J. H. Blessing,

Friction Clutch.

No. 113,841. Patented Apr. 18. 1871.

Fig. 1

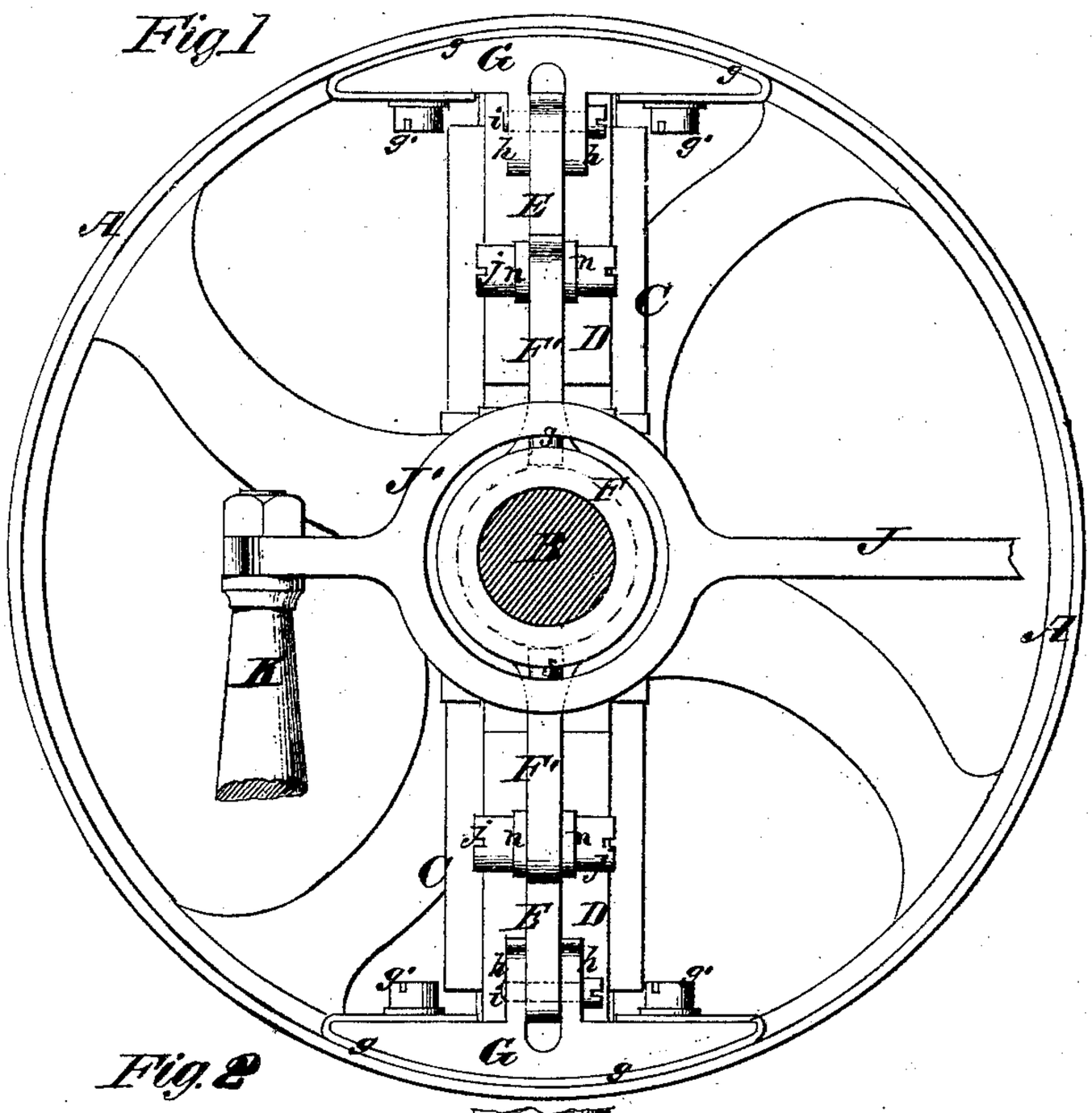
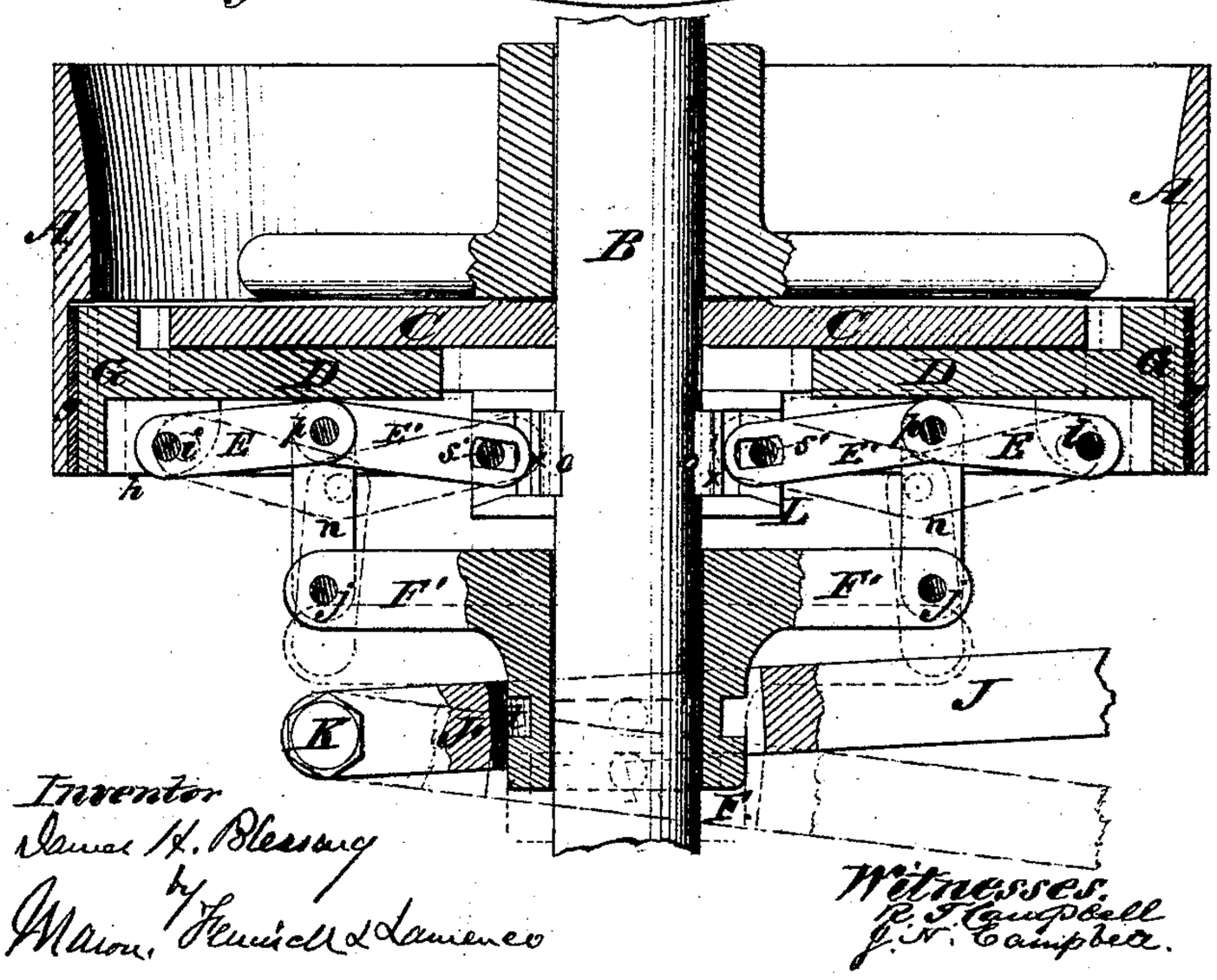


Fig. 2



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JAMES H. BLESSING, OF ALBANY, NEW YORK, ASSIGNOR TO HIMSELF AND TOWNSEND & JACKSON, OF SAME PLACE.

Letters Patent No. 113,841, dated April 18, 1871.

IMPROVEMENT IN FRICTION-CLUTCHES FOR BELT-PULLEYS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, JAMES H. BLESSING, of the city and county of Albany and State of New York, have invented a new and improved Friction-Clutch for Belt-Pulleys; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing making part of this specification, in which—

Figure 1 is an end view of a belt-pulley having my improved clutch applied to it.

Figure 2 is a diametrical section through the pulley and clutch.

Similar letters of reference indicate corresponding parts in the several figures.

The object of this invention is to improve friction-clutches for belt-pulleys, by the combination of expansible friction-pads, toggle-levers, and elastic abutments for such levers, as will be hereinafter explained.

The following description of my invention will enable others skilled in the art to understand my invention.

In the accompanying drawing—

A represents a belt-pulley, which is applied loosely upon its shaft B, and which has part of the inside surface of its rim turned smooth.

C represents a plate which is made fast to the shaft B, and which extends equal distances from each side of the axis of said shaft. This plate C has dovetail grooves made into its face, into which slides D D are fitted. These slides have segments G on their outer ends, the outer surfaces of which are turned to the same diameter as the inner turned surface of the rim of pulley A, and covered with leather *g*, or any other suitable soft frictional material.

This leather *g* is secured to the segments by means of screws *a g' g'*.

Each segment or friction-pad G has two ears, *h h*, formed on its inner flat surface, to which a lever, E, is pivoted at *i*.

The opposite end of lever E is pivoted to a lever, E', by means of a pin, *p*, which pin also affords a pivot for a link, *n*.

The inner end of each lever E' is slotted and connected to a two-part box, L, by means of a pin, *s'*, which passes through the said slot, as shown by fig. 2.

The box L is chambered, and into the chambers springs O O and plates *x x* are inserted between the shaft B and the inner ends of the two levers E' E', as shown in fig. 2.

The links *n n* are pivoted at *j j* to the extremities of two arms, F' F', on a sliding collar, F. This collar is annularly grooved at *t* and applied loosely on the shaft B.

J is a lever for giving endwise movement to the collar F and its arms, which lever is pivoted to a fixed post, K, and yoked at J'.

By means of pins *s s* on lever J, working in the groove *t* in collar E, the clutch can be operated by vibrating said lever.

It will be seen from the above description that I have a self-holding clutch—that is to say, when the collar F is moved toward the pulley the joints of the toggle-levers at *p p* will be moved from the positions indicated by the full lines in the same figure, in which latter positions the toggles will abut against the slides D D.

This movement of the toggles is permitted by the springs O O, which are compressed, and which, by their recoil, hold the toggles firmly in place when the friction-pads are applied to the rim of the pulley.

I am aware that expansible friction-pads have been applied to belt-pulleys and operated in a variety of ways before my invention, and I do not, therefore, claim such contrivances.

What I do claim as new, and desire to secure by Letters Patent, is—

The elastic abutments O O, in combination with toggle-levers and expansible frictional pads G, substantially as described.

JAMES H. BLESSING.

Witnesses:

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