F. W. BYRNE.

MACHINE FOR MARKING GROUND.

No. 190,819. Patented May 15, 1877.

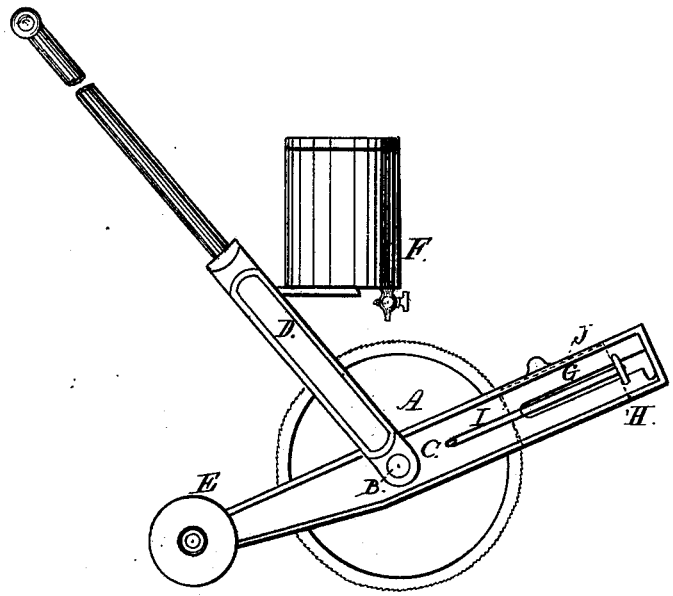

Fig. 1.

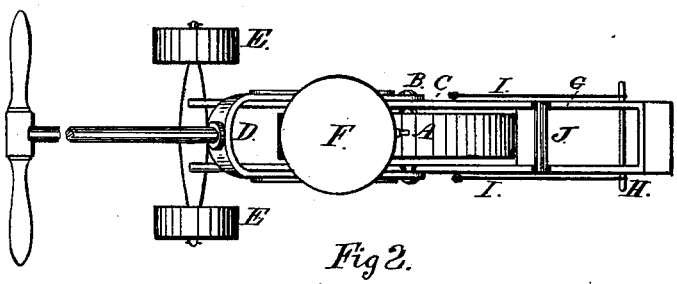

Fig 2.

Witnesses

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FREDERICK W. BYRNE, OF LIVERPOOL, ENGLAND.

IMPROVEMENT IN MACHINES FOR MARKING GROUND.

Specification forming part of Letters Patent No. **190,819**, dated May 15, 1877; application filed March 9, 1877.

To all whom it may concern:

Be it known that I, FREDERICK WILLIAM BYRNE, of Liverpool, in the county of Lancaster, in the Kingdom of England, have invented certain new and useful Improvements in Machines for Marking Out Ground; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing, making a part of this specification, in which—

Figure 1 shows a side elevation, Fig. 2 a plan of the machine.

In these, A is a wheel revolving with an axle, B, in bearings in the frame C of the machine, or it may revolve on a fixed axle. This wheel I usually roughen on the periphery (as shown in the drawing) when made of iron; but it can be made of stone or other suitable material. From points close to the bearings the handles D rise at an angle of, say, thirty to sixty degrees, preferably fifty. Between the person or animal pushing or propelling the machine, as near the junction of the frame of the machine and handles as convenient, I place wheels or rollers E, so that, whenever required, by depressing the handle the whole weight of the machine is brought to bear on the rollers, and the marking-wheel lifted clear from the ground.

Above the marking-wheel I attach a water-tank, F, to the handle or handles of the machine. The bottom of this tank is fitted with a straight tap, so that should it get stopped up from any cause it can immediately be cleaned with a wire. A trough or slide, G, bearing against the disk, is constructed in the front part of the frame, and in this trough or slide I place a piece of pipe-clay, chalk, or other marking material or pigment, (shown at J,) and arranged to press against the wheel by the sliding piece H sliding in grooves in the frame. This sliding piece holds the pipe-clay or coloring matter firmly against the wheel by means of the springs I, (usually india-rubber bands, as shown in the drawing.) Other devices can be adapted for holding the coloring matter against the wheel, but I prefer the above.

The can being filled with water and the coloring matter or pigment being placed in the slide, the machine is pushed forward, leaving a track wherever it travels, the coloring matter being transferred to the wet wheel.

In marking on hard or rough surfaces, brushes are used instead of stone or other disks.

Among the uses to which this invention could be applied would be marking out the ground in outdoor games, such as lawn-tennis, the creases on cricket-grounds, temporarily marking streets and open places when surveying, or the courses in steeple-chases and athletic sports; also by gardeners in marking out flower-beds.

My reasons for keeping the pigment pressing against the wheel, and the water entirely distinct therefrom, are these: I found that if (*a*) a mixture of the two were made and put into the can it almost immediately clogged up the tap; (*b*) to prevent this required incessant attention, even when the tap was arranged perpendicularly, as shown in drawing—an arrangement of parts I believe to be new for this special purpose.

I claim as my invention—

1. In a ground-marking machine, the combination of a serrated or roughened wheel to travel on the ground, a fluid-reservoir arranged to discharge its contents upon the periphery of the wheel, and a device, H, adapted to present a solid pigment against the periphery of the wheel, said elements being constructed and arranged substantially as shown and described.

2. In a ground-marker, the combination of a serrated or roughened wheel, A, a fluid-reservoir, F, and a sliding spring-presser, H, adapted to force a pigment, J, against the wheel, substantially as shown.

3. The combination of the frame C, wheels A E E, handle D, can F, presser H, and springs I.

FREDK. WM. BYRNE.

Witnesses:

WM. P. THOMPSON,

EDW. G. COLTON.