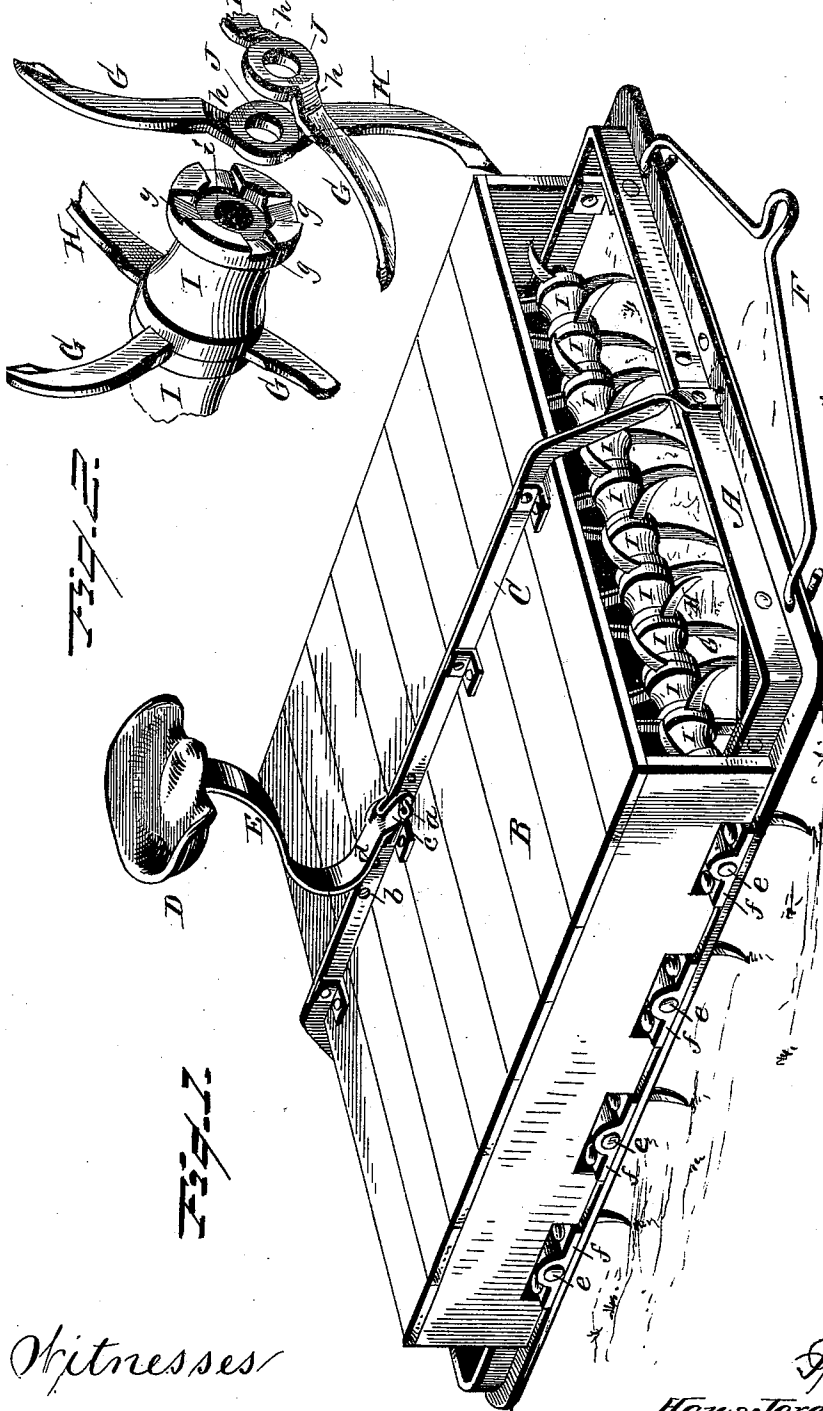


(No Model.)

H. J. NELSON & N. M. NIELSEN.
CLOD CRUSHER AND PULVERIZER.

No. 520,799.

Patented June 5, 1894.



Witnesses
G. Williamson.
W. Gordon.

Inventors
Hans Jørgen Nelson.
Nicolaj Martinus Nielsen.
per Cha. W. Fowler
Attorney.

UNITED STATES PATENT OFFICE.

HANS JORGEN NELSON AND NICOLAJ MARTINUS NIELSEN, OF TYLER,
MINNESOTA.

CLOD CRUSHER AND PULVERIZER.

SPECIFICATION forming part of Letters Patent No. 520,799, dated June 5, 1894.

Application filed January 12, 1894. Serial No. 496,664. (No model.)

To all whom it may concern:

Be it known that we, HANS JORGEN NELSON and NICOLAJ MARTINUS NIELSEN, citizens of the United States, residing at Tyler, in the county of Lincoln and State of Minnesota, have invented certain new and useful Improvements in Clod Crushers, Pulverizers, or Harrows; and we do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters of reference marked thereon.

The present invention has for its object to provide a pulverizer, clod-crusher, or harrow, that will be effective in all kinds of soil, less power required for operating it, and will possess both strength and durability, which objects we attain by the construction shown in the drawings and hereinafter described and claimed.

Figure 1 of the drawings represents a perspective view of our improved clod-crusher, pulverizer, or harrow, constructed in accordance with our invention; Fig. 2, a detail view in perspective and on an enlarged scale showing the construction of teeth and the means employed for connecting them to the shaft.

In the accompanying drawings A represents the metal frame of any suitable form and construction, and to this frame is connected a hood or fender B to prevent the soil from being thrown upward and protect the driver. A central brace C is connected to the hood or fender B and also to the frame A, and to this brace is adjustably connected the seat D by means of the pin *a* which engages with one of the holes *b* in the brace and holes in the bifurcated end *c* of the seat support E.

The support E is preferably of spring metal and is bent horizontally at its lower end as shown at *d* to form a long bearing which will come in contact with the brace C and better support the seat and the weight of the driver thereon.

The bifurcated end of the support E embraces the sides of the brace C and holds the support from lateral displacement.

The frame A has attached at its front end a draft-bar F for suitably connecting the team thereto.

To the frame A are connected the shafts *e* which may be of any suitable number and have their bearings in boxes *f* secured to the sides of the frame.

The teeth G H are secured to the shafts by means of the clamping hubs I which have central holes for the passage of the shafts and are provided upon their opposite ends with inclined seats *g* to correspond to the angle of the offset *h* in the teeth.

The teeth G H are joined together by a central eye J which is also seated in the end of the hub, a mortised seat *i* being provided for that purpose. When the two pairs of teeth are together, the eyes of the respective pairs lap each other so that the teeth of each pair will be at right angles with each other. The off-sets *h* are necessary in order to have the teeth come on the same plane, and in order to provide for these off-sets the seats *g* are made incline to correspond therewith.

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

1. A suitable frame of a pulverizer, clod-crusher, or cultivator having shafts connected thereto, teeth upon the shafts formed in pairs connected together by a central eye, off-sets upon the teeth at a point of juncture with the eyes, and suitable clamping hubs having at their respective ends inclined seats to correspond with the incline on the off-sets, substantially as and for the purpose specified.

2. A pulverizer, clod-crusher, or harrow, consisting of the suitable frame, a hood or fender, a central brace connecting it with the frame, a seat adjustably and removably connected to the brace, shafts connected to the frame, clamping hubs upon the shafts having at their opposite ends inclined seats, and teeth held between the hubs and having eyes and off-sets, substantially as and for the purpose described.

In testimony that we claim the above we have hereunto subscribed our names in the presence of two witnesses.

HANS JORGEN NELSON.

NICOLAJ MARTINUS NIELSEN.

Witnesses:

MARCUS LAURITSEN,

GEO. CHRISTENSON.