

P. CHOUNARD.
ROAD GRADER ATTACHMENT.
APPLICATION FILED MAY 5, 1911.

1,015,004.

Patented Jan. 16, 1912.

Fig. 1.

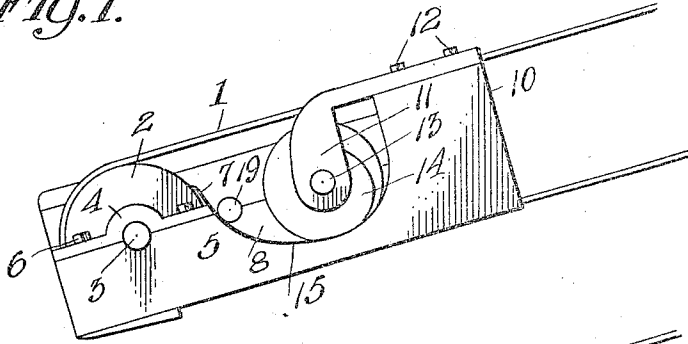


Fig. 2.

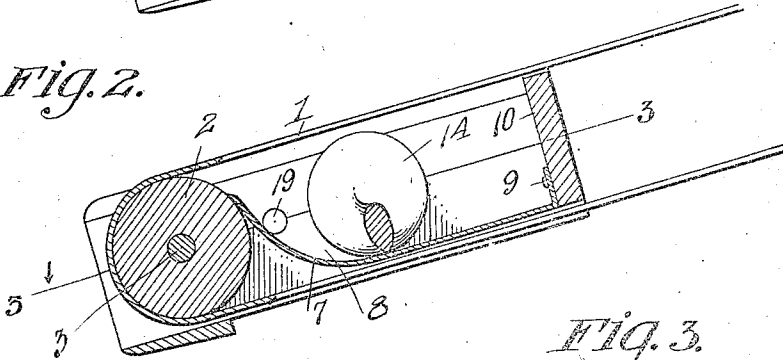
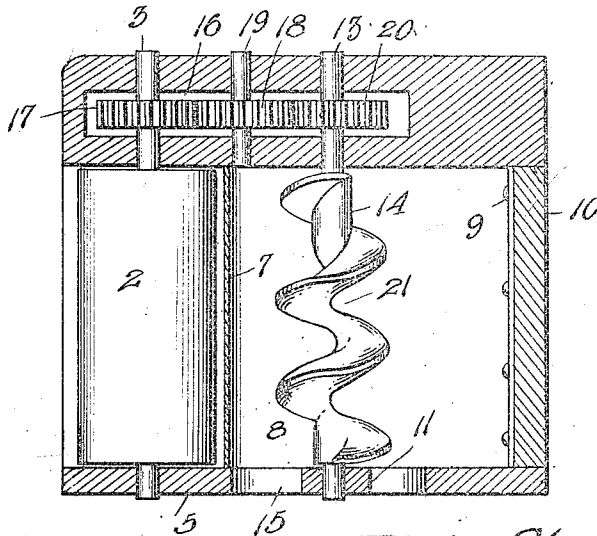


Fig. 3.



WITNESSES

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PHILIP CHOUNARD, OF PEMBINA, NORTH DAKOTA.

ROAD-GRADER ATTACHMENT.

1,015,004.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, PHILIP CHOUNARD, a citizen of the United States, residing at Pembina, in the county of Pembina and State of North Dakota, have invented certain new and useful Improvements in Road-Grader Attachments, of which the following is a specification.

My invention relates to improvements in road grader attachments and is particularly designed for use in connection with road grader machines of the belt conveyer type.

My invention has for its object the provision of a device of the character named which will effectually remove the mud and dirt which usually adheres to the lower roller of the grader machine and causes the belt conveyer to slip from side to side and thus soon become worn out.

Another object of my invention is the provision of a device of this character which may be affixed to the lower roller of the grader machine to clean same and means suitably located for removing the dirt after being scraped from the conveyer belt.

Other objects of my invention are the provision of an attachment of this character which will be of simple and inexpensive construction; which will be capable of attachment to any road grader machine of the belt conveyer type; and which will remove the dirt accumulation from the roller with the least possible resistance and prevent the dirt from entering between the belt and the roller.

To attain the desired objects my invention broadly stated consists of the frame or supporting means, a roller mounted thereon, a flexible scraper device mounted in the frame and contacting with the roller to clean the same, and a screw arrangement mounted on the frame and contacting with the scraper device to expel the accumulated dirt therefrom.

My invention further consists of an attachment for road grading machines embodying novel features of construction and combination of parts for service substantially as disclosed herein.

Figure 1 represents a side elevation of my improvement, showing particularly the cut out portion of the frame through which the dirt is expelled. Fig. 2 represents a central sectional view of the improvement, showing clearly the scraper device, and Fig. 3 represents a sectional view on line

3—3 of Fig. 2, showing the peculiar formation of the screw conveyer, which constitutes an important feature of my invention.

In the drawings in which similar characters of reference denote corresponding parts in all the views: The numeral 1 designates the carrier belt, operating over the roller 2 to revolve same, and the axle 3 of the roller is mounted as at 4 on the supporting structure 5 and is secured by nuts and bolts 6.

7 represents the scraper of tin, heavy rubber belting or other material, which is mounted in frictional engagement with the roller 2 and serves to scrape the mud and dirt accumulating thereon into the trough-like recess 8, wherefrom it is removed or expelled as will be explained hereinafter.

The scraper 7 is secured by any suitable means as at 9 to the supporting member 10 and the said member or frame is provided with the bracket 11 secured thereon as at 12 by any suitable means and has mounted thereon the axle 13 of the expelling member 14, which is in frictional contact with the trough of the scraper and serves to drive out the dirt accumulating therein.

By reference to the drawings it will be observed that the supporting structure is cut away on one side as at 15 to permit the ready expulsion of the dirt and on the other side has the recess or groove 16 in which are secured the operating means, consisting of the gear wheel 17 mounted on the axle 3 of the roller 2, and meshing with the intermediate gear 18 mounted on the axle 19, which in turn transmits the motion to the gear 20 mounted on the axle 13 of the screw conveyer 14. From this arrangement it will be seen that I have provided means for operating both the roller and the screw conveyer simultaneously, thus insuring the prompt and certain removal of the dirt accumulation.

To further prevent any clogging of the device I have provided a peculiar construction of screw conveyer which reduces the liability of such occurrence to the minimum. By reference to the Fig. 3 it will be seen that while the screw conveyer 14 is mounted on the axle 13, the axle does not extend across from one side of the supporting structure to the other, but that the conveyer is formed of a flat piece of material and is twisted as at 21 to form the screw arrangement, and this construction removes all possibility of

the dirt accumulating between the axle or shaft of the conveyer and the screw twists, since the axle does not extend across the trough or dirt receiving trough 8.

5 It will be also noted that the scraper 7, which is really but a continuation of the trough or recess 8 bears against the roller 2 and cleans the same thoroughly, thus preventing the dirt packing on the roller and causing the belt to slip from side to side and wear out.

From the foregoing it will be seen that the mud and dirt is removed from the roller 2 automatically by the scraper 7 and falls 15 into the trough or recess 8, from whence it is expelled over the cut out portion 15 of the side, by means of the screw conveyer 14.

It will be seen that I have provided an attachment for cleaning and removing the dirt from the roller of the carrier belt which 20 is capable of attachment to any machine of the belt conveyer type; which is simple and inexpensive of production and which is thoroughly practical and efficient from every view point.

I claim:

1. An attachment for road grading machines, comprising a rectangular frame, one side of which is provided with a recessed casing and the other side having an integral 30 shaft support, a depending bracket and a cut-out portion, a geared roller carrying shaft mounted in the recessed casing and extending transversely across the frame to the integral shaft support, a roller carried thereby and operating in the space between the recessed casing and the supporting structure, a geared conveyer carrying shaft 35 mounted in the recessed casing and extending transversely across the frame to the depending bracket, a conveyer carried thereby and operating in the space between the

recessed casing and the depending bracket, a geared stub shaft mounted in the recessed casing intermediate the roller and conveyer shafts and mounting with said geared roller 45 and conveyer carrying shafts, a belt passing over the roller, a vertical rear wall extending transversely across the frame, and a scraper device contacting with the roller to clean same. 50

2. An attachment for road grading machines, comprising a rectangular frame one side of which is provided with a recessed casing and the other side having an integral 55 shaft support, a depending bracket and a cut-out portion, a geared roller carrying shaft mounted in the recessed casing and extending transversely across the frame to the integral shaft support, a geared conveyer 60 carrying shaft mounted in the recessed casing and extending transversely across the frame to the depending bracket, a geared stub shaft mounted in the recessed casing intermediate the roller and conveyer shafts, 65 a roller carried by the roller shaft and a conveyer carried by the conveyer shaft, said members operating in the space between the casing and the respective shaft supports, a belt passing over the roller, a vertical rear 70 wall extending transversely across the frame and a scraper having its rear end secured to the vertical wall at right-angles to the belt, said scraper passing along the bottom of the frame between the casing and side wall in a 75 direction parallel with that of the belt and having its forward end bent upwardly to contact with the roller.

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

PHILIP CHOUNARD.

Witnesses:

AUG. SHORT,
H. B. SPILLER.