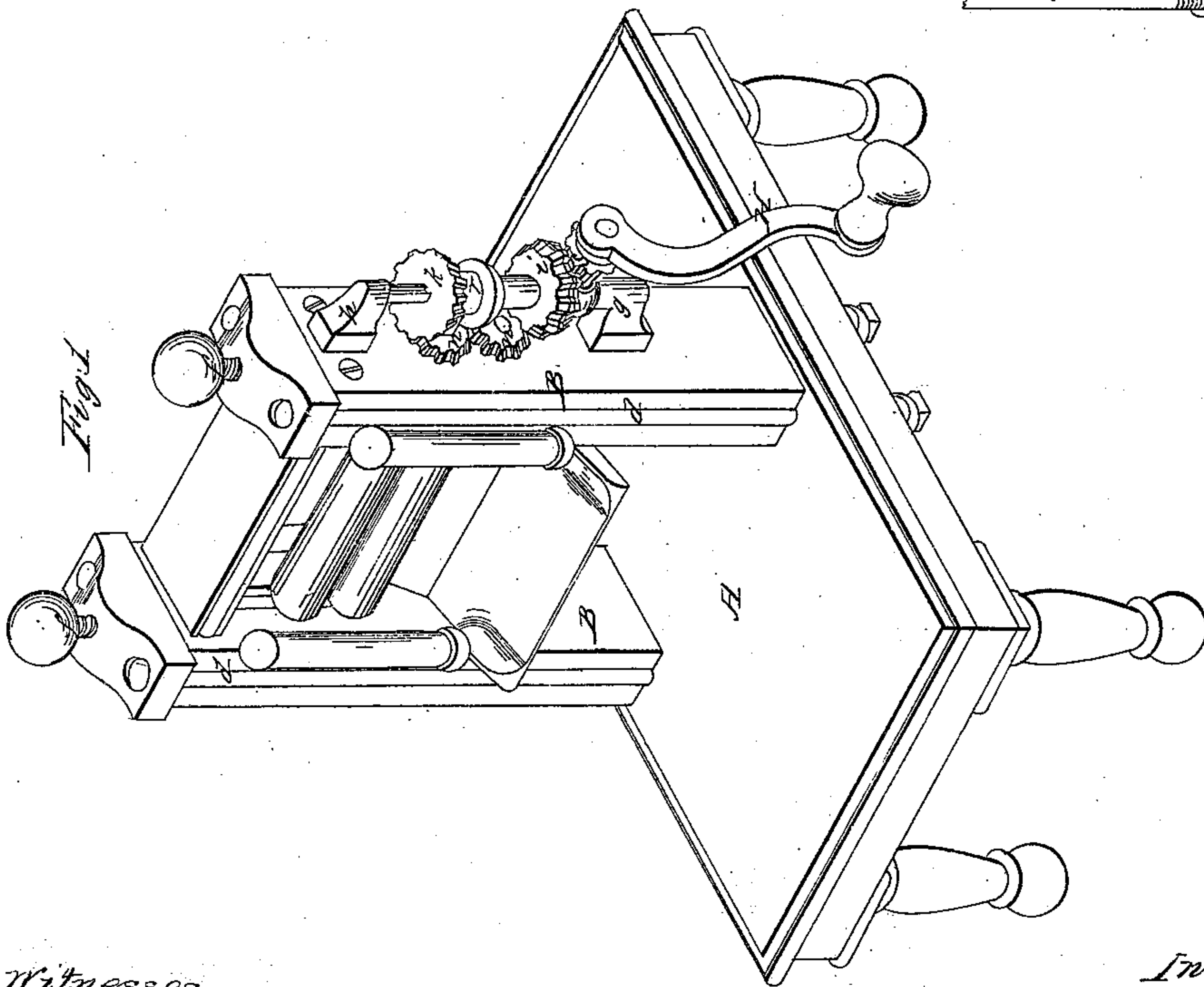
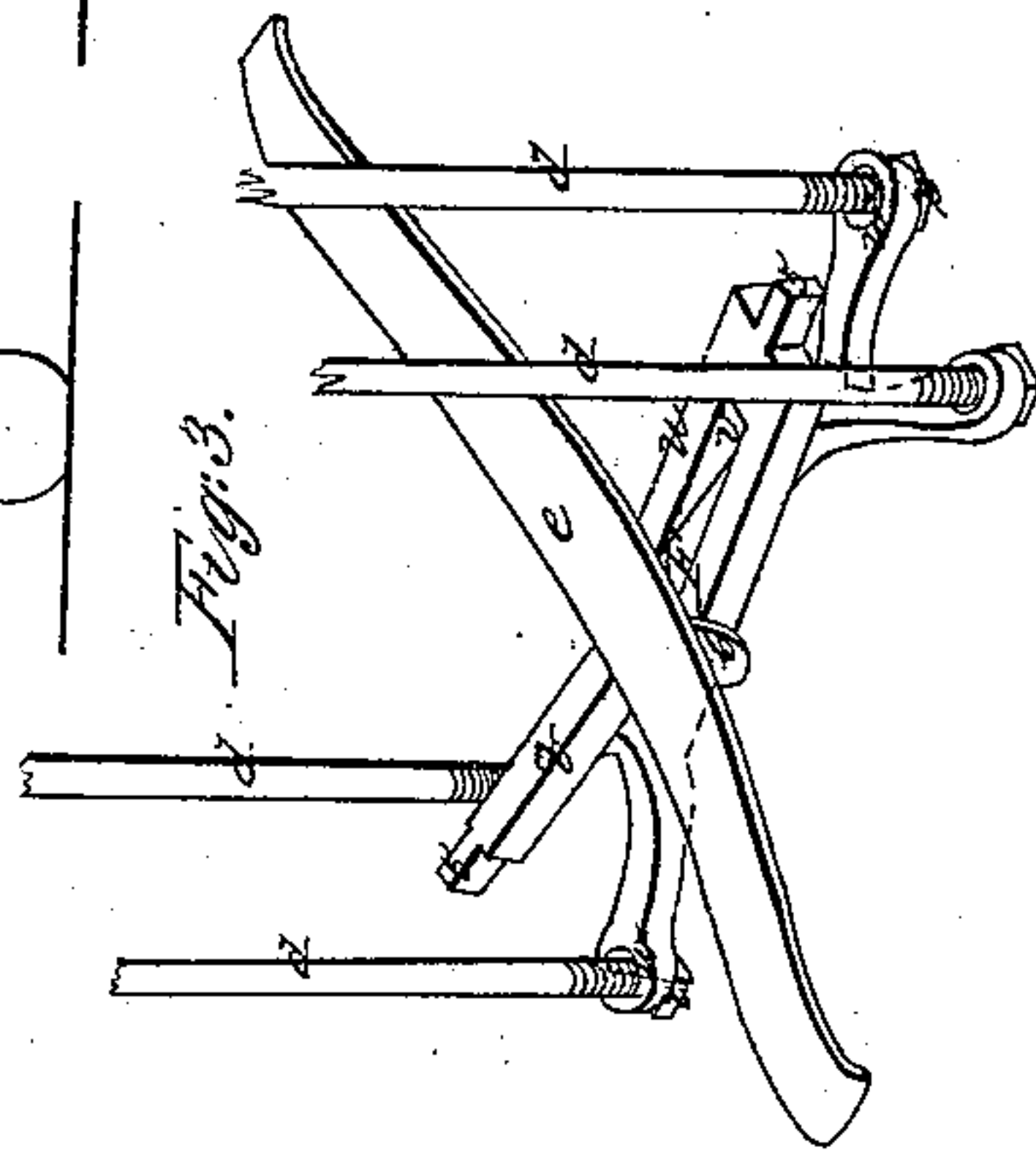
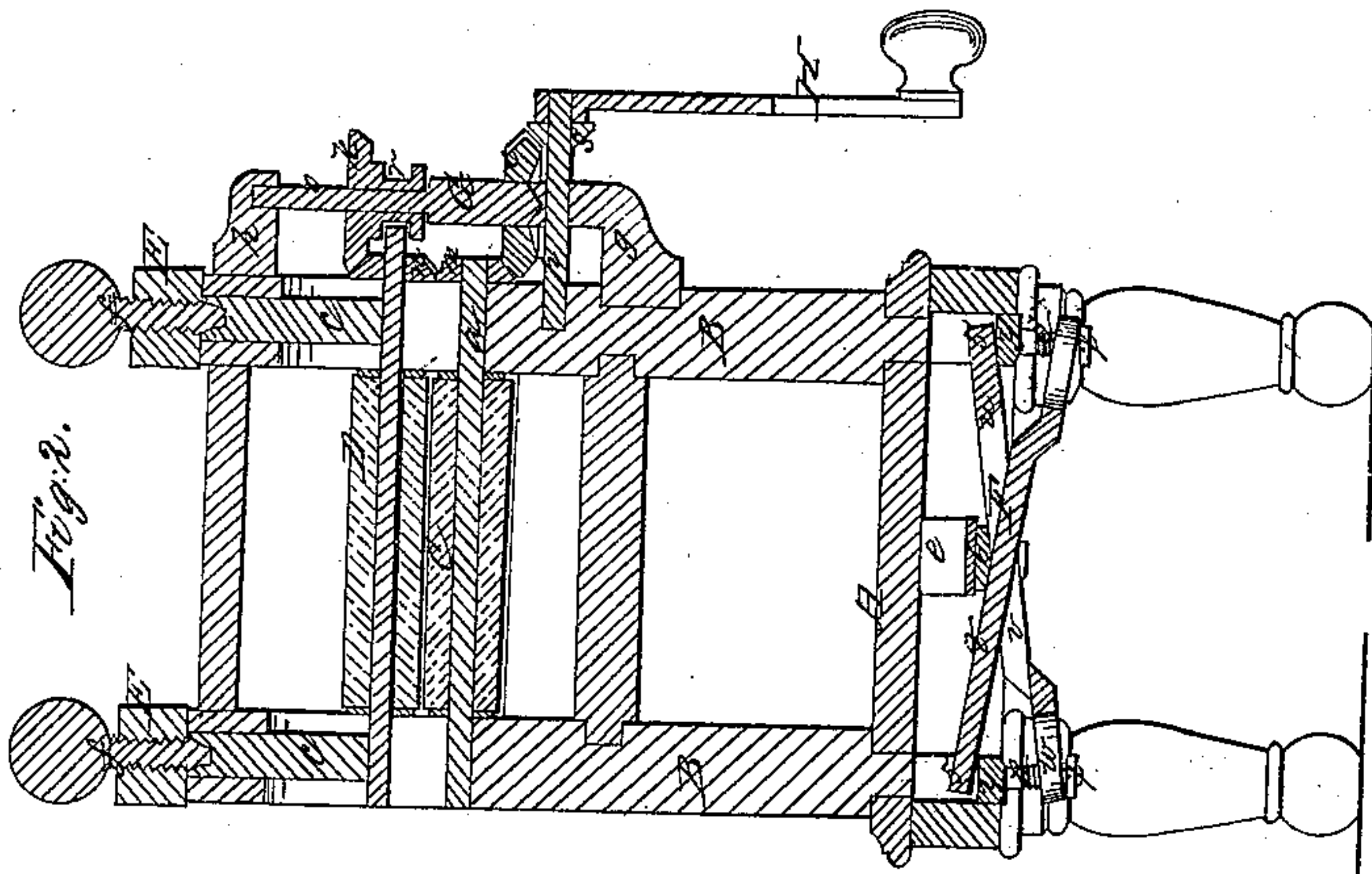


N.B. White,

Wringer,

Nº 34,618,

Patented Mar. 4, 1862.



Witnesses.

W.B. Schmaack
Edmund Mason

Inventor.

Nelson B. White
by his attorney
Samuel Cooper
(W. Roach)

UNITED STATES PATENT OFFICE.

NELSON B. WHITE, OF SOUTH DEDHAM, MASSACHUSETTS, ASSIGNOR TO HIMSELF AND WILLIAM B. RHOADS, OF SAME PLACE.

IMPROVED CLOTHES-WRINGER.

Specification forming part of Letters Patent No. 34,618, dated March 4, 1862.

To all whom it may concern:

Be it known that I, NELSON B. WHITE, of South Dedham, in the county of Norfolk and State of Massachusetts, have invented certain Improvements in Clothes-Wringing Machines, 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 a perspective view of a wringing-machine; Fig. 2, a vertical section through the same; Fig. 3, a detail to be referred to.

The first part of my present invention consists in an improved method of operating or revolving the rolls of a clothes-wringing machine.

I am aware that the two rolls have been connected together by gears so that as one was revolved by the hand-crank motion was communicated to the other; but with such an arrangement the distance to which the rolls could separate one from the other was limited by the length of teeth of the gears, and of course would be but small. With my construction of the machine, however, a large amount of vertical motion may be allowed to one of the rolls without the rolls getting out of gear.

The second part of my invention consists in so applying the power of the spring which compresses the rolls together that the roll which has the vertical motion may remain parallel with the other, although the article being passed between them and which forces them apart may be thicker near one end of the rolls than at the other.

That others skilled in the art may understand and use my invention, I will proceed to describe the manner in which I have carried it out.

In the said drawings, A is a table intended to be of a convenient height and size to hold the tub or tubs. From this table rise two standards B in suitable bearings, in which run the shaft *a* of the lower roll C and the shaft *b* of the upper roll D, the latter shaft bearing against boxes *c*, which are free to rise and fall in recesses in the standards. A head-block E on top of each standard B is connected by rods *d*—one on each side of the

standard—with a frame F beneath the table. A stout metal spring *e*, which extends lengthwise under the table, presses upon this frame F, (to be more particularly described hereinafter,) and through the rods *d* presses down the blocks E. A set-screw *f* passes through each block E and bears on the box *c*, so that the pressure of the spring *e* on the rolls D may be adjusted.

To the outside of one of the standards B is attached a bracket *g* and higher up another one *h*. These support a vertical spindle G, to which is attached a beveled gear *i*. It also carries another gear *k*, which is free to slide up and down on the spindle, but is carried round with it by means of a tongue which enters a slot *o* in the spindle.

A gear *m* on the shaft *a* engages with the gear *i*, and a gear *n* on the shaft *b* with the gear *k*. The latter shaft is prolonged and enters a groove *r* in the hub of the gear *k*. This permits the gear *k* to be carried up with the roll D as it rises. At the same time it continues engaged with the gear *n*, and the power applied to the lower gear *i* revolves both rolls with an equal speed, no matter at what distance they may be pressed apart by the article passing between them.

A horizontal shaft *p*, which passes through the head of the bracket *g* and enters the side of the standard, carries at its outer end a beveled pinion *s*, which engages with the gear *i*, which, it will be seen, is beveled on both sides. The hand-crank H is attached to this pinion *s*, and by it the gear *i* and spindle G are revolved. In this manner the required vertical motion may be allowed to the roll D and the roll still be driven with the same surface motion as the lower roll, which is a great desideratum, and prevents in a great measure the rubber-covering of the roll from being twisted from the shaft.

It is desirable that the roll in its vertical motions should remain parallel, or very nearly so, with the lower roll, not only on account of the operating of the gears, but also that its ends may slide snug and close to the standards without binding against them, as it would if the roll were allowed to tilt up at one end when an article was passed through the rolls

nearer to one end than to the other, or which was thicker at one part than at another. To accomplish this I have devised the following method of applying the power of the spring *e* to the roll *D*:

The frame *F*, which is shown detached in Fig. 3, is formed of two parts *t* *u*, the former passing through a slot *v* in the latter. The rods *d* pass through eyes *w* in the outer ends of these pieces *t* and *u* and have nuts *x* on their ends. The other ends 5 of the pieces *t* and *u* rest on blocks or stirrups *y*, attached to the table *A*. A block 6 rests on the middle of the frame *F* and the spring *e* bears on this block and against the under side of the table. Thus whichever piece *t* or *u* is raised by the lifting of either end of the roll *D*, the spring *e* is compressed and is raised off from the other

piece *t* or *u*, and the opposite end of the roll is permitted to follow up and keep parallel.

What I claim as my invention, and desire to secure by Letters Patent as improvements in clothes-wringing machines, is—

1. Operating the rolls *C* and *D* by gears, one of which is moved vertically by the shaft of the roll which rises and falls, substantially in the manner specified.

2. The frame *F* or its substantial equivalent, through which the power of the spring *e* is brought to bear on the roll which rises and falls, for the purpose set forth.

N. B. WHITE.

Witnesses:

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