

No. 680,337.

Patented Aug. 13, 1901.

J. M. W. LONG.
DISK PLOW.

(Application filed June 10, 1901.)

(No Model.)

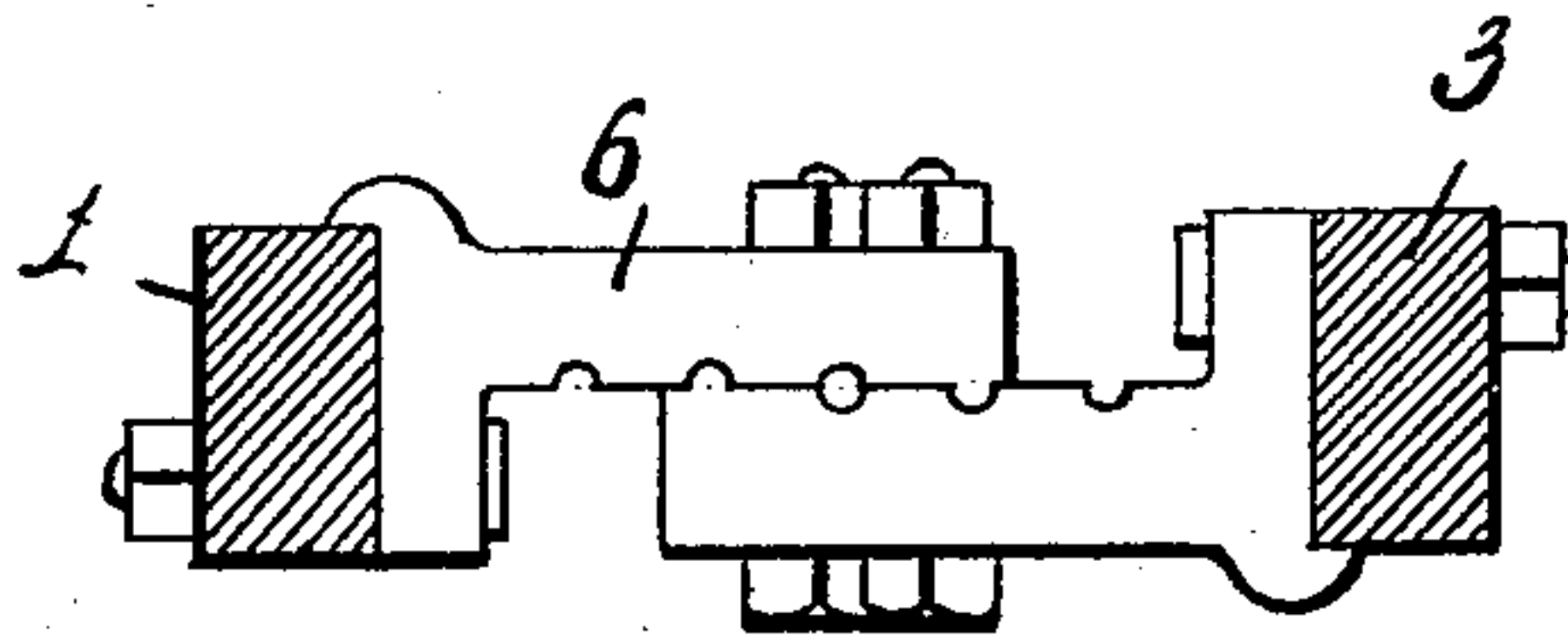
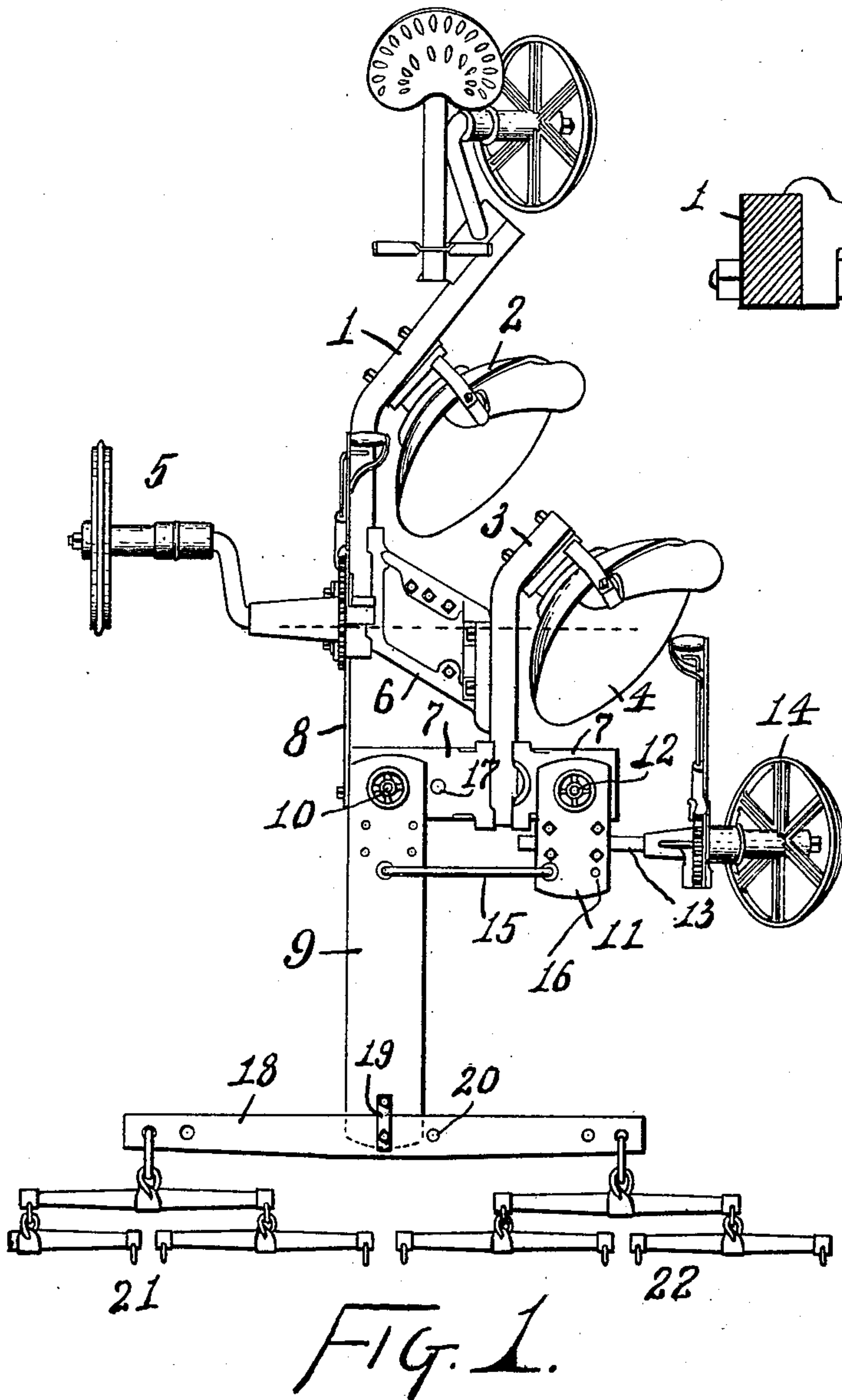


FIG. 2.

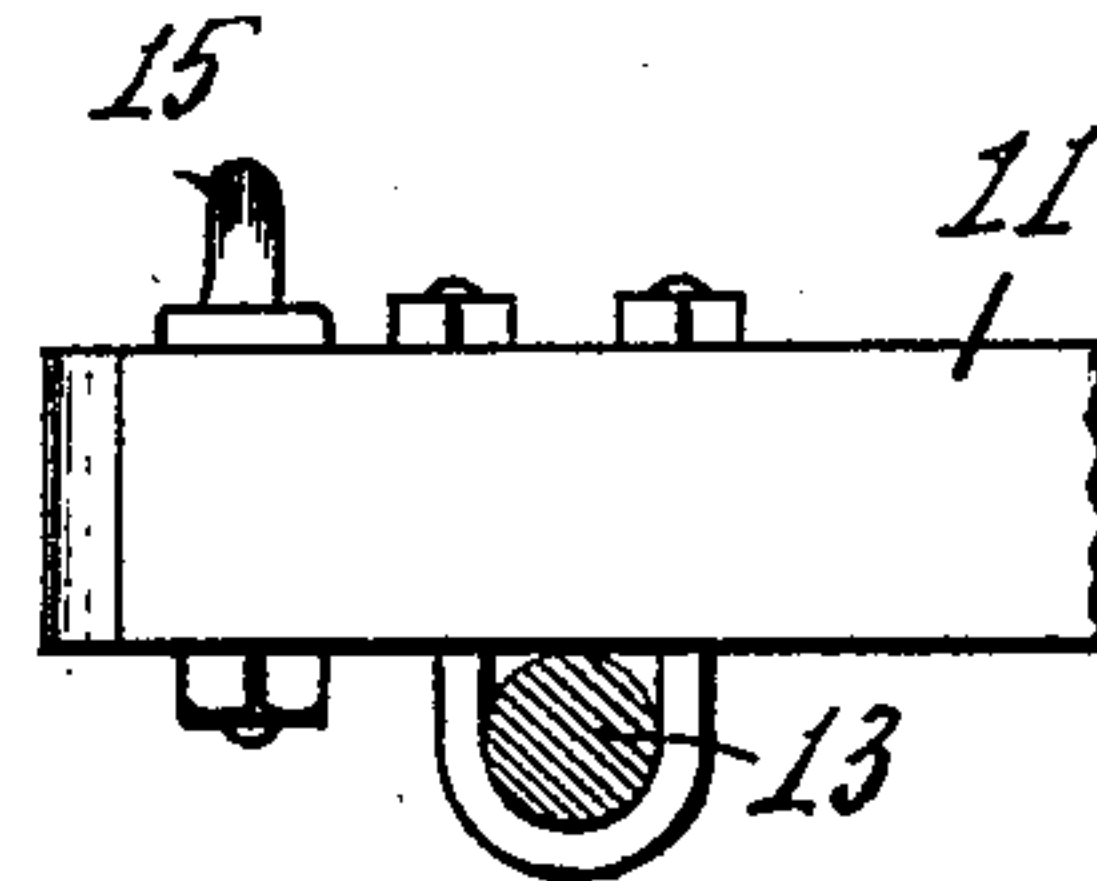


FIG. 3.

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JOHN M. W. LONG, OF HAMILTON, OHIO, ASSIGNOR TO THE LONG & ALLSTATTER COMPANY, OF SAME PLACE.

DISK PLOW.

SPECIFICATION forming part of Letters Patent No. 680,337, dated August 13, 1901.

Application filed June 10, 1901. Serial No. 63,881. (No model.)

To all whom it may concern:

Be it known that I, JOHN M. W. LONG, a citizen of the United States, residing in Hamilton, Butler county, Ohio, (post-office address, Hamilton, Ohio,) have invented certain new and useful Improvements in Disk Plows, of which the following is a specification.

This invention, pertaining to improvements in disk plows, will be readily understood from the following description, taken in connection with the accompanying drawings, in which—

Figure 1 is a plan of a double-disk plow embodying my improvement; Fig. 2, a vertical section of the two plow-beams, showing the adjustable stretcher in front elevation; and Fig. 3, a vertical transverse section of the front side-wheel axle, the sub-tongue appearing in side elevation.

In the drawings, 1 indicates the right-hand plow-beam; 2, the right-hand plow-disk mounted thereon; 3, the left-hand plow-beam, with its forward end disposed a distance in advance of the forward end of the other plow-beam; 4, the left-hand plow-disk mounted on plow-beam 3; 5, the right-hand side wheel, mounted on an adjustable cranked axle, as usual, this cranked axle being rigidly supported by the right-hand plow-beam 1; 6, a two-part stretcher disposed between and rigidly connecting the forward ends of the two plow-beams 1 and 3, this stretcher being formed of two plates firmly bolted together, one lying over the other, the outer edge of each plate being rigidly bolted to its appropriate plow-beam, the two plates being united by bolts through selective holes in series, so that the stretcher may be extended to set the two plow-beams closer to or farther from each other and then hold them in rigid union, the contacting faces of the two plates of the stretcher being provided with intermembering ribs and grooves at definite distances apart—say one inch—so that each degree of adjustment of length for the stretcher represents a definite unit of distance; 7, a stout cross-arm rigidly secured to the front end of plow-beam 3 and projecting to each side thereof; 8, a strong blade-spring or flexible bar having its front end rigidly attached to the right-hand end of arm 7 and its rear end

attached to the forward portion of plow-beam 1; 9, the "tongue," so called, though comparatively short, its rear end being united by a vertical pivot to arm 7, between the fore and aft vertical planes of the two plow-beams; 10, the vertical pivot just referred to as uniting tongue 9 to arm 7; 11, a sub-tongue, shorter than tongue 9 and disposed parallel with it and having its rear end united by a vertical pivot to the left-hand portion of arm 7; 12, the vertical pivot uniting sub-tongue 11 to arm 7; 13, the axle of the left-hand side wheel, the same being firmly but adjustably bolted under sub-tongue 11 by means of stirrups, so that the axle can be adjusted inwardly and outwardly; 14, the left-hand side wheel, mounted on axle 13; 15, a link extending across between and pivotally connecting tongue 9 and sub-tongue 11, this link lying parallel with the common plane of pivots 10 and 12, and being formed, preferably, of a bar with downwardly-turned ends engaging in pivot-eyes in the two tongues; 16, a second pivot-eye in sub-tongue 11 in the plane of the length of link 15 and adapted to be selectively engaged by the appropriate end of that link; 17, a pivot-eye in the right-hand portion of arm 7 in the common plane of pivot-points 10 and 12 and at a distance from pivot-point 10 corresponding with the distance between pivot-eye 16 and the left-hand end of link 15 in the position of the parts as shown, this pivot-eye 17 lying between pivot-points 10 and 12 and being adapted, selectively, to receive pivot 10; 18, an evener having its mid-point pivoted to the forward end of tongue 9; 19, an ordinary hammer-strap and bolt forming the ordinary pivot arrangement connecting the evener and tongue; 20, a pivot-eye in the evener to the left of pivot attachment 19 and adapted to be selectively engaged by that pivot attachment; 21, a doubletree and a pair of singletrees attached to the right-hand end of the evener, and 22, a doubletree and a pair of singletrees attached to the left-hand end of evener 18.

With the parts in the position shown in Fig. 1 the two plow-beams are set in their closest position, thus causing the two plow-disks to work in their narrowest furrowing

relationship. To increase the distance between furrows one inch, the two members of the structure 6 are unbolted and shifted transversely one notch and rebolted. This 5 firmly unites the two plow-beams in their new relationship to each other. The sidewise flexing of bar 8, which, it will be observed, constitutes, in effect, a second connection between the two plow-beams, readily permits 10 of the stated adjustment being effected at the structure 6, and in all conditions of adjustment the flexible bar 8 acts as a draft member of the general system. The structure 6 is thus adjusted one or more notches, 15 according to the relationship of furrows desired, and at the same time an appropriate sidewise adjustment is to be made in the position of side wheel 14 by shifting its axle in the stirrups binding it to subtongue 11.

20 The forward portion of the implement, as illustrated in Fig. 1, is adapted for four horses under the best conditions of draft as regards side strains. The tongue and the subtongue pivot upon arm 7, always remaining parallel by reason of the action of link 15, and during this swiveling motion the side 25 wheel 14 follows the motion of the subtongue. If three instead of four horses are to be employed, then pivot 10 is to be moved to pivot-eye 17 and the left-hand end of link 15 is to be moved to pivot-eye 16, evener 18 is to be shifted to bring pivot-eye 20 to pivot attachment 19, and a singletree alone is to take the place of the doubletree and pair of single-trees 21. 35

It is apparent that if stretcher 6 extended at right angles across between the plow-beams it would serve equally as well in adjusting the transverse distance between the disks, 40 or, otherwise stated, between the furrows produced by the disks; but when in plows of this class the disks are adjusted farther apart for wider furrowing distances then a greater amount of soil requires to be dealt with by each disk and a greater amount of room is 45 required for the soil turned from the furrow. If the rear disk were set far enough to the rear to satisfy all conditions, then the machine would be very much more extended and bulky than is desirable. By the present 50 arrangement great compactness is secured, for as the distance between the furrows is increased by separating the disks transversely they at the same time separate in a fore and aft direction, thus increasing the amount of soil-space between them to a greater degree 55 than is represented by the increase in distance between furrows. This is accomplished by the angular disposition and extension of the stretcher 6. 60

I claim as my invention—

1. In a plow, the combination, substantially as set forth, of a pair of plow-beams parallel with each other and one with its forward end in advance of that of the other, a rigid arm 65 projecting from the advance plow-beam, a flexible bar uniting said arm with the forward portion of the less advanced plow-beam, and an adjustable stretcher disposed between and rigidly uniting the two plow-beams. 70

2. In a plow, the combination, substantially as set forth, of a pair of plow-beams parallel with each other and one with its forward end in advance of that of the other, a rigid arm projecting from the advance plow-beam, a 75 flexible bar uniting said arm with the forward portion of the less advanced plow-beam, a stretcher member rigidly secured to one of the plow-beams and projecting toward the other, a stretcher member rigidly secured to 80 the remaining plow-beam and overlying the first-mentioned stretcher member, and bolts adjustably clamping said two stretcher members together.

3. In a plow, the combination, substantially 85 as set forth, of a double parallel plow-beam structure carrying the plows, a rigid transverse arm at the forward end of said structure, a tongue, a pivot uniting said tongue to said arm and adapted for engagement in 90 either of a plurality of pivot-eyes, a subtongue, a furrow-wheel supported thereby, a pivot uniting said subtongue to said arm and disposed in the common plane of said plurality of pivot-eyes, a link pivotally connect- 95 ing said tongue and subtongue at points forward of their pivotal union with said arm and adapted to have one of its ends engaged in a selective one of a plurality of pivot-eyes, and draft devices connected with said tongue. 100

4. In a plow, the combination, substantially as set forth, of a pair of plow-beams disposed substantially parallel with each other, a plow carried by each of said beams, one of said plows being in advance of the other, and an 105 adjustable stretcher disposed between and rigidly uniting the two beams, said stretcher being disposed and adjustable in a direction at an angle to said beams corresponding substantially with the angular relationship be- 110 tween the two plows due to the fact that one of the plows is in advance of the other, whereby when the stretcher is adjusted in length to increase the furrowing distance between the plows the actual distance between the 115 plows is increased to a greater extent.

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