J. FLOYD.

COTTON THINNER.

APPLICATION FILED MAR. 6, 1908.

916,431.

Patented Mar. 30, 1909.

2 SHEETS—SHEET 1.

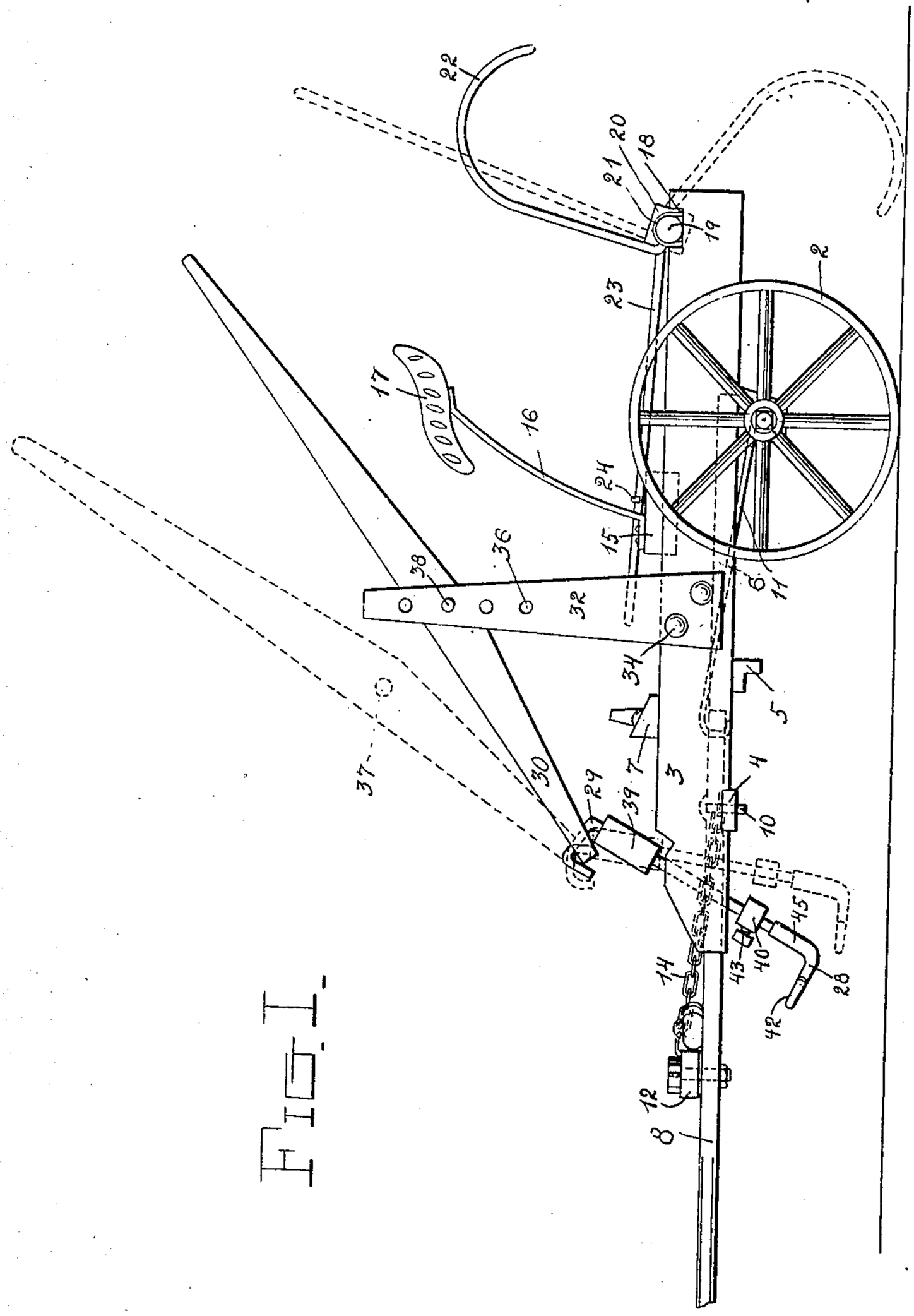

FIG. 1.

Witnesses
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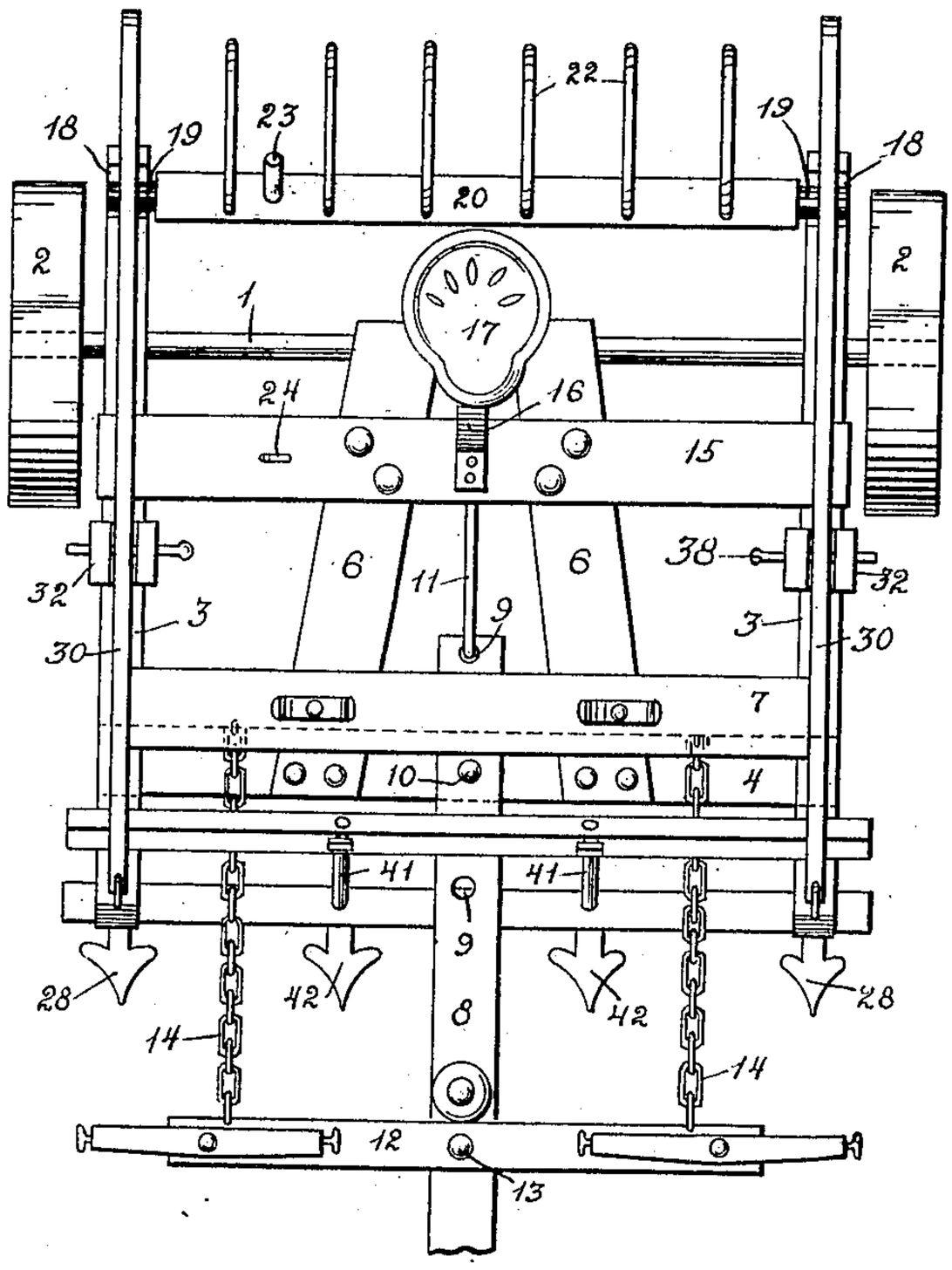

FIG. 2.

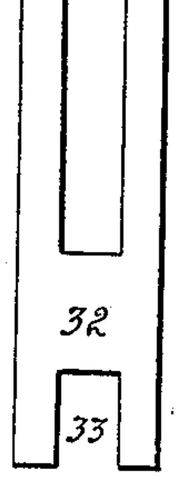

FIG. 4.

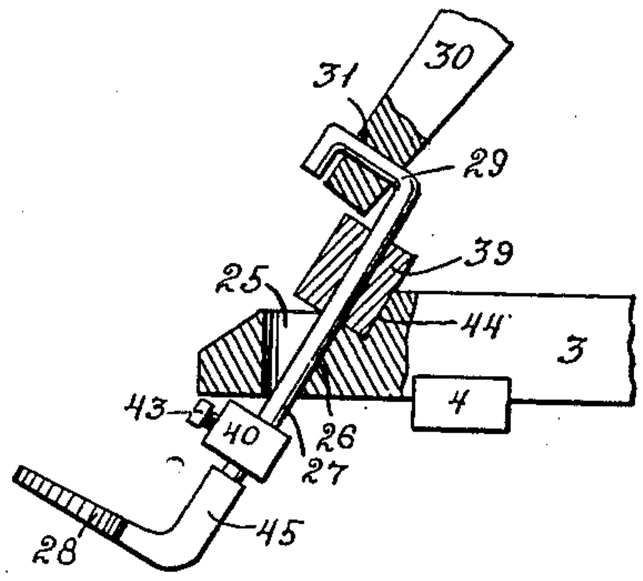

FIG. 3.

Witnesses

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UNITED STATES PATENT OFFICE.

JAMES FLOYD, OF NORTH FORT WORTH, TEXAS.

COTTON-THINNER.

No. 916,431. Specification of Letters Patent. Patented March 30, 1909.

Application filed March 6, 1908. Serial No. 419,530.

To all whom it may concern:

Be it known that I, JAMES FLOYD, who is a citizen of the United States of America, residing at North Fort Worth, county of Tarrant, Texas, United States of America, have invented certain new and useful Improvements in Cotton-Thinners, of which the following is a specification.

This invention relates to new and useful improvements in cotton thinners and it is the object of the invention to provide a novel device of this character wherein the plows or cutters may be adjusted vertically.

It is also an object of the invention to provide a novel device of this character wherein the machine is thoroughly reinforced to produce an apparatus possessing sufficient strength for performing the functions required thereof.

It is also an object of the invention to provide in combination with a novel device of this character a raking attachment which may be easily held out of operative position.

Furthermore, an object of this invention is to produce a device of the character noted, which will possess advantages in points of simplicity, efficiency and durability, proving at the same time comparatively inexpensive to manufacture.

With the foregoing and other objects in view, the invention consists in the details of construction and in the arrangement and combination of parts to be hereinafter more fully set forth and claimed.

In describing the invention in detail, reference will be had to the accompanying drawings forming part of this specification wherein like characters denote corresponding parts in the several views, in which—

Figure 1, is a view in side elevation of the invention, the raking attachment being in an inoperative position. Fig. 2, is a top plan view with the rake in operative position. Fig. 3, is a detail view partly in section. Fig. 4, is a view in elevation of a second detail of the invention.

In the drawings 1, denotes the axle having mounted therein in the usual manner the supporting wheels 2.

Secured to the axle 1, in any desired manner adjacent the supporting wheels 2, are the side bars 3, said bars being secured to the axle near their rear ends. At the front, the bars are connected one to the other by the cross strip 4, and intermediately the axle 1, and the cross strip 4, by the transverse angular bar 5. The side bars 3, the cross strip 4, and bar 5, form a rigid frame for the machine. The frame is further reinforced longitudinally by the bars 6, which are secured to the cross strip 4, and the axle 1. These bars are so arranged as to slightly converge one with the other and are intended to provide for the proper distribution of the strain of the drafting apparatus when the machine is in operation. The frame is also reinforced by a second cross strip 7, arranged above the strip 4, and slightly to the rear thereof. In other words, it may be stated that the cross strip 4, is secured to the under edge of the side bars 3, while the strip 7, is attached to the upper edges of the side bars 3.

Passing between the strips 4 and 7 and between the bars 6, is the rear portion of the draft pole 8, having therein a series of perforations 9, through one of which a king bolt 10, passes, said king bolt also passing through a suitable opening in the strip 4. By providing the draft pole with a plurality of openings it may be readily adjusted with relation to the machine as is, it is thought, plainly obvious. In order that the strain on the king bolt may be relieved or minimized, a link 11, engages the rear perforation 9, and the axle 1, said link being preferably a rigid member. It is to be stated that when adjustment is made of the draft pole 8, a link of the requisite length must be employed. The draft pole 8, is provided with the usual double tree 12, pivoted to the pole as at 13. This double tree is held against undue movement on its pivot by the connections 14, secured both to the tree 12, and the cross strip 4. The side bars are further connected by a cross strip 15, secured to the upper edges of the side bars 3, and to the bars 6. This cross strip 15, is positioned slightly in advance of the axle 1. Centrally of the cross strip 15, is fixed the standard 16, of the seat 17, both of which being of any well known construction.

Adjacent the rear of the side bars 3, are recesses 18, in which rest the reduced cylindrical ends 19, of a bar 20. The ends 19, are held against displacement from the recesses 18, by the straps 21, said straps forming in conjunction with the bases of the recesses bearings for the cylindrical ends 19. This member 20, is preferably angular in cross section and has secured to its top or upper

face the curved rake fingers 22, formed of wire or of such material as to permit the same to have a certain amount of resiliency. It is thought that the function of these rake fingers will be plainly understood. When it is desired to make these rake fingers inoperative, the handle 23 is depressed and caused to engage the catch 24, carried by the cross strip 15. This handle 23, projects from the bar 20, at such an angle as to permit the fingers 22, being lifted to an almost vertical position as is plainly indicated in Fig. 1. The catch 24, is positioned to one side of the seat 17, so that the handle 23, may be easily disengaged therefrom by the operator without the necessity of his changing his position.

The side bars 3, adjacent their forward ends are provided with openings 25, the rear walls 26, of which are inclined upwardly. Through these openings 25, pass the shanks 27, of the side plows 28. The upper portion 29, of each shank 27, is angular as more particularly shown in Fig. 3. This angular portion 29, is engaged by the end of a lever 30, said engagement being afforded by passing the angular portion 29, through a perforation 31, in the lever 30.

Projecting upwardly from each of the side bars 3, slightly in advance of the cross strip 15, is an upward or standard 32. This standard has its lower portion bifurcated as at 33, to straddle the side bar 3 and is held to the bar by the bolts 34, passing through this bifurcated portion 33, and the bar 3. The upper portion of the standard 32, is also bifurcated as indicated at 35. The members of this bifurcated portion 34, are provided with alining apertures 36, and within this bifurcated portion 35 one of the levers 30, is intended to pass, said lever 30, being provided with an opening 37, through which a suitable securing pin 38, is intended to pass, the said pin also passing through certain of the alining apertures of the bifurcated portion 35. By this means it will be readily understood that the position of the plows 28 may be readily adjusted. The shanks 27, are united by a cross bar 39, and are further connected beneath said bars 3, by a second bar 40. The bars 39 and 40, are provided with alining openings through which pass the shanks 41, of the intermediate plows 42, said plows 42, being of the same structure as the plows 28, hereinbefore referred to. The upper bar 39, may be termed the plow carrying bar, while the bar 40, may be termed the spacing bar. This spacing bar 40, is provided with a series of set screws 43, one for each plow shank, and is intended to engage the shanks 45 and hold the same against rotation. These set screws, therefore, hold the plows 28 and 42, for without the use of these set screws, the plows or the shanks thereof would have a tendency to rotate. This set screw arrangement also provides for the further advantage of adjusting the plows so as to present them angularly to the surface, should the requirements so necessitate.

The levers 30, not only afford an adjustment of the plows vertically but permit the plows to be thrown into an inoperative position as is shown in the detail Fig. 3, and it is for this purpose that the rear walls 26, of the openings 25, are inclined upwardly as said levers facilitate the plows in assuming their inoperative position.

In order that sufficient movement may be given the plow carrying bar 39, the side bars 3, are notched as at 44, to receive the plow carrying bar 39, particularly shown in Fig. 3.

The attachment of the levers 30, and the standards 32, is intermediate the length of the levers and these levers 30, extend rearwardly a sufficient distance as to be within easy reach of the operator on the seat 17.

The plows 28 and 42, are each similarly constructed and may be as desired, it only being necessary that the shanks of the plows be rigidly secured thereto.

What I claim is:—

1. A device of the character described comprising a carrying frame, plows having shank members passing upwardly loosely through said frame, transverse bar members applied to said shank members, above and below said frame respectively, and lever suspending and manipulating means for said plow shanks.

2. A device of the character described comprising a carrying frame having its side members provided with openings near their forward ends, having rearwardly and upwardly inclined walls, plows having their shanks passing through said openings and adapted to rest upon said inclined walls, transverse bars effecting connection between said plow shanks above and below said carrying frame and arranged apart sufficiently to allow of disposing said plow shanks at an inclination thereto and a suspending and manipulating lever for said plows and shanks.

3. In a device of the character described, a frame having perforations adjacent one end, a carrying bar positioned above the frame, plows, shanks carried by the plows secured to the carrier bar, certain of the shanks passing through the perforations of the frame.

4. A device of the character described embracing a carrying frame having its side bar members provided with openings having upwardly and rearwardly inclined walls, said side bar members also having angular notches in their upper surfaces, at the upper rear edges of the inclined walls, plows having shank members extending through said

openings, suspending and manipulating levers for said shank members and plows, and transverse connecting bars between said plow shank members arranged above and below said frame side bar members, the upper one of said transverse bars adapted to be seated in said angular notches.

5. A device of the character described embracing a carrying frame, plows having shank members extending through the side bar members of said frame and having upper angular or bent end portions, suspending and manipulating levers connected to said upper bent or angular end portions of said plow shank members and transverse connecting bars between said plow shank members, arranged above and below said carrying frame.

6. A device of the character described, comprising a carrying frame, plows having shank members extending through the side bar members of said frame, plow shank suspending and manipulating levers and a transverse connecting bar between said plow shank members equipped with means for the adjustment or retention of said shank members in relatively fixed position, said connecting bar being arranged below said carrying frame, and connecting means between said shank members, arranged above said supporting frame.

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

JAMES FLOYD.

Witnesses:
M. D. PRIEST,
W. R. SAWYERS.