

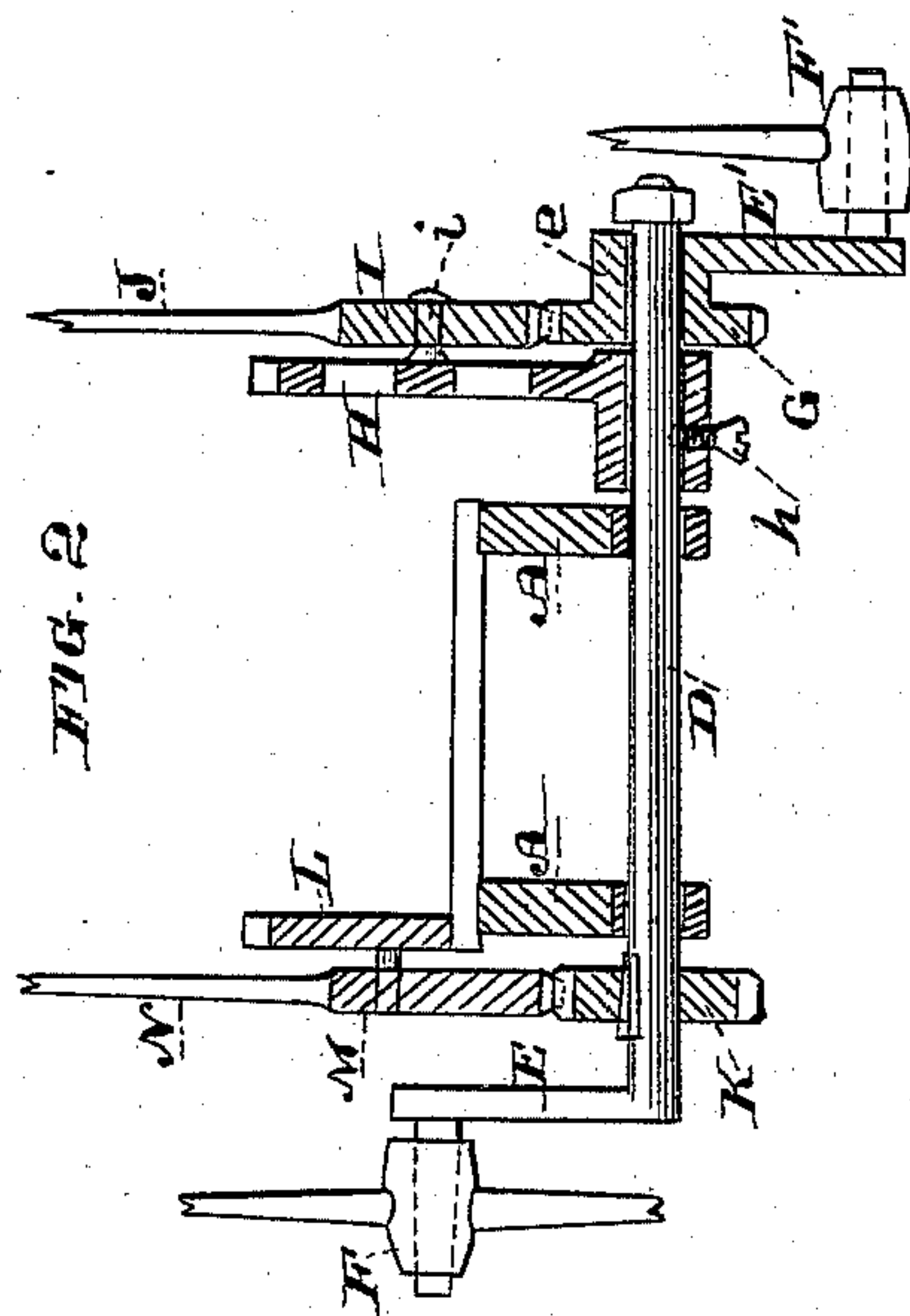
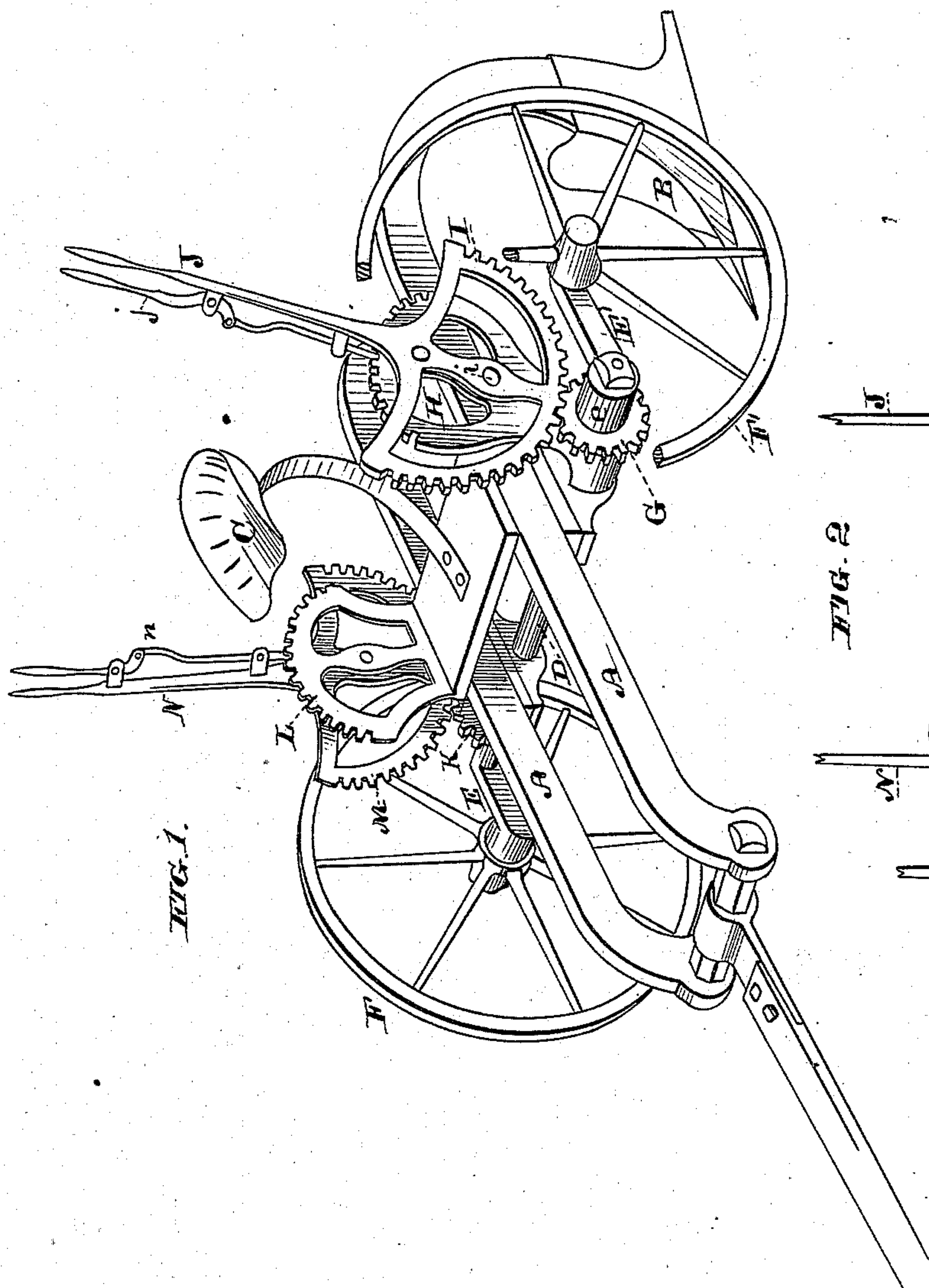
(No Model.)

H. S. PALMER.

GANG PLOW.

No. 288,362.

Patented Nov. 13, 1883.



Witnesses,
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UNITED STATES PATENT OFFICE.

HENRY S. PALMER, OF SANTA ANA, CALIFORNIA.

GANG-PLOW.

SPECIFICATION forming part of Letters Patent No. 288,362, dated November 13, 1882.

Application filed April 10, 1883. (No model.)

To all whom it may concern:

Be it known that I, HENRY S. PALMER, of Santa Ana, county of Los Angeles, State of California, have invented certain new and useful Improvements in Gang-Plows; and I hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to the class of gang-plows and to certain new and useful improvements therein.

These improvements consist in details of construction and in the means for leveling and regulating the depth of the plows, as will hereinafter fully appear.

The present construction of levers by which the cranks or crank-axes upon which the wheels are mounted or operated renders it often a matter of some difficulty to raise the plows out of the ground or regulate their depth. It is the object of my invention to render this operation easy, as I shall show.

Referring to the accompanying drawings, Figure 1 is a perspective view of a gang-plow, showing my improvement. Fig. 2 is a vertical transverse section of the same.

A represents the beams of the plow, and B the plows. C is the seat. Under the beams is an axle, D, mounted in suitable boxes or bearings, to oscillate. Upon one end of the axle is rigidly secured a crank, E, in the end of which is journaled one wheel, F. Upon the other end of the axle is loosely mounted or fitted a sleeve, e, carrying on its outer end a crank, E', in the end of which is journaled the other wheel, F'. The inner end of this sleeve carries a gear, G. Upon this side or end of the axle, between the gear G and the box of the axle, is fitted and secured, by a set-screw, h, a vertical rack, H. Pivoted to the body of this rack, at i, is a segmental gear, I, the teeth of which mesh with the gear G. This segmental gear is provided with a handle or lever, J, having a spring-pawl, j, which engages with the rack H. Upon the other end of the axle, between its box and the crank, is keyed securely a gear, K.

Upon a frame-work of the seat or beams is rigidly secured a rack, L, to which is pivoted the body of a segmental gear, M, the teeth of

which mesh with the teeth of gear K. It has a handle or lever, N, provided with a spring-pawl, n, engaging with the rack L.

The operation of these devices is as follows: By moving the lever N the axle is oscillated and both cranks moved alike, to level the plows. This movement is occasioned by reason of the gear K and the rack H on the other side being fast on the axle, and the lever J being engaged with the rack H, through its pawl j, and the segmental gear I, meshing with the loose gear G on the sleeve e, which carries crank E'. Thus both cranks receive motion from the axle equally. The rack H, by being on the axle, is always in position to be engaged by the lever J. Now, when the lever J is moved, the axle is not oscillated, and only the crank E' is moved, which regulates the depth of the plows. This movement is effected by reason of the loose sleeve e, with whose gear G the segmental gear I of the lever J engages. But small exercise of power is required to move either of the levers to level the plows or regulate their depth.

I am aware that heretofore wheel and sulky plows have been provided with a loose crank set and held by a lever and with another lever by which the whole axle is turned to raise and lower the frame. I am also aware that such operations have been previously accomplished by means of a pinion and a segment-lever; hence I do not claim such arrangements, broadly.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The combination, in a gang-plow, of the axle D, formed at one end with the fixed crank E and pinion K, and having a segment-lever, N, and rack L, with the loose sleeve e, having the crank E' and pinion G, the rack-standard H, and the segment-lever J, these parts being adjustably secured to the axle, substantially as and for the purpose set forth.

In witness whereof I hereunto set my hand.

H. S. PALMER.

Witnesses:

GEO. E. FREEMAN,
JAKOB WALKER.