

(No Model.)

J. T. WHITTLESEY & A. B. KEYES.

RUBBER CUTTING MACHINE.

No. 426,577.

Patented Apr. 29, 1890.

FIG. 1.

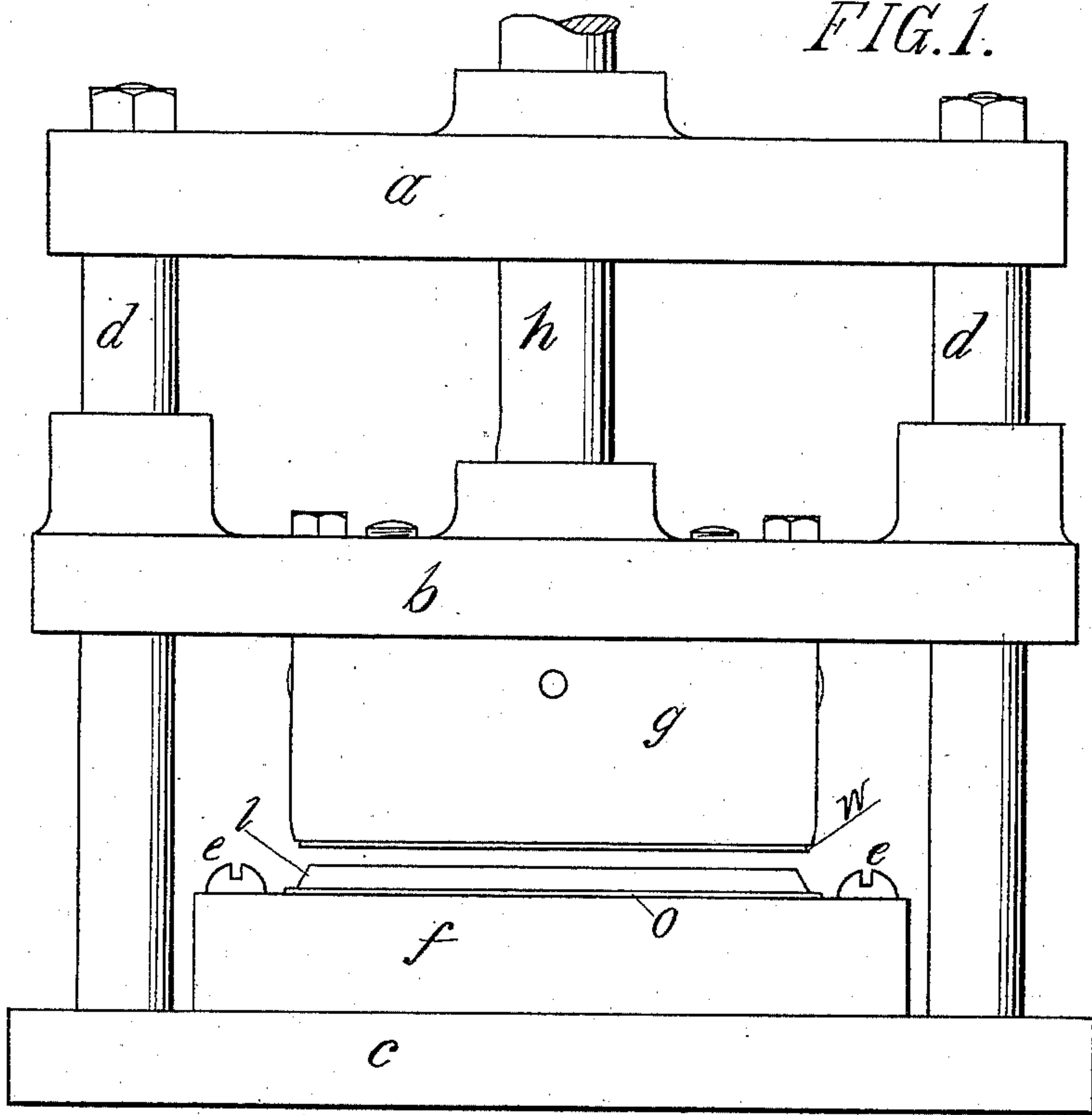


FIG. 2.

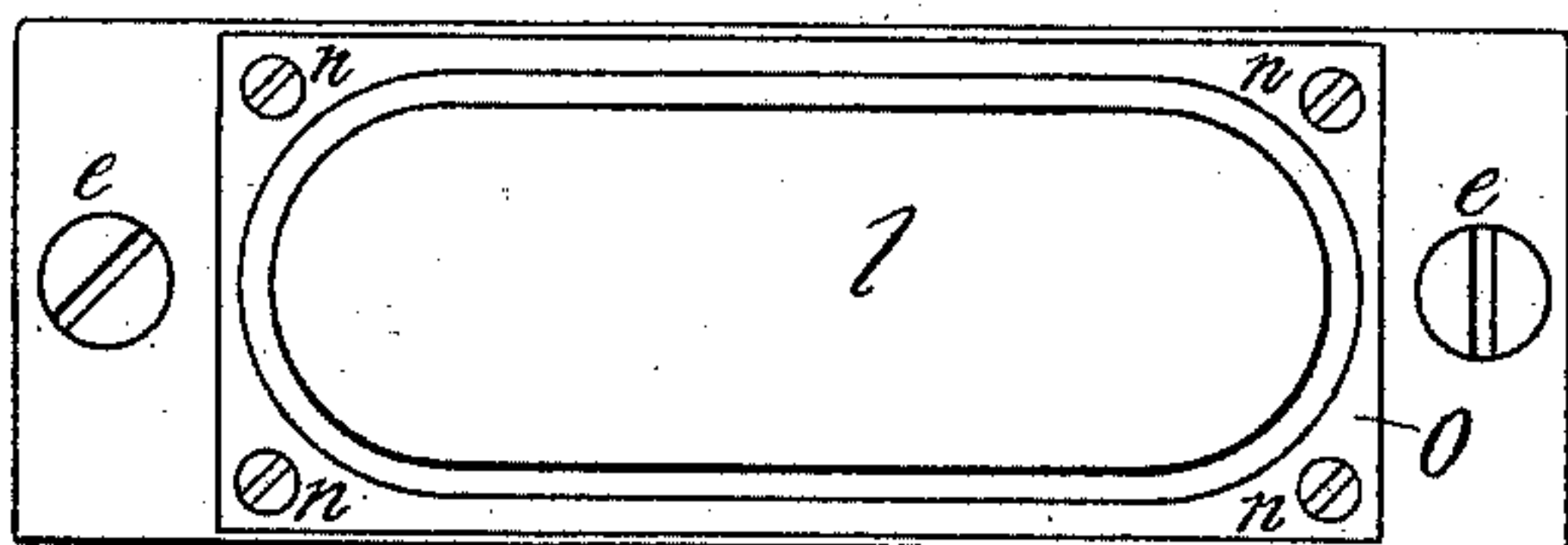


FIG. 3.

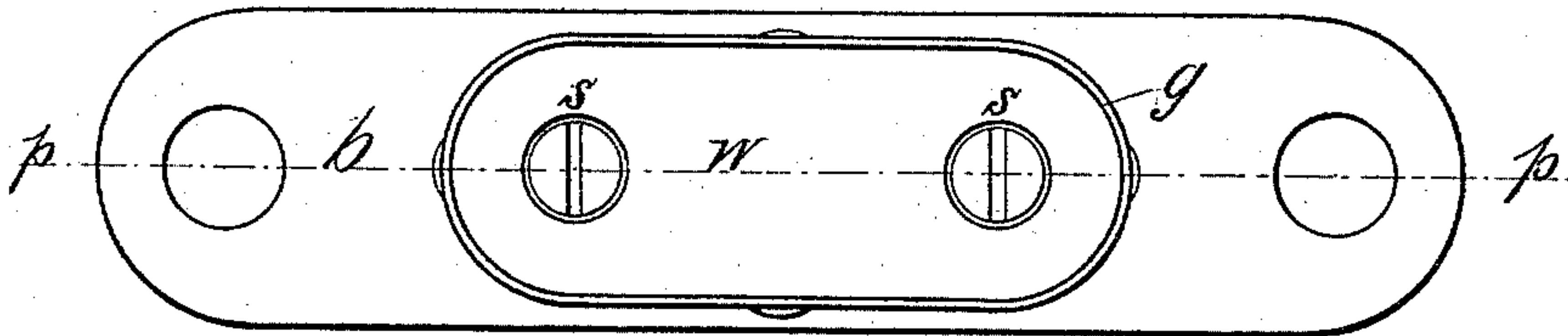
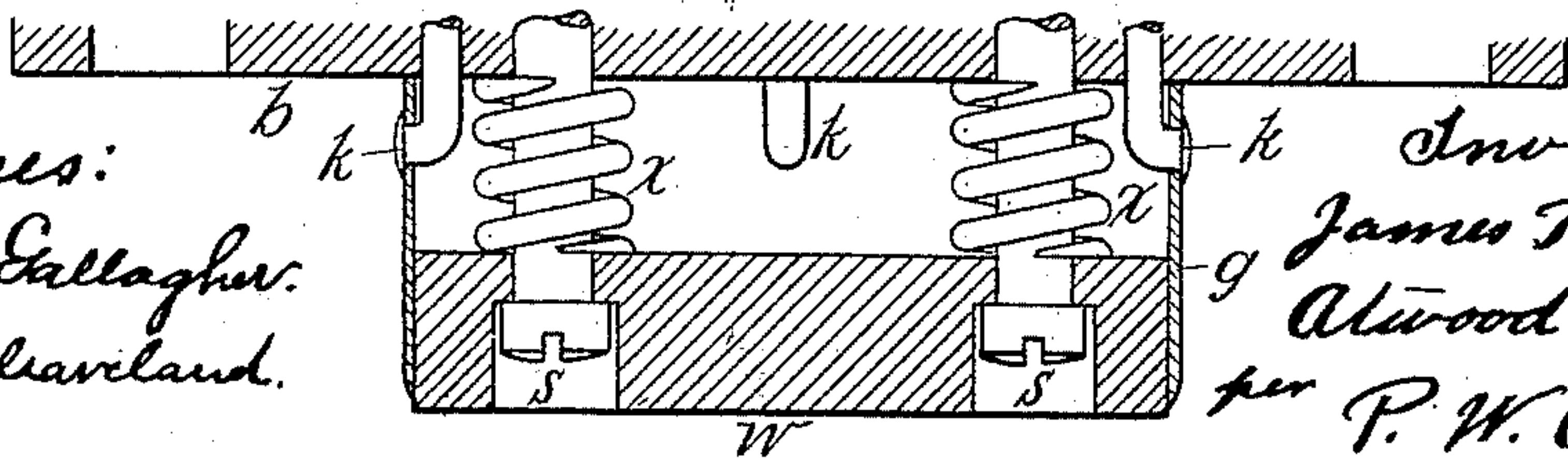


FIG. 4.



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UNITED STATES PATENT OFFICE.

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RUBBER-CUTTING MACHINE.

SPECIFICATION forming part of Letters Patent No. 426,577, dated April 29, 1890.

Application filed December 13, 1889. Serial No. 333,607. (No model.)

To all whom it may concern:

Be it known that we, JAMES T. WHITTLESEY, a citizen of the United States, residing at New Haven, in the county of New Haven and State of Connecticut, and ATWOOD B. KEYES, a citizen of the United States, residing at East Princeton, in the county of Worcester and State of Massachusetts, have invented a new and useful Improvement in Rubber-Cutting Machines, of which the following is a specification.

Our invention relates to improvements in rubber-cutting machines, in which a moving cutting-tool operates in conjunction with a stationary bevel-edged form or die; and the object of our invention is to cut a beveled edge on rubber or any other flexible material. We attain this result by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a side view of the machine. Fig. 2 is a top view of the bevel-edged form or die. Fig. 3 is an inverted view of the cutting tool or knife. Fig. 4 is a vertical section of the cutting-tool on the line *p p*, Fig. 3.

Similar letters refer to similar parts throughout the several views.

The base *c*, the upright bars *d d*, and the cross-bar *a* form the frame-work of the machine. The cross-bar *a* forms a bearing for the movable vertical rod *h*. The uprights *d d* form bearings for the slide or cross-head *b*, to which is attached the cutting-tool *g* by bolts *k k k k*. The cutting-tool *g* with the cross-head or slide *b* and the rod *h* are rigidly connected and receive a reciprocating motion from an external source—such as a cam or eccentric—but which are not essential to our invention.

The cutting-tool *g* is an endless steel band sharpened at its lower edge and fastened to the cross-head *b*, as herein set forth. Within the cutting-tool *g* is a block or holder *w*, which protrudes below the sharpened edge of the knife *g*, and when in use it is forced upward into the cutting-tool by pressure from beneath sufficient to compress the springs *x x*, Fig. 4. The screws *s s* hold the block or holder *w* and the springs *x x* in their proper position, and also afford a means of adjusting

the position of the block *w* below the cutting-edge of the knife *g*, for a purpose to be hereinafter stated.

The base-block *f* holds a copper plate *o*, to which is riveted or otherwise fastened the bevel-edged form or die *l*, and the two are temporarily secured to the base-block *f* by screws *n n n n*, and the whole in turn is secured to the base *c* by screws *e e*.

The essential feature of our invention is the bevel-edged form or die *l*, working in conjunction with the knife *g* and the block *w*, as herein set forth.

We attain the result claimed by the operation of our machine, as follows: A sheet of material—such as rubber, felt, &c.—is placed upon the bevel-edged form *l*, after which the knife *g*, containing the block *w*, is forced downward until the latter comes in contact with the material upon the die *l*, holding it firmly in place, and by the action of the springs *x x* recedes within the knife *g*, thus allowing the knife to complete the cut. The block *w* also removes the material from within the cutting-tool *g* when the same is ascending, leaving it lying on the die, where it can be easily displaced, thereby preventing the necessity of stopping the machine for this purpose. The knife *g* descends just outside of the beveled form *l*, bending the material over its upper edge, and makes a wedge-shaped shearing cut down through the substance, which is completed when the cutting-tool *g* meets the copper plate *o* at the spreading base of the die *l*.

The angle of the beveled edge, the thickness of the form *l*, and also its shape and outline may be varied to accommodate the thickness of material used and amount of taper required in the cut. The cutting-tool *g* may also be of any desired shape or size, so long as it corresponds with the shape of the bevel-edged form *l*, thus permitting them to work together.

We are aware that previous to our invention machines similar in outline to the one herein described have been used for various purposes. We also are aware that machines of various kinds have been invented and used in cutting flexible material. We do not,

therefore, claim the herein-described machine broadly; but

What we do claim as our invention, and desire to secure by Letters Patent, is—

5 In a machine for cutting a beveled edge on rubber or other flexible material, the combination, with a reciprocating endless steel band cutting-tool and a spring-pressed block

operating therein, of a stationary bevel-edged form or die, substantially as shown, and for the purpose specified.

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