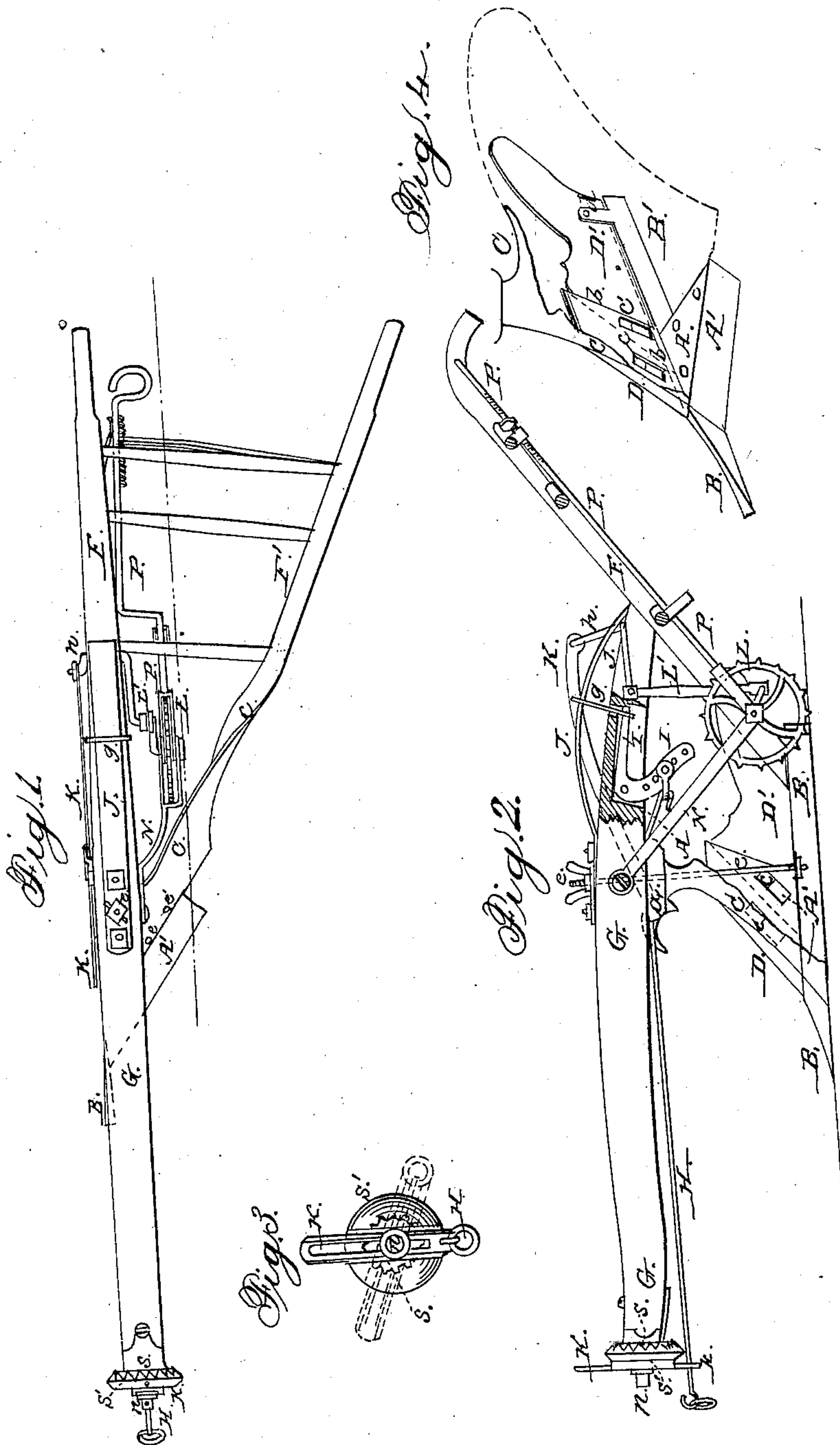


J. K. GINGRICH.

Plow.

No. { 448, {  
31,452. }

Patented Feb. 19, 1861.



WITNESSES:

J. Loomis  
A. S. Spencer

INVENTOR

J. K. Gingrich  
per Munnell  
attorney

# UNITED STATES PATENT OFFICE.

JOSEPH K. GINGRICH, OF NORTH ANNVILLE, PENNSYLVANIA.

## IMPROVEMENT IN PLOWS.

Specification forming part of Letters Patent No. **31,452**, dated February 19, 1861.

*To all whom it may concern:*

Be it known that I, J. K. GINGRICH, of North Annville, in the county of Lebanon and State of Pennsylvania, have invented certain new and useful Improvements in Plows; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 shows a top view of my improved plow. Fig. 2 is a side elevation of the same, with a portion of the beam and mold-board broken out to show some of the parts more clearly. Fig. 3 is an end view of the improved clevis, showing the parts in two positions. Fig. 4 is a perspective sectional view of the plow, showing the construction of the same.

Similar letters of reference indicate corresponding parts in the several figures.

To enable those skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

The first part of my invention relates to the plow-body, which is composed of four principal parts—viz., the sole-plate A, share A', point B, and landside B', all of which form one piece, the mold-board C, the colter-plate D, and the landside-wing D'. These four parts are put together in the following manner: The mold-board C is secured by bolts to the enlargement (standard portion) *a* and to the handle F'. The cutter D is then attached to a slotted plate, *b*, on the landside by a dovetail tenon, *c*, (shown clearly in Fig. 4,) which tenon enters the lower portion of the slot, and is then pushed up so as to wedge itself tightly and hold securely to the plate *b*. The cutter-plate has two cutting-edges, either of which may be used, and by reversing the plate when one edge wears dull a new cutting-edge may be presented. The wing D' is attached behind the cutter D by a tenon, *c'*, in the same manner as D is attached. The sole-plate, share, point, and landside-bar, which have been described as one piece, are now secured by a bolt, *e*, that passes up through the sole-plate A and through the beam G and receives a nut on its upper end, as shown in Fig. 2, by a bolt that passes through a lip, *d*, at the heel of the landside-bar B', (shown in Fig. 4,) and through the lower end of handle F, and through the back part of the landside-

wing D', and by two bolts, *e' e'*, that pass through the sole-plate A and through the lower edge of the mold-board C. The four parts forming the plow-body are in this manner firmly secured together in their proper places, and as the plates D D' rest on the top of the landside-bar B', they are prevented from slipping down without first removing the bottom of the plow.

The second part of my invention relates to a novel manner of holding the plow down and keeping it steady, and to prevent the jarring and concussions occasioned by attaching the draft-chain rigidly to the clevis. H is a draft-rod that passes through an adjustable slotted bar attached to the clevis, as will be hereinafter described, and is carried along under the beam G behind the standard *a*, and hooks into an adjustable coupling-link that is attached to an arm of the bent lever I. Said lever has its fulcrum in the beam G, as shown in Fig. 2, and its upper arm is connected to a spring, J, by a short stirrup, *g*. The spring J is simply a stout strip of steel-plate that is secured at one end by bolts which secure the standard to the beam. Its other end is allowed to play on a face-plate near the rear end of the beam G. The beam is attached to the ring on the front end of rod H, and it will be seen that the draft will be transferred from the clevis or end of the beam behind the standard *a*, so that while the plow is held steady by the beam it will be held down to its work with greater or less force, according to the position of the adjustable coupling-link with relation to the bottom of the beam. Besides this the draft will be upon the spring J, which takes off much of the jar and concussions, which in some kinds of plowing is very hard on the horses.

The invention relates, thirdly, to a novel arrangement for clearing the plow of grass, &c., and preventing its clogging up at the angle formed by the standard and under side of the beam. K is a rod with a crescent-shaped fork on one end, which is attached to the right-hand side of the beam G, so as to be free to receive an alternate reciprocating motion. At the rear end of the rod K is attached a crank, *h*, which receives its motion from a traction-wheel, L, through the medium of a connect-



ing-rod, L'. This motion of the wheel gives to the rod K at each revolution of the wheel a forward and downward thrust, which pushes off grass or other obstructions from the front part of the plow, and in this manner lessens the draft of the plow to a great extent. The wheel L is hung in such a manner by the swinging rod N and rod P that the attendant can raise this wheel free from the ground, and thus stop the motion of the clearer R while the plow is in motion.

The clevis is peculiar in its construction, consisting of two circular bevel-spurred plates, S S', one of which is like a bevel-spurred wheel, and this is securely bolted to the end of the beam G, and the other is a spurred ring with the teeth on the inside of this ring. On the outside of the ring S' is formed a dovetail groove, into which slides a slotted bar, k, which is secured rigidly to the ring by the screw n, that passes into the center of the spurred wheel S and secures the slide to the ring and the

ring to the wheel S. The draft-rod H passes through the lower end of the slotted bar k, and by loosening the screw n the ends of the draft-rod may be set nearer to or farther from the center of the beam G, and by turning the ring S' to one side or to the other the line of draft may be changed to the right or to the left of the beam G. This clevis is simple, and when locked up will not be liable to slip.

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

The arrangement of the driving-wheel L, elevating-rod P, swinging rod N, connecting-rod L', crank h, clearer K, beam G, rod H, crank I, spring J, and handles F F', with the plow-body A A' B B' C D D', as and for the purposes herein shown and described.

JOSEPH K. GINGRICH.

Witnesses:

HENRY EHRLMAN,  
JAS. R. HENRY.