(No Model.)

C. A. STRINGER.

PLOW JOINTER.

No. 476,090. Patented May 31, 1892.

Fig. 1

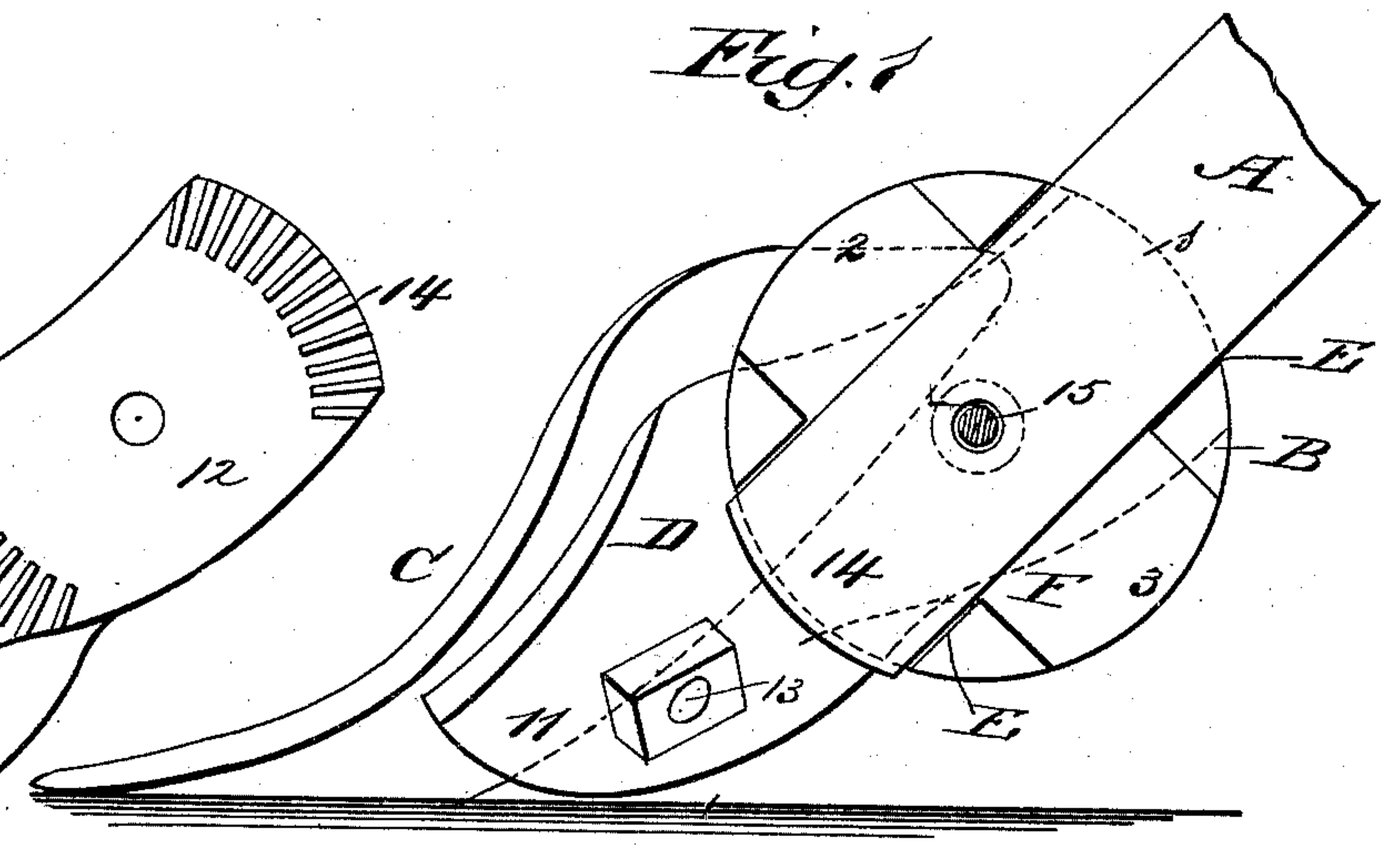

Fig. 2

Fig. 3

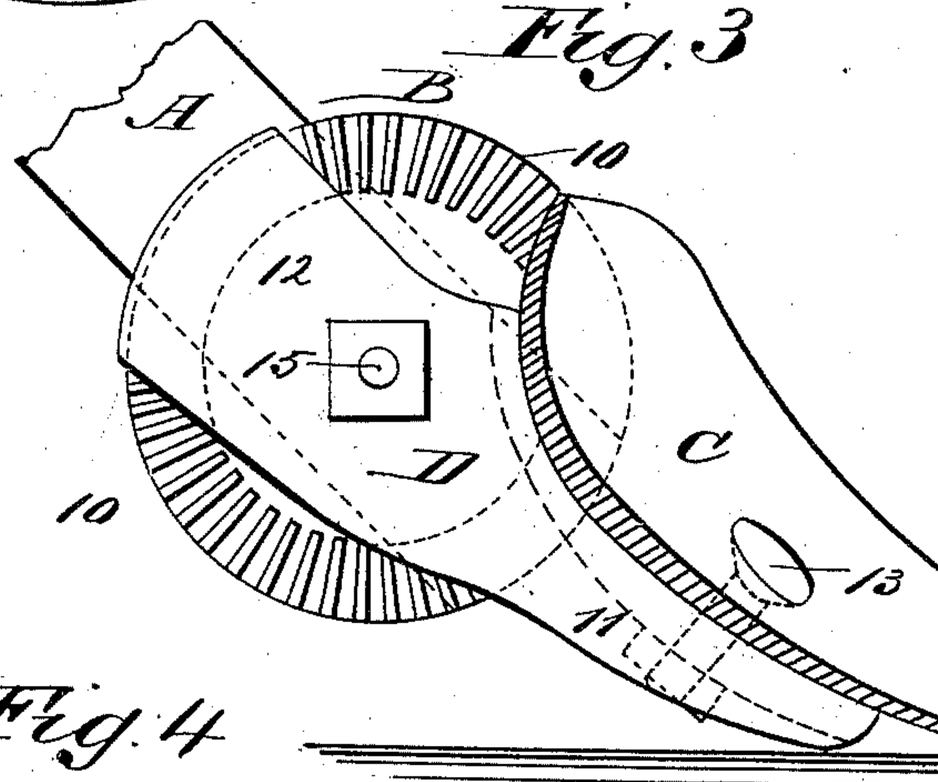

Fig. 5

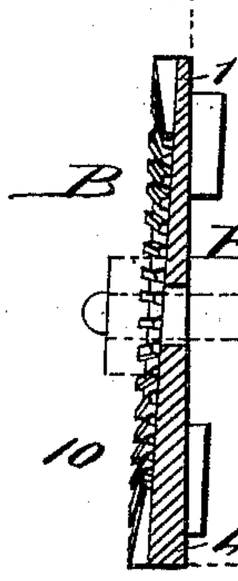

Fig. 6

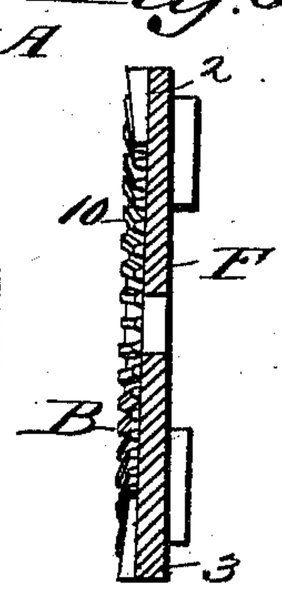

Fig. 4

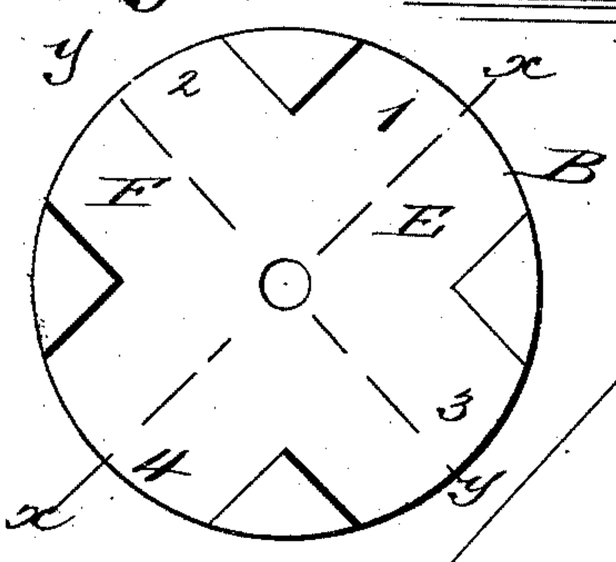

Fig. 7

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CHARLES A. STRINGER, OF MUNNSVILLE, NEW YORK.

PLOW-JOINTER.

SPECIFICATION forming part of Letters Patent No. 476,090, dated May 31, 1892.

Application filed January 28, 1891. Serial No. 379,417. (No model.)

To all whom it may concern:

Be it known that I, CHARLES A. STRINGER, of Munnsville, in the county of Madison and State of New York, have invented a new and useful Improvement in Plow-Jointers, of which the following is a full, clear, and exact description.

My invention relates to an improvement in plow-jointers, and has for its object to provide a simple, durable, adjustable, and reversible device capable of being conveniently and expeditiously attached to any plow-beam, whether of wood, iron, or steel.

A further object of the invention is to provide a means whereby without disturbing the standard attached to the beam the jointer proper may be thrown to or from the land, which simplifies the work of fitting all styles of plows, and when set rigidly held in position; also, to provide a means whereby the jointer may be easily set and firmly held in place at an exact angle for sward or stubble.

Another object of the invention is to render the adjustments so simple that any person of ordinary intelligence cannot fail to understand their manipulation, nor can they err in setting the jointer.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures and letters of reference indicate corresponding parts in all the views.

Figure 1 is a perspective view of the jointer viewed from the rear, a portion of the standard being broken off. Fig. 2 is a rear perspective view of the shank. Fig. 3 is a side elevation of the jointer, the share being in section. Fig. 4 is a plan view of one face of the adjusting-disk. Fig. 5 is a section through the disk, taken on the line $x\ x$ of Fig. 4. Fig. 6 is a similar view, the section being taken on the line $y\ y$ of Fig. 4; and Fig. 7 is a plan view of the jointer.

The jointer consists, mainly, of four parts, a standard A, an adjustable ratchet-disk B, a blade or share C, and an adjustable shank D, connecting the disk and the blade. The standard is preferably made of metal, being ordinarily rectangular in cross-section and of greater width than thickness. The upper end of the standard is attached to the plow-beam by the usual colter-grip or its equivalent.

Upon one face of its periphery the disk B is provided with a series of radial teeth 10, and in the opposite face of the disk preferably two diametrical recesses E and F are formed, crossing each other at right angles, as is best shown in Fig. 4. The deepest point in all the recesses is at 1 in the recess E, and the shallowest point is at the part 4, immediately opposite the part 1 in the same recess, the points 1 and 4 being at the extremities of the recess. The extremity marked 2 in the recess F is not as deep as at 1 in the recess E, but is much deeper than the recess E at the point 4, and the opposite extremity of the recess F (marked 3) is of a depth intermediate of the depths at 2 and 4. The recesses E and F extend through to the periphery of the disk and are of a width sufficient to neatly receive the front face of the standard. By reason of the variation in depth of their extremities each recess has a different inclination, and when placed in connection with the standard the outer or toothed face of the disk is given more or less inclination to set the point of the jointer outward, accordingly as the disk is set with the points 1 to 4 upward. When set with the point 1 of recess E upward, the least outward inclination is given to the point of the jointer, and when the point 4 is set upward the greatest outward inclination is given to the jointer-point. The recess E gives the least and greatest outward inclination and the recess F gives the intermediate changes. The rear face of the blade or share C is convexed and the front face is concaved and the entire blade partakes somewhat of the form of a scroll. The shank D essentially comprises two members 11 and 12. The member 11 is curved to neatly fit against the central convexed surface of the blade and is attached thereto by a suitable bolt 13, provided with a nut, as shown in Figs. 1 and 3. The section 12 stands at an angle to the section 11 and is provided with a flat rear face, upon which at top and bottom radial teeth 14 are formed,

adapted to engage with the teeth of the adjusting-disk. The toothed section of the shank and the disk are secured to the standard by a bolt 15, which passes through them, the said bolt being provided with the usual nut. After the standard has been secured to the plow-beam its position is not changed, all of the adjustments being made upon the standard, except to adjust depth of furrow by raising or lowering the standard.

In operation, when the jointer is attached to the plow, the standard may be first secured to the beam, in which event the disk B is placed in engagement with the standard, the said standard being made to enter one of the recesses with Nos. 1, 2, or 3 uppermost, as illustrated in Figs. 5 or 6. The shank D is then bolted to the share C, the teeth 14 of the shank are brought into engagement with the teeth of the adjustable disk, and the bolt 15 is passed through the shank, the disk and the standard effectually uniting them. When the disk is in the position above described, and shown in Fig. 5, the point of the share will be carried a sufficient distance in direction of the land for proper work. If it is desired to turn the furrow quickly, the shank is adjusted upon the disk to give the upper portion of the share or blade a decided downward throw. If, however, a furrow is to be turned slowly, as in cutting sward, the blade is set more upright or as shown in the drawings. After the point of the plow-blade, by constant wear or through other means, has become damaged, the bolt 15 is removed and the disk is turned until the standard A fits into the recess having the next higher number at the upper edge, whereupon the parts are again secured in position. When the disk has been so changed, the blade is thrown a sufficient distance in the direction of the land to compensate for any wear that may have taken place.

It will be observed that as the recesses in the disk are well defined and but few in number a mistake cannot take place in setting the jointer, and that the adjustment of the share to turn the furrow either quickly or slowly is readily and easily effected.

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

1. In a plow-jointer, an adjusting-disk provided with diametrical grooves in one face of different depths at its periphery, one groove crossing the other, the said grooves being adapted to receive the plow-standard, substantially as described, whereby a jointer may be given many positions and different inclinations in or out, as set forth.

2. In a plow-jointer, the combination, with a standard and a disk provided with diametrical recesses in one face of different inclinations and crossing one another, the said disk being provided upon its opposite face with radial teeth, of a shank comprising two sections, one at an angle to the other, the lower section being adapted for attachment to a share and the other section being provided with teeth to engage with the teeth of the disk, as and for the purpose set forth.

3. In a plow-jointer, the combination, with a standard and a disk provided upon one face with diametrical grooves crossing one another, the said grooves at their extremities being of different depths, and radial teeth formed upon the opposite side of the disk, of a share essentially scroll-shaped, a shank comprising a lower concaved member adapted for engagement with the share and an upper essentially-straight member standing at an angle to the lower member and provided with teeth adapted to engage with the teeth upon the disk, and fastening devices connecting the shank with the blade and the shank and disk with the standard, substantially as and for the purpose set forth.

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