(Model.)

J. E. DONOVAN.

SELF BELTING PULLEY.

No. 270,028. Patented Jan. 2, 1883.

Fig. 1.

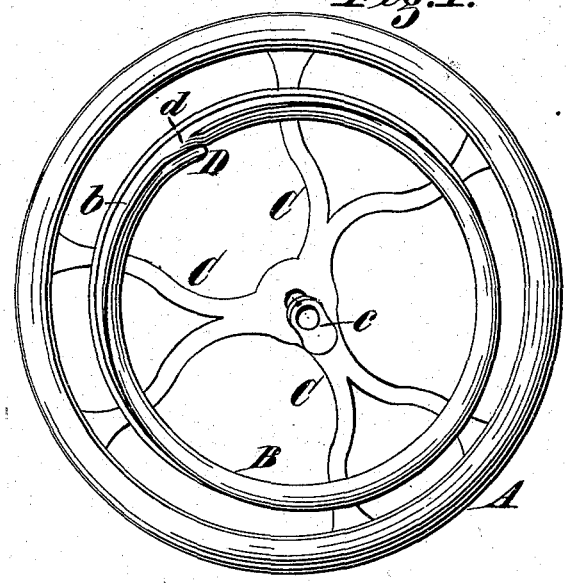


Fig. 2.

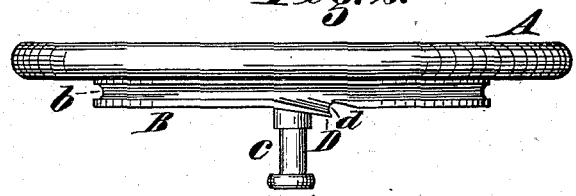
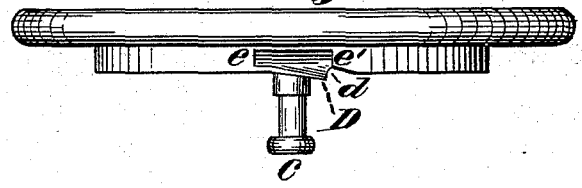


Fig. 3.



Attest,
Jno. E. Wiles.
Adolphe J. Gluchowsky.

Inventor,
John E. Donovan.
by Wood & Boyd
his Attorneys &c.

UNITED STATES PATENT OFFICE.

JOHN E. DONOVAN, OF CINCINNATI, OHIO.

SELF-BELTING PULLEY.

SPECIFICATION forming part of Letters Patent No. 270,028, dated January 2, 1883.

Application filed July 6, 1882. (Model.)

To all whom it may concern:

Be it known that I, JOHN E. DONOVAN, a citizen of the United States, and a resident of Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Self-Belting Pulleys, of which the following is a specification.

My invention relates to an improved self-belting pulley, which will be fully explained in the description of the accompanying drawings, in which Figure 1 is an elevation of my improvement; Fig. 2, a top plan view, and Fig. 3 a plan view of the pulley before the band-groove is scored.

A represents the balance-wheel of an ordinary sewing-machine.

B represents a grooved pulley in which the band runs for driving the machine.

C represents spider-arms of the fly-wheel; *c*, the crank-shaft.

D represents a grooved flange, which projects laterally on one side of the rim of the grooved wheel B a sufficient distance to allow of an angular groove, *d*, to be formed in the flange D, of the same size and depth as the groove *b* in the band-wheel B. This angular groove *d* intersects the groove *b* in the manner shown in Fig. 2. The flange D and groove *d* are made integral with the band-wheel B, the grooves *b* and *d* lying in the same horizontal plane. This flange and groove are preferably made as follows: A pattern is made of that part of the band-wheel which lies between the points *e e'*, (shown in Fig. 3,) having the angular groove, as therein shown. The pattern of the other portion of the band-wheel is made with the pulley B plain or unscored. The two patterns are placed in the flasks so as to cast the wheel integral, and of the form shown in Fig. 3, when the groove is cut by being turned in a lathe in the usual manner.

In other belting devices having a simple notch cut in the rim of the grooved pulley the belt is required to be held by the hand to secure it, whereas my device will automatically band the wheel by simply turning the wheel, the angular groove *d* catching and guiding the belt into place. By these means I also avoid strains of the belt by lifting it bodily over the flange of the grooves, and avoid the use of studs or fingers, which are made to project above the face of the flanges on either side of the groove, which studs are liable to catch the clothing of the operator.

My device can be made at a very slight increase in cost over the common plain pulley, and obviates the objections existing in other devices.

What I claim as my invention is—

A band-wheel constructed with an annular band-receiving groove in its periphery, and a flange projecting laterally from one side of the rim of the wheel, and having its outer surface constructed with an obliquely-arranged groove, the inner end of which intersects the annular groove in the wheel, substantially as described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

JOHN E. DONOVAN.

Witnesses:
JNO. E. JONES,
J. H. CHAS. SMITH.