gates.

P, P, are the wheel levers.

R R are upright shafts and S the floor for the rider.

W, W, are knives placed across the top of the frame and horizontally with the lower part of the plows; V, the plows.

There are five lower sills placed in a horizontal position at equal distances from each other and near each end underneath the sills are placed plates as bolsters and each sill is bolted to them. The upper sills are equal in number to the lower sills and are framed and bolted into the forward ends of the lower sills extending back in a line of nearly 15 degrees forming a triangle with the lower sills and are framed into a girt or head block at the back end. As many braces or studs are placed between the lower

and upper sills at right angles with the upper sills as may be required for its proper support and at the back end are studs at right angles with the lower sills. At the front end as the sills are placed and corresponding in line and angle with the upper sills are five iron sills which extend within two or three inches of the rail on the track and each one of them is bolted at the back end into the forward end of each pair of sills in such a manner that the weight or purchase is directly over the transverse beam of the forward trucks. The iron sills are wider at the back end and have a gradual taper to the front and lower ends. Near the lower end and outside of the two outside iron sills are fastened knives at right angles with the upper sills having a relative height to the machine in length which would be nearly one foot in height to three feet in length of the machine. The shape of the knives on the outside to be level and in line with the outside of the box and slight tapering in width from the bottom to the top. And a cross bar to extend across from one knife to the other and affixed at the top and the inside of the knife increases in thickness from the edge to the back proportionate to the strength required also a slit on the inner and back edge of the knife for the purpose of bolting on to the sides of the box.

At the lower ends of the iron sills is placed a horizontal knife which is bolted to the upper sides of the sills which cuts the snow on the track.

There are five posts arranged on the outside of the upper sills of each side and the distances from each other are in proportion to 3, 6, 10, 15, 20, on each side of the frame. The first post of each side of the frame is of the same height of the knives. The second pair is nearly one third less in height and a beam or girt extends from the third pair across the top of the second pair and bolted into the first posts and the back of the knives. The third pair of posts are nearly as long as the first pair of posts with grooves cut on the upper two thirds of the length of the posts on the inner side for the purpose of one end of a pair of gates to slide in. The fourth pair are two thirds less in height and the fifth pair are one third less in height than the first pair with grooves cut on the inner side for the ends of the second pair of gates to slide



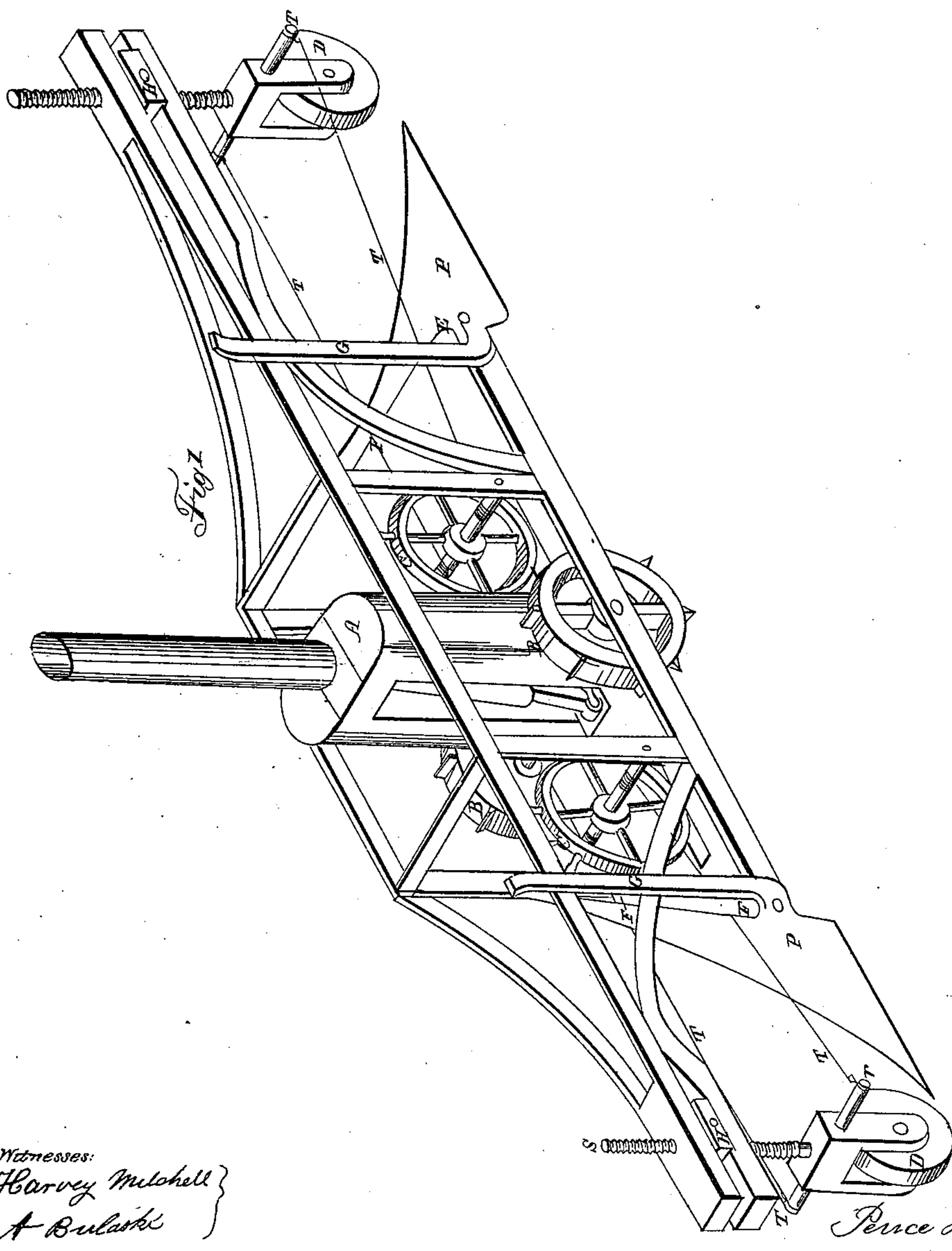
P. KLINGLE.

2 Sheets—Sheet 1.

Steam-Plow.

No. 19,427.

Patented Feb. 23. 1858.



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