

No. 646,235.

Patented Mar. 27, 1900.

J. L. PATE.  
LISTER ATTACHMENT FOR PLANTERS.  
(Application filed Dec. 18, 1899.)

(No Model.)

FIG.1.

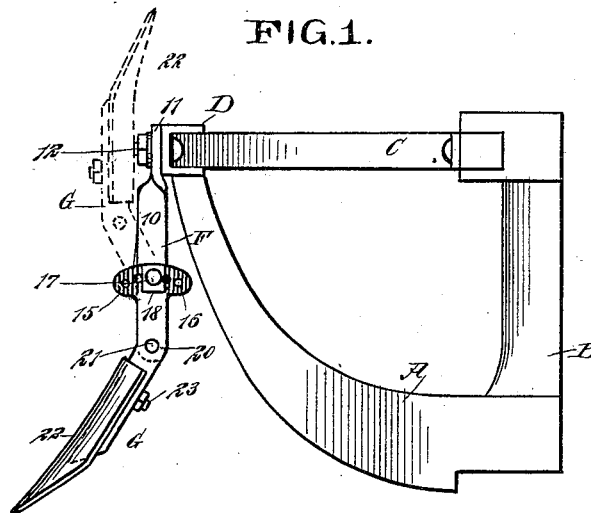


FIG.2.

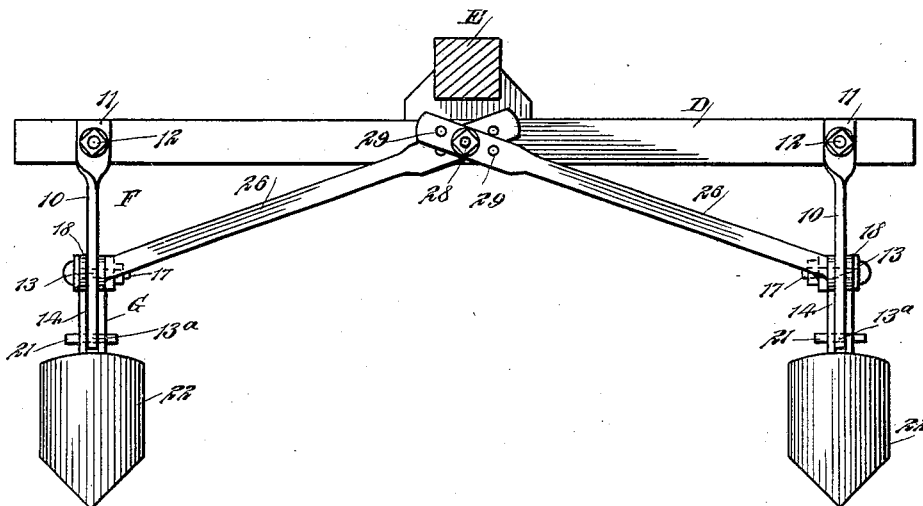
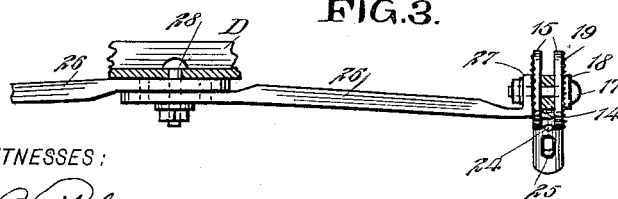


FIG.3.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

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## LISTER ATTACHMENT FOR PLANTERS.

SPECIFICATION forming part of Letters Patent No. 646,235, dated March 27, 1900.

Application filed December 18, 1899. Serial No. 740,706. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN LUTHUR PATE, a citizen of the United States, residing at Wauneta, in the county of Chautauqua and State of Kansas, have invented a new and Improved Lister Attachment for Planters, of which the following is a full, clear, and exact description.

One object of the invention is to provide lister-standards which are constructed in adjustable and folding sections, so that the shovels or shares used upon the standards may be given any desired forward or rearward inclination or be lifted and held lifted out of possible engagement with the ground, the lister-standards being of such construction that they may be readily attached to the frame of any planter.

Another object of the invention is to so proportion the lister-standards relative to the runners or shares carried thereby that they will make a deep furrow for the reception of seed, thus leaving a ridge at each side of a planted row, the earth in which ridges in the cultivation of the young plants may be directed to their stalks and roots, leaving the ground comparatively level.

Another object of the invention is to provide an attachment of the character above described which will not in the slightest degree interfere with the usual operation of the planter nor with any check-row appliance which may be used.

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 characters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of the runner portion of a planter, illustrating the improvement applied thereto, the shovel or share fastenings being shown in both upper and lower positions. Fig. 2 is a vertical section through the tongue of a planter, showing the front beam of the frame in side elevation and the improved lister-standards attached thereto; and Fig. 3 is a horizontal section through the upper section of a lister-standard and through a portion of the front beam of the planter-frame.

A represents the runner or furrow-opener of a corn-planter, C a portion of the frame supporting the runner, and B the boot adapted to conduct seed to the bottom portion of the runner.

D represents the front cross-bar of a planter-frame, which is shown as attached to a tongue or pole E.

The attachment consists, primarily, of two lister-standards or beams that are adapted to carry shovels, shares, or the like for the purpose of opening furrows for the reception of the seed. These lister-standards are located in front of the runners A and are consequently placed one near each end of the front cross-bar D of the planter-frame, as shown in Fig. 2. Each lister-standard comprises an upper section F and a lower section G. The upper section F of the standard has the longitudinal edge of its body portion presented to the front and to the rear, and the material of the upper section F of each standard is twisted or otherwise manipulated to form a flat head 11. These heads are attached to the cross-beam D of the planter-frame by means of bolts 12 or equivalent devices. The body portion 10 of each upper section F of a lister-standard is practically straight and is provided between its ends with an aperture 13 and at or near the lower end with a second aperture 13<sup>a</sup>, as shown in dotted lines in Fig. 2. The lower section G of each lister-standard is angular, the upper portion being straight and the lower portion inclined downwardly in the direction of the ground. The straight portion of each lower section G of a lister-standard is bifurcated, and the lower portions of the upper members F of the said lister-standards are received between the bifurcated portions of the lower sections G, the slots producing the bifurcations in the lower sections G being designated as 14 in the drawings. Each upper member of each lower section G of a lister-standard is provided with a transverse head 15, preferably of segmental shape, as shown in Figs. 1 and 3, and each of these heads 15 is provided with a series of segmentally-arranged apertures 16. The lower sections G are attached to the upper sections F of the lister-standards by means of pins 17, which are passed through the apertures 16 in the heads of the lower sections

and through the upper openings 13 in the upper sections F of the lister-standards, the pins 17 being provided with suitable heads at one end and nuts at their opposite ends.

5 Each pin 17 is provided with a washer 18, adjacent to its head, and the outer surfaces of the heads 15 of the lower sections G of the lister-standards are roughened or vertically serrated, and the serrations on the outer faces

10 of the outer heads of the said lower sections G mate with serrations on the washers 18, carried by the pins 17. Serrations 19 are made on the outer faces of both heads 15 of a lister-standard, as these standards are interchangeable.

15 The lower sections G of the lister-standards are further connected with the upper sections F by breakable pins 21, which are passed through apertures 20 in the said lower sections of the standards and through the aper-

20 tures 13<sup>a</sup> in the lower portions of the upper sections F of the standards, so that in the event the shovels 22, shares, or other openers employed and attached to the lower sections of the standards should meet with an ob-

25 struction, so that they cannot pass, these pins 21 will break and permit the shovels and the lower sections to swing backward under the planter. The shovels may be placed in the dotted position shown in Fig. 1 when they are

30 not needed. It is obvious that any desired inclination may be given to the shovels by passing the pins 17 through any one of the several apertures 16 in the heads of the shovel-carrying sections G of the standards.

35 The shovels 22 are shown as attached to the lower sections of the standards by bolts 23; but any suitable attachment may be employed, and in Fig. 3 these lower sections G of the lister-standards are shown as provided

40 each with an aperture 24 and a slot 25. The lister-standards are braced at their upper sections F by means of bars 26, the outer ends of which are at an angle to the body, and the pins 17, connecting the upper and the lower

45 sections of the lister-standards, are also employed to attach the braces 26 to the said standards, as shown in Figs. 2 and 3, the said pins passing through flanges 27 on the braces 26. The braces 26 cross each other immedi-

50 ately below the tongue or pole E and are adjustably attached at their inner ends to the front cross-beam D of the planter-frame, the inner ends of the braces 26 being provided with apertures 29, adapted to receive a pin

55 or bolt 28. Thus the attachment may be applied to any planter whether the runners be close together or far apart.

The length of the lister-standards is such that the points of the shovels or shares 22 em-

60 ployed will extend quite a distance below the level of the bottom portion of the runners A, so that while located in advance of the runners they will open an exceedingly-deep furrow, and when the earth falls upon the seed

65 a ridge will be left at each side of the furrow, and the earth constituting these ridges may at a subsequent cultivation be thrown

upon the young plants in a beneficial manner, protecting them at their roots and at the same time rendering the field practically level. 70

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

1. An attachment to planters, consisting of a standard constructed in two sections pivotally and adjustably connected, the upper section being adapted for attachment to the frame of a planter and having a straight body the lower section being angular, the upper portion of said lower section being straight 80 and the lower portion inclined downwardly, and a brace connecting with said standard where its parts are pivotally connected and adapted for attachment to the frame of the planter, substantially as described. 85

2. An attachment for planters, consisting of a standard constructed in two sections, an upper section adapted for attachment to a planter-frame and having a straight body, and a lower angular section having a straight 90 upper portion and a downwardly-inclined lower portion, the upper straight portion of the lower section being bifurcated to receive the upper section, the members at the said bifurcated portion being provided with hori- 95 zontally-elongated heads having a series of segmentally-arranged apertures therein, the outer faces of the said heads being roughened, a pivot-pin passed through registering apertures in the heads of the lower section 100 and through the body portion of the upper section, a washer carried by the pivot-pin and provided with a roughened inner face adapted to engage with the roughened surface of one of the said heads of the lower section of the 105 standard, and a share or shovel carried by the lower inclined portion of the lower section of the standard, substantially as described.

3. An attachment for planters, consisting 110 of a standard constructed in two sections, an upper section adapted for attachment to a planter-frame and having a straight body, and a lower angular section having a straight upper portion and a downwardly-inclined 115 lower portion, the upper straight portion of the lower section being bifurcated to receive the upper section, the members at the said bifurcated portion being provided with hori- 120 zontally-elongated heads having a series of segmentally-arranged apertures therein, the outer faces of the said heads being roughened, a pivot-pin passed through registering apertures in the heads of the lower section and through the body portion of the upper sec- 125 tion, a washer carried by the pivot-pin and provided with a roughened inner face adapted to engage with the roughened surface of one of the said heads of the lower section of the standard, a breakable connection between 130 the two sections of the standard below their pivoted connection, a share or shovel carried by the lower inclined portion of the lower section of the standard and extending be-

yond the bottom of the runner of the planter to which the attachment is to be made, and a brace connecting said standard with the planter-frame, substantially as described.

- 5 4. The combination, with the front beam of a planter and its pole or tongue, of lister-standards attached to the said front beam near each of its ends and extending downwardly therefrom, each of said lister-standards being located in front of the runner of the planter and comprising an upper section rigidly secured to the said frame-beam, and a lower section having adjustable and pivotal connection with the upper section of the lister-standard, and likewise a breakable connection, and braces connected with the said standards where their parts are pivotally connected, which braces cross each other at their inner ends and are adjustably secured to the frame-beam beneath the tongue or pole of the planter, as described.

- 10 5. The combination with the front beam of a planter and the runners, of lister-standards attached to the said front beam near each of its ends, and extending downwardly therefrom, each of said standards being located in front of the corresponding runner of the planter and comprising an upper section having a straight body rigidly secured to the said

beam of the planter, and a lower angular section having means for attachment to a share or shovel, the upper part of said lower section having adjustable and pivoted connection with the upper section, and braces connected at one end with the said standards and adjustably connected at their other ends with the said front beam of the planter; substantially as described.

6. The combination with a planter-frame provided with runners, of a standard adapted to carry a share or shovel and constructed in two sections pivotally and adjustably connected, the upper section being adapted for attachment at its upper end to the planter-frame, and a brace provided at one end with a flange through which the pivot-pin connecting the sections of the standard is adapted to pass, to connect the brace to the standard, the other end of said brace being adjustably connected with the planter-frame, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN LUTHUR PATE.

Witnesses:

W. J. KIRBY,

C. P. B. KNIGHT.