(No Model.)

# W. L. HELLER.

## SPUD ATTACHMENT FOR ROAD GRADER WHEELS.

No. 356,584. Patented Jan. 25, 1887.

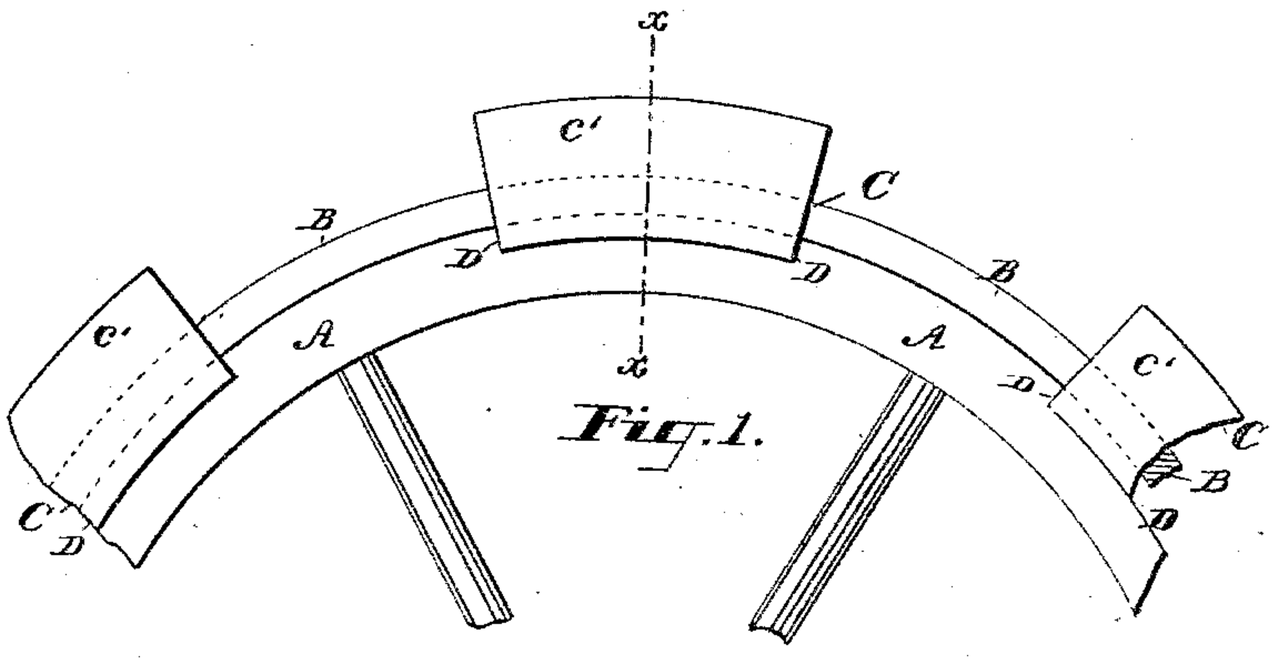


Fig. 1.

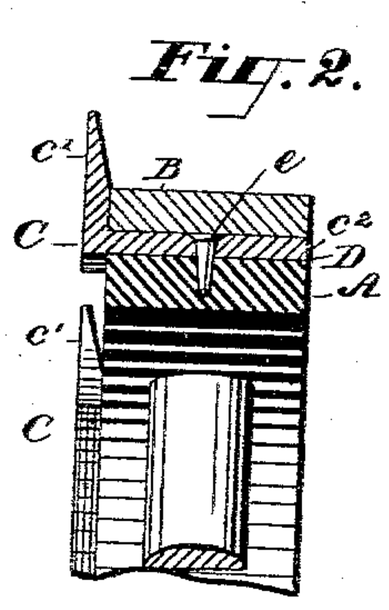


Fig. 2.

WITNESSES:

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# UNITED STATES PATENT OFFICE.

WILLIAM L. HELLER, OF FORT WAYNE, IND., ASSIGNOR TO THE AMERICAN ROAD MACHINE COMPANY, OF KENNETT SQUARE, PENNSYLVANIA.

## SPUD ATTACHMENT FOR ROAD-GRADER WHEELS.

SPECIFICATION forming part of Letters Patent No. 356,584, dated January 25, 1887.

Application filed June 18, 1886. Serial No. 205,518. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM LEWIS HELLER, a citizen of the United States, residing at Fort Wayne, in the county of Allen and State of Indiana, have invented certain new and useful Improvements in Spud Attachments for Road-Grader Wheels, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, of which—

Figure 1 is an elevation of a section of wheel having my invention applied thereto. Fig. 2 is a section on line *x x*.

This invention is an improvement in the manner of attaching and securing the flanged pieces or spuds upon the wheels of road-grading machines—such, for example, as shown in Letters Patent No. 305,533, granted September 23, 1884, to Samuel Pennock, assignor to S. Pennock & Sons Company, for improvement in road-graders. The object of these flanged spuds is to furnish a resistance to the lateral strain against the diagonal scraper-bar in road-grading machines by the flange of the spuds sinking into the ground.

My invention, which, as above stated, consists in a particular manner or means of securing these spuds to the rims of the wheels, will appear from the following description and claim.

Referring to the annexed drawings, A is the rim or felly of the wheel, B the tire, and C the spud, of usual form, *c'* being its flange or part that enters the earth when the machine is in operation, and $c^2$ the curved-plate portion, which is applied to the periphery of the wheel.

Ins ad of securing the spud to the wheel by means of bolts or rivets passing through the plate $c^2$ into the felly, as shown in said Pennock patent, I cut an offset, D, in the periphery of the felly, the depth of which offset is about equal to or preferably a little less than the thickness of the plate $c^2$, and its length equal to that of said plate. I then insert the latter in the offset and secure the same by means of a nail or screw, *e*, driven into the felly. All the spuds having been thus placed in position, I then shrink on the tire B in the usual manner. The spuds are applied on that side of the wheel where the lateral pressure, when the machine is doing work, will tend to force the flanges toward the wheel or tire. The edge of the latter serves as a stop or abutment for the spud, and the screws or nails *e* may be dispensed with. I make use of these merely for the purpose of holding the spuds in place when the tire is being applied.

Having thus described my invention, I claim—

The comoination, with the wheel of a road-grading machine, of the spud having the flange and plate, together with the felly provided with the offsets and the tire, substantially as and for the purpose set forth.

In testimony whereof I have hereunto affixed my signature this 11th day of June, A. D. 1886.

WILLIAM L. HELLER.

Witnesses:
THOMAS JACKSON,
THOS. MEEGAN.