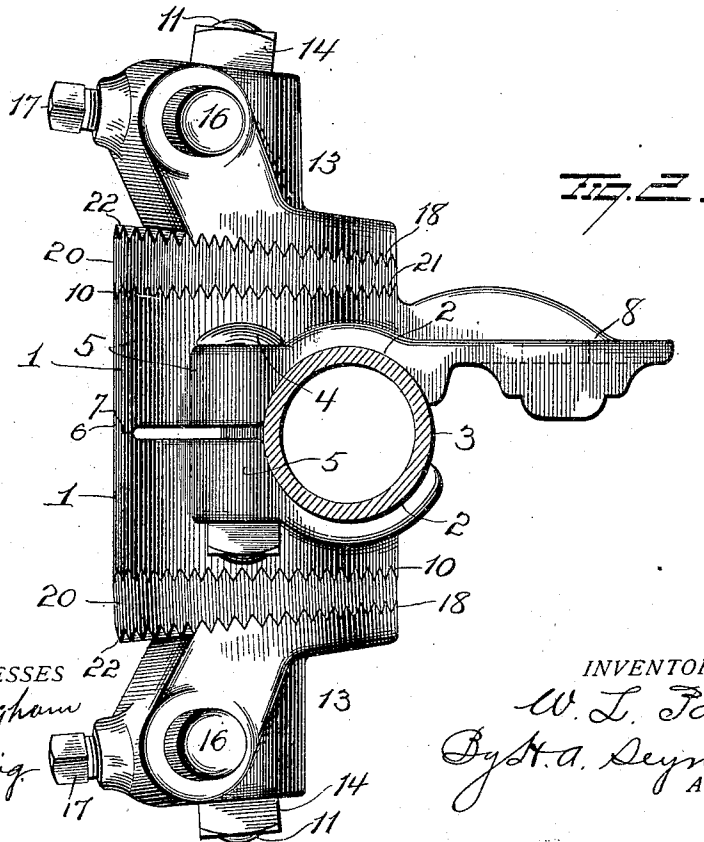
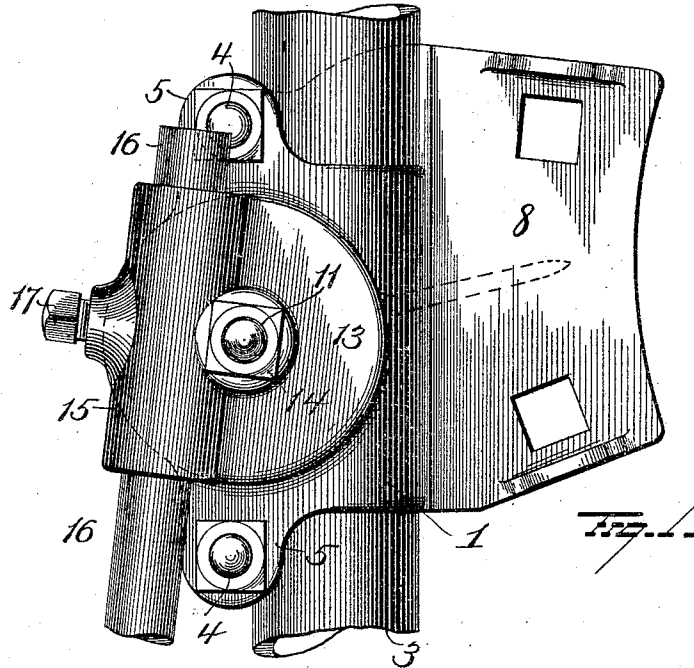


W. L. PAUL.
SEEDING MACHINE.
APPLICATION FILED JUNE 29, 1908.

944,578.

Patented Dec. 28, 1909.
2 SHEETS—SHEET 1.



WITNESSES
E. Nottingham
G. J. Downing

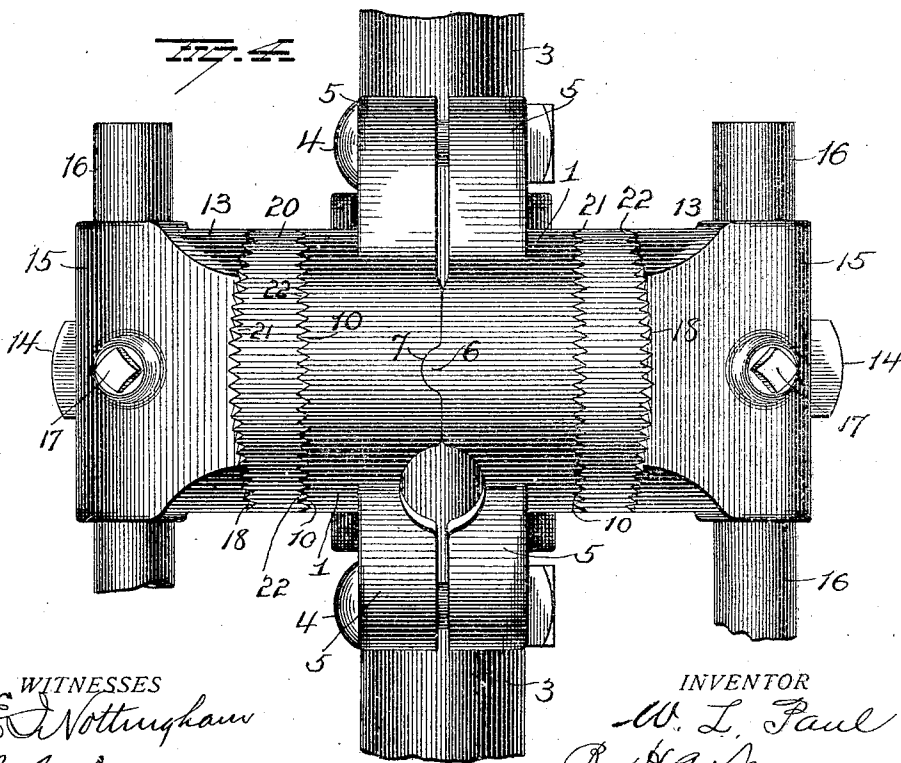
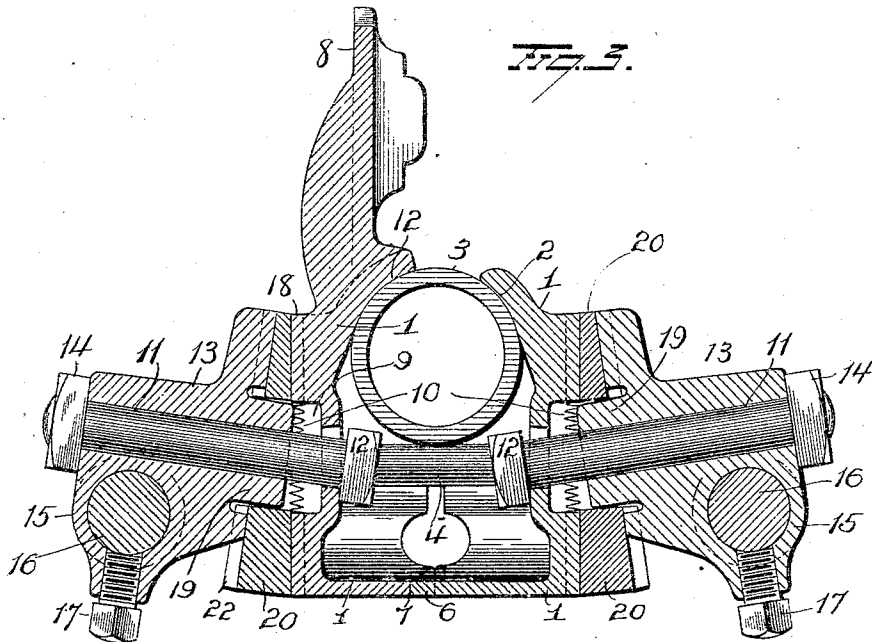
INVENTOR
W. L. Paul
By H. A. Seymour
Attorney

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UNITED STATES PATENT OFFICE.

WILLIAM L. PAUL, OF SOUTH BEND, INDIANA, ASSIGNOR TO OLIVER CHILLED PLOW WORKS, OF SOUTH BEND, INDIANA.

SEEDING-MACHINE.

944,578.

Specification of Letters Patent.

Patented Dec. 28, 1909.

Application filed June 29, 1908. Serial No. 440,925.

To all whom it may concern:

Be it known that I, WILLIAM L. PAUL, of South Bend, in the county of St. Joseph and State of Indiana, have invented certain new and useful Improvements in Seeding-Machines; and I 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.

This invention relates to improvements in seeding machines, and more particularly to means for adjustably supporting the covering blades or disks.

The object of my present invention is to provide simple and efficient devices by means of which the covering blades of a seeding machine can be adjusted forwardly or backwardly; also laterally with relation to each other, and also in a manner to change the angle at which the blades meet the soil.

With this object in view the invention consists in certain novel features of construction and combinations of parts as hereinafter set forth and pointed out in the claim.

In the accompanying drawings, Figure 1 is an elevation showing my improvements. Fig. 2 is a plan view with the seed tube shown in section. Fig. 3 is a horizontal sectional view, and Fig. 4 is a rear elevation.

1, 1, represent two castings, each having a curved seat 2 to engage the seed tube 3 of a planter. The castings 1 are rigidly secured to the seed tube (so as to support the latter) by means of bolts 4 passing through lugs 5 on the respective castings, and at a point between said lugs, one of said castings is made with a projection 6 which enters a recess 7 in the other. One of the castings is provided with a plate or extension 8 adapted to be secured to the beam or framework of the machine. Each casting 1 is made with a transverse hole 9 and around this hole the casting is provided with an annular series of radial teeth 10. A bolt 11 passes through each hole 9 and is provided at its inner end with a head 12 which bears against the inner face of the casting. Each bolt 11 passes through a holder 13 and is provided at its outer end with threads for the reception of a nut 14, the latter being adapted to bear against the holder and retain the same in position when the parts are assembled in the manner presently explained. Each holder

13 is provided with a tubular portion 15 for the accommodation of a shank 16 to the lower end of which a covering shovel or disk is secured. The covering shovel or disk may be adjusted vertically by moving the shank vertically through the tubular portion of the holder and will be held in position by means of a set screw 17. The angle at which the blade or shovel meets the soil may also be adjusted by turning the shank and then securing it in position by means of the set screw 17.

The inner face of each holder 13 is provided with an annular series of radial teeth 18 and with an annular flange or collar 19 surrounding the opening through which the bolt 11 passes and projecting inwardly from the toothed face of the holder. The annular flange or collar of each holder enters a hole in the center of a disk 20. Each disk 20 is made beveled transversely so that it will be thicker at one part than at the diametrically opposite part. The respective faces of each disk are provided with annular series of radial teeth 21 and 22,—the teeth 21 being adapted to mesh with the teeth 10 on casting 1 and the teeth 22 being adapted to mesh with the teeth 18 on the holder 13. With the parts thus intermeshing and the nut on the bolt 11 tightened against the holders 13 the latter will be firmly held in any position to which they may be adjusted. It is apparent that by turning the holders relatively to the disks 20 the blades or covering shovels may be adjusted forwardly or rearwardly. It is also apparent that by turning the disks 20 relatively to the holders 13 and the castings 1 the angle of the holders relatively to the vertical plane of the castings and the seed tube can be changed and the covering blades or shovels will thus be adjusted laterally so that they will be faced a greater or less distance apart,—such adjustment of the covering blades or shovels being due to the beveled or wedge-shape of the disks 20.

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

The combination with two castings provided with means for clamping the same to a seeding machine, each of said castings provided on its outer face with an annular series of radial teeth, a bolt attached to and projecting laterally from each of said cast-

ings, and holders adapted to receive the shanks of covering blades or shovels, said holders having holes for the passage of said bolts, and each of said holders provided on its inner face with an annular series of radial teeth, of beveled or wedge-shape disks interposed between the holders and castings and provided on their respective faces with annular series of radial teeth to mesh with

the radial teeth on the castings and holders, 10 and nuts on the free ends of said bolts.

In testimony whereof, I have signed this specification in the presence of two subscribing witnesses.

WILLIAM L. PAUL.

Witnesses:

FRANCIS C. NIPPOLD,
A. A. FREDERICK.