

M. S. McMAHAN.  
GOPHER GANG-PLOWS.

No. 187,032.

Patented Feb. 6, 1877.

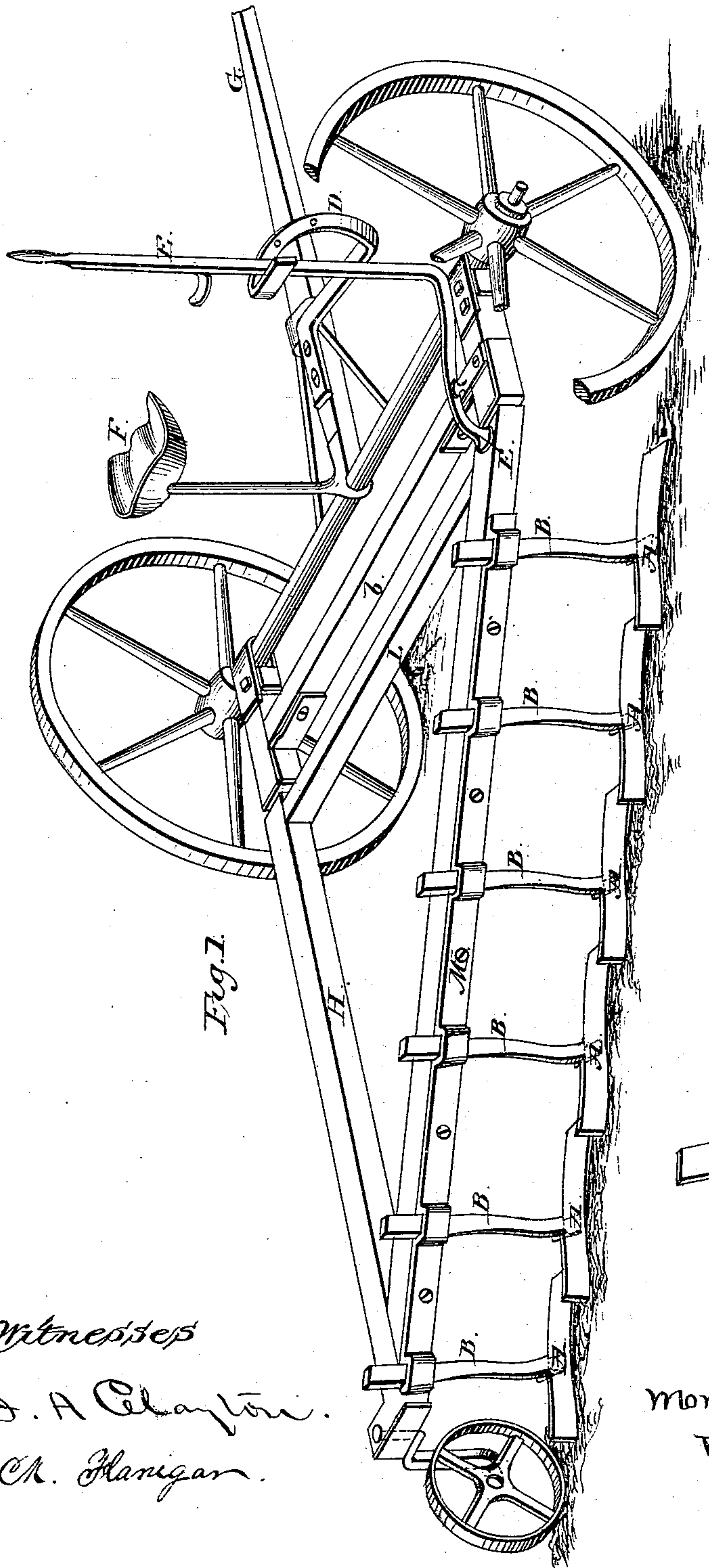
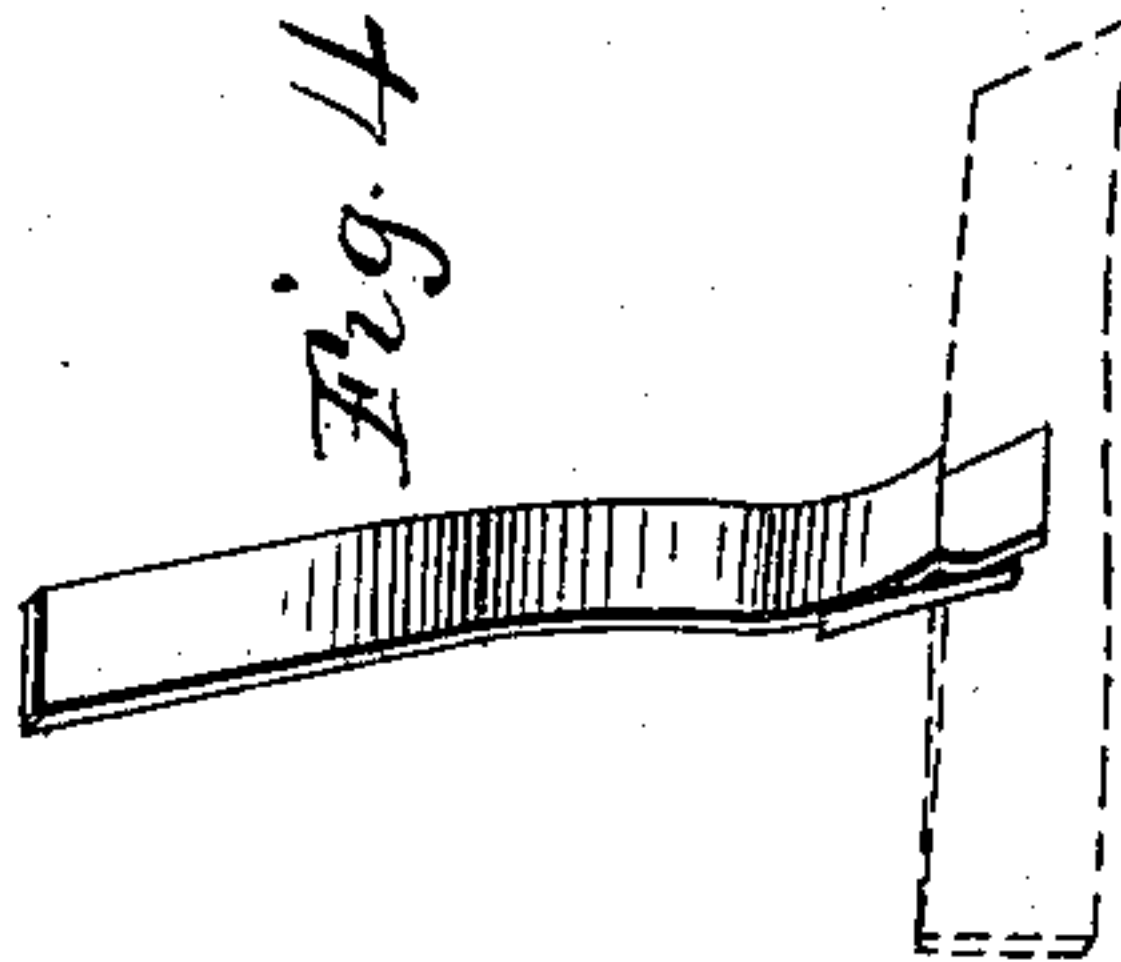
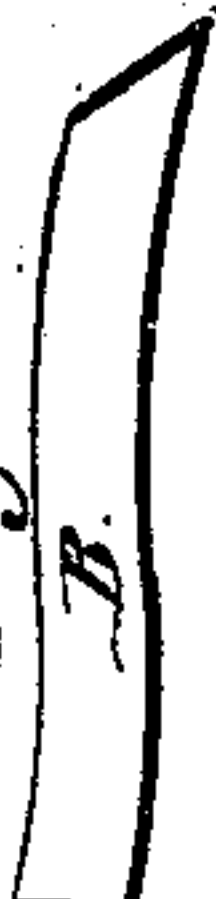


Fig. 1.

Fig. 2.

Fig. 3.

Fig. 4.



Witnesses

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# UNITED STATES PATENT OFFICE

MORGAN S. McMAHAN, OF SAN JOSÉ, CALIFORNIA.

## IMPROVEMENT IN GOPHER GANG-PLOWS.

Specification forming part of Letters Patent No. 187,032, dated February 6, 1877; application filed December 4, 1875.

*To all whom it may concern:*

Be it known that I, MORGAN STRANGE McMAHAN, of San José, in the county of Santa Clara and State of California, have invented an Improved Gang-Plow. I do hereby declare the following description and accompanying drawing are sufficient to enable others skilled in the art or science to which it most nearly appertains to make and use my invention.

My invention has for its objects to furnish an improved gang-plow, which will be light, easily drawn, thoroughly breaking up the ground in its operation, and making it loose and mellow to any depth desired. It is not liable to choke or be easily thrown out of the ground, the combined shear and mold-board being so constructed that it may be easily turned over, or end for end, at pleasure, thereby becoming a self-sharpener, while the simple method of raising the plow out of the ground, its rear resting on the caster-wheel, makes it convenient for turning at the end of the field, and easily portable from place to place.

It consists of the combined share and mold-board, with its attachment, by slot and key, to the standard, and the lever arranged to lift the plows, and also made capable of holding them in the ground when at work.

Figure 1 is an oblique view of my gang-plow. Fig. 2 represents the combined share and mold-board, with a slot in its edge to receive the standard. Fig. 3 is the standard, to which the share and mold-board are attached; and Fig. 4 is the standard, attached by a key.

Similar letters of reference indicate corresponding parts.

A represents the combined share and mold-board, attached to the standard by means of the slot and key.

In its length the share is curved spirally, and slotted or mortised at the center to receive the standard, which enters at an angle of forty-five degrees, so that when the share is reversed each point is presented in the same working position, the cutting-edge being horizontal. The standard and share are connected together at the center edge of the share with a wedge-shaped pin, which is simply driven into the mortised place alongside of the standard after the standard has been placed into the mortise.

B represents the standard, which is secured to the plow-beam by means of a strong iron bar, so bent as to form a succession of brackets or loops, through which standard B may slide up or down in regulating the depth of the plow, by means of bolts, which pass through the iron bar, fastening it to the plow-beam. M represents the iron bar, having a succession of loops to receive the standard B.

The caster-wheel at the rear runs upon the unbroken ground, and supports the rear end of the plow. The two sections of the frame H L and b are supported or connected at the bottom on each side by hinges, which admit of the raising of the rear portion of section b and the front portion of H L by means of the lever E. The front part of section b revolves on the axle.

F represents the driver's seat, and G represents the tongue, permanently attached to the axle. D represents the ratchet, in which the lever E rests. E E represent the lever, which, when thrown forward and downward, raises the frame, where it is united by the hinges, thereby lifting the gang out of the ground, while the caster-wheel remains on the ground, supporting the rear end of the frame. When the lever E is raised to a perpendicular position, and fastened in the ratchet D, its posterior extremity rests on the angle of section H L at E, thereby again securing the frame on a level with the axle.

Having thus described my invention, what I claim as new, and wish to secure by Letters Patent of the United States, is—

1. The combination of the frame b, rocking upon the axle, with triangular plow-carrying frame H, L, and M, and with the bent lever E, the latter arranged to lift the plow-frame from the front or to hold it down when at work, all substantially as shown and described.

2. The spirally-curved reversible plow-share A, having an angular slot upon its edge, in combination with the standard B, bent and notched at its lower end, and with the key C, arranged to hold either end of the share in proper working position, as shown and described.

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Witnesses:

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