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H. N. BARRETT & E. D. WALLACE.

ATTACHMENT FOR GRADERS.

APPLICATION FILED DEC. 1, 1905.

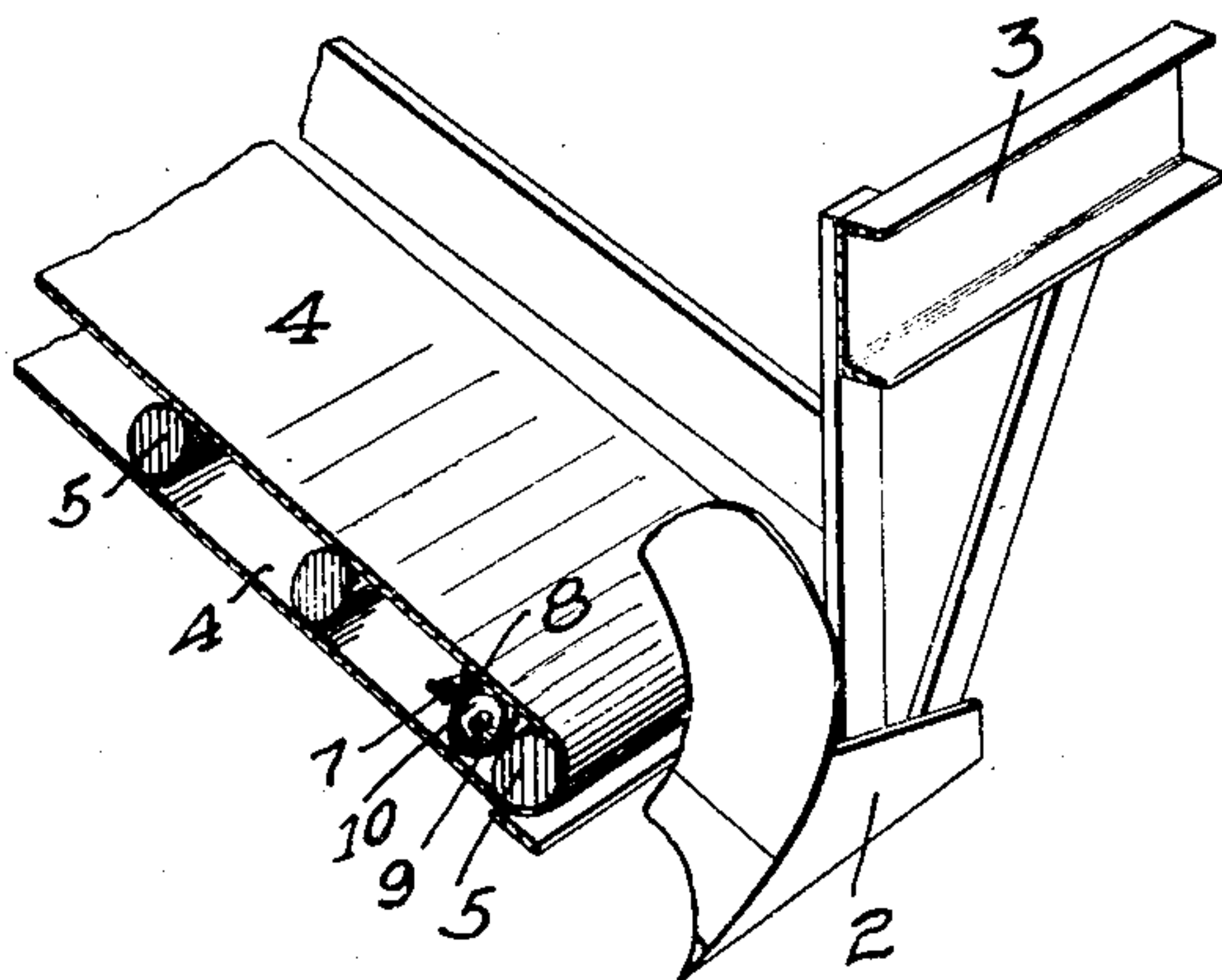


FIG. 1.

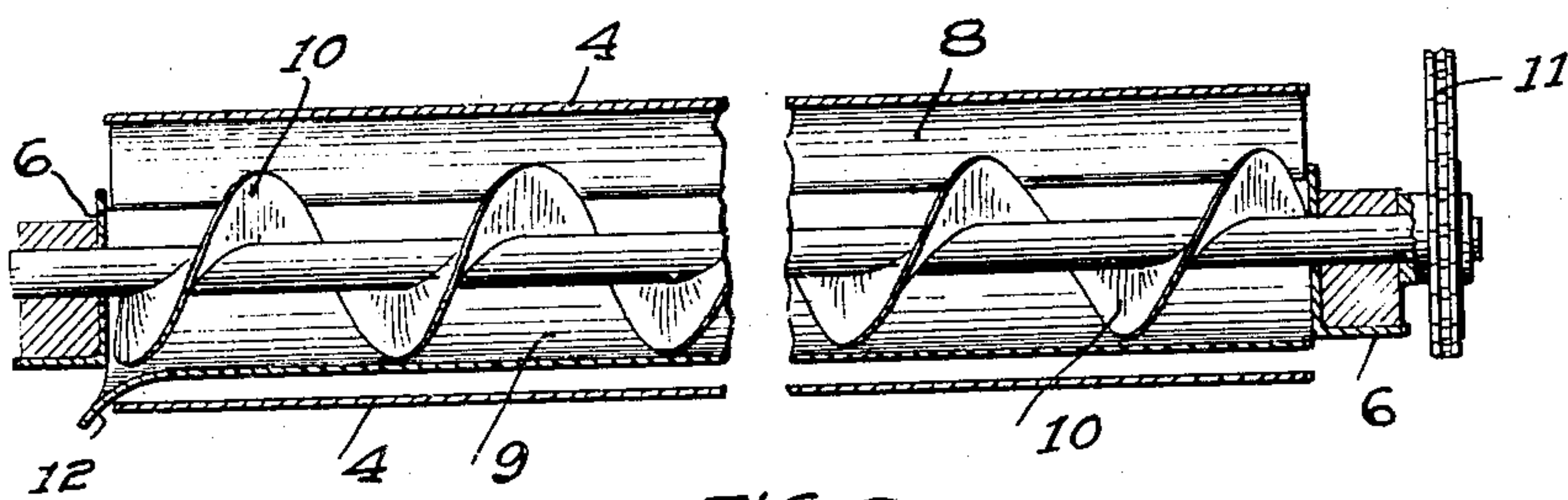


FIG. 2.

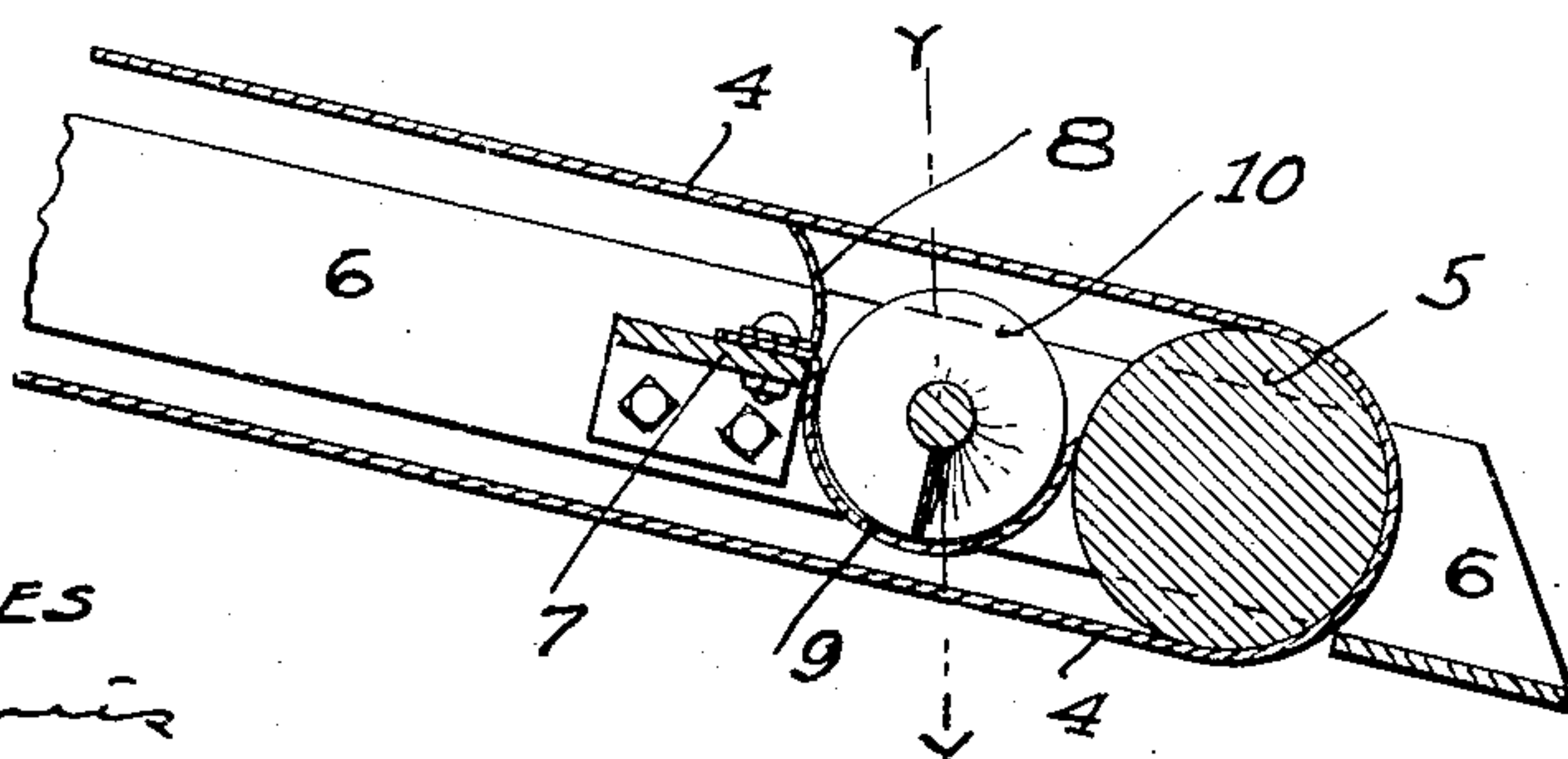


FIG. 3.

WITNESSES
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UNITED STATES PATENT OFFICE.

HENRY N. BARRETT, OF HOPE, NORTH DAKOTA, AND ELMER D. WALLACE, OF MINNEAPOLIS, MINNESOTA.

ATTACHMENT FOR GRADERS.

No. 897,955.

Specification of Letters Patent.

Patented Sept. 8, 1908.

Application filed December 1, 1905. Serial No. 289,837.

To all whom it may concern:

Be it known that we, HENRY N. BARRETT, residing at Hope, Steele county, North Dakota, and ELMER D. WALLACE, of Minneapolis, Hennepin county, Minnesota, have invented certain new and useful Improvements in Attachments for Graders, of which the following is a specification.

The object of our invention is to provide means in connection with the scraper device of a grader conveyer belt to receive the dirt dislodged from the belt by said scraper and discharge it in front or in the rear of the belt.

The invention consists generally in a conveyer device located between the upper and lower section of the grader belt and whereto the dirt dislodged from the belt by the scraper or otherwise is delivered.

In the accompanying drawings forming part of this specification, Figure 1 is a perspective view of a grader plow and a portion of the carrier belt. Fig. 2 is a transverse sectional view showing the position of the conveyer between the upper and lower sections of the belt taken on the section line *y-y* of Fig. 3. Fig. 3 is a transverse sectional view illustrating the relative position of the transverse conveyer and the scraper device.

In the drawing, 2 represents a suitable plow having a beam 3, and 4 a carrier belt operating over roller 5 and whereto the dirt is directed by the mold board of the plow.

6 represents a frame on each side of the carrier belt, and 7 a cross bar whereon a flexible scraper device 8 is mounted. This scraper device may be made of any suitable material, preferably heavy rubber belting, and its upper edge is adapted to bear with a yielding pressure on the inner surface of the belt and scrape off any accumulation of dirt thereon which if allowed to remain would pass between the roller and the belt and interfere seriously with the successful operation of the machine. Scraper devices of this kind are generally used on grading machines, and we make no claim to the scraper in this case.

Whenever the scraper has been used it has been necessary to reach in between the upper and lower section of the belt with a rake or other tool and drag or push out the accumulation of dirt to prevent it from being carried between the lower roller and the belt and in-

terfering with the successful operation of the machine. The removal of this dirt has always required the expenditure of considerable time and labor. To avoid this removal of the dirt by hand from between the upper and lower sections of the belt, we prefer to provide a carrying device operating transversely with respect to the movement of the grader belt, and comprising preferably a trough semicircular in cross section, supported between the cross bar 7 and the lower roller in position to receive the dirt dislodged by the flexible scraper. In this trough we arrange a screw conveyer 10 operated by any suitable means as a belt 11 connected with some operating part of the machine. A lip 12 may be provided on one end of the trough extending beyond the edge of the belt for the purpose of directing the dirt collected by the conveyer to a point where it will drop upon the ground out of the path of the belt. The edge of the trough, as shown upon the drawing, is close to the roller 5 for the purpose of keeping the surface of the roller clean and preventing the dirt accumulating thereon from entering between the belt and the roller. The dirt collected by this trough edge will drop down into the trough and be collected by the conveyer.

We claim as our invention:

1. In a grading machine, the combination with a carrier belt and a scraper arranged between the upper and lower sections of the belt and engaging the surface of the same to remove the accumulated dirt, of frame members on each side of said carrier belt, a trough near said scraper, said frame members forming ends to the trough, and a carrier operating transversely to the direction of movement of said belt and whereto the dirt is delivered by said scraper, substantially as described.

2. In a grading machine, the combination with a carrier belt and a scraper device arranged between the upper and lower sections thereof, of a trough provided near said scraper, and a transversely operating conveyer provided in said trough, substantially as described.

3. In a grading machine, the combination with a carrier belt and a flexible scraper arranged between the upper and lower sections of the belt, of a trough semi-circular in cross section provided near said scraper and adapted to receive the dirt therefrom, said trough being arranged transversely with respect to

said belt, and a screw conveyer operating in said trough.

4. In a grading machine, the combination with a carrier belt, of means operating between the upper and lower section of said belt and transversely with respect to the direction of the movement thereof, to deliver the dirt dislodged from said belt beyond the edge of the same, and means acting upon the inner surface of the carrier belt adjacent to said delivering means to detach dirt from the belt and direct it onto said delivering means, said delivering means being entirely within the carrier belt, substantially as described.

5. In a grading machine, the combination with a carrier belt and a roller and a scraper arranged between the upper and lower sections of the belt and engaging the surface of the same to remove the accumulation of dirt, of a

trough arranged transversely near said scraper and having an edge adapted to engage the surface of said roller, for the purpose specified.

In witness whereof, we have hereunto set our hands HENRY N. BARRETT, at Hope, Steele county, North Dakota, this 15th day of November 1905, and ELMER D. WALLACE, at Minneapolis, Hennepin county, Minnesota, this 22d of November, 1905.

HENRY N. BARRETT.
ELMER D. WALLACE.

Witnesses as to the signature of Henry N. Barrett:

S. J. DANSKIN,
ARTHUR G. NELSON.

Witnesses as to the signature of Elmer D. Wallace:

RICHARD PAUL,
C. MACNAMARA.