P. KAVANAGH.

Sheaves.

No. 167,257. Patented Aug. 31, 1875.

Fig. 1.

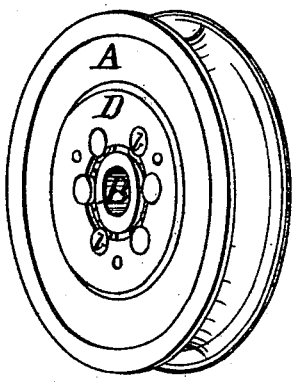

Fig. 2.

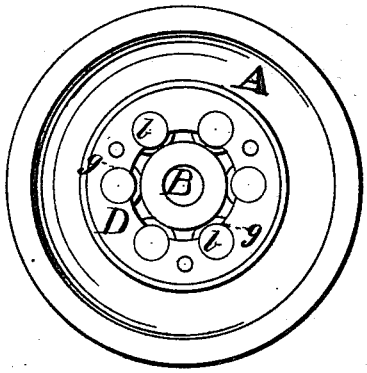

Fig. 5.

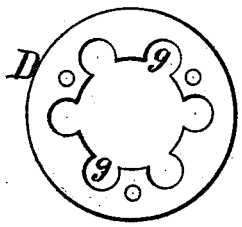

Fig. 3.

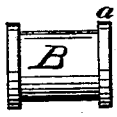

Fig. 4.

WITNESSES

Robert Everett

E. H. Bates

By

INVENTOR

Patrick Kavanagh

Chipman Hosmer & Co.

Attorney

UNITED STATES PATENT OFFICE.

PATRICK KAVANAGH, OF CANARSIE, NEW YORK.

IMPROVEMENT IN SHEAVES.

Specification forming part of Letters Patent No. **167,257**, dated August 31, 1875; application filed July 17, 1875.

To all whom it may concern:

Be it known that I, PATRICK KAVANAGH, of Canarsie, in the county of Kings and State of New York, have invented a new and valuable Improvement in Sheaves; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a transverse vertical section of my sheave. Fig. 2 is a face view thereof; and Figs. 3, 4, and 5 are detail views of the same.

My present invention is intended as an improvement upon the pulley for which Letters Patent No. 141,564 were granted to me; and it consists in a novel construction of the intermediate solid rollers and recessed side flanges, as will be hereinafter more fully set forth.

In the annexed drawing, A represents the outside sheave or pulley, and B the center spool, provided with circumferential flanges *a a* at its ends, all constructed in the same manner as described in my former patent above referred to. C C represent the intermediate rollers, which are cast solid, with their journals *b b* at their ends. The relative size of the body of the roller and of its journals is such that the journals will bear on the spool-flanges *a* with equal strain or equal pressure as the body of the rollers bears on the body of the spool, thus increasing the bearing, and making the rollers capable of withstanding a much heavier crushing strain. The side plates D D, which hold the rollers in position, are cut away around the inner periphery to make room for the ends of the rollers, as at *g*.

By this construction of the rollers and side plates the latter are prevented, when they have been in use some time, from coming in contact with the flanges of the spool, and create a friction.

What I claim as new, and desire to secure by Letters Patent, is—

The intermediate rollers C C, made solid, with journals *b b* at their ends, in combination with the flanges, center spool B, side plates D D, and outside sheave A, all constructed substantially as and for the purposes herein set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

PATRICK KAVANAGH.

Witnesses:

BERNHARD ALLER,

JAMES S. SERENE.