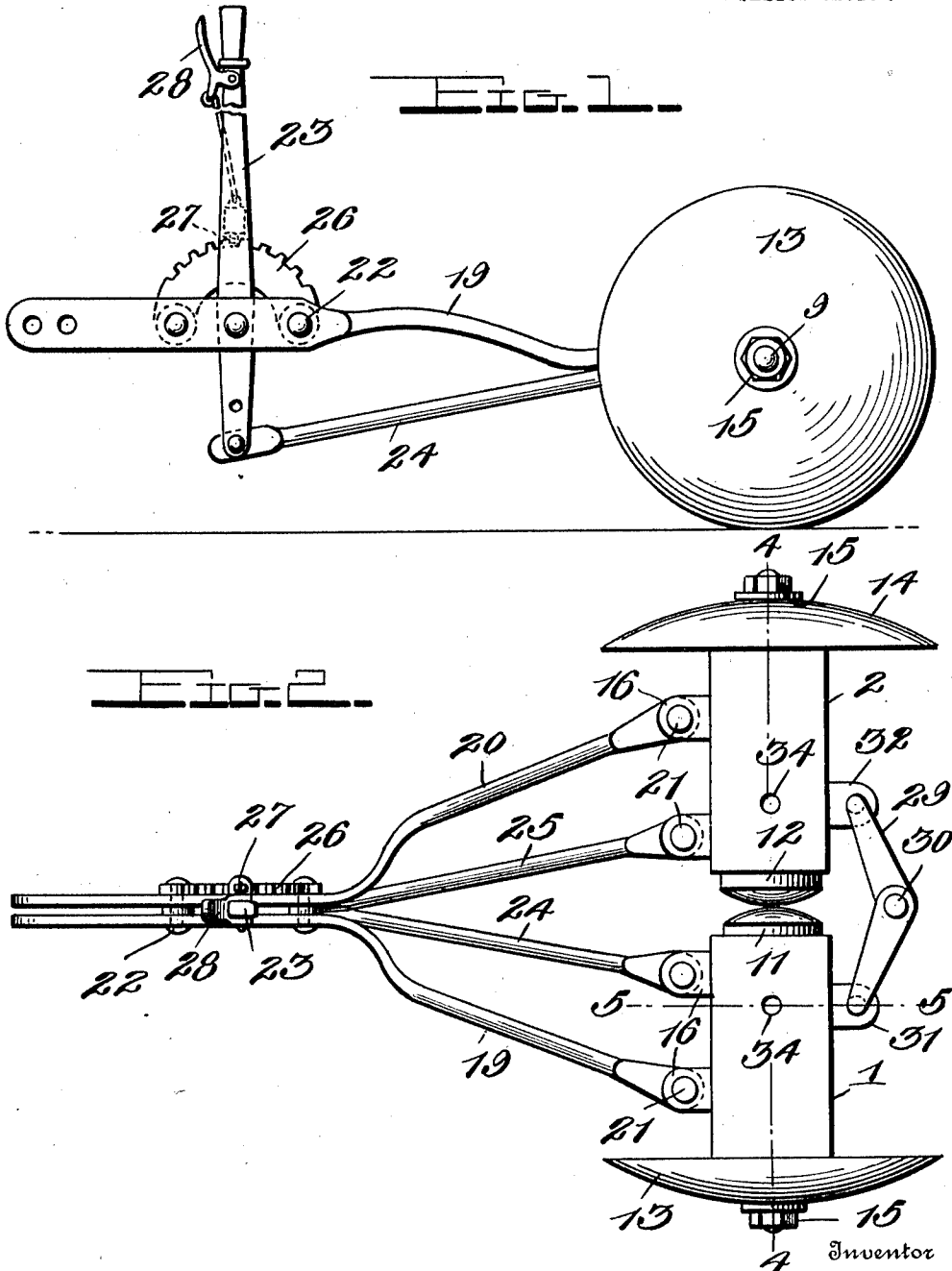


W. A. STEPHENS.
COVERING ATTACHMENT FOR LISTERS.
APPLICATION FILED AUG. 12, 1911.

1,012,287.

Patented Dec. 19, 1911.

2 SHEETS-SHEET 1.



Witnesses

Chas. L. Griebauer.
L. H. Ellis.

W.A. Stephens,

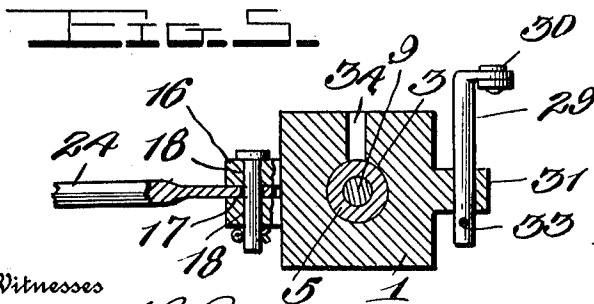
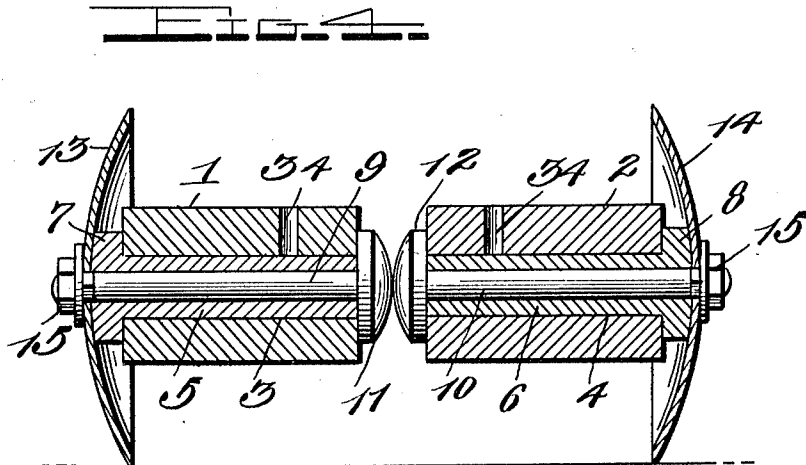
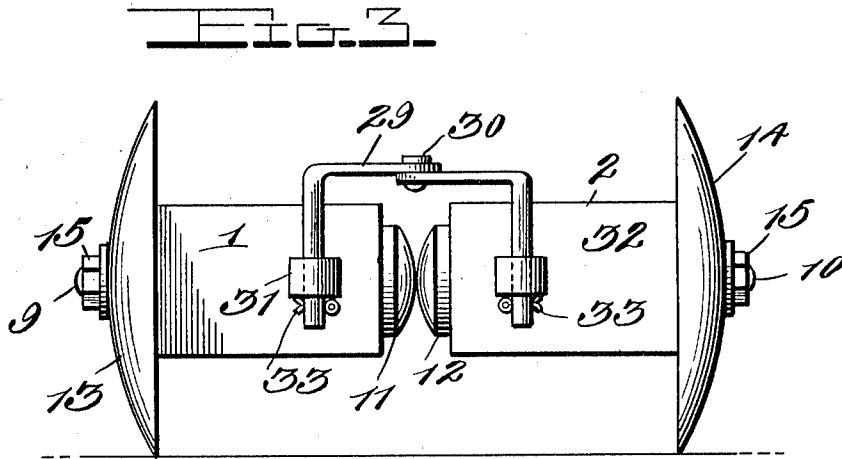
By Watson E. Coleman.
Attorney

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Inventor

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UNITED STATES PATENT OFFICE.

WILLIAM A. STEPHENS, OF NASHVILLE, KANSAS.

COVERING ATTACHMENT FOR LISTERS.

1,012,287.

Specification of Letters Patent.

Patented Dec. 19, 1911.

Application filed August 12, 1911. Serial No. 643,748.

To all whom it may concern:

Be it known that I, WILLIAM A. STEPHENS, a citizen of the United States, residing at Nashville, in the county of Kingman and State of Kansas, have invented certain new and useful Improvements in Covering Attachments for Listers, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to new and useful improvements in attachments for listers and more particularly to a covering attachment therefor, and my object is to provide a device of this character which may be readily and quickly attached to a lister of any design, whatsoever, and which will effectively cover the seed planted by the lister.

A further object of the invention resides in the provision of a device having a pair of covering disks thereon and means for the adjustment of said disks to various angles.

A further object of the invention resides in the provision of a device formed of a pair of sections, upon which are rotatably supported the covering disks and means for the adjustment of said sections at angles to one another to correspondingly dispose the covering disks at such angles.

A still further object of the invention resides in the provision of a sectional arch between the sections of the device, which sections of the arch are pivotally connected with one another to compensate for the disposing of the sections of the device at various angles to one another.

A still further object of the invention resides in the provision of a device which is extremely simple in construction, thereby readily and cheaply manufactured, and one which is very effective and useful in operation.

With these and other objects in view, my invention consists in the novel features of construction, combination and arrangement of parts as will be hereinafter referred to and more particularly pointed out in the specification and claims.

In the accompanying drawings forming a part of this application, Figure 1 is a side elevation of the device. Fig. 2 is a top plan view thereof. Fig. 3 is a rear elevation.

Fig. 4 is a section as seen on line 4—4, Fig. 2, and, Fig. 5 is a section through the device as seen on line 5—5, Fig. 2.

In carrying out my invention, I shall refer to the drawings in which similar reference characters designate corresponding parts throughout the several views and in which 1 and 2 indicate, respectively, a pair of boxings square in cross section and provided with the central horizontal bores 3 and 4, respectively. Disposed in said bores 3 and 4, so as to rotate therein, are the sleeves 5 and 6, the outer ends of which are provided with the integral heads or washers 7 and 8, respectively, the bores of said sleeves being somewhat restricted and extending completely through the heads thereof, and extending through the bores of said sleeves, are the spindles 9 and 10 which are, respectively, provided on their inner ends with the integral heads or washers 11 and 12. The outer ends of said spindles project a short distance beyond the outer faces of the head 7, and mounted thereon, are the covering disks 13 and 14, respectively. The extreme outer ends of said spindles are threaded and have engaged therewith, the nuts 15, whereby said disks may be securely held thereon and the spindles and sleeves retained in position within the boxings.

Each of the boxings or members 1 and 2, is provided on its front face with a pair of lugs 16, which lugs are slotted, as shown at 17, and each is provided with an opening 18 which extends vertically therethrough. A pair of bars 19 and 20 is also provided, the one end of each of which is disposed in the slot of the outer of each pair of lugs 16, and pins 21 are passed through the vertical openings 18 in said lugs and through the ends of said bars, whereby the latter will be pivotally connected to said lugs. Said bars 19 and 20 are also bent intermediate of their ends toward one another so as to be secured together in any desired manner, as shown at 22, and the extreme free ends of said bars are slightly separated and provided with openings, whereby the same may be readily secured or engaged with a lister frame or the like.

At the point at which the pair of bars 19

and 20 are clamped to one another, is fulcrumed a lever 23, the lower end of which has pivoted thereto, the ends of a pair of bars 24 and 25. The opposite ends of these bars are inserted in the slots of the inner lugs 16 on said boxings 1 and 2 and pivotally mounted therein by having the additional pins 21 passed therethrough, as in the manner heretofore described with reference to the bars 19 and 20. Also secured to the bars 19 and 20 immediately adjacent the fulcrum point of the lever 23, is a segmental ratchet 26 which is adapted to receive in engagement therewith, a spring-held detent 27 on the lever 23, said detent being operable by means of the usual grip 28 pivotally carried on said lever. In this manner, it will be seen that by the movement of the lever, the boxings 1 and 2 may be disposed at various angles to one another to correspondingly dispose the covering disks 13 and 14 at similar angles, but in order to limit the movement of said boxings 1 and 2 and prevent the entire separation of the same during the operation of the device, the arch 29 is provided, which arch is formed in sections. The sections of this arch are pivoted together about centrally of the horizontal portion thereof, as shown at 30, and the arms or vertical portions of said arch are disposed in the vertical openings of the lugs 31 and 32 formed on the rear faces of the boxings 1 and 2, respectively, said arms or vertical portions of the arch being provided with openings adjacent their ends in which are entered the bifurcated or cotter-pins 33, whereby said arch may be retained in its effective position. Said boxings or members 1 and 2 are also provided on their upper faces with the openings 34 which extend therethrough to the bores therein, and through the medium of these openings 34, the rotating sleeves which support the spindles carrying the disks, may be readily lubricated.

It is a well known fact that in the use of covering attachments for listers, difficulty has been experienced in obtaining a lister, the covering blades of which may be adjusted to throw sufficient soil to cover deep furrows, and it will be seen that in the use of the device, such as I have provided, the sections thereof may be disposed at such angles as to cause the blades or disks to engage the banks of the soil and throw the same into the furrow where seed has been planted.

In the use of my device, it will be seen that the washers or heads of the spindles of the respective boxings, are adapted to contact with one another, as said boxings are forced to the various angles through the

medium of the lever, and it will still further be seen that in the various movements of the boxings, the sectional arch remains in engagement therewith to prevent complete separation thereof.

It will further be seen that this device may be readily attached to a lister of any type, whatsoever, thereby eliminating the necessity of an entirely separate machine.

It will still further be seen that my device is of simple and durable construction, may be cheaply manufactured, and is one which will be very effective and useful in operation.

What I claim is:—

1. An attachment for listers, comprising a pair of sections, flexible connecting means therebetween, covering disks rotatably carried on said sections, bars pivotally secured to said sections and adapted to be attached to a lister, a lever fulcrumed on said bars, additional bars pivoted to said sections and engaged with one end of said lever, whereby said sections may be disposed at various angles to one another.

2. An attachment for listers, comprising a pair of boxings provided with lugs on their rear faces, a U-shaped linking member formed in sections, the sections of which are pivoted to one another and have their arms, respectively, engaged in the lugs on said boxings, covering disks rotatably carried on said boxings, means to attach said boxings to a lister, and additional means to dispose said boxings at various angles to one another.

3. An attachment for listers, comprising a pair of sections, flexible connecting means therebetween, covering disks rotatably carried on said sections, said sections being each provided on their outer faces with a pair of laterally extending lugs, a pair of bars pivotally engaged at one of their ends to a lug on each of the sections, an additional pair of bars having one of their ends pivotally engaged with the remaining lugs on said sections, and a lever fulcrumed on the first referred to pair of bars and having the lower end thereof pivotally engaged with the opposite ends of said additional pair of bars, whereby said sections may be disposed at various angles to one another.

4. An attachment for listers, comprising a pair of sections being each provided on their rear faces with a lug, a U-shaped connecting member formed of sections pivoted to one another, the arms of said U member being engaged in said lugs, a pair of lugs on each of the front faces of said sections, a pair of bars, the inner ends of which are pivotally engaged with one of the last referred to lugs on each of said sections, an

additional pair of bars having the inner
ends thereof pivotally engaged with the re-
maining lugs on the front faces of said sec-
tions, and a lever fulcrumed on the first
5 referred to bars and having the lower end
thereof pivotally engaged with the forward
ends of the additional bars.

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

WILLIAM A. STEPHENS.

Witnesses:

F. E. READ,

G. F. GUTHRIE.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."
