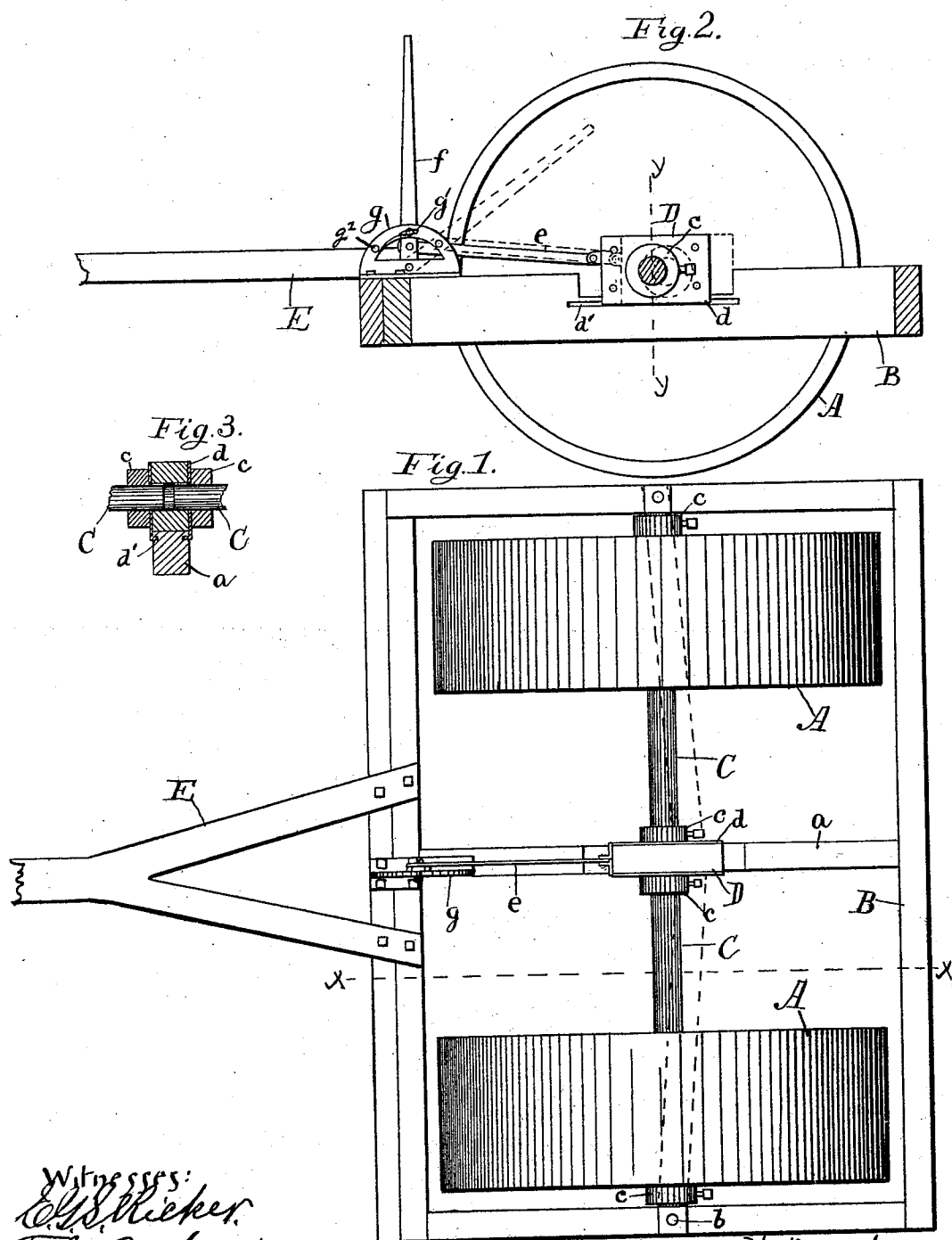


(No Model.)

S. HAPGOOD.
SNOW ROLLER.

No. 505,944.

Patented Oct. 3, 1893.



Witnesses:
Chas. Meeker
H. E. Barbour

Inventor: *Sherman Hapgood*
by *S. M. Bates* atty.

UNITED STATES PATENT OFFICE.

SHERMAN HAPGOOD, OF DEERING, MAINE.

SNOW-ROLLER.

SPECIFICATION forming part of Letters Patent No. 505,944, dated October 3, 1893.

Application filed February 8, 1893. Serial No. 461,098. (No model.)

To all whom it may concern:

Be it known that I, SHERMAN HAPGOOD, a citizen of the United States, residing at Deering, in the county of Cumberland and State of Maine, have invented certain new and useful Improvements in Snow-Rollers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to snow rollers such as are used for breaking out roads after a heavy fall of snow. These rollers as they have heretofore been constructed have consisted of a single roll of the length desired for the width of the road bed this roll being supported by a movable frame work. Rollers of this construction have been difficult to haul owing to their length and size and the conditions under which they were used, and they required for their operation a large number of horses. It usually happens in country districts that in breaking out roads after a storm, the roller necessarily traverses the same road twice and it is the design of the present invention, to construct a roller which shall have one or more rolls of sufficient width to cover half of the road way, means being provided for shifting the position of the rolls so that in traversing the road a second time, the portion left will be acted on. In the form of roller which I have illustrated herein, as embodying my invention, I make use of two rolls mounted on two independent shafts in such a manner that they can be shifted from one end of the shaft to the other by swinging the shafts out of their normal position at right angles to the line of draft, thus causing the roll to move along the shaft as the roller is drawn along.

I illustrate my invention in the accompanying drawings in which—

Figure 1 is a plan view of my roller, and Fig. 2 is a section on the line X X Fig. 1. Fig. 3 is a section on Y Y of Fig. 2.

A represents a rectangular frame divided laterally into two sections by a beam *a* and E is the tongue by which it is drawn. On the beam *a* is a movable bearing D held in place by side plate *d* and capable of a limited motion in each direction along the beam. The bearing D is held down by flanges on the lower

edges of the plates *d* which fit into grooves *d'* formed in the sides of the beam. The inner end of the two shafts C C are supported loosely in the bearing D and their outer ends are pivoted to the frame by pivots *b*. The two shafts are normally in line with each other but they may be swung out of line in either direction by the movement of the bearing D along the beam *a*.

The rollers A A are each mounted on one of the shafts C in such a manner as to be capable of a longitudinal movement on the shaft. They are secured in any desired position on the shaft by means of collars *c* provided with set screws.

The width of the face of the rolls taken together is approximately as herein shown one half of the width of the frame and one half the width of the track to be rolled and each roll is substantially half the width of the section of the frame in which it runs.

Means are provided for shifting the bearing D and securing it in place. I prefer to make use of a lever *f* for this purpose, pivoted to a standard *g* at the front of the frame. The lever is connected with the bearing by means of a link *e* and it is secured in any desired position by means of a circle which is made part of the standard *g* and which has holes *g*² corresponding in position to a hole in the lever. A pin *g'* is used to secure the lever opposite any one of the holes *g*².

When it is desired to shift the position of the rolls on their respective shafts the lever is thrown over and the block D swung from its normal position bringing the shafts out of line. If now the roller is drawn straight ahead the rolls will gradually move over on the shafts until they are in the proper position. They are then secured with the collars *c* and the bearing is brought to its central position.

My roller is operated as follows:—The rolls are first preferably set in their inner positions and drawn over the road to be broken. A narrow track will thus be made in the center of the road the outside being left and this will be acted on when the roller traverses the road a second time, the rolls having been shifted to the outer position on the return trip. Thus by going and returning over the

road the entire surface will be rolled with one half the team necessary to haul the full sized rollers formerly used.

5 I do not wish to limit myself to the means here shown for shifting the position of the bearing D as other means may be used for this purpose. The roller may be changed in other respects also while keeping within the limits of my invention.

10 I claim—

1. In a snow roller, the combination of a frame, two shafts thereon normally at right angles to the line of draft of the roller, a roll on each of said shafts adjustable longitudinally thereon and means for temporarily swinging the adjacent or opposite ends of said shafts out of line in the same direction to adjust the position of said rolls, substantially as described.

2. In a snow roller, the combination of a 20 frame, two shafts thereon normally in line with each other and at right angles with the line of draft of the roller, the outer ends of said shafts being pivoted to said frame and their inner ends being held by a bearing movable at right angles to said shafts, rolls mounted on said shafts and movable longitudinally thereon and means for adjusting the position of said movable bearing, substantially as described.

30 In testimony whereof I affix my signature in presence of two witnesses.

SHERMAN HAPGOOD.

Witnesses:

E. DUDLEY FREEMAN,
S. W. BATES.