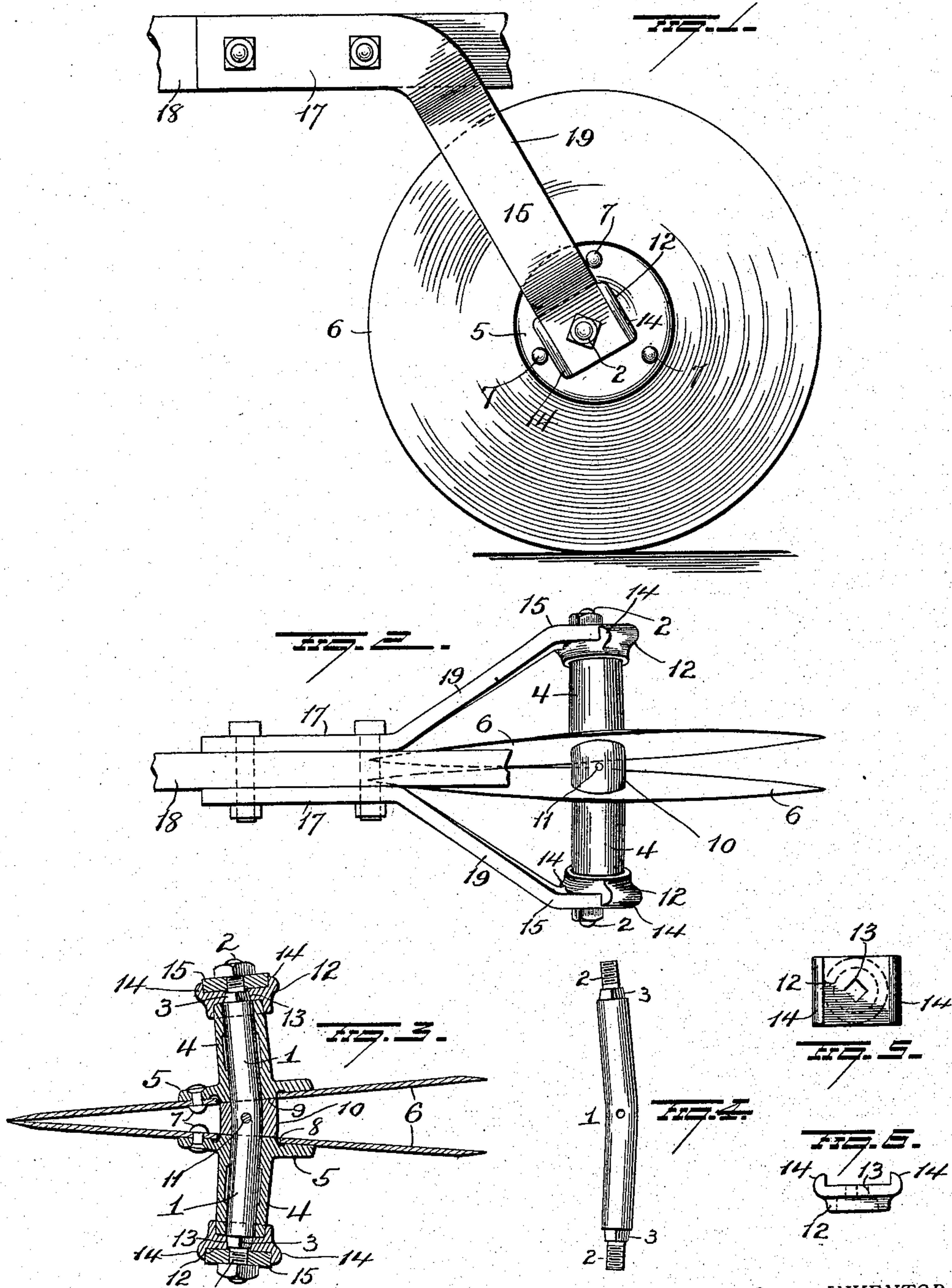


R. J. ALTGELT.
PLANTER.
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1,166,962.

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WITNESSES
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PLANTER.

1,166,962.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, RUDOLPH J. ALTGELT, a citizen of the United States and a resident of South Bend, in the county of St. Joseph, and State of Indiana, have invented certain
5 new and useful Improvements in Planters; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and
10 use the same.

This invention relates to improvements in planters and more particularly to double disk furrow-openers therefor,—one object
15 of the invention being to so mount the disks that the close proximity of their leading edges to each other shall be maintained.

A further object is to so mount the disks that they will form a narrow wedge, and at the same time prevent the leading edges
20 from becoming unduly separated, even when parts of the structure become worn.

A further object is to mount double disk furrow openers in such manner that the assembling of the parts shall be facilitated.
25

With these and other objects in view, the invention consists in certain novel features of construction and combinations of parts as hereinafter set forth and pointed out in the
30 claims.

In the accompanying drawings, Figure 1 is a side elevation; Fig. 2 is a plan view, and Fig. 3 is a sectional view of my improvements, and Figs. 4, 5 and 6 are detail views.

35 1 represents a bent axle, having threaded portions 2 at its respective ends, and angular portions 3 in proximity to said threaded portions. Bearing sleeves 4, are mounted to rotate on the straight portions of the bent
40 axle and are provided near their inner ends with annular flanges 5, to which the furrow-opener disks 6, are secured by means of fastening devices 7. The disks 6 are made with central openings 8 into which annular shoulders 9 at the inner ends of the bearing
45 sleeves 4 project. A spacing collar 10 is located upon the bent intermediate portion of the axle 1 and is secured thereto by means of a suitable pin or key 11, said spacing collar being of a shape to conform to the tapering
50 space between the disks and adapted at its respective ends to form abutments for the annular shoulders 9 of the respective bearing sleeves.

55 Dust caps 12 are mounted loosely upon

the outer ends of the respective bearing sleeves and are made with angular openings 13 to receive the angular portions 3 of the axle 1. Each dust cap is provided with parallel ribs 14 to receive between them, the
60 lower end portions of supporting arms 15 and the latter are provided with suitable holes for the passage of the threaded ends 2 of the axle. Nuts 16 are screwed upon said threaded ends of the axle and bear firmly
65 against the outer faces of the arms 15.

The supporting arms 15 are made rearwardly and downwardly flaring,—that is to say, the upper portions 17 of said arms are securely bolted to a beam 18 of a planter,
70 and from these upper portions 17, the supporting arms project laterally and also downwardly in rearwardly inclined directions, as indicated at 19, and the lower ends of said arms are so disposed as to receive
75 the respective ends of the axle as previously explained.

Slight changes might be made in the details of construction of my invention without departing from the spirit thereof or limiting its scope and hence I do not wish to restrict myself to the precise details herein set forth.
80

Having fully described my invention what I claim as new and desire to secure
85 by Letters-Patent, is:

1. The combination with a bent axle, of bearing sleeves mounted thereon, disks secured to said bearing sleeves, a tapering spacing collar secured to the inner ends of
90 the axle between the disks and bearing sleeves, dust caps on the ends of the bearing sleeves and secured to the axle and having recessed seats, and supporting arms secured to respective ends of the axle and in the
95 respective seats of the respective dust caps.

2. The combination with a bent axle, of bearing sleeves thereon having annular shoulders at their inner ends, mounted on said axle, disks secured to said bearing
100 sleeves and having central openings receiving said annular shoulders, a tapering spacing collar secured to the central portion of the axle and constituting abutments for the annular shoulders at the inner ends of the
105 bearing sleeves, and supporting arms secured to respective ends of the axle.

3. The combination with a bent axle, having angular portions and threaded portions near its ends, of bearing sleeves mounted on
110

said axle, disks secured to the inner end
portions of said sleeves, a spacing collar se-
cured to the central portion of the axle, dust
caps mounted on the outer ends of the bear-
5 ing sleeves and having angular holes to re-
ceive the angular portions of the axle, par-
allel ribs on each of said dust caps, support-
ing arms having their lower portions dis-
posed between said parallel ribs and pro-
10 vided with holes for the passage of the

threaded ends of the axle, and nuts on said
threaded ends of the axle.

In testimony whereof, I have signed this
specification in the presence of two sub-
scribing witnesses.

RUDOLPH J. ALTGELT.

Witnesses:

JAMES OLIVER, 2d.,
J. COVAEZEL.

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