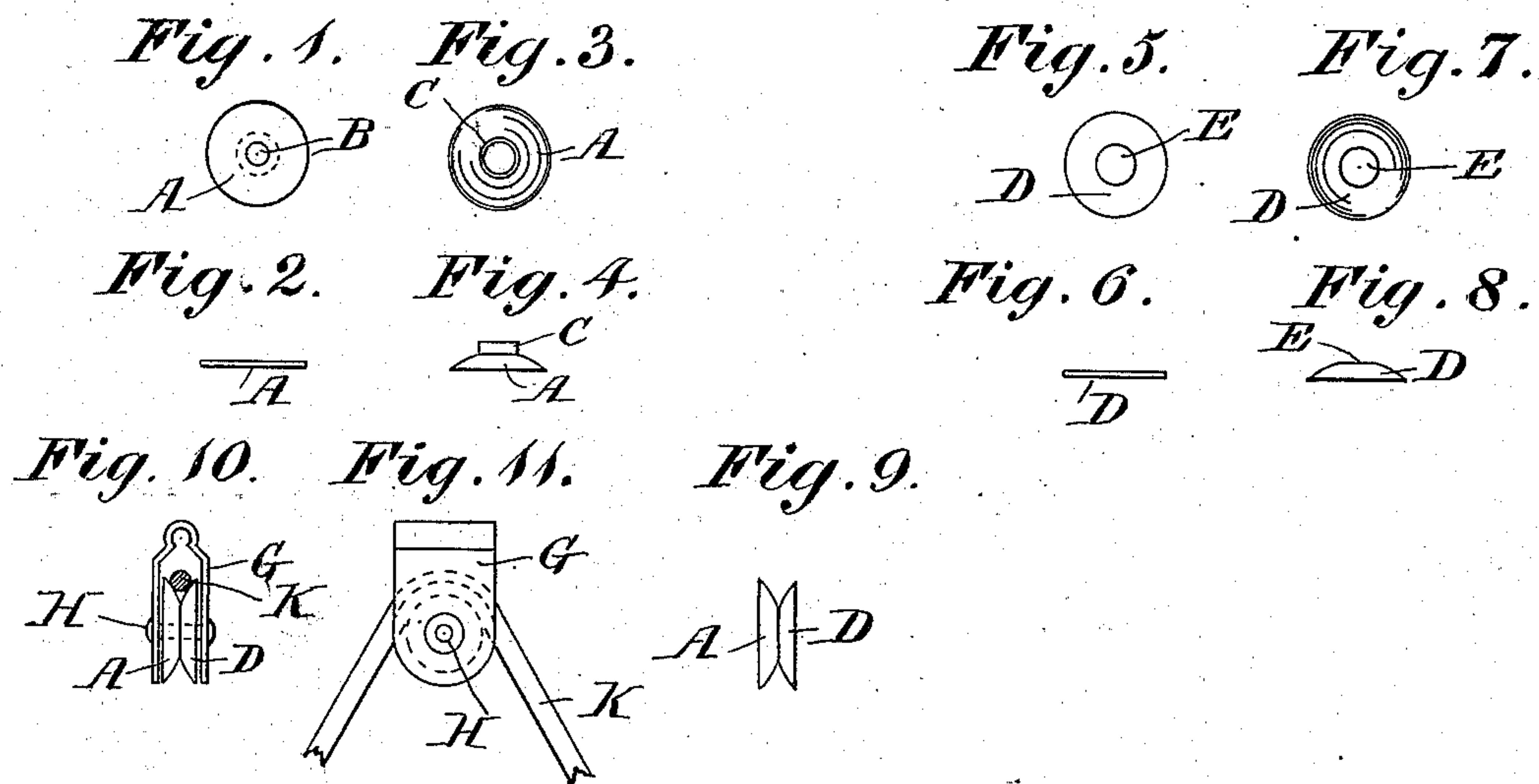


(No Model.)

H. TURNER.
Pulley.

No. 239,405.

Patented March 29, 1881.



Witnesses

Charles L. Simpson
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Inventor

Henry Turner

UNITED STATES PATENT OFFICE.

HENRY TURNER, OF MONTREAL, QUEBEC, CANADA, ASSIGNOR OF ONE-HALF TO WILLIAM TURNER, OF SAME PLACE.

PULLEY.

SPECIFICATION forming part of Letters Patent No. 239,405, dated March 29, 1881.

Application filed January 4, 1881. (No model.)

To all whom it may concern:

Be it known that I, HENRY TURNER, of the city and district of Montreal, Province of Quebec, Canada, have invented certain new and useful Improvements in the Construction of Pulleys; and I do hereby declare that the following is a full, clear, and exact description of the same.

This invention has reference to improvements in the construction of pulleys, principally for small light work, such as are used in some of the forms of pantaloons-suspenders at present employed, and all such and similar purposes. I nevertheless wish it to be understood that larger pulleys may also be constructed in the same manner.

Pulleys made out of wood and bone split, and are therefore objectionable. Pulleys made out of solid metal are expensive to make, heavy, and clumsy, while by my invention a light and inexpensive pulley is formed.

In the drawings hereunto annexed similar letters of reference indicate like parts.

Figures 1, 2, 3, and 4 show the construction of one half of the pulley. Figs. 5, 6, 7, and 8 show the construction of the other half of the pulley. Fig. 9 shows the whole pulley. Fig. 10 is a side elevation, showing one manner of using the invention. Fig. 11 is a front view of Fig. 10.

I take a sheet of metal of suitable thickness and punch out in the ordinary way a washer or annulus, A, (shown in Figs. 1 and 2,) in which the center opening, B, is smaller than what is required, as indicated by the dotted circle in Fig. 1. I next form this washer or annulus into the dished or outer surface of a concavo-convex form, (shown in Figs. 3 and

4,) by means of a pair of concave and convex dies, one of which dies (preferably the convex one) has a central projection agreeing with a central opening, and proportioned to "strike up" the inner portion of the washer or annulus A and form it into a neck, C, as shown in Fig. 4. This completes the one half of the pulley. The other half of the pulley is made by similarly punching out a washer or annulus, D, of equal outer diameter, but having a central opening, E, of proper size to fit upon the neck C. This washer or annulus is also rendered dished or concavo-convex in a similar manner to A. The two parts A and D are put together, and the surplus of the neck C, extending through the washer or annulus D, is turned over with a pair of dies of ordinary construction for the purpose, thus forming the complete pulley. (Shown in Fig. 9.)

In Figs. 10 and 11 one manner of using my invention is shown. G is an ordinary strap, and H an ordinary axle, which passes through the strap and the center opening, E, in the pulley, and thereby holds the pulley in the strap in the ordinary way. K is any suitable cord, &c., passing over the pulley in the ordinary way.

What I claim as my invention, and wish to secure by Letters Patent, is as follows:

The hereinbefore-described pulley, consisting of the part A, having neck C, and the part D, having opening E, the opposite surfaces of the two being convex, and united in the manner and for the purpose set forth.

HENRY TURNER.

Witnesses:

CHARLES G. C. SIMPSON,
THOS. D. VAILBANCOURT.