

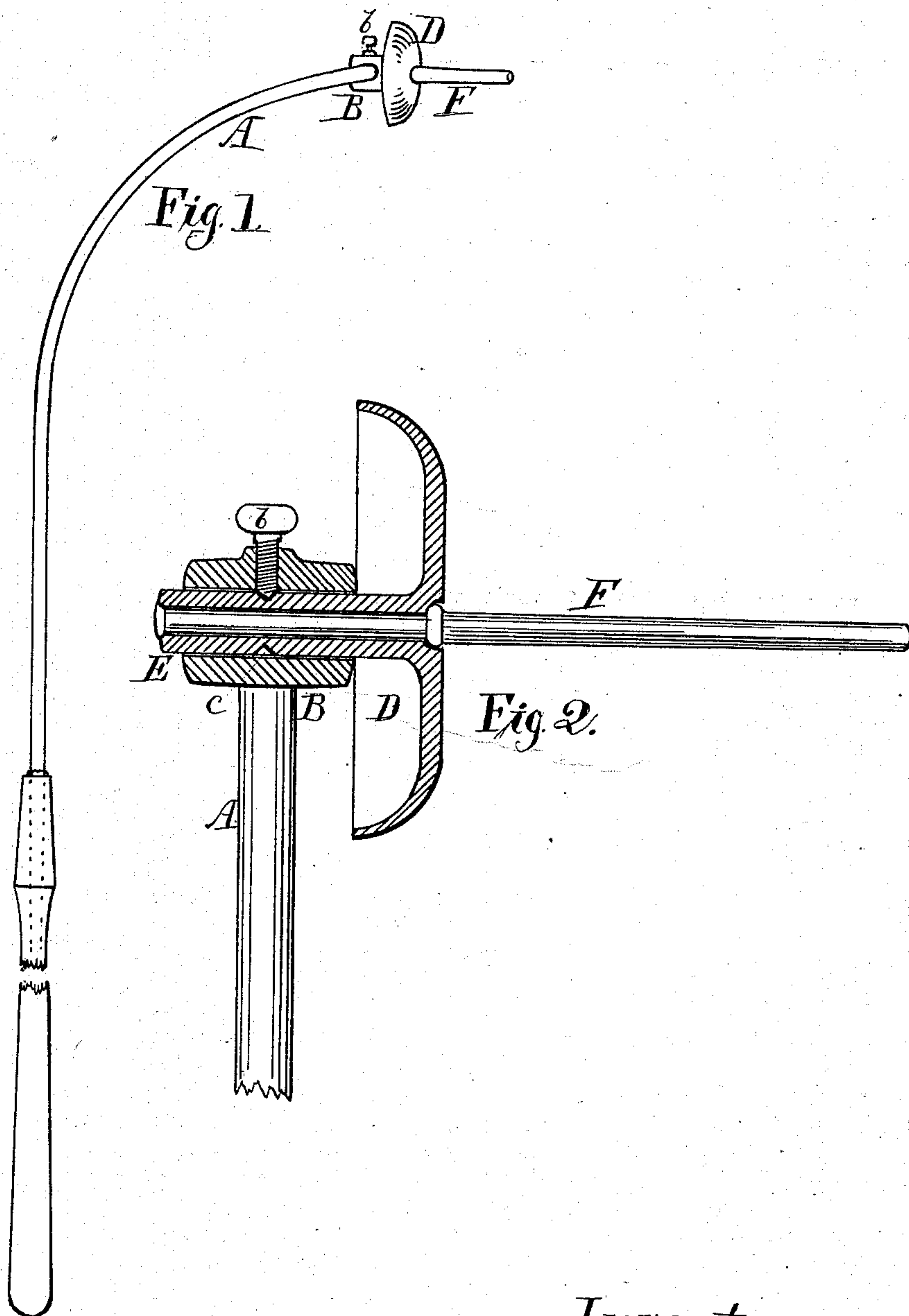
(No Model.)

A. GAIRING.

BELT LIFTER.

No. 252,453.

Patented Jan. 17, 1882.



Witness,  
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# UNITED STATES PATENT OFFICE.

ADOLF GAIRING, OF CLEVELAND, OHIO.

## BELT-LIFTER.

SPECIFICATION forming part of Letters Patent No. 252,453, dated January 17, 1882.

Application filed December 7, 1881. (No model.)

*To all whom it may concern:*

Be it known that I, ADOLF GAIRING, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements on Belt-Lifters, of which the following is a specification.

This invention relates to certain improvements on Patent No. 235,970 for belt-lifters, and has for its objects to overcome certain defects which render said device practically inoperative and objectionable. In said patented device the first defect consists in the handle being straight, which prevents the lifter from passing or reaching over the pulley, but which strikes the shaft, and either jerks the implement out of the hand of the user or else breaks the handle, and is liable to do injury. The second defect is that the spindle is secured in the sleeve of the handle by a nut on the end. This renders it difficult or slow to remove in case that it is required to reverse the spindle, which frequently occurs; and, furthermore, if the spindle should be revolving in the opposite direction to that which the nut is screwed on, it is liable to unscrew the nut, and then the parts, being loosened, are liable to fall apart. The next or third defect is that the flange is a simple sleeveless concave disk revolving on the spindle, requiring a shoulder for keeping it on that will prevent the disk from coming close to the pulley in putting on a belt.

My improvements consist in making a bent arm or handle for holding the working parts, a sleeve on the disk playing in a sleeve on the end of said arm or handle, and providing a set-screw in said sleeve which reaches into an annular groove in the outer surface of said disk-sleeve, whereby said disk is secured in the said handle-sleeve and allows it to revolve freely, and also enables said disk to be readily removed for reversing the same, next setting the spindle in the disk-sleeve with a countersunk shoulder in the face of the disk, and heading or riveting down the end of the spindle in the back end of the sleeve loosely, so that it may revolve freely therein.

In the accompanying drawings, Figure 1 is a perspective view of my improved belt-lifter. Fig. 2 is a longitudinal section.

A is the staff or arm, which I secure in a wooden handle, like a rake or hoe. It is bent or curved, as shown, in about a quarter-circle, and has on its upper end a permanent sleeve or socket, B, provided with a set-screw, *b*.

D is a concavo-convex disk, which I make with straight central portion and with short curved edge, the object being to supply more bearing-surface for the edge of the belt. Said disk has a permanent sleeve, E, fitting and revolving in the aforesaid sleeve or socket B, and has an annular groove, *c*, cut in its outer surface, which receives the set-screw *b*, which holds the sleeve in place, but allows it to revolve freely.

F is a spindle, having a small shoulder, *f*, seated in a countersunk recess in the face of the disk D. The spindle reaches through the sleeve E, and is headed or riveted down in a countersunk recess, which secures the spindle permanently, but is loosely fitted to allow it to revolve independently.

From the foregoing it will be seen that my improved device permits it to be passed clear over the top of a pulley in replacing a belt before the handle or arm would reach the shaft, and also that to reverse the spindle and disk it is very readily and easily done by means of the thumb-screw.

Having described my improvements, I claim—

The curved or bent arm A, having the permanent sleeve or socket B and set-screw *b*, the disk D, having the permanent sleeve E, provided with the annular groove *c*, and the spindle F, all constructed and operating as shown and described.

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Witnesses:

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