

(No Model.)

F. GÜNTHER.  
SHEAVE PULLEY.

No. 522,466.

Patented July 3, 1894.

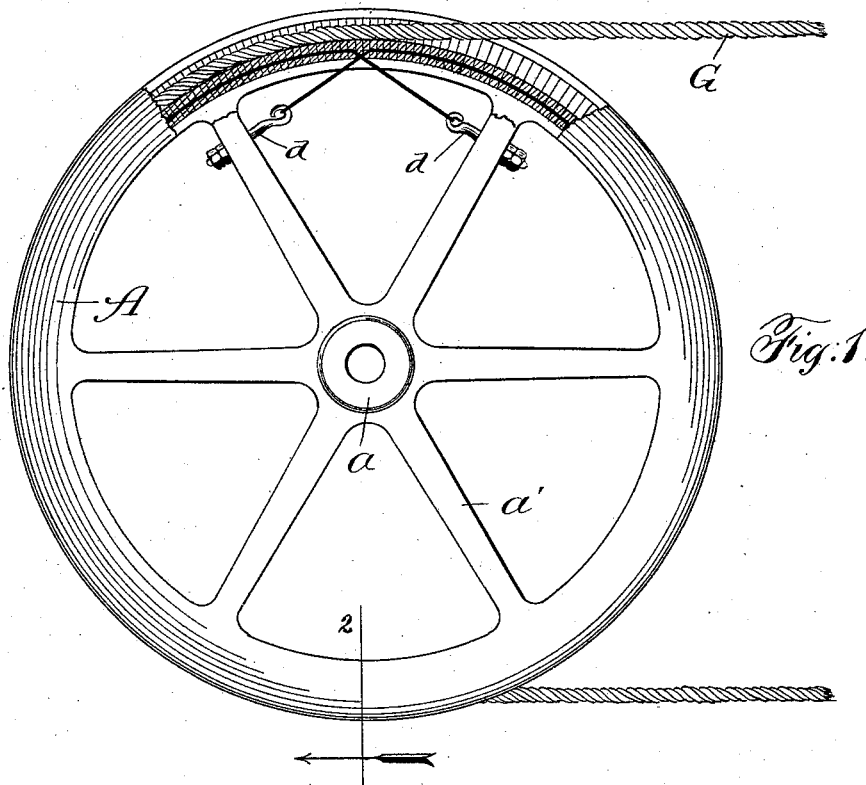


Fig. 1.

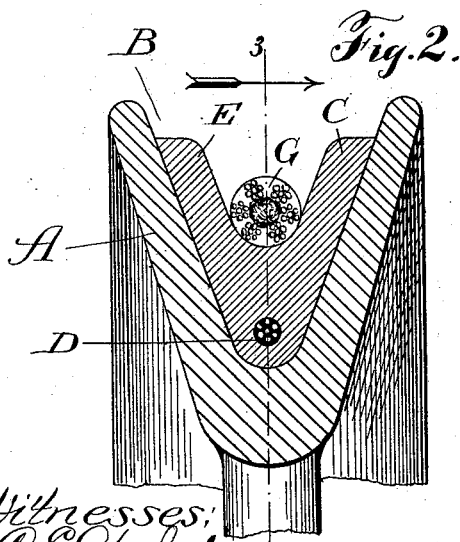


Fig. 2.

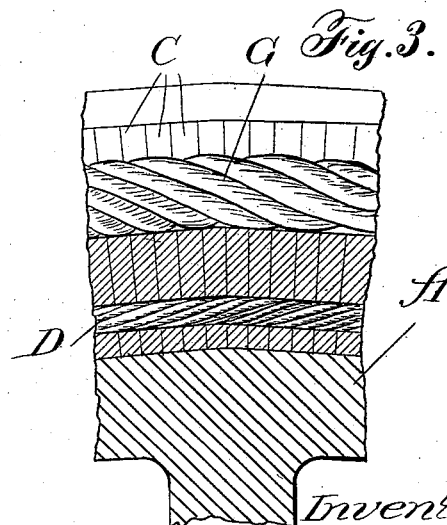


Fig. 3.

Witnesses:  
C. E. Gaylord,  
L. B. Alter.

Inventor:  
Franz Günther,  
By *Dunning & Dunning,*  
Attorneys.

# UNITED STATES PATENT OFFICE.

FRANZ GÜNTHER, OF ST. JOHANN, GERMANY, ASSIGNOR TO GEORGE HECKEL,  
OF SAME PLACE.

## SHEAVE-PULLEY.

SPECIFICATION forming part of Letters Patent No. 522,466, dated July 3, 1894.

Application filed November 9, 1893. Serial No. 490,411. (No model.)

### *To all whom it may concern:*

Be it known that I, FRANZ GÜNTHER, a subject of the Emperor of Germany, residing at St. Johann, Saarbrücken, Germany, have invented certain new and useful improvements in Sheave-Pulleys, of which the following is a specification.

The object of my invention is to provide a simple, economical and efficient sheave pulley; and it consists in the arrangements, combinations and details hereinafter described and claimed.

In the drawings, Figure 1 represents an elevation of my improved sheave pulley, partly in section; Fig. 2 an enlarged sectional detail, taken on line 2 of Fig. 1; and Fig. 3 an enlarged sectional detail taken on line 3 of Fig. 2.

The sheave pulleys now in use are generally formed of cast iron, and having the groove in the periphery of the same material provided with a dove-tailed slot extending all around the inner diameter of the groove in order to form a clearance. The objection to this style of pulley is that it quickly wears away under the action of the cable, which slips into the dove-tailed groove after it has become worn enough to allow it, which necessitates the discarding of the entire pulley, or repairs which consume considerable time and expense. To avoid these objections, and at the same time provide a pulley which will last a greater length of time, I make a pulley, A, provided with the usual hub, *a*, and spokes, *a'*, and cast a groove, B, preferably V-shaped, around the outer edge of the pulley. I provide a number of sections, C, of leather or like material, cut to fit the inner groove of the pulley, and insert them in place side by side, so as to cover almost entirely the metallic surface of the groove. These pieces, when laid in place, are secured together and held in position, preferably by means of a cable, D, which has its ends secured to locking bolts, *d*, and which are bolted firmly to the spokes of the wheel in such manner that the cable can be drawn very taut. These pieces of leather are cut in such shape that they form, when in position, a circumferential

groove, E, for the reception of the cable G, and are designed to be of such shape that they may be cut from one piece of leather without waste of material.

The advantages to be had in using my improved pulley are such that by covering and inclosing the metallic groove of the pulley with these leather or cushion strips, the cable will hug more closely to the yielding surface, thereby doing away with the wear on the cable and pulley, as well as loss of power due to slipping, and which will permit of a set of these sheave pulleys being run much closer together than where the ordinary pulleys are used. When the cushion or leather pieces are worn away, they can be released from their fastenings, and new ones substituted for the worn pieces, or an entirely new set of pieces set in the groove, without the necessity of removing the pulley from the shaft.

While I have described with more or less minuteness the details, construction and materials entering into my invention, I do not desire to be limited thereto unduly, any more than is pointed out in the claim. On the contrary, I contemplate changes in form, construction and arrangement and the use of equivalents, as circumstances may suggest or render expedient.

### I claim—

In sheave pulleys the combination of a wheel provided with a V-shaped circumferential groove, a number of V-shaped pieces of leather or like cushioning material surrounding the inner portion of the groove and forming in turn a V-shaped circumferential groove for the reception of a cable or rope belt, a wire cord or cable passed through the leather portions and bolted to the pulley arms and tightening bolts secured to such cable and the pulley arms for the purpose of securing the leather pieces in their working position, substantially as described.

FRANZ GÜNTHER.

Witnesses:

JAK. RÖMER,

PH. BURGEMEISTER,

*Both of St. Johann.*