

(No Model.)

M. S. WELLER.

DEVICE FOR OVERCOMING DEAD CENTERS.

No. 249,492.

Patented Nov. 15, 1881.

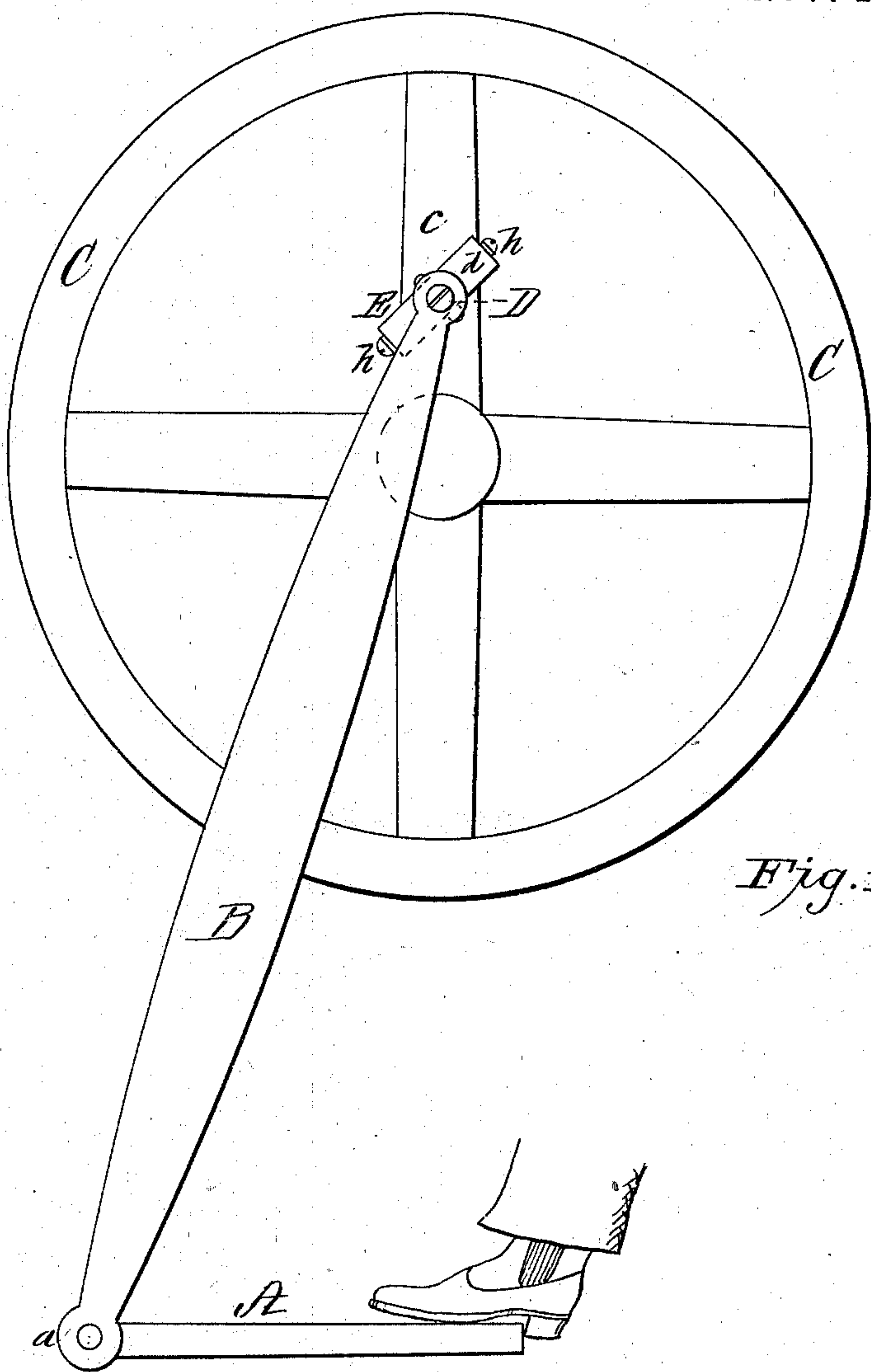


Fig. 1.

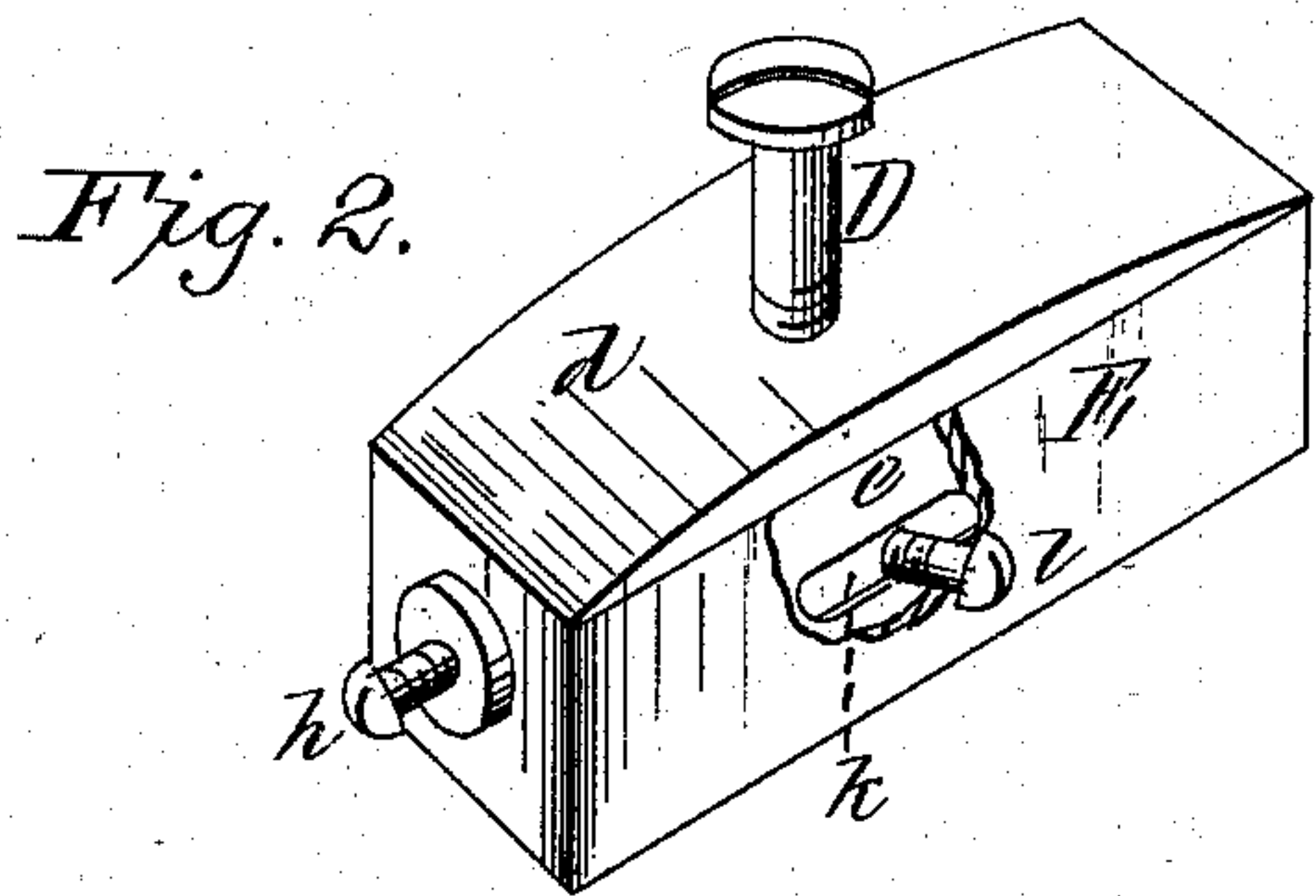


Fig. 2.

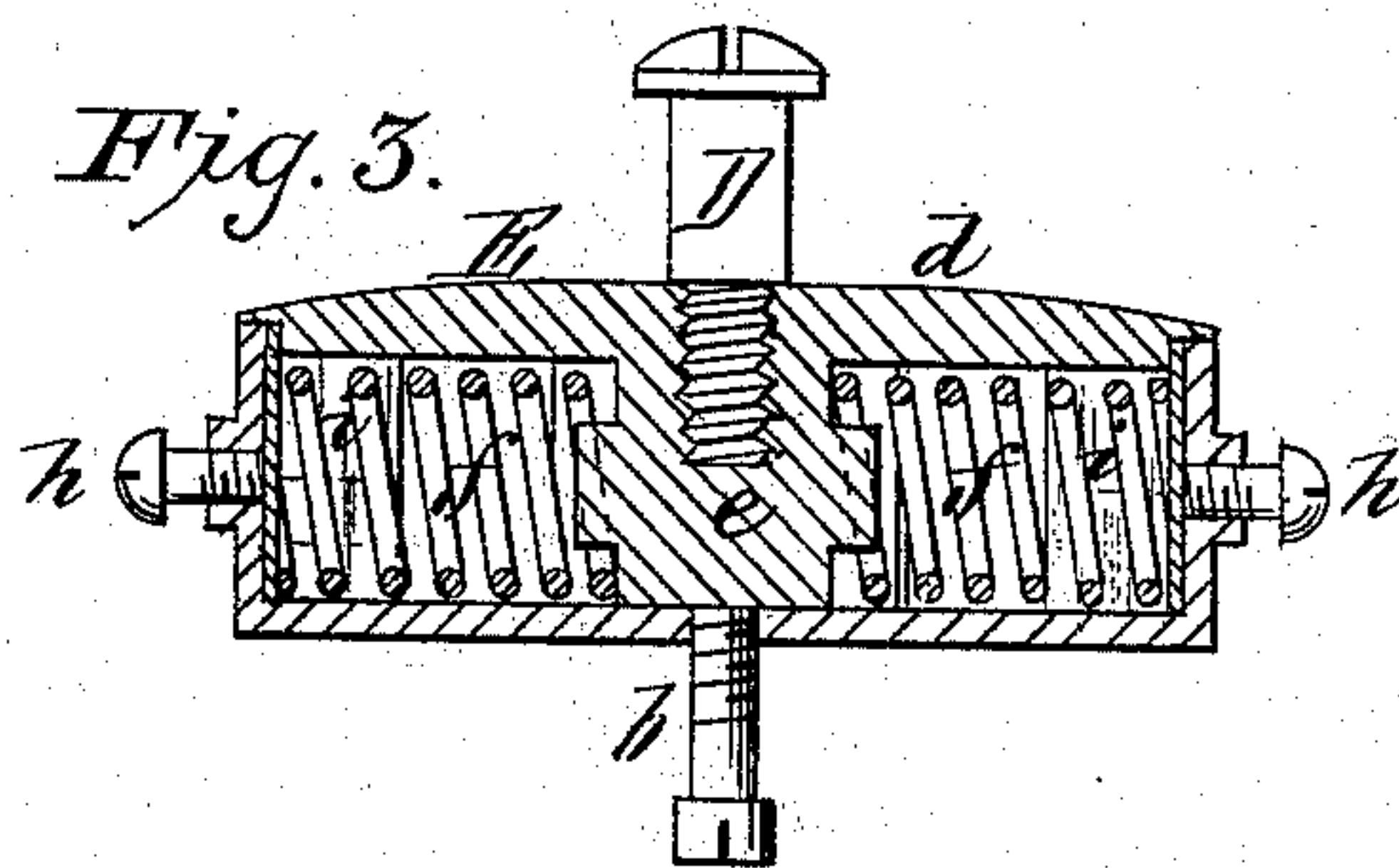


Fig. 3.

WITNESSES

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MICHAEL S. WELLER, OF CHARLESTOWN, WEST VIRGINIA, ASSIGNOR TO
HIMSELF AND THOMAS W. DAVIS, OF SAME PLACE.

DEVICE FOR OVERCOMING DEAD-CENTERS.

SPECIFICATION forming part of Letters Patent No. 249,492, dated November 15, 1881.

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

To all whom it may concern:

Be it known that I, MICHAEL SCOTT WELLER, of Charlestown, in the county of Jefferson and State of West Virginia, a citizen of the United States, have invented an Improved Device for Overcoming the Dead-Centers of Cranks, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is an elevation of a driving-wheel operated by a treadle, the connecting-rod or pitman being secured to the former by means of my improved device. Fig. 2 is a perspective view of my device detached, a portion of one side being broken away to show the interior. Fig. 3 is a longitudinal section through the center of the same.

My present invention consists in a yielding connection or wrist between the pitman and the driving-wheel, to be hereinafter described and specifically claimed.

In the said drawings, A represents the treadle of a sewing or other light machine, to which the lower end of a pitman, B, is pivoted at *a*, the upper end of the latter being secured to the driving-wheel C by means of an adjustable wrist or crank pin, D, of the following construction:

E is a rectangular box, secured by one or more screws, *b*, to the arm *c* of the wheel C at an angle of about forty-five degrees (45°) with its longitudinal center. This box is provided with a lid or cover, *d*, having an enlargement, *e*, extending down from its center, and a spiral spring, *f*, located at each end thereof, the tension of the springs being regulated by screws *h*, bearing against bent plates *i*. Passing into this central enlargement, *e*, from its outside is

a large cylindrical pin, D, having a screw-thread on its inner end and a large head on its outer end. This pin D, I term a "wrist" or "crank" pin, and the box secured to the arm *c*, I designate a "wrist-box," E. The pitman is allowed to pass over its critical points or dead-centers by pressing the central enlargement or block, *e*, with its wrist against the spring *f*, on the side opposite that in which the pitman is moving, each side of the central block, *e*, being provided with a slot, *k*, (see Fig. 2,) into which projects a screw, *l*, to limit its throw in that direction.

It will be seen from the foregoing that my invention may be applied to sewing-machines, lathes, drills, saws, and other light mechanism driven by foot-power, the pressure on the treadle at any position of the pitman being always sufficient to start the driving-wheel.

It is also evident that my improvement may be used to advantage on many other classes of mechanism operated by foot or other power.

I claim—

1. A yielding wrist or crank pin, D, for connecting the pitman B with the driving-wheel C, constructed and arranged to operate substantially as and for the purpose described.

2. The wrist-box E, secured to the face or an arm of the wheel C, in combination with the sliding lid or cover *d*, having a slotted enlargement or block, *e*, located between a pair of springs, *f*, and with the wrist-pin D projecting therefrom, substantially as set forth.

Witness my hand this 5th day of October, 1881.

MICHAEL SCOTT WELLER.

In presence of—

T. W. MITCHELL,
D. A. PHILLIPS.