

(No Model.)

W. O. SMITH.

SAW SET.

No. 327,609.

Patented Oct. 6, 1885.

Fig. 1

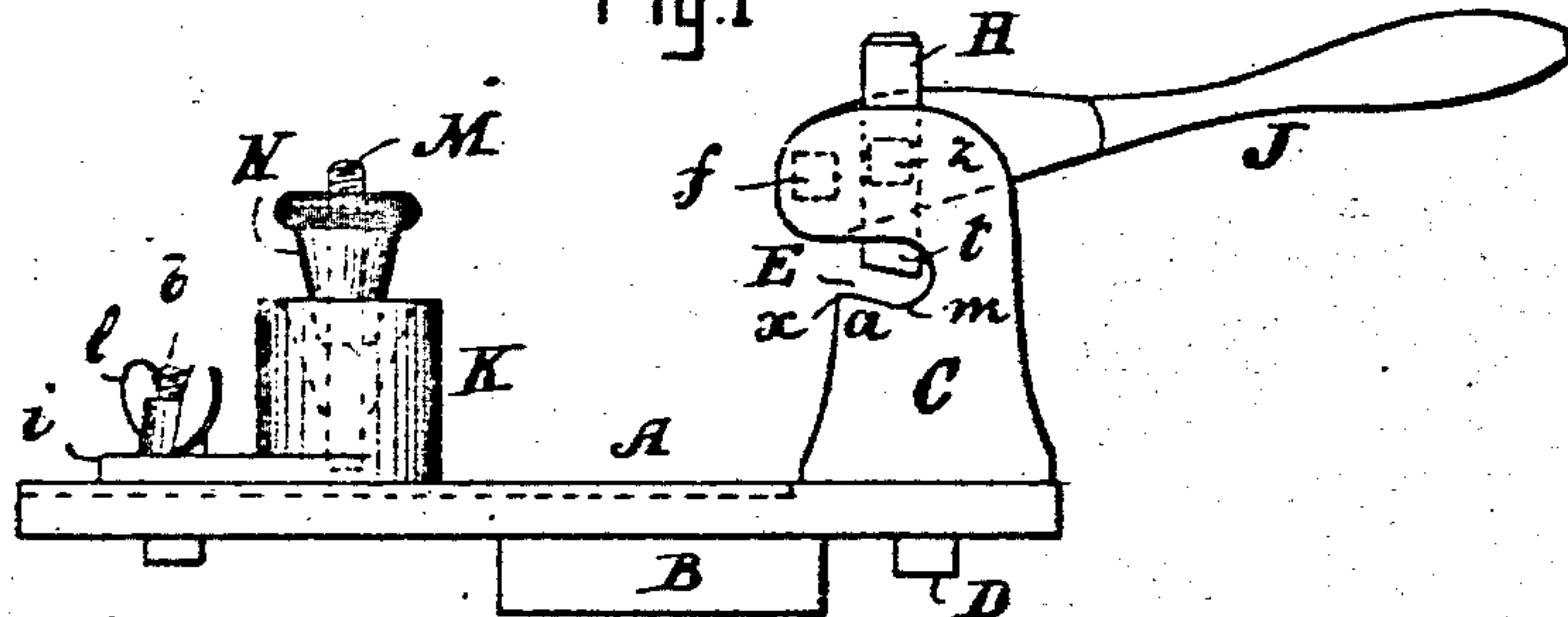


Fig. 2.

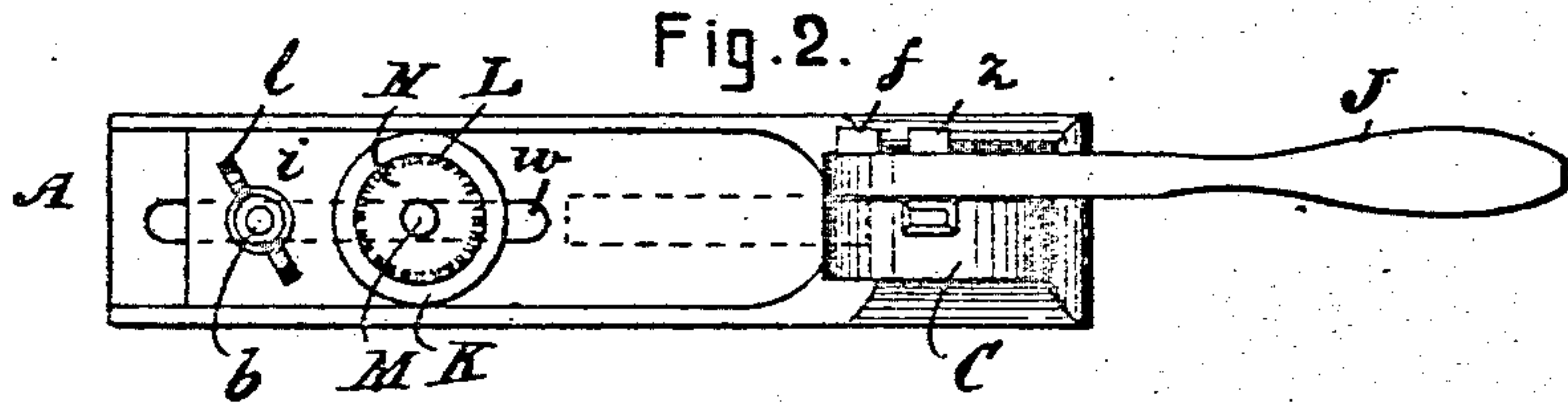


Fig. 3.

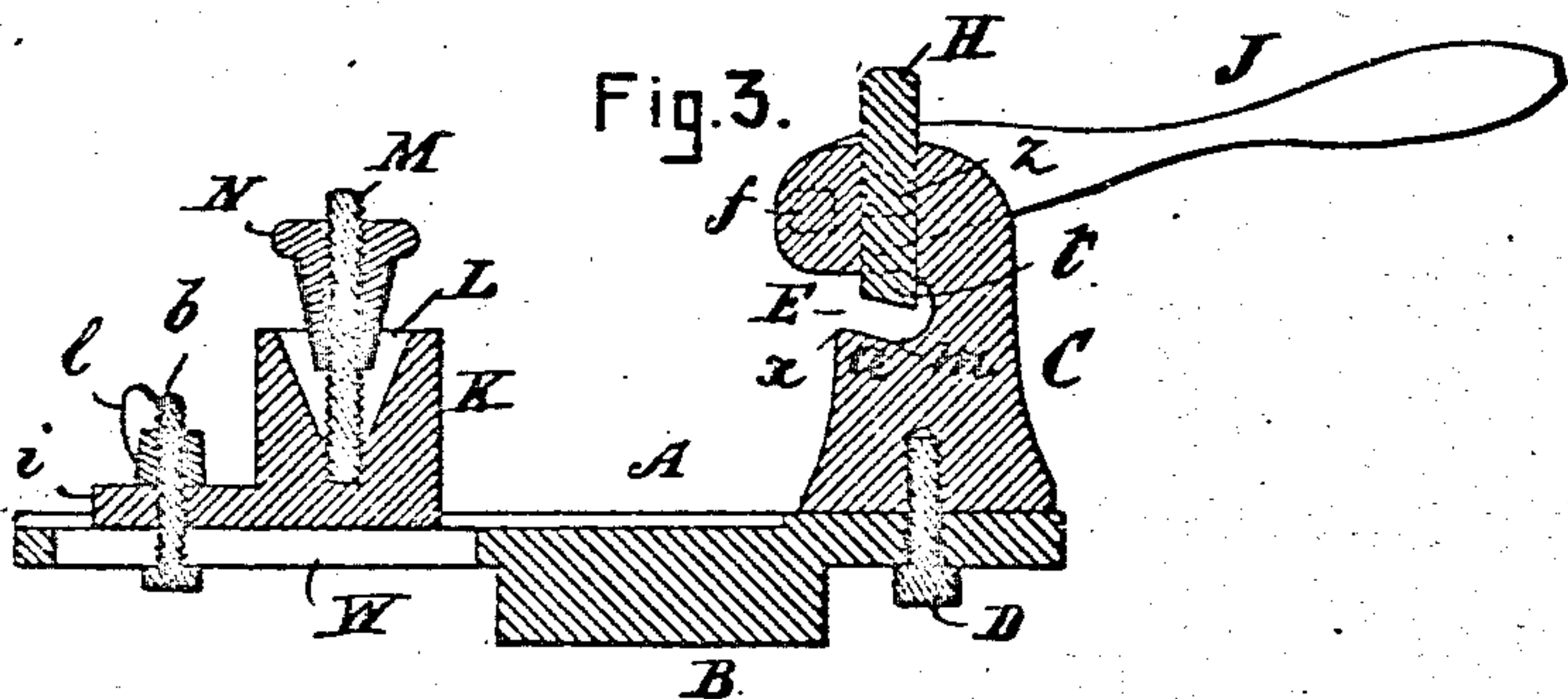


Fig. 4.

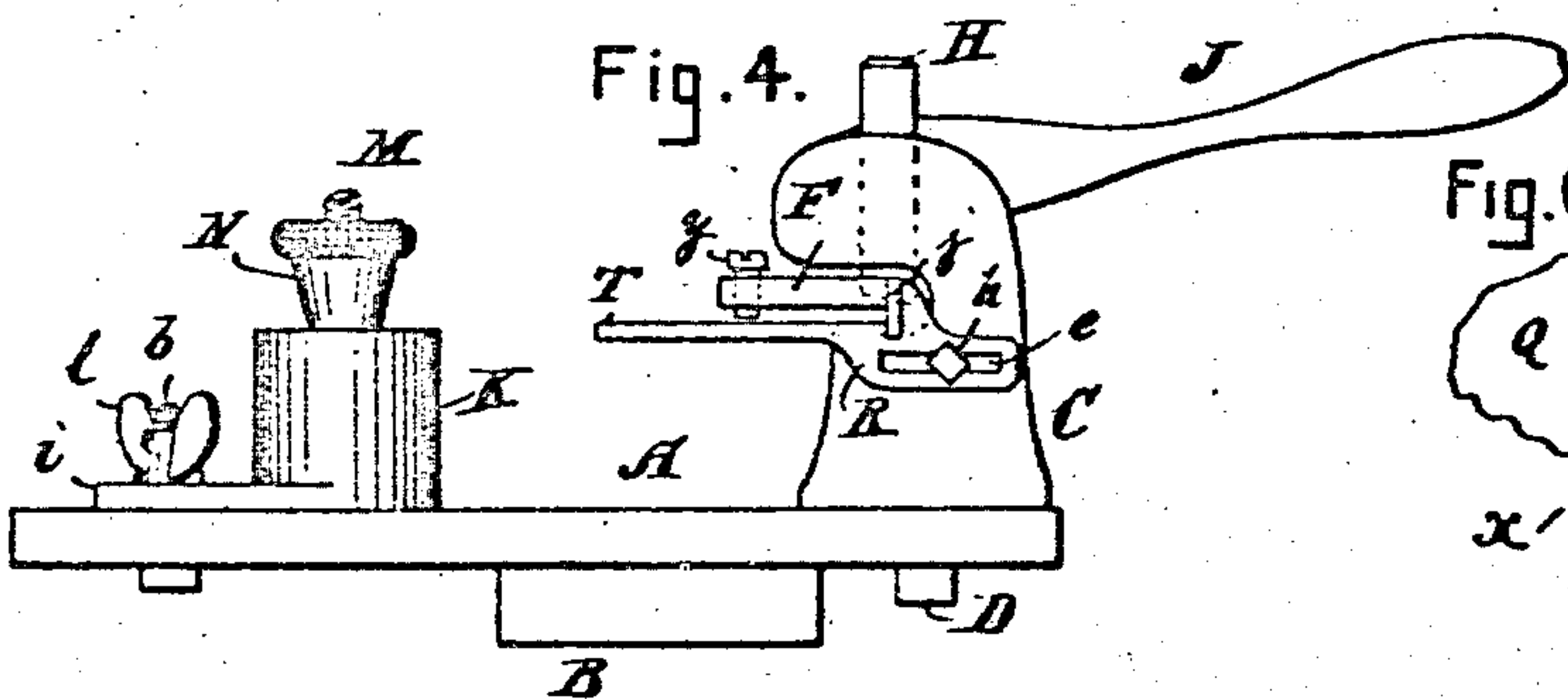


Fig. 5.

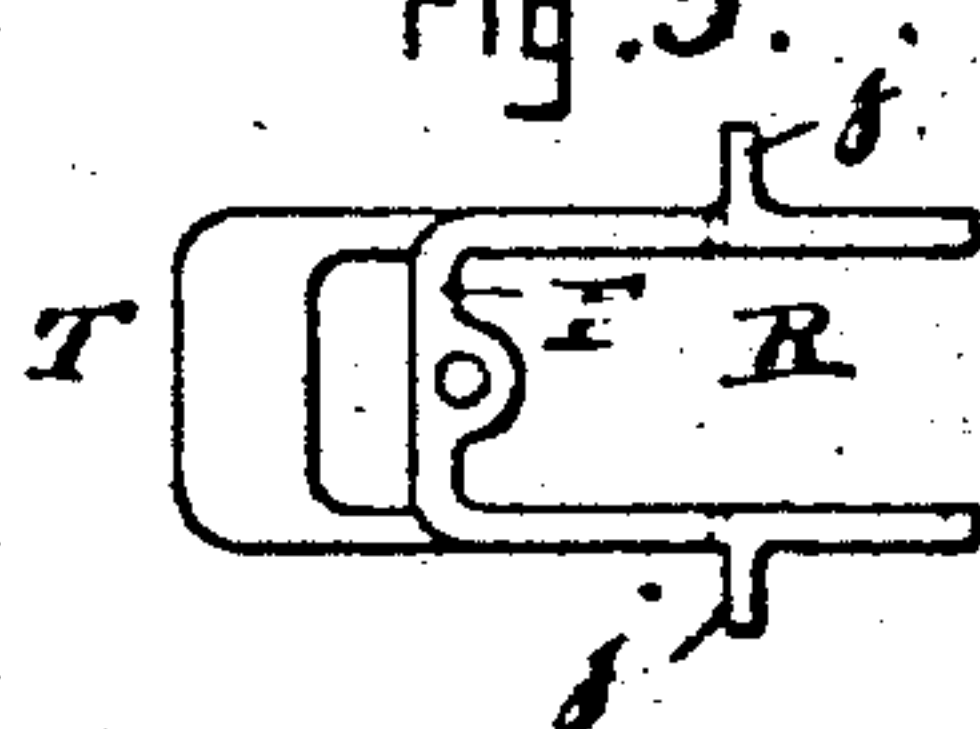
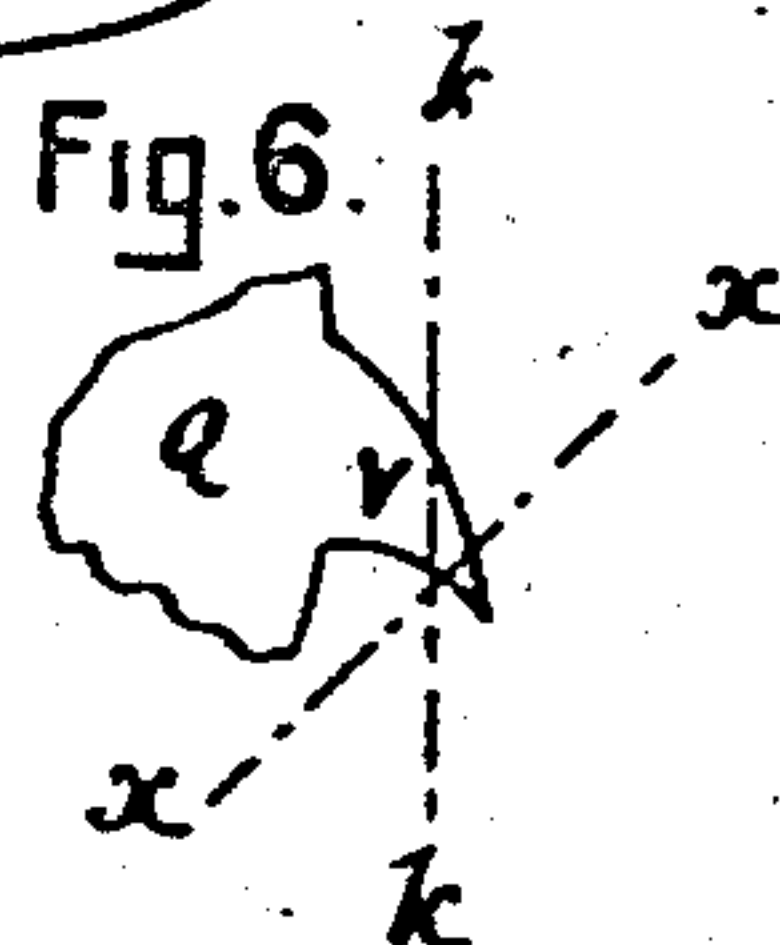


Fig. 6.



Witnesses.

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SAW-SET.

SPECIFICATION forming part of Letters Patent No. 327,609, dated October 6, 1885.

Application filed August 22, 1885. Serial No. 175,049. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM O. SMITH, of Boston, (Cambridge,) in the county of Middlesex, State of Massachusetts, have invented a certain new and useful Improvement in Saw-Sets, of which the following is a description sufficiently full, clear, and exact to enable any person skilled in the art or science to which said invention appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a side elevation of my improved saw-set; Fig. 2, a top plan view of the same; Fig. 3, a vertical longitudinal section; Fig. 4, a side elevation of the set provided with the attachment shown in Fig. 5, and Fig. 6 a diagram showing the method of setting the teeth of a circular saw.

Like letters of reference indicate corresponding parts in the different figures of the drawings.

My invention relates more especially to that class of saw-sets which are designed for setting circular saws; and it consists in a novel construction and arrangement of the parts, as hereinafter more fully set forth and claimed, by which a more desirable and effective article of this character is produced than is now in ordinary use.

The nature and operation of the improvement will be readily understood by all conversant with such matters from the following explanation.

In the drawings, A represents the bed or body of the set, which is provided with a downwardly-projecting flange, B, on its under side, by means of which the set may be secured in an ordinary bench-vise.

A vertically-arranged standard, C, is mounted on one end of the bed A, and secured thereto by the screw-bolt D, the bolt passing loosely through a hole in the bed, and thereby enabling the standard to be revolved laterally.

A slot or recess, E, is formed in one side of the standard, the lower part of said slot being inclined from x to m to form an anvil, a , on which the saw-tooth rests while being set.

Fitted to slide vertically in the upper portion of the standard C there is a bar, H, and pivoted at f in said standard there is a horizontally-arranged handle, J, said handle being

jointed to the bar H by the bolt z in such a manner that when the handle is raised or lowered corresponding vertical reciprocating movements will be imparted to said bar.

The lower end or face of the bar H is chamfered or inclined to correspond with the incline of the anvil or bed a .

A rest, K, is mounted on the bed A, opposite the standard C, said rest being provided with a laterally-projecting flange, i , bolt b , and nut l , for securing it to the bed, the bolt passing through an elongated slot, W, in the bed, thereby enabling the rest to be adjusted longitudinally thereof.

A funnel-shaped cavity or recess, L, is formed in the upper end of the rest K, and projecting vertically from said rest at the center of said recess there is a threaded rod, M, provided with a nut, N.

The shape of the body of the nut is that of an inverted cone, its form and size approximating the form and size of the recess L, which it enters when turned onto the rod M.

In the use of my improvement for setting circular saws the nut N is removed and the saw placed horizontally on the rest K, with the rod M projecting upwardly through the arbor-hole in the center of the saw. The nut N is then turned onto the rod M, and as it descends its lower end enters the arbor-hole and crowds the saw down onto the rest, where it is firmly held by the nut, which also "centers" it on the rest as it descends. The rest is then adjusted on the bed A to bring the teeth of the saw into proper position over the anvil a , after which it is secured by the nut and bolt l b , the teeth of the saw being "set" or bent by means of the bar H and handle J in a manner which will be readily obvious without a more explicit description. When one tooth of a saw has been set, as described, the saw is revolved intermittently the distance of one tooth at a time on the nut N as a center until all of the others are successively brought over the anvil a and set in like manner.

In setting teeth which "rake" or are considerably curved it is desirable to bend the point at a right angle to the body of the tooth, as shown by the dotted line xx in Fig. 6; but when the handle J of the set is arranged in parallelism with the body A the teeth will be bent on the line kk , or obliquely. To obviate

this objection—that is to say, to avoid bending or setting the teeth on the line *k k*—the standard C is turned on the bolt D until the front edge of the anvil *a* stands at a right angle to the point of the tooth, in which position it is secured by said bolt, so that when the bar H is forced down by the handle J to set the tooth the point of the tooth will be bent at a right angle to its body, or on the line *x x*, as seen in Fig. 6, in which Q represents a portion of the saw, and *v* the tooth.

A bracket, R, is employed when the set is used for setting hand-saws and other straight saws, as seen in Figs. 4 and 5. This bracket consists of a bed, T, which is arranged on a plane with the anvil *a*, the bracket being secured to the standard C by a bolt, *h*, which passes transversely through the same. An arm, F, projects horizontally over the bed T from the upper portion of the bracket R, said arm being provided at its forward end with a vertically-arranged screw, *y*.

To prepare the set for setting hand-saws the handle J is turned at right angles to the bed A and the bracket R secured to the standard C by the bolt *h*. The saw to be set is then placed on the bed T, beneath the arm F, and the screw *y* turned down until it slightly touches the body of the saw, after which the saw is moved beneath the bar H and the teeth set in a manner which will be readily understood without further description.

Projecting horizontally from either side of

the bracket R there is a gage, *j*, against which the teeth of the saw rest when it is in position to have its teeth set, the bracket being made adjustable on the bolt *h* by the slot *e* to enable said gages to be arranged in any desired position with respect to the bar H.

Having thus explained my invention, what I claim is—

1. In a saw-set, the bed A, provided with the flange B and slot *w*, the rest K, provided with the recess L, rod M, nut N, bolt *b*, and nut *l*, and the standard C, provided with the anvil *a*, handle J, bar H, and bolt D, combined and arranged to operate substantially as described.

2. In a saw-set, a standard carrying an anvil, a setting-bar, and a handle for operating said bar, said standard being adapted to be revolved or turned laterally on the bed of the set to enable the point of the saw-tooth to be bent or set at right angles to its body, in combination with a suitable rest or support for the saw, substantially as described.

3. In a saw-set, the standard C, provided with the anvil *a*, bar H, handle J, and bolt D, in combination with the bed A and means for properly supporting the saw while being set, substantially as set forth.

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Witnesses:

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