No. 713,976. Patented Nov. 18, 1902.

T. B. FUNK.

GRAIN DRILL.

(Application filed Apr. 25, 1902.)

(No Model.) 2 Sheets—Sheet 1.

Fig. 1.

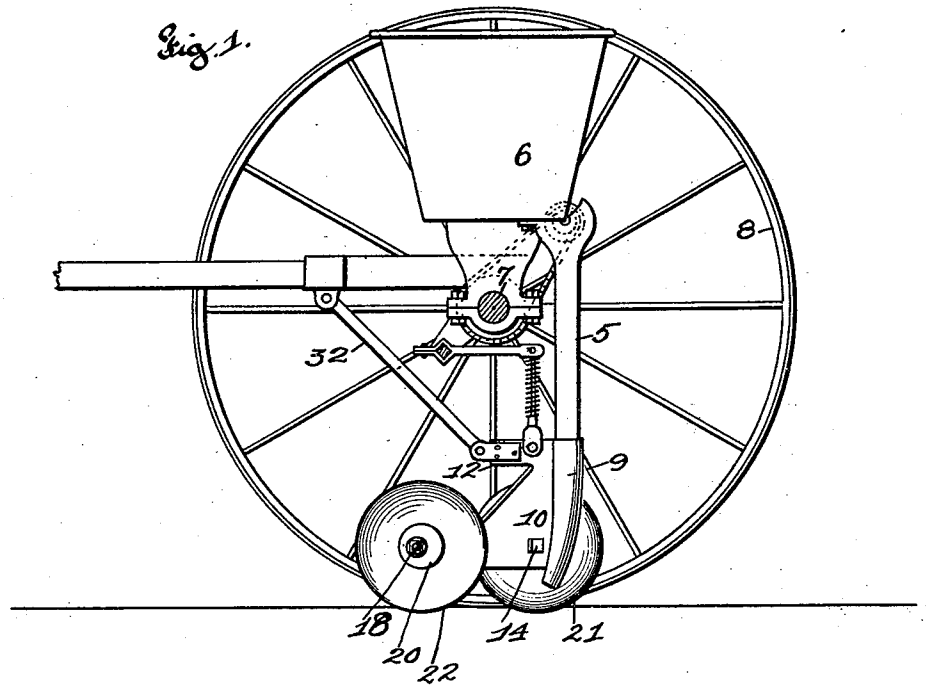
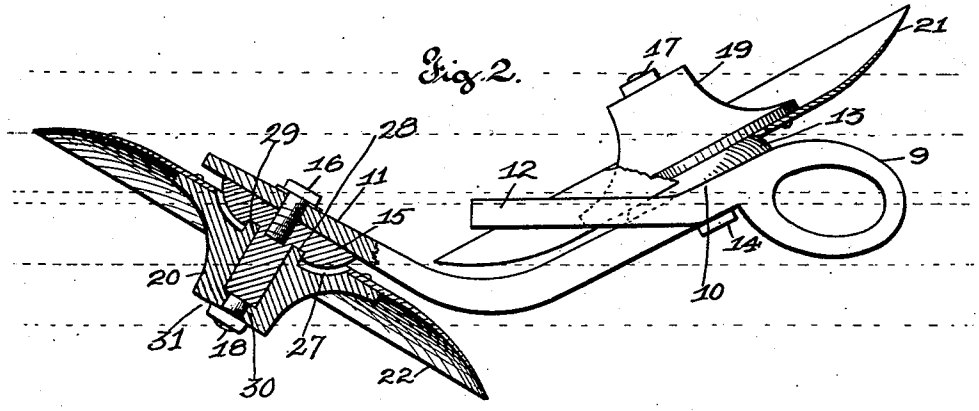


Fig. 2.



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Fig. 3

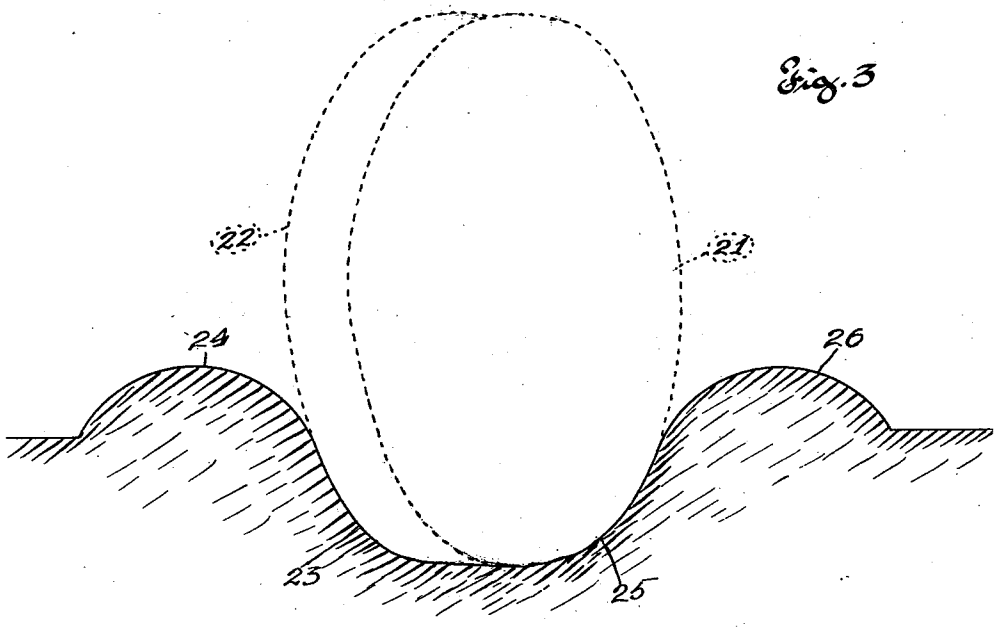
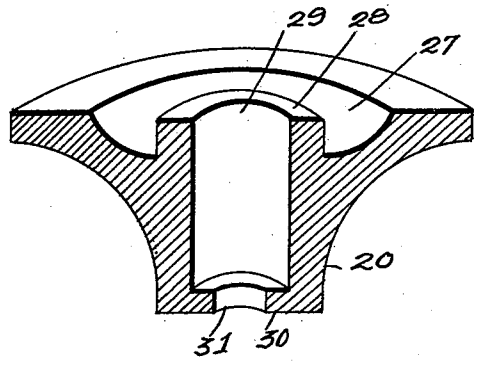


Fig. 4.



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UNITED STATES PATENT OFFICE.

TRUMAN B. FUNK, OF ENID, OKLAHOMA TERRITORY.

GRAIN-DRILL.

SPECIFICATION forming part of Letters Patent No. 713,976, dated November 18, 1902.

Application filed April 25, 1902. Serial No. 104,718. (No model.)

To all whom it may concern:

Be it known that I, TRUMAN B. FUNK, of the city of Enid, Garfield county, Territory of Oklahoma, have invented certain new and useful Improvements in Grain-Drills, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to grain-drills; and it consists of the novel construction, combination, and arrangement of parts hereinafter shown, described, and claimed.

My object is to construct a grain-drill or seed-planter which will deposit the seed in a deep and narrow furrow having an equal amount of earth thrown up on each side of the furrow; and my invention consists of the combination in a grain-drill or the like with suitable framework having dropping-tubes and means of conveying the seed into the dropping-tubes, of a disk-carrying frame having a boot to receive the lower end of the dropping-tube, said frame extending forwardly from said boot at an angle first to one side and forming a bearing-plate and then turning to the other side and forming a second bearing-plate, a trunnion-base extending from the first bearing-plate, a trunnion-base extending from the second bearing-plate, trunnions extending from said bases, and disks mounted upon said trunnions, the forward halves of said disks being in the same running line, and means of drawing said disks.

Figure 1 is a view, showing the axle in section, of a grain-drill embodying the principles of my invention. Fig. 2 is a top plan view, partly in section, of the disks shown in Fig. 1. Fig. 3 is a diagrammatic view showing how the disks dig the furrow, the sides of which are equal, with an equal amount of earth thrown up on each side of the furrow. Fig. 4 is a sectional perspective of the hub of one of the disks.

Referring to the drawings in detail, the grain-dropping tube 5, the grain-box 6, the axle 7, and their connecting parts, including the traction-wheel 8, are of the usual construction; and my invention consists in detail of the combination, with the lower end of the grain-dropping tube 5, of a disk-carrying frame comprising the boot 9 to receive the seed from the dropping-tube, said frame extending forwardly from the boot at an angle first to one side and forming the bearing-plate 10 and then turning to the other side and forming the bearing-plate 11; the tongue 12, extending forwardly from the boot and providing means of attachment to the draft apparatus; a trunnion-base 13, secured to the bearing-plate 10 by means of the bolt 14; the trunnion-base 15, secured to the bearing-plate 11 by means of the bolt 16; the trunnion 17, extending from the trunnion-base 13; the trunnion 18, extending from the base 15; the hub 19, mounted upon the trunnion 17; the hub 20, mounted upon the trunnion 18; the disk 21, mounted upon the hub 19, and the disk 22, mounted upon the hub 20, the forward halves of said disks being in the same running line so that the forward disk 22 will make the furrow 23 and throw up the bank 24 by the outer side of the furrow and the rear disk 21 will make the furrow 25, said furrows 23 and 25 overlapping and the bank 26 being thrown up from the furrow 25, said banks 24 and 26 being substantially of the same size. The hubs 19 and 20 are formed as shown in detail in the sectional part of Fig. 2 and in Fig. 4. The groove 27 is formed in the inner face of the hub, thus producing the flange 28, extending inwardly around the bore 29, said bore being adapted to receive the bearing-surfaces of the trunnion 18 and the outer end of said bore being reduced by the flange 30 to form the small opening 31 to receive the screw-threaded neck of the trunnion. The connecting-rod 32 connects the tongue 12 to the frame of the drill and provides a means of drawing the disk.

I am aware that disks have been used on grain-drills and the like for making furrows to receive the seed; but I am not aware that the disks have heretofore been mounted with the forward part of one disk in the same running line as the forward part of the other disk, so as to make a furrow the sides of which are equal and throw up an equal amount of earth upon each side of the furrow.

I claim—

The combination in a grain-drill or the like with suitable framework having dropping-tubes, and means of conveying the seed into the dropping-tubes; of a disk-carrying frame

having a boot to receive the lower end of the dropping-tube, said frame extending forwardly from said boot at an angle first to one side and forming a bearing-plate, and then turning to the other side and forming a second bearing-plate; a trunnion-base extending from the first bearing-plate; a trunnion-base extending from the second bearing-plate; trunnions extending from said bases and disks mounted upon said trunnions, the forward halves of said disks being in the same running line; and means of drawing said disks, substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

TRUMAN B. FUNK.

Witnesses:
ALFRED A. EICKS,
JOHN C. HIGDON.