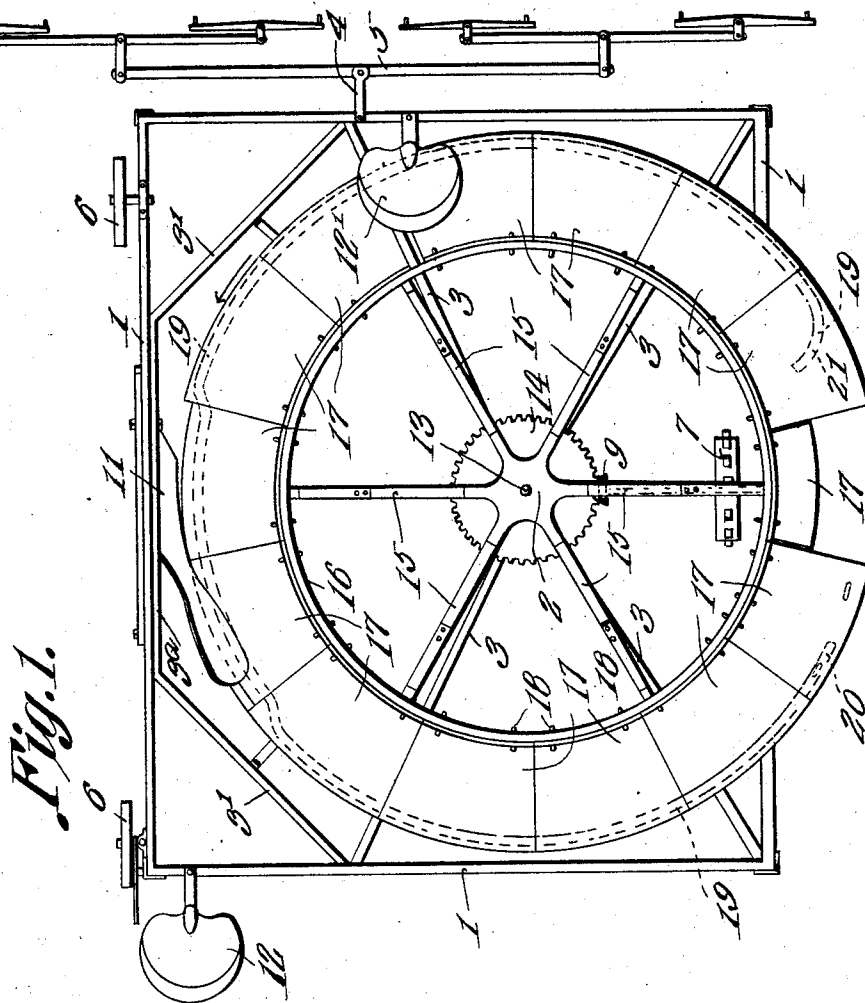


C. W. GERDES.
ROAD GRADER.
APPLICATION FILED OCT. 28, 1911.

1,047,781.

Patented Dec. 17, 1912.

3 SHEETS—SHEET 1.



Witnesses

H. Conner
L. H. Watson

Charles W. Gerdes,
Inventor

by

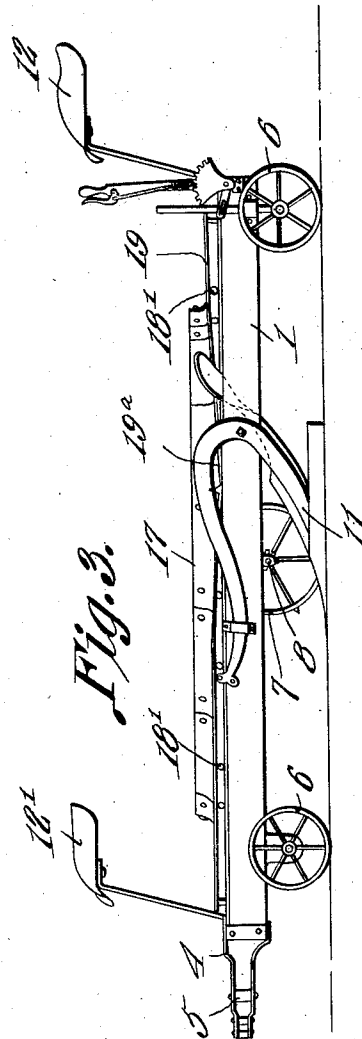
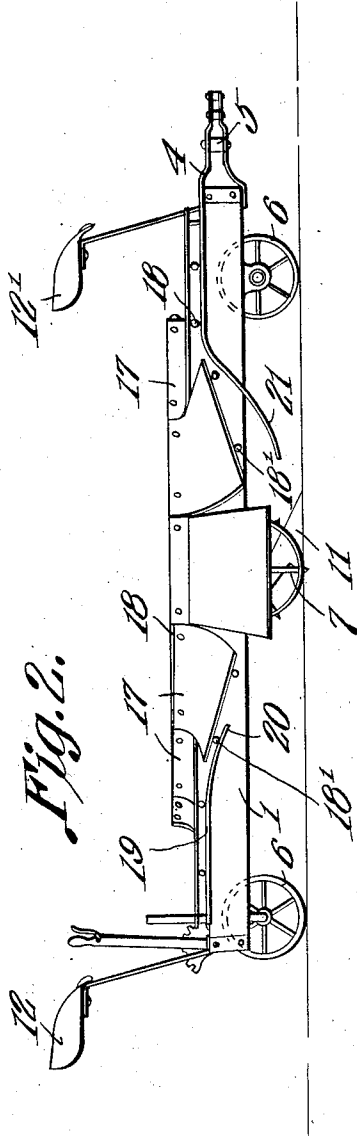
C. A. Snow & Co.
Attorneys

C. W. GERDES.
ROAD GRADER.
APPLICATION FILED OCT. 28, 1911.

1,047,781.

Patented Dec. 17, 1912.

3 SHEETS—SHEET 2.



Witnesses

J. H. Walcott
S. H. Walcott

Charles W. Gerdes,
Inventor

by

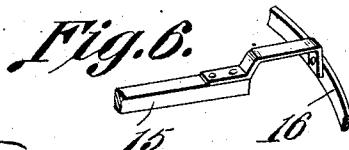
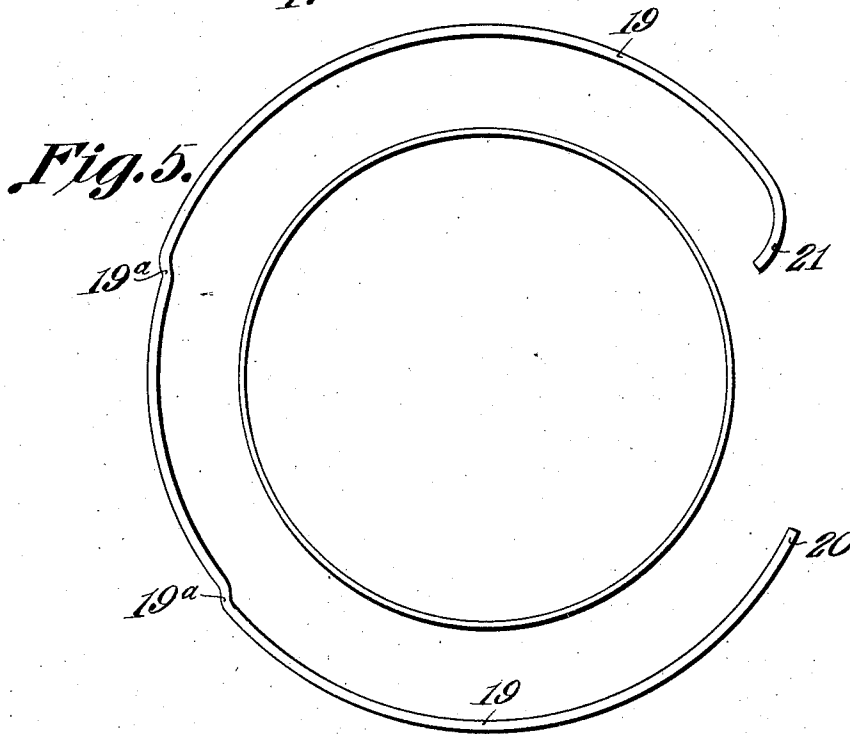
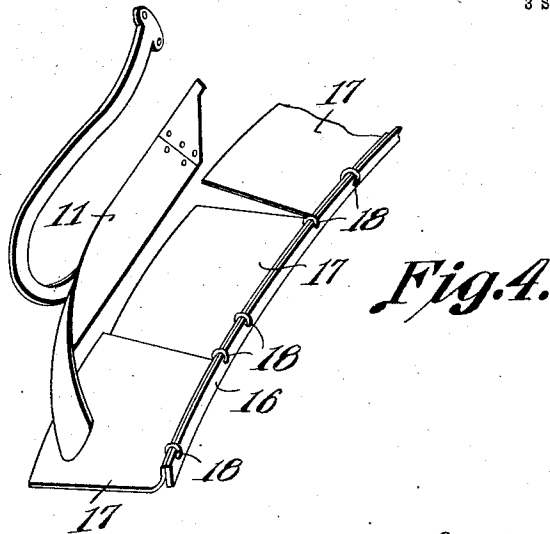
C. A. Snow & Co.
Attorneys

C. W. GERDES.
ROAD GRADER.
APPLICATION FILED OCT. 28, 1911.

1,047,781.

Patented Dec. 17, 1912.

3 SHEETS—SHEET 3.



Witnesses

J. P. [Signature]
L. H. Wilcox

Charles W. Gerdes,
Inventor

by

C. A. Snow & Co.
Attorneys

UNITED STATES PATENT OFFICE.

CHARLES W. GERDES, OF MOUND VALLEY, KANSAS.

ROAD-GRADER.

1,047,781.

Specification of Letters Patent.

Patented Dec. 17, 1912.

Application filed October 28, 1911. Serial No. 657,215.

To all whom it may concern:

Be it known that I, CHARLES W. GERDES, a citizen of the United States, residing at Mound Valley, in the county of Labette and State of Kansas, have invented a new and useful Road-Grader, of which the following is a specification.

This invention relates to improvements in road graders, and the primary object of the invention is the provision of a road grader of the horizontal carrier type, and in which a novel form of supporting frame for such carrier and its operating mechanism is provided.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of invention herein disclosed can be made within the scope of what is claimed without departing from the spirit of the invention.

In the drawings—Figure 1 is a top plan view of the complete machine. Fig. 2 is a side elevation taken at the right side of the machine. Fig. 3 is a similar view taken at the left side thereof. Fig. 4 is a detail view demonstrating the deposit of dirt from the plow share to one of the trays of the horizontal conveyor, and Fig. 5 is a top plan view of the means for operating the same. Fig. 6 is a detail view.

Referring to the drawings, the numeral 1 designates the main frame of the machine which is substantially rectangular in shape and is provided with a series of braces 3 radiating from the spider 2, which supports the shaft 13 to one side of the diagonal center of the frame. The angle braces 3'—3' are connected to the frame 1 at the far side thereof and are themselves connected by the strip 3^a which parallels one side of the frame 1 and is attached thereto. By this means two of the radiating arms 3 as shown have their respective ends connected to the frame 1 at the junction of the free ends of the braces 3'—3' therewith and thus provide a rigid support for the spider 2 and consequently the shaft 13. Connected to the forward portion of the frame is the draft attaching link 4 carrying the draft attaching single and double trees 5, one side of the machine being provided with the small wheels 6 while the opposite side has the

traction wheel 7, keyed upon the shaft 8, which is rotatably connected to and carried by the frame and carries upon its inner end a small bevel pinion 9, the purpose of which will presently appear. At the forward portion of the frame is mounted the driver's seat 12' while to the rear end to one corner thereof is the operator's seat 12.

Carried upon a vertical shaft 13 connected to the spider 2 is a large gear wheel 14 which meshes and receives motion from the small pinion 9, the said gear traveling in the direction of the arrow, when the machine is in operation. The radiating spokes 15 have connected to their inner ends the spider 2 and to their outer ends a rim 16 which has pivotally connected thereto at their inner sides, the dirt receiving, conveying and dumping trays 17, the connection between said trays and the ring 16 being a hinge connection as 18.

Disposed below the other ends of the trays is the rail track or rim 19, (Fig. 5) which constitutes the means for permitting the trays to be loaded and emptied, the end permitting the trays to fall and deposit the dirt upon the ground at the traction side of the machine while the end 21 permits the trays to ride thereon so their rollers 18' will engage the same and hold the trays in a horizontal position until they are brought beneath the plow share as illustrated in Figs. 4 and 5, the curved portion 19^a permitting them to dip and receive the dirt as it leaves the share and before it falls upon the ground.

It is evident that as the machine is pulled along, the plow 11 will produce a furrow in the ground according to the depth at which it is desired to cut, and that the wheel 7 will convey motion to the horizontally disposed and rotatable dirt conveying wheel, the trays carried by the periphery thereof being so disposed that when passing the plow 11 they will dip to receive the dirt and by means of the portions 19^a will be lifted to horizontal position until they arrive at a point opposite the traction wheel 7, at which point they are permitted to drop by gravity to deposit the dirt upon the ground at the side of the machine, and after such depositing the portion 21 will raise the trays and cause the same to travel in a horizontal position until they reach the plow 11. By providing a series of these trays it will be seen that the operation of receiving and dumping will be continuous.

What is claimed is:

In a road grader, a supporting structure, comprising a rectangular open frame, a strip paralleling and connected to one side of said frame, two angular braces connected to the
5 respective ends of said strip and the opposite sides of the frame, a wheel journaling spider, and a plurality of arms radiating from said spider certain of which have their
10 outer ends connected while others have their outer ends connected to the frame at the

points where the braces join the frame, said arms supporting the frame to rigidly support the spider out of the diagonal center of the frame.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

CHARLES W. GERDES.

Witnesses:

F. C. RIEVES,

W. W. TAYLOR.

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