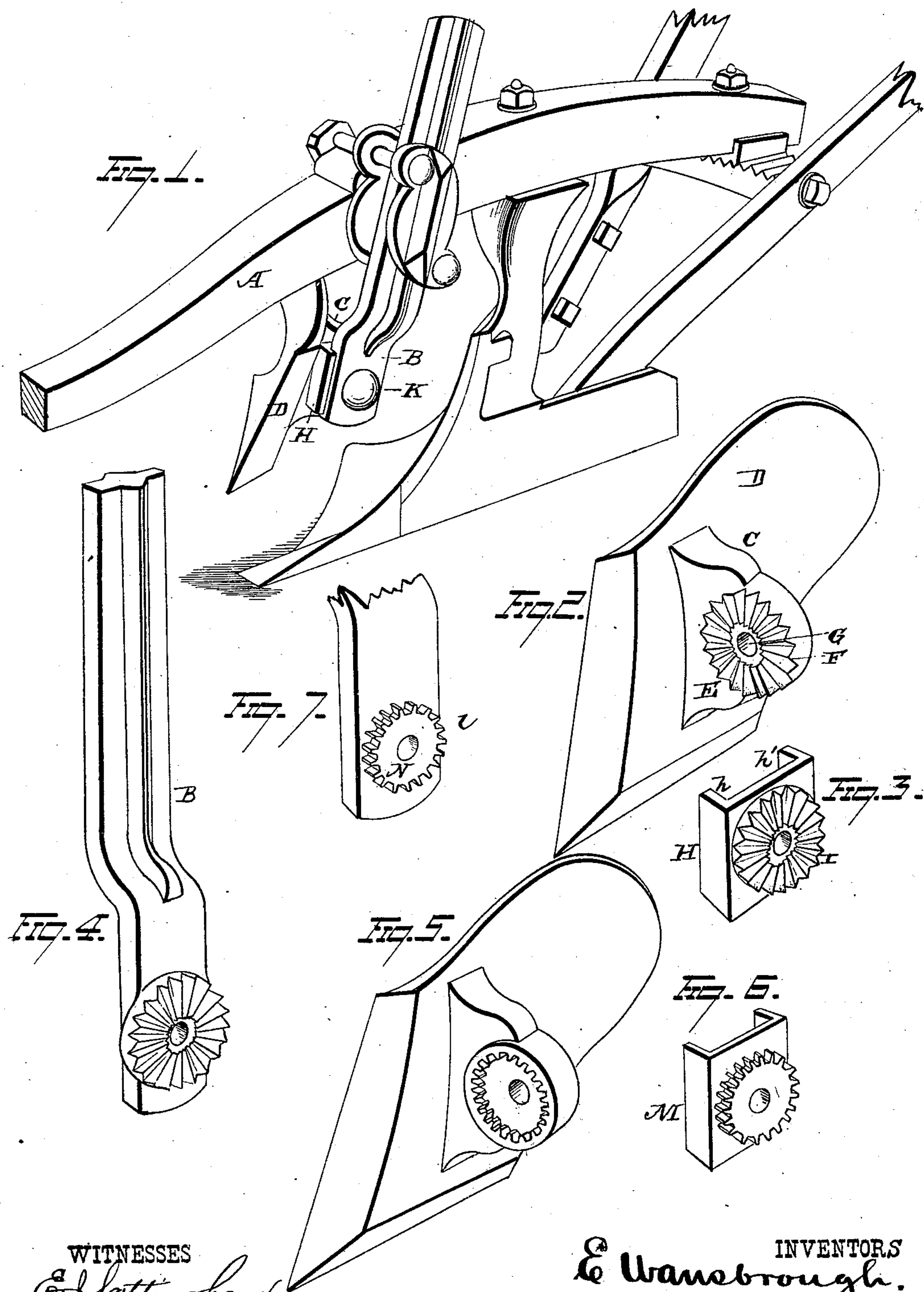


E. WANSBROUGH & W. W. SPEER.
Plow.

No. 226,641.

Patented April 20, 1880.



WITNESSES
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UNITED STATES PATENT OFFICE.

EDMUND WANSBROUGH AND WILLIAM W. SPEER, OF PITTSBURG, PA.

PLOW.

SPECIFICATION forming part of Letters Patent No. 226,641, dated April 20, 1880.

Application filed February 13, 1880.

To all whom it may concern:

Be it known that we, EDMUND WANSBROUGH and WILLIAM W. SPEER, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Plows; and we 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, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

Our invention relates to an improvement in plows, the object being to provide simple and efficient means for securing the colter or jointer plow to the standard at any desired angular adjustment to raise or lower the point of the colter and cause it to penetrate the earth to any depth required; and to this end our invention consists, first, in the combination, with the jointer-plow having a serrated or corrugated disk cast solid therewith, of a correspondingly serrated or corrugated disk formed on the lower end of the colter-standard, or formed on a plate secured to the standard, whereby the colter or jointer plow may be secured at any desired adjustment and held in place by means of a single bolt.

Our invention further consists in the several other details in construction and combinations of parts, as will hereinafter be explained, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view, in perspective, of a plow embodying our invention. Fig. 2 is a view, in perspective, of the colter detached from the standard. Fig. 3 is a view, in perspective, of the standard-plate with the corrugated disk formed thereon. Fig. 4 is a view, in perspective, of a modification. Figs. 5, 6, and 7 are modifications.

A represents the plow-beam, and B the colter-standard, the latter with its attaching and adjusting mechanism being of the construction secured to us by Letters Patent No. 201,470, reissued September 9, 1879, No. 8,888, though a detailed description of such parts is not herein required, as my improvement is adapted to be embodied in connection with any form of vertically-adjustable colter-standards, and

hence we would have it understood that we do not restrict ourselves to the combination of our improved devices for securing the colter or jointer plow at any desired angle of adjustment with the particular construction of standard and adjusting mechanism herein shown.

The colter-plow has a plate, C, cast solid on the rear side of the mold-board D, on one side of which is formed the corrugated disk E. The corrugations F radiate from the bolt-hole G in the disk, and may be of any desired shape in cross-section—as, for instance, the corrugations may be V or U shape, or may be formed as face ratchet-teeth, if desired.

Upon the lower end of the standard is secured a removable plate or bearing, H, which is provided with flanges *h h'*, which bear against the edges of the standard, and thus prevent any rotary or lateral movement of said plate.

The outer side of the plate is provided with a corrugated disk, I, which is furnished with radial grooves or corrugations corresponding in form, size, and number to those on the disk E, so that when the two are brought together and the bolt K inserted through the parts and nut tightened the colter will be firmly held against displacement.

To adjust the angle of the colter it is simply necessary to loosen the nut and turn the point of the colter or plow upward or downward, as may be desired; then tighten the nut on the fastening and pivoted bolt, which operates to draw the radial corrugations of one disk into the corresponding radial grooves in the other disk, and thus firmly secures the colter in the desired adjustment.

The separate or removable plate is employed when the standard is formed of wrought-iron, the plate being made of cast-iron and secured to the standard.

In some cases or forms of plows the standard or colter-stem may be formed of cast-iron, and in such form of construction the removable plate is dispensed with and the corrugated disk cast solid on the lower end of the standard, as shown in Fig. 4.

Instead of employing corrugated disks, as hereinbefore explained, the plate on the rear side of the mold-board may have a disk with its inner periphery notched, as represented in Fig. 5, which may fit into corresponding notches

formed on the removable plate M, (represented in Fig. 6,) or in the notches *l*, formed on the periphery of the disk N on the bottom of the standard, as shown in Fig. 7.

5 It is evident that slight changes may be resorted to in the several details of construction without departing from the spirit of our invention, and hence we would have it understood that we do not limit ourselves to the exact construction shown and described.

10 We are aware that serrated disks and plates have been combined with the different parts of a plow, and hence we would have it understood that we make no broad claim to such feature of construction, but restrict ourselves to our particular improvement.

15 Having fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

The combination, with a colter-standard 20 and a perforated, corrugated, or serrated disk connected with its lower end, of a colter or jointer plow having a corrugated or serrated disk formed on a plate cast solid with the colter or jointer plow, and extending rearward 25 from the mold-board therefrom, and a bolt extending through the disks on the standard and rearwardly-projecting plate, substantially as and for the purpose shown and described.

In testimony that we claim the foregoing we 30 have hereunto set our hands this 2d day of February, 1880.

EDMUND WANSBROUGH.
WILLIAM W. SPEER.

Witnesses:

D. L. GILLESPIE,
THOS. D. GRAHAM.