No. 778,999. PATENTED JAN. 3, 1905.

C. H. PELTON.

PRESS DRILL.

APPLICATION FILED FEB. 23, 1904.

4 SHEETS—SHEET 1.

Fig. 7.

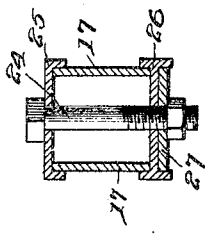


Fig. 1.

Fig. 6.

Witnesses

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Irvine Miller.

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4 SHEETS—SHEET 2.

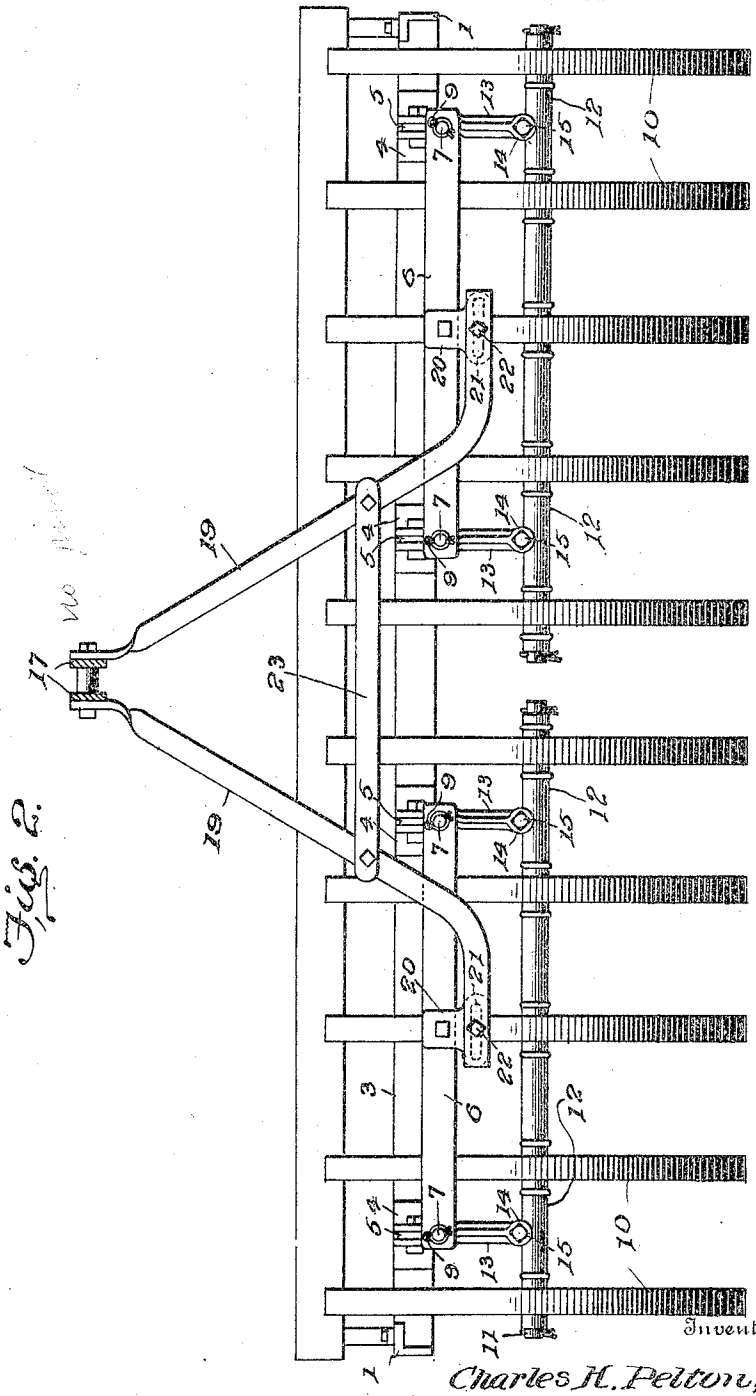


Fig. 2.

Witnesses

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Irvine Miller

Inventor

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4 SHEETS—SHEET 3.

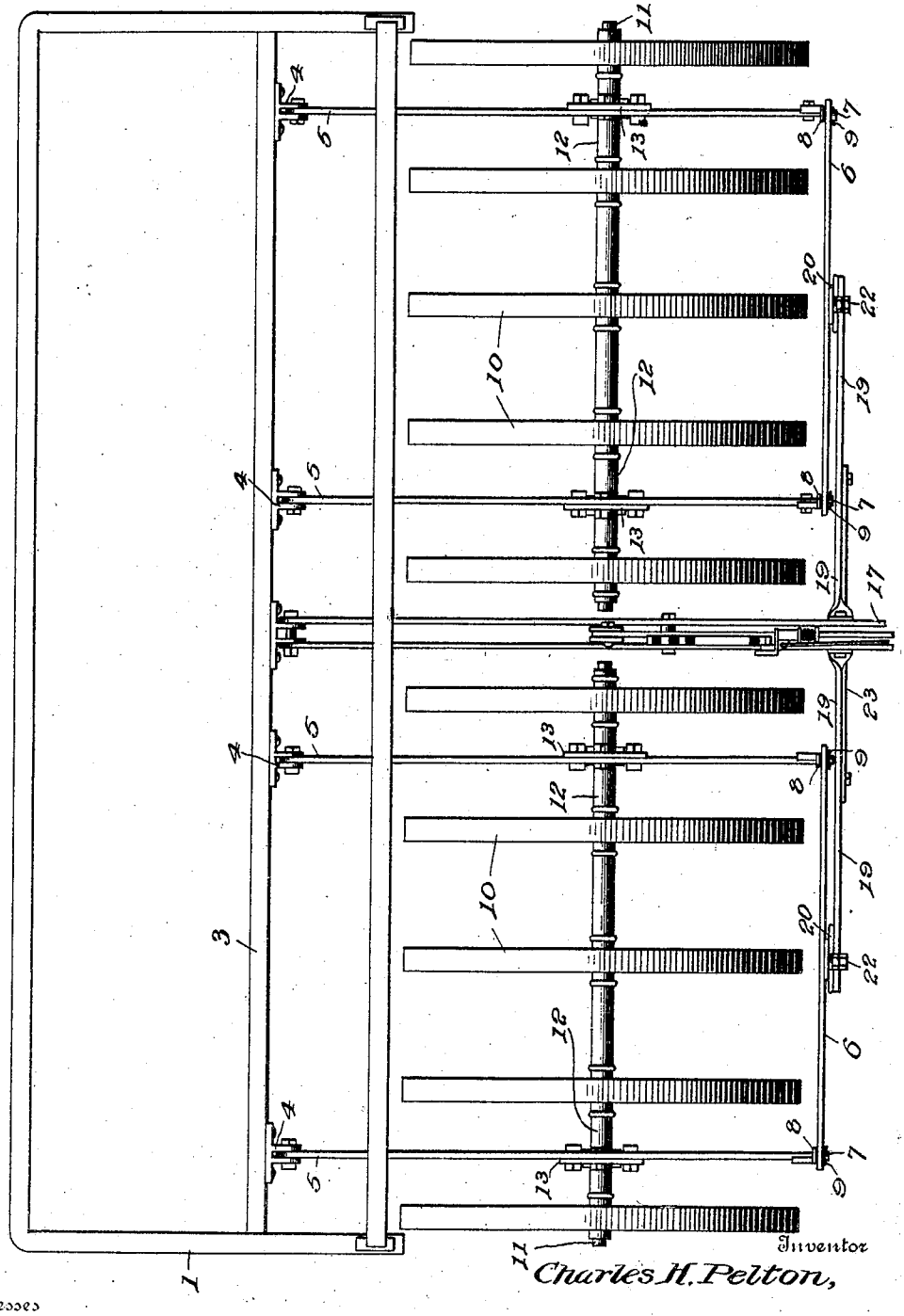


Fig. 3.

Witnesses

G. Howard Walmsley

Louise Miller.

Inventor

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4 SHEETS—SHEET 4.

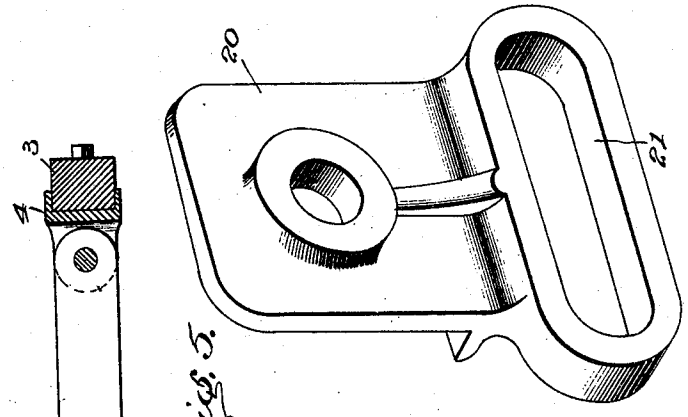


Fig. 5.

Fig. 4.

Witnesses

G. Howard Walmsley.

Irvine Miller.

Inventor

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PHOTO LITHOGRAPHED BY JACKETT & WILHELMS LITHO. & PTG. CO. NEW YORK.

No. 778,999. Patented January 3, 1905.

UNITED STATES PATENT OFFICE.

CHARLES H. PELTON, OF SPRINGFIELD, OHIO, ASSIGNOR TO THE THOMAS MANUFACTURING COMPANY, OF SPRINGFIELD, OHIO, A CORPORATION OF OHIO.

PRESS-DRILL.

SPECIFICATION forming part of Letters Patent No. 778,999, dated January 3, 1905.

Application filed February 23, 1904. Serial No. 194,690.

To all whom it may concern:

Be it known that I, CHARLES H. PELTON, a citizen of the United States, residing at Springfield, in the county of Clark and State of Ohio, have invented certain new and useful Improvements in Press-Drills, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to press-drills, and has for its object to provide a construction whereby the press-wheels shall be adapted to conform in their travel to the inequalities of the soil, while at the same time the axles and supporting-frames are freed from undue strain.

To these ends my invention consists in certain novel features which I will now proceed to describe and will then particularly point out in the claims.

In the accompanying drawings, Figure 1 is a perspective view of a press-drill embodying my invention in one form. Fig. 2 is a rear elevation of the same. Fig. 3 is a plan view. Fig. 4 is a vertical section, and Fig. 5 is a detail perspective view of one of the parts. In Figs. 2, 3, and 4 the various parts carried by the front frame are omitted. Figs. 6 and 7 are detail views of the foot-rest.

In the said drawings, 1 indicates the front frame, rigidly connected to the tongue 2 and carrying the seeding devices, which may be of any approved construction. To the rear of this front frame are hinged the frames which carry the press-wheels. In the present instance I have shown two press-wheel frames, although the number may be varied.

3 indicates a cross-bar of the front frame 1, provided with lugs or brackets 4, to which are pivoted the forward ends of bars 5, which constitute the side or longitudinal members of the wheel-frames. Each wheel-frame also comprises a transverse member or rear cross-piece 6, connecting the rear ends of the side members 5. This connection is a pivotal one, the rear end of each side member 5 being provided with a pivot-stud 7, which may be formed on a cap 8, secured to the rear end of the member 5. The member 6 is provided with an aperture at each end to receive the pivot-stud 7, and a pin 9 or other suitable securing device is employed to hold the cross-bar 6 in position relatively to the other frame members.

Each wheel-frame is provided with a plurality of press-wheels 10, of which any suitable number may be employed, corresponding of course with the number of furrow-openers with which the front frame is provided. In the present instance I have shown in Fig. 1 a structure embodying eight press-wheels, four to each frame, while in Figs. 2 and 3 I have shown a structure having ten press-wheels, five to each frame. Each group of press-wheels is mounted on an axle 11, and said axle has a bearing in sleeves 12, there being two of these sleeve-bearings for each axle, and each sleeve-bearing being pivotally connected to the corresponding longitudinal member 5 of the corresponding wheel-frame. I prefer for this purpose to provide each member 5 with a downwardly-extending bracket 13, having at its lower end lugs 14, apertured to receive a pivot-bolt 15. The bearing-sleeve 12 is provided with a similar lug 16, fitting between lugs 14 and having an aperture through which the pivot-bolt 15 also passes. It will be observed that the pivotal axes of the connections between the bearing-sleeves and frame are transverse to the axle and longitudinal with respect to the machine.

The seat-bar (indicated by the reference-numeral 17) is pivotally connected at its front end to the front frame, has a seat 18 adjustable thereon longitudinal at its rear end, and is provided with supporting-bars 19, connected at their upper ends to the seat-bar and at their lower ends to the wheel-frames. This latter connection is preferably effected by providing the rear cross-bar 6 of each wheel-frame with a bracket 20, secured thereon and provided with a longitudinal slot 21, extending in the direction of the length of the member 6 and adapted to receive a bolt 22, which connects it to the end of the corresponding supporting-bar 19. The bolt 22 plays freely in the slot 21 and permits free relative movement of the wheel-frames, while at the same time the weight of the operator is duly trans-

ferred to said wheel-frames and distributed to the wheels. The supporting-bars 19 are connected by a cross-bar 23.

In press-drills of this class as heretofore constructed it has been the practice to mount the press-wheels in groups in independent frames to permit the groups to adapt themselves more or less to the inequalities of the soil, the weight of the driver being distributed to the frames by suitable equalizing devices. So far as I am aware, however, each wheel-frame has been a substantially rigid frame, having the axle-bearings rigidly connected therewith, so that the several press-wheels of each group are maintained in substantially the same horizontal plane, the axle being horizontal and the bearing-surfaces of the wheels of each group being also horizontal, so that the individual groups of wheels are not adapted to conform to the inequalities of the soil. By reason of the construction which I have devised the axle of each group is free to conform to the inequalities of the soil, one end being capable of tilting up, while the other end tilts downward, this tilting action being permitted by reason of the pivotal connections between the longitudinal and transverse members of the wheel-frame and the pivotal connections between the axle-bearings and the wheel-frame. The axles are thus free to adjust themselves to the surface of the ground without racking or straining the wheel-frames and the weight of the operator is at the same time evenly distributed to the several wheels of each group.

In Figs. 1, 6, and 7 I have shown an improved form of foot-rest, which is adapted for ready adjustment both vertically and longitudinally. In this construction the seat-bar 17 is composed of two parallel bars suitably spaced apart. 24 indicates a bolt which secures the supporting-bar of the foot-rest in place on the seat-bar, said bar being provided with clips 25 and 26, fitting over the upper and lower edges of the seat-bar, respectively, the bolt 24 passing down between the two members of the seat-bar. 27 indicates the foot-rest-supporting bar, the upper end of which is so bent as to fit against the under side of the under clip 26, the bolt 24 passing through the same and securing the foot-rest bar in position. By sliding the clips, bolt, and supporting-bar longitudinally on the seat-bar the foot-rest may be adjusted nearer to or farther from the seat. The body portion of the supporting-bar 27 extends diagonally downward and forward and has the foot-plate 28 secured on its lower end, so as to be adjustable longitudinally of the supporting-bar, thus bringing the foot-plate closer to or farther from the seat independently of the adjustment of the supporting-bar and raising or lowering the foot-plate to give it the desired height. The construction which I prefer for this purpose is that shown, in which the foot-plate has a seat or recess 29, in which the supporting-bar 27 fits, the foot-plate being provided with a stud-bolt 30 and clamping-nut 31 and the supporting-bar being provided with a plurality of apertures 32, spaced along the lower part of the same at suitable intervals at different distances from the lower end of the bar. The bolt 30 may be passed through any desired one of the apertures 32, and the parts may then be secured in position by tightening up the clamping-nut 31.

I do not wish to be understood as limiting myself strictly to the precise details of construction hereinbefore described, and shown in the accompanying drawings, as the same may obviously be modified without departing from the principle of my invention.

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

1. In a press-drill, a front frame, in combination with a wheel-frame having longitudinal members pivoted to the front frame at their forward ends on a fixed transverse pivotal axis and independently movable vertically, an axle provided with a plurality of press-wheels, and bearings for said axle pivotally connected to the wheel-frame, substantially as described.

2. In a press-drill, a front frame, in combination with a wheel-frame having longitudinal members pivoted to the front frame at their forward ends on a fixed transverse pivotal axis and independently movable vertically, an axle provided with a plurality of press-wheels, and bearings for said axle pivotally connected to the wheel-frame, the pivots of said bearings being transverse to the axle and substantially horizontal, substantially as described.

3. In a press-drill, a front frame, in combination with a wheel-frame having longitudinal members pivoted to the front frame at their forward ends on a fixed transverse pivotal axis and independently movable vertically, an axle provided with a plurality of press-wheels, and bearings for said axle pivotally connected to the longitudinal members of the wheel-frame, substantially as described.

4. In a press-drill, a front frame, in combination with a wheel-frame having longitudinal members pivoted to the front frame at their forward ends and independently movable vertically, an axle provided with a plurality of press-wheels, and bearings for said axle pivotally connected to the longitudinal members of the wheel-frame, the pivots being transverse to the axle and substantially horizontal, substantially as described.

5. In a press-drill, a front frame, in combination with a plurality of wheel-frames, each wheel-frame having longitudinal members pivoted to the front frame at their forward ends and independently movable vertically, a plurality of axles, each axle being provided with a plurality of press-wheels and having bearings pivotally connected to the longitu-

dinal members of the corresponding wheel-frame, and a seat-bar pivoted to the front frame and having an equalized connection with the longitudinal members of the wheel-frames, substantially as described.

6. In a press-drill, a front frame, in combination with two wheel-frames, each composed of two longitudinal members pivoted to the front frame at their forward ends and independently movable vertically, and a transverse member pivoted at its ends to the longitudinal members, an axle for each wheel-frame, provided with a plurality of press-wheels, and having bearings pivotally connected to the longitudinal members of said frame, a seat-bar pivoted to the front frame, and supporting-bars extending from the seat-bar to the transverse members of the wheel-frames and having a pivotal connection therewith, substantially as described.

7. In a press-drill, a front frame, in combination with two wheel-frames, each composed of two longitudinal members pivoted to the front frame at their forward ends and independently movable vertically, and a transverse member pivoted at its ends to the longitudinal members, an axle for each wheel-frame, provided with a plurality of press-wheels, and having bearings pivotally connected to the longitudinal members of said frame, a seat-bar pivoted to the front frame, and supporting-bars extending from the seat-bar to the transverse members of the wheel-frames and having a pivotal and sliding connection therewith, substantially as described.

8. In a press-drill of the character described, the combination, with a front frame, of a wheel-frame comprising two longitudinal members pivoted to the front frame at their forward ends and provided at their rear ends with rearwardly-extending pivot-studs, and a transverse member having its ends mounted on said pivot-studs, brackets depending from the longitudinal members of the frame, and an axle provided with a plurality of press-wheels and having bearing-sleeves pivotally connected with said brackets by longitudinal pivots, substantially as described.

9. In a press-drill of the character described, the combination, with a front frame, of two wheel-frames, each comprising two longitudinal members pivoted at their forward ends to the front frame, and a transverse member pivoted at its ends to the longitudinal members, each transverse member being provided with a bracket having a longitudinal slot, a seat-bar pivoted to the front frame, and supporting-bars secured to the seat-bar at their upper ends and provided at their lower ends with bolts engaging the slots of the brackets, each wheel-frame being provided with an axle carrying a plurality of press-wheels and having bearings pivotally connected to the longitudinal members of the frame, substantially as described.

10. In a press-drill, a seat-bar provided with a seat, in combination with a foot-rest comprising a supporting-bar longitudinally adjustable on the seat-bar at its upper end, and a foot-plate comprising lateral foot-receiving portions and an intermediate seat or recess fitting and vertically adjustable on the lower end of the supporting-bar, and means for securing the same in position after adjustment, substantially as described.

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

CHARLES H. PELTON.

Witnesses:
E. O. HAGAN,
IRVINE MILLER.