

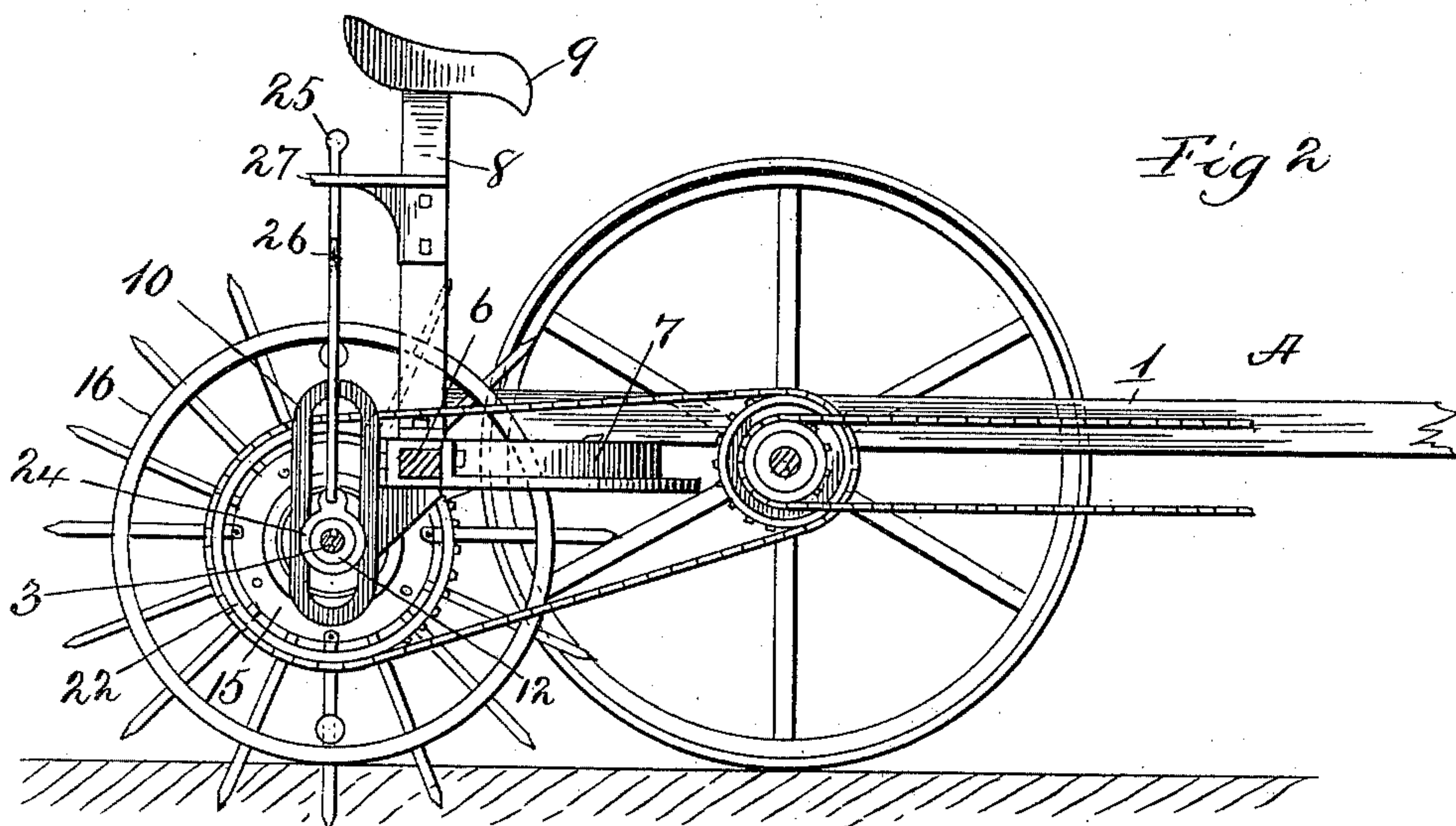
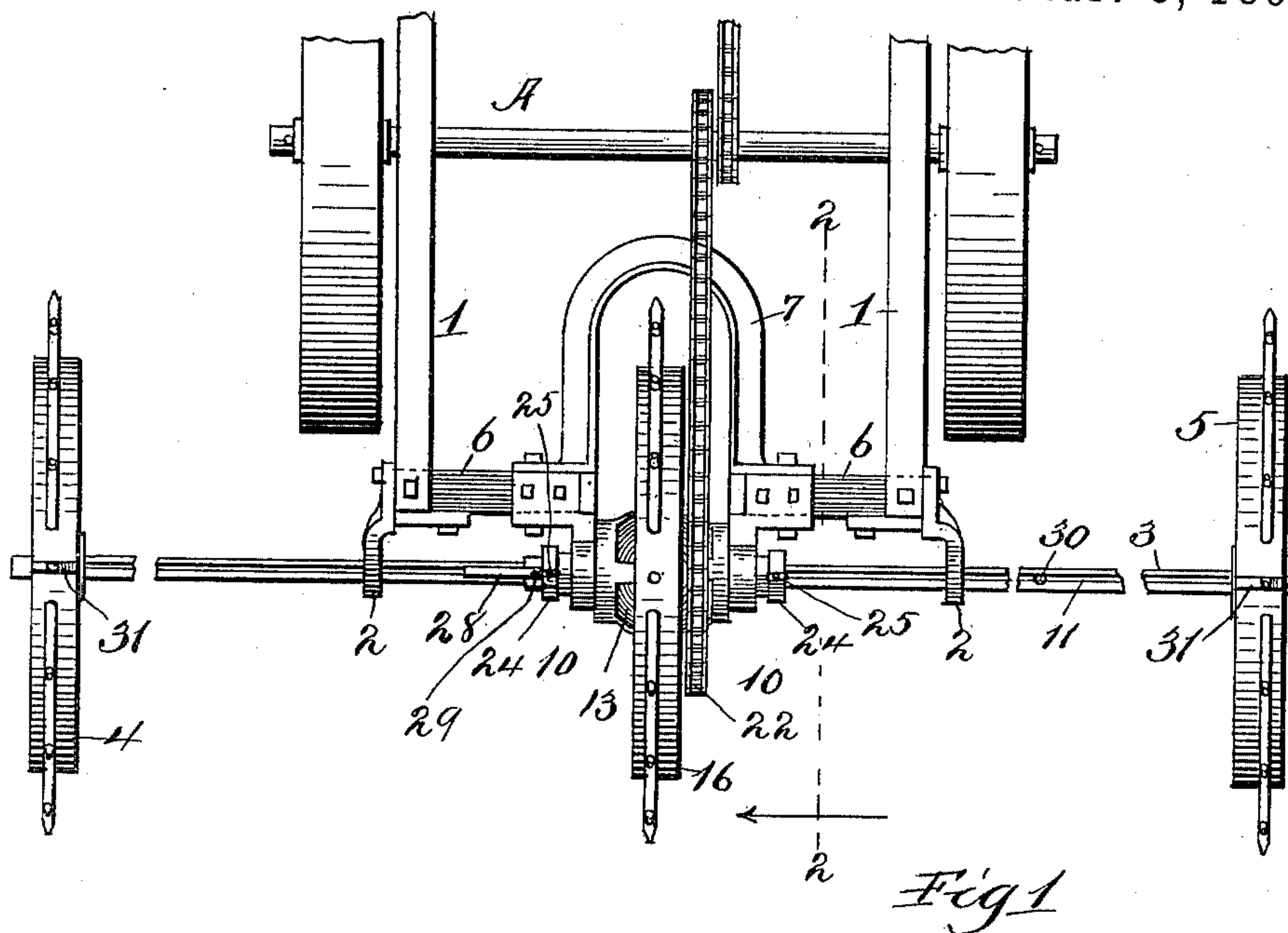
(No Model.)

2 Sheets—Sheet 1

C. C. JOHNSON & J. GRAVELOT.
CHECKING ATTACHMENT FOR SEED PLANTERS.

No. 600,349.

Patented Mar. 8, 1898.



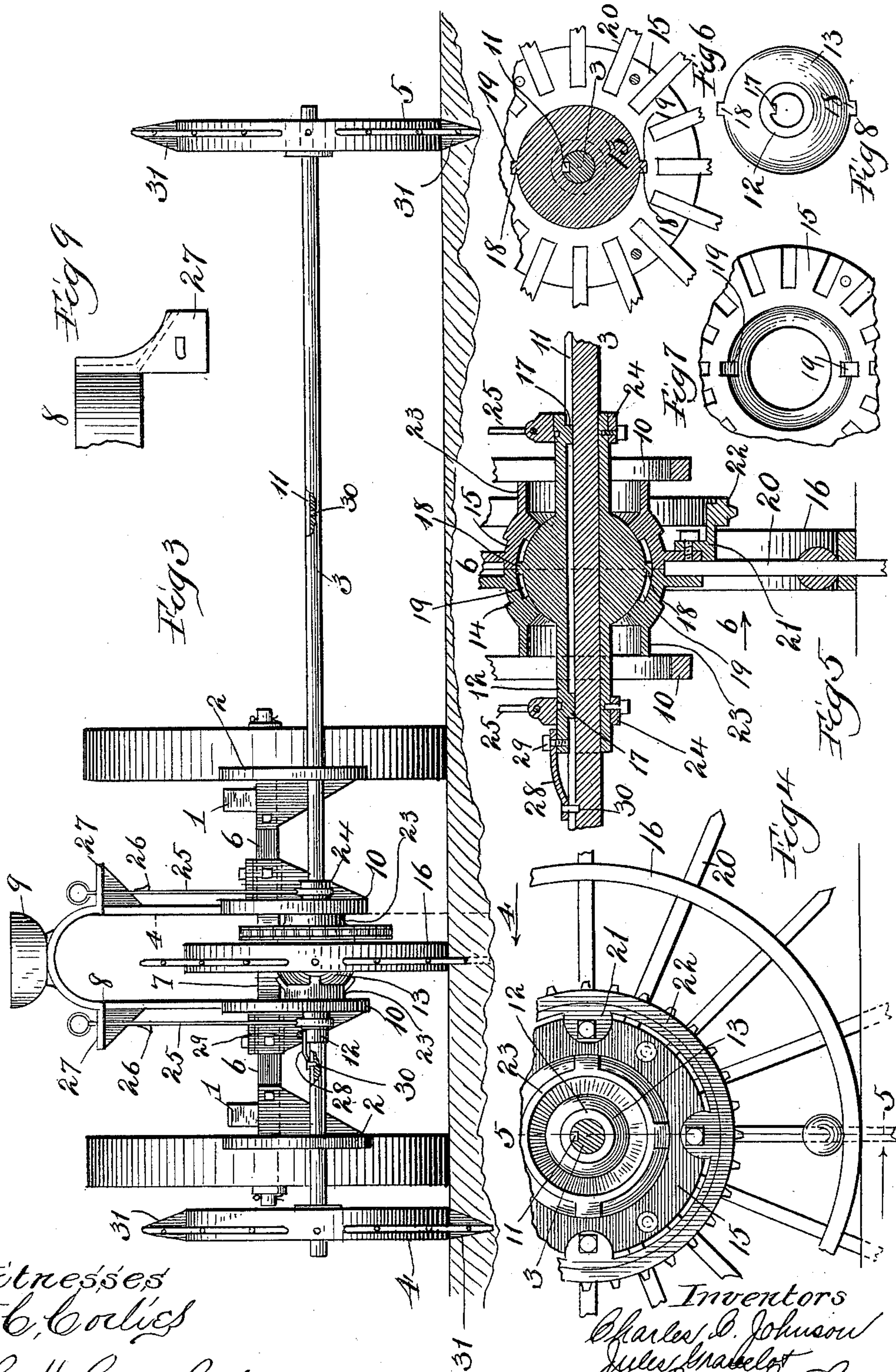
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UNITED STATES PATENT OFFICE.

CHARLES C. JOHNSON AND JULES GRAVELOT, OF CHEBANSE, ILLINOIS.

CHECKING ATTACHMENT FOR SEED-PLANTERS.

SPECIFICATION forming part of Letters Patent No. 600,349, dated March 8, 1898.

Application filed November 1, 1897. Serial No. 657,008. (No model.)

To all whom it may concern:

Be it known that we, CHARLES C. JOHNSON and JULES GRAVELOT, citizens of the United States, residing at Chebanse, in the county of Iroquois and State of Illinois, have invented certain new and useful Improvements in Checking Attachments for Seed-Planters; and we 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 use the same.

Our invention relates to a novel construction in a checking attachment for seed-planters, the object being to provide a simple and durable device of this construction which can be easily adjusted to any desired position; and it consists in the features of construction and combinations of parts hereinafter fully described and claimed.

In the accompanying drawings, illustrating our invention, Figure 1 is a top plan view of the rear end portion of a seed-planter provided with a checking attachment constructed in accordance with our invention. Fig. 2 is a sectional view of the same on the line 2 2 of Fig. 1. Fig. 3 is a rear elevation of the same. Fig. 4 is a detail sectional view, on an enlarged scale, on the line 4 4 of Fig. 3. Fig. 5 is a detail sectional view on the line 5 5 of Fig. 4. Fig. 6 is a detail sectional view on the line 6 6 of Fig. 5. Fig. 7 is a detail view in elevation of the inner face of one member of the hub of the middle check-wheel. Fig. 8 is a detail end elevation of the sleeve through which the shaft carrying check-wheels passes and upon which the hub of the middle check-wheel is mounted. Fig. 9 is a detail view in elevation of guides which we employ.

Referring now to said drawings, A indicates the frame of a seed-planter, upon the rear end of beams 1 of which guides 2 are mounted, through which the shaft 3, carrying check-wheels 4 and 5, rigidly mounted thereon at its ends, passes. Two inwardly-extending beams 6 are mounted upon said beams 1 and at their inner ends are joined by the loops or yokes 7 and 8, the latter of which carries the seat 9. Guides 10 are also mounted upon said ends of said beams 6 and are flush with said guides 2, said shaft 3 passing there-through also. Said shaft 3 is provided with

a groove or key-seat 11 along its entire length, so as to permit it to move longitudinally with relation to parts mounted thereon, but hold the latter rigid against revolution with relation to said shaft. Mounted upon said shaft between said guides 10 and extending there-through at its ends is a sleeve 12, which is enlarged at its middle portion to form a ball 13, upon which the members 14 and 15 of the hub of the middle check-wheel 16 are mounted. Said sleeve 12 is held against rotation with relation to said shaft 3 by means of the keys or lugs 17, and the said ball 13 thereof is provided with lugs 18, which move in grooves 19 in said members 14 and 15 of said hub to hold the latter against rotation with relation to said sleeve in one direction, but permitting it a limited rotation in the other direction to compensate for the rise and fall of said end-most check-wheels in accordance with the unevenness of the ground. Said members 14 and 15 of said hub are provided with circumferential flanges at their meeting edges, which are provided with radial grooves adapted to receive the spokes 20 of said check-wheel 16. Brackets 21, secured to the flange of one of said members of said hub, support the sprocket-rim 22, which is geared to the seed-dropping mechanism, which we have not shown. In order to hold said sleeve 12 centered and parallel with relation to said guides 6, we provide circumferential flanges 23, abutting at their ends against the inner faces of said guides 10. As before stated, said end portions of said sleeve 12 pass through said guides 10 and at their ends carry collars 24, which are revoluble with relation thereto, but not longitudinally movable thereon. Rods 25 are connected with said collars 24, and by means thereof said shaft 3 and the parts mounted thereon can be raised free of the ground when it is desired for the purpose of moving the shaft longitudinally to opposite limits of motion. Said rods 25 are provided with lugs 26, adapted to engage the guides 27 to hold said shaft in its raised position. Collars 28, provided with set-screws 29, are mounted on said shaft and are adapted to be rigidly secured thereon adjacent said guides 6 to hold said shaft longitudinally rigid.

Our device is operated much in the same manner as other checking devices, the shaft

3 being moved to opposite limits of its movement every time the planter is turned and adjusted to check new rows exactly and plant in the rows already checked by adjusting the
5 middle check-wheel so that the spokes thereof enter the holes last made by the outer check-wheel and then starting forward and following said line or row already checked.

We claim as our invention—

10 1. In a device of the kind specified, the combination with a frame provided with vertical guides, of a shaft passing through said guides and carrying check-wheels at its ends rigidly mounted thereon, and an intermediate check-
15 wheel slidingly mounted thereon between two of said guides through the intermediacy of a sleeve, said shaft being adapted to turn in a vertical plane with relation to said intermediate check-wheel to compensate for irregularities in the ground, substantially as described.

20 2. In a device of the kind specified, the combination with a horizontal shaft vertically movable in guides and carrying check-wheels
25 at its ends rigidly mounted thereon, of a sleeve slidingly mounted on said shaft but revolutely rigid with relation thereto, and having a spherical enlargement at its middle portion upon which the members of the hub of a
30 check-wheel are journaled and are held

against relative revolution in one direction, means for holding said check-wheel horizontally rigid against movement with relation to the frame of said machine, and means for raising said shaft and the parts mounted thereon free from the ground, substantially as described. 35

3. In a device of the kind specified, a horizontal shaft vertically movable in guides on the frame of the machine, a sleeve slidingly
40 mounted on said shaft and provided between its ends with a spherical enlargement, a wheel having a two-part hub journaled upon said spherical enlargement, and grooves in the inner faces of said hub adapted to receive lugs
45 on said spherical enlargement to hold said hub against revolution with relation to said sleeve in one direction, whereby said wheel is held against rotation with relation to said shaft in one direction but permits said shaft to swing
50 in a vertical plane to compensate for irregularities in the ground, substantially as described.

In testimony whereof we affix our signatures in presence of two witnesses.

CHARLES C. JOHNSON.
JULES GRAVELOT.

Witnesses:

F. J. McMAHON,
JOHN GRAVELOT.