

(No Model.)

2 Sheets—Sheet 1.

W. A. LLOYD.
SAND ROPE REEL.

No. 485,203.

Patented Nov. 1, 1892.

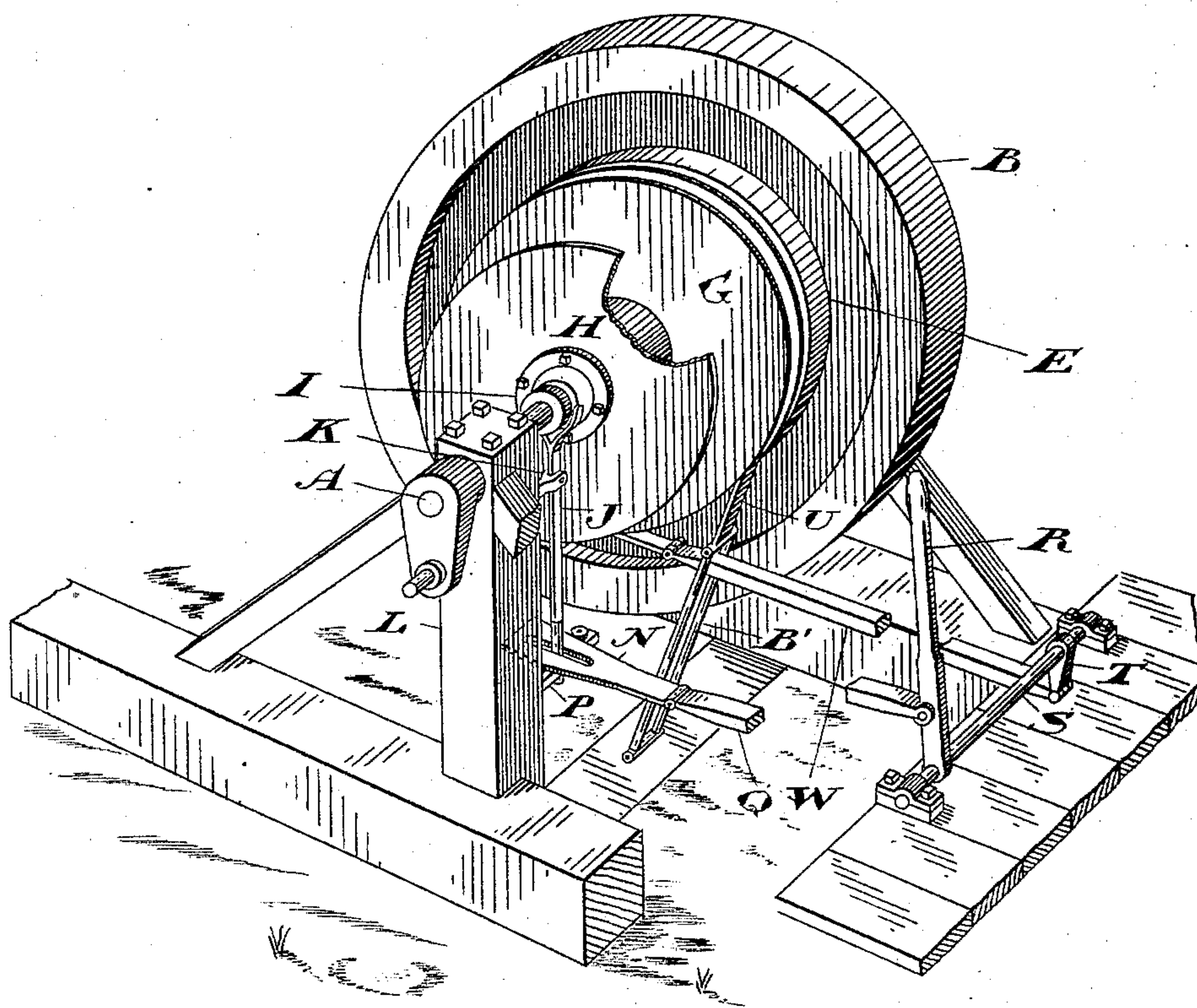


Fig. 1

Witnesses

J. Edw. Maybee
A. G. Mcmillan

Inventor

Wm. A. Lloyd
by Donald C. Ridout & Co.
Attys.

(No Model.)

2 Sheets—Sheet 2.

W. A. LLOYD.
SAND ROPE REEL.

No. 485,203.

Patented Nov. 1, 1892.

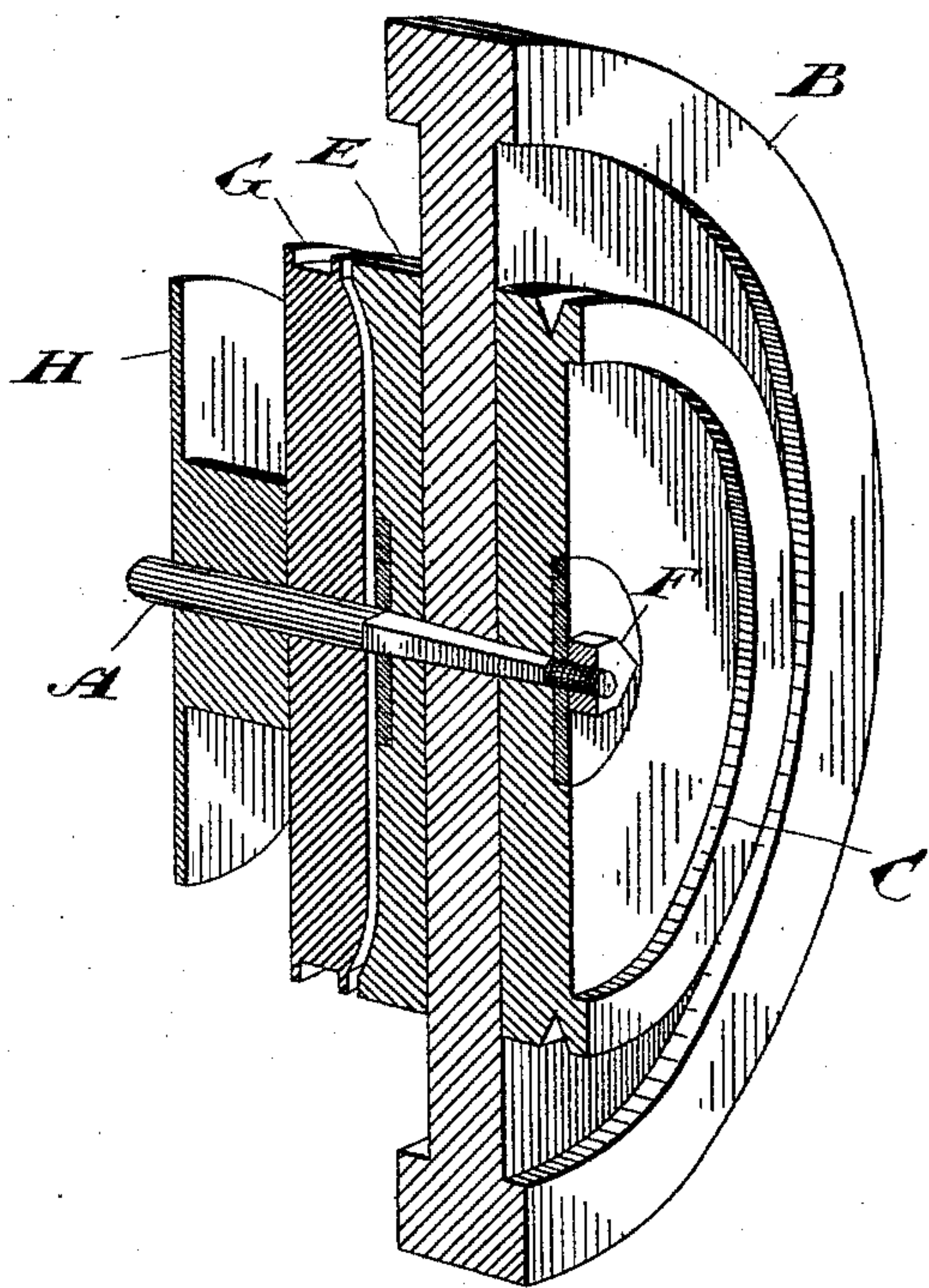


Fig. 2

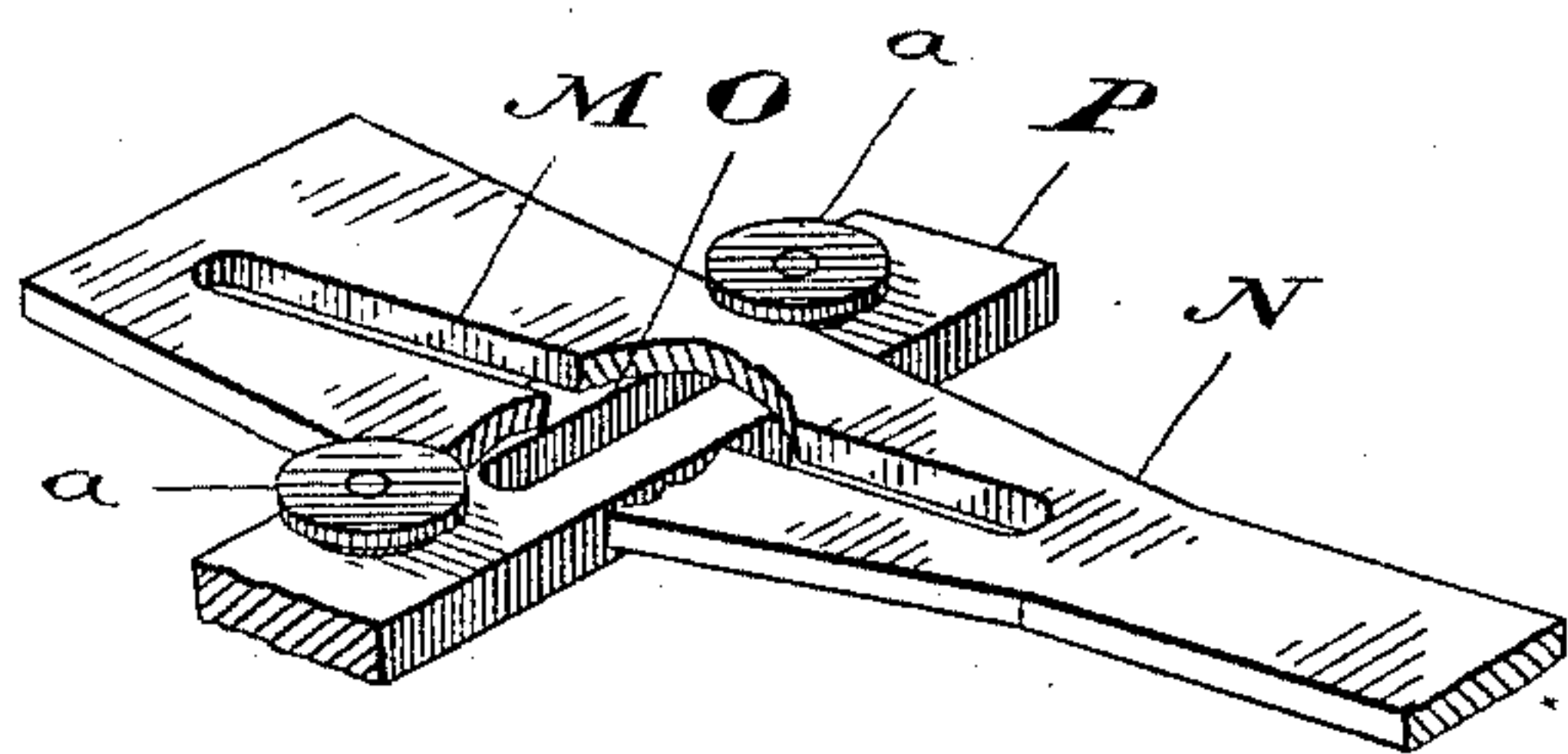


Fig. 3

Witnesses

J. Edw. Maybee

W. G. McMillan

Inventor

W. A. Lloyd

by Donald C. Ridout & Co
Attys

UNITED STATES PATENT OFFICE.

WILLIAM A. LLOYD, OF PITTSBURG, PENNSYLVANIA.

SAND-ROPE REEL.

SPECIFICATION forming part of Letters Patent No. 485,203, dated November 1, 1892.

Application filed January 21, 1892. Serial No. 418,829. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM ALEXANDER LLOYD, of the city of Pittsburg, in the county of Allegheny, in the State of Pennsylvania, have invented a certain new and Improved Sand-Rope Reel, of which the following is a specification.

The object of the invention is to arrange the sand-reel wheel on the shaft of the driving-wheel in such a manner that the said reel may be instantly thrown into gear with the driving-wheel and as easily thrown out of gear and its motion arrested; and it consists, essentially, of a reel loosely journaled on the driving-wheel shaft and provided with a lever by which its surface may be thrown into frictional contact with the face of the driving-pulley or thrown out of contact with the said pulley and simultaneously stopped by the friction-brake, the whole being arranged substantially as hereinafter more particularly explained.

Figure 1 is a perspective view of my improved sand-rope reel. Fig. 2 is a sectional perspective view of the driving-pulley and sand-reel. Fig. 3 is a perspective view, partially in section, of the adjustable plate by which the shifting-lever is operated.

In the drawings like letters of reference indicate corresponding parts in each figure.

A represents the driving-shaft, B the driving-pulley, and C a pulley fixed to the driving-pulley B and on which the bull-rope is carried.

E is a friction-disk fixed to the pulley B.

It will be observed that the ends of the shaft A, on which the pulleys B C and the friction-disk E are fitted, is made square or angular in shape and is also tapered, so that by tightening the nut F the pulleys and friction-disk referred to will be forced onto the said shaft and held so that they cannot revolve thereon.

G is a band-pulley fixed to the reel H, both of which are loosely journaled on the shaft A, the inner face of the band-pulley G being made to correspond with and fit the face of the friction-disk E. A grooved hub I (see Fig. 1) is fixed to the face of the reel H, the groove in the said hub being intended to receive the forked end of the lever J, which is pivoted on the end of the bar or bracket K which extends from the post L. The end of the lever J passes through a diagonal slot M,

made in the movable plate N, and through a slot O, made in the fixed plate P, the said slot O being parallel with the shaft A. The plate N is hinged to the rod Q, which extends back to the hand-lever R, on which it is pivoted. This lever is fixed to a shaft S, on which the crank T is likewise fixed. A flexible band U extends around the band-pulley G and is fastened at one end to the link B', which is pivoted in the frame of the machine, as indicated. The other end of the band U is connected to the rod W, which extends from and is pivoted upon the crank T. In Fig. 1 it will be observed that the rods Q and W are broken. This is for the purpose of indicating that the lever R and its shaft are some distance away from the reel.

On reference to Fig. 3 it will be observed that the plate N is carried between friction-rollers *a*. In order to put the reel H into motion, I draw upon the hand-lever R, which action, owing to the connection already described, pulls the plate N, and owing to the relative positions of the slot M and slot O, through which the lever J passes, the said lever is moved so as to force the face of the band-pulley G, which pulley is fixed to the reel, against the face of the friction-disk E, thereby forming frictional contact between the reel and pulley B, so that the motion of the said pulley shall be imparted to the reel. Simultaneously with the shifting of the reel to secure the desired frictional connection with the revolving pulley B the crank T, which is connected to the shaft S of the hand-lever R, pulls the rod W, so as to loosen the band U. When it is desired to stop the reel H, the movement of the hand-lever R is reversed, and owing to the relative positions of the slots M and O the lever J is moved so as to draw the face of the band-pulley G away from the face of the friction-disk E, and simultaneously the crank T draws upon and tightens the band U. Thereby a single movement of the hand-lever R removes the reel from its driving-power and simultaneously applies the friction-brake, so as to stop its motion. It will of course be understood that the pulleys B C and friction-disk E may be made all in one piece, if desired.

What I claim as my invention is—

1. The pulleys B C and friction-disk E, held

upon the angular-shaped end of the shaft A, the band-pulley G, and reel H, fixed together and loosely journaled on the shaft A, in combination with the slotted plates N and P, the
5 pivoted lever J, its upper end fitted into the groove in the hub I, which is fixed to the face of the reel H, its other end extending through the slots in the plates, and the hand-lever R, substantially as and for the purpose specified.
10 2. In a sand-rope reel, the band U, having one end stationary and its other end connected

to a rock-shaft, in combination with a hand-lever R, rod Q, movable plate N, having a diagonal slot and fixed slotted plate P, and the pivoted lever passing through both slots, substantially as and for the purpose specified.

Toronto, January 8, 1892.

WILLIAM A. LLOYD.

In presence of—

J. EDW. MAYBEE,

W. G. McMILLAN.