W. H. KRETSINGER.

HAY AND MANURE FORK.

No. 180,041. Patented July 18, 1876.

Fig. 1.

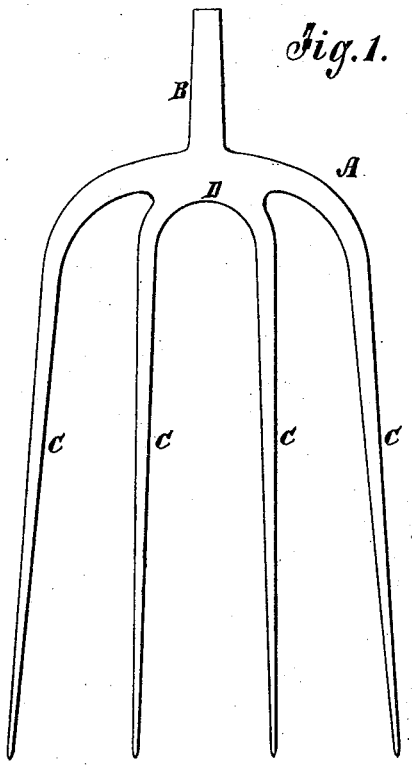


Fig. 5.

Fig. 2.

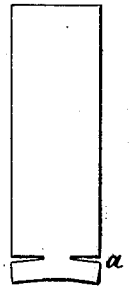


Fig. 2a.

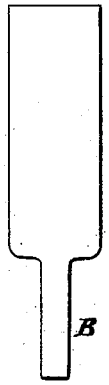


Fig. 3.

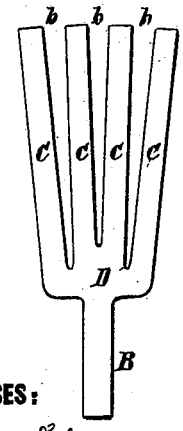
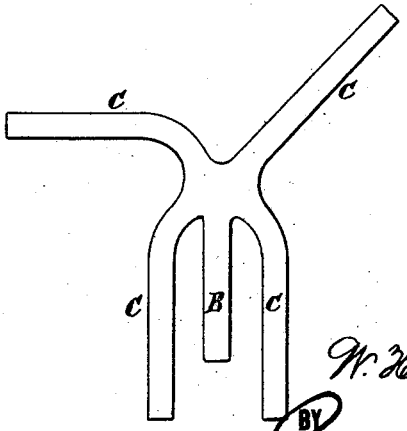


Fig. 4.



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UNITED STATES PATENT OFFICE.

WILLIAM H. KRETSINGER, OF FORT MADISON, IOWA.

IMPROVEMENT IN HAY AND MANURE FORKS.

Specification forming part of Letters Patent No. **180,041**, dated July 18, 1876; application filed July 18, 1874.

To all whom it may concern:

Be it known that I, WILLIAM H. KRETSINGER, of Fort Madison, in the county of Lee and State of Iowa, have invented a new and useful Improvement in Four or More Pronged Barn or Pitching Forks, of which the following is a specification:

My invention consists in an improved process for making or producing a four or more pronged barn-fork from a blank of sheet metal, as will be hereinafter more fully set forth.

In the accompanying drawing, Figure 1 represents the fork complete. Figs. 2, 3, and 4 show the method of construction from the blank of steel, (No. 5.)

Similar letters of reference indicate corresponding parts.

A is the fork, consisting of the shank B, the prongs C C C C, and the solid head or center D.

The first operation is to cut into each side of the blank, as shown at *a*, Fig. 2; then draw the cut pieces to form shank B; then split the remainder of the pattern into four or more parts, as shown at *b* in Fig. 3, making the middle cut enough shorter than the others to provide for the head D; then turn the two outer prongs back nearly parallel with shank, and the two middle prongs outward, as shown in Fig. 4, (the one on the right in position for drawing,) and draw, and after drawing bend it back to the left out of the way, straighten out, and draw the outside prong; then draw the remaining prongs in same manner, after which bend all the prongs to their proper position, as shown in the complete fork.

I am aware that four-prong forks have heretofore been made by continuing the shank beyond its junction with the two outside prongs, forming then a neck, with still sufficient metal at the end from which to draw the two middle prongs. By this plan an objectionable recess is formed between the base of the middle and outside prongs, preventing an easy unloading or discharge, and, besides, the neck has to bear all the weight placed on the two middle prongs, and is, therefore, necessarily made too weak at that point. Four or more pronged forks have also been made by welding the shank to the middle of, and at right angles with, the bar or pattern, then setting down or reducing while heated the width of the pattern between the two middle prongs, then properly splitting and drawing the remainder or wide part of the pattern into prongs of proper size, &c. Constructed in this way an easy balance is destroyed, and a weak point is left on each side of the shank, which must support the load given to either the two right or two left hand prongs.

In my fork each prong bears its own weight, and no more, and is a part of, or a continuance of, a solid brace head or center.

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

The process herein set forth of producing a four or more pronged barn-fork from a blank sheet of metal, consisting in first making the incisions *a a* in the blank, and drawing the cut pieces to form the shank B; then splitting the other end of the pattern into four or more parts, as seen at *b*, making the middle cut shorter than the others to form the brace-head D, and then turning and drawing the prongs, substantially as described, and for the purpose set forth.

WM. H. KRETSINGER.

Witnesses:
R. J. FINCH,
E. BATES.