

No. 817,848.

PATENTED APR. 17, 1906.

E. & P. GUITEL.  
PULLEY TACKLE.

APPLICATION FILED FEB. 7, 1905.

Fig. 1.

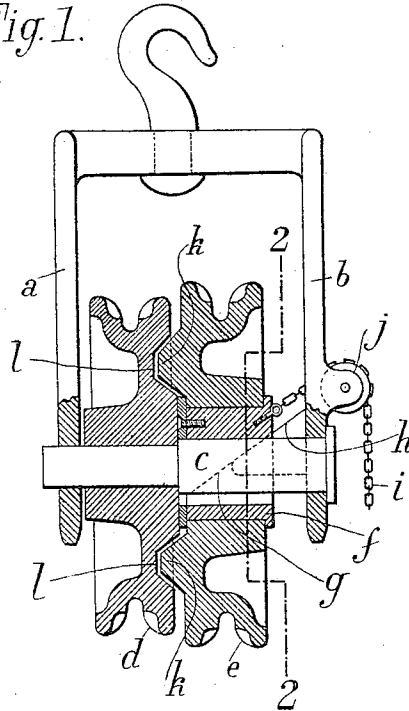
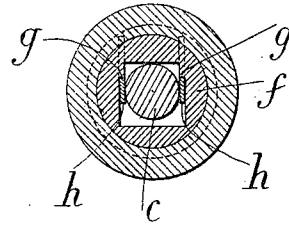


Fig. 2.



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# UNITED STATES PATENT OFFICE.

EMILE GUITEL AND PAUL GUITEL, OF MOREUIL, FRANCE.

## PULLEY-TACKLE.

No. 817,848.

Specification of Letters Patent.

Patented April 17, 1906.

Application filed February 7, 1905. Serial No. 244,535.

*To all whom it may concern:*

Be it known that we, EMILE GUITEL and PAUL GUITEL, citizens of the Republic of France, and residents of Moreuil, Somme, France, have invented certain new and useful Improvements in Pulley-Tackle, of which the following is a specification.

This invention relates to improvements in pulley-tackle, more particularly in so-called "differential" tackle and "worm-wheel" tackle; and its object is to allow of rendering the pulleys on which the load-chain travels independent movement from each other, if desired. This arrangement allows of rapidly lowering the hook when there is no load thereon, and the loss of time involved by the arrangements hitherto used is thus obviated.

In the accompanying drawings, Figure 1 is a sectional elevation illustrating our improved pulley-tackle. Fig. 2 is a section on line 2 2 of Fig. 1.

In the apparatus shown in Figs. 1 and 2 the cheeks *a* and *b* of the hanger are provided with a transverse axle *c*, on which are mounted two sheaves *d* and *e*. The sheave *d*, which is not longitudinally displaceable on the said axle, is situated between the cheek *a* and a suitable shoulder with which the axle is provided. The sheave *e* is not directly mounted on the axle *c*, but on a sleeve *f*, on which it is freely revoluble. The sleeve *f* is provided with two recesses *g*, into which extend two parallel projections *h*, fixed to the inner surface of the cheek *b*, as shown in the drawings. To the sleeve *f* is attached a chain *i*, which passes over a roller, the axle of which is supported by bearings provided in lugs *j*, fixed to the cheek *b*. One of the sheaves—for instance, the sheave *e*—is provided with bosses *k*, adapted to engage corresponding recesses in the other sheave, so that when the sheaves are closed together they are connected with each other by means of the said bosses and recesses.

When the tackle is to be operated without a load, the chain *i* is pulled, so that the sleeve *f* is caused to slide upward along the inclined surfaces of the projections *h h*, taking with it the sheave *e*, the bosses *k* of which are thus removed from the recesses *l* in the other sheave. The sheaves are thus rendered independent from each other, so that the tackle can be operated very rapidly.

It is obvious that when a load is supported by the chain traveling over the sheaves *d* and *e* the sleeve *f* is caused by gravity to slide down the inclined surfaces of the projections *h*, so that the sheaves are held firmly together and there is no danger of accidents. The device described also has the advantage that the two sheaves *d* and *e* are mounted on a single axle supported by the cheeks *a* and *b* and that all danger of jamming is avoided.

Having thus described the nature of our invention and the means for carrying out the same, we declare that what we claim is—

In differential pulley-tackle the combination of two sheaves of different diameters, with fixed cheeks, an axle carried by the latter and supporting the sheaves, a sleeve arranged inside one of the said sheaves, inclined surfaces inside the said sleeve, corresponding inclined surfaces on one of the cheeks, a chain attached to the said sleeve, a small pulley guiding the said chain, recesses in one of the sheaves and corresponding bosses provided on the other sheave, substantially as described and for the purpose set forth.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

EMILE GUITEL.  
PAUL GUITEL.

Witnesses:

HECTOR WILBOUT,  
HENRI VIGNAUT.