

(No Model.)

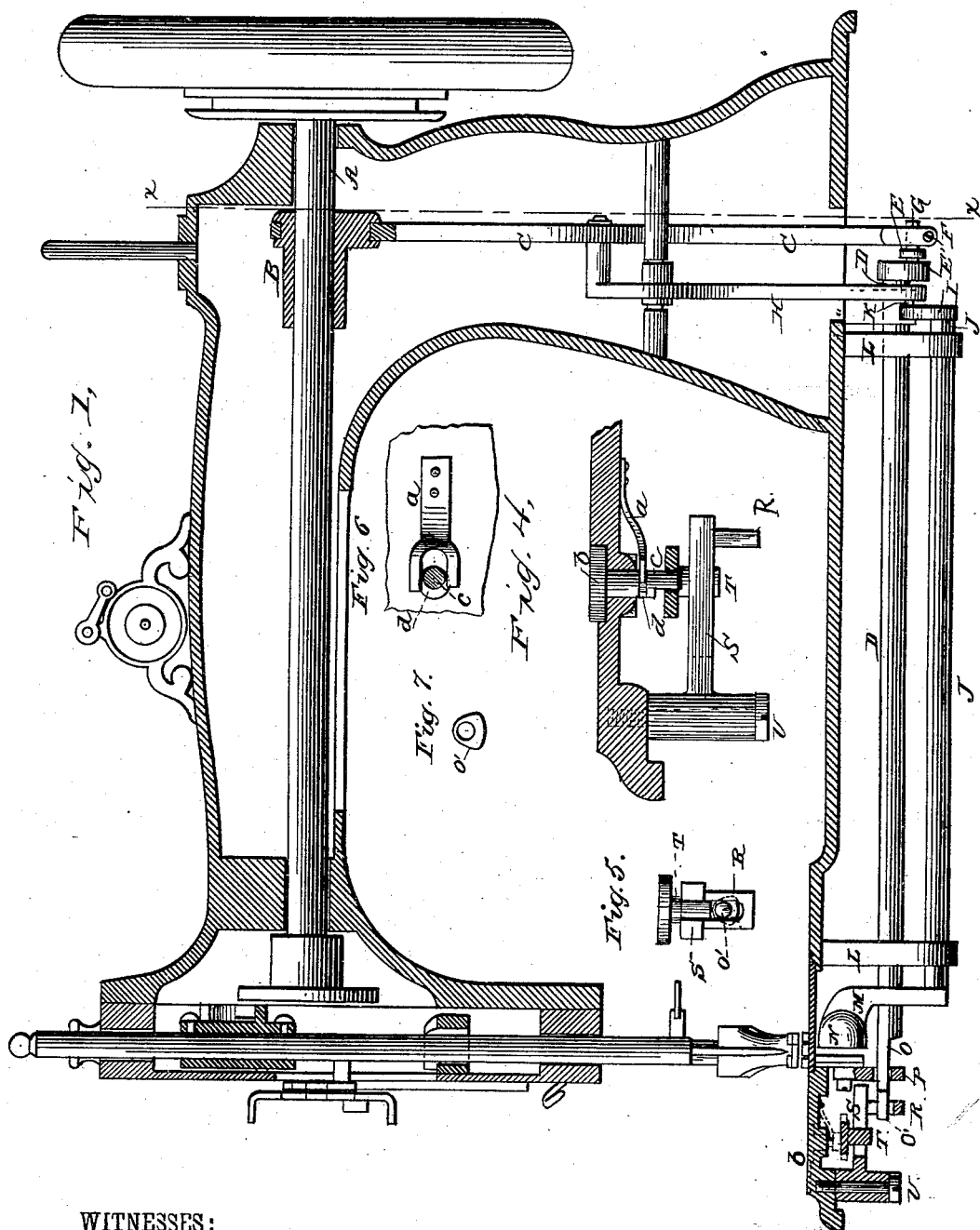
3 Sheets—Sheet 1.

T. A. MACAULAY.

SEWING MACHINE.

No. 265,686.

Patented Oct. 10, 1882.



WITNESSES:

*And. S. Dietrich*  
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(No Model.)

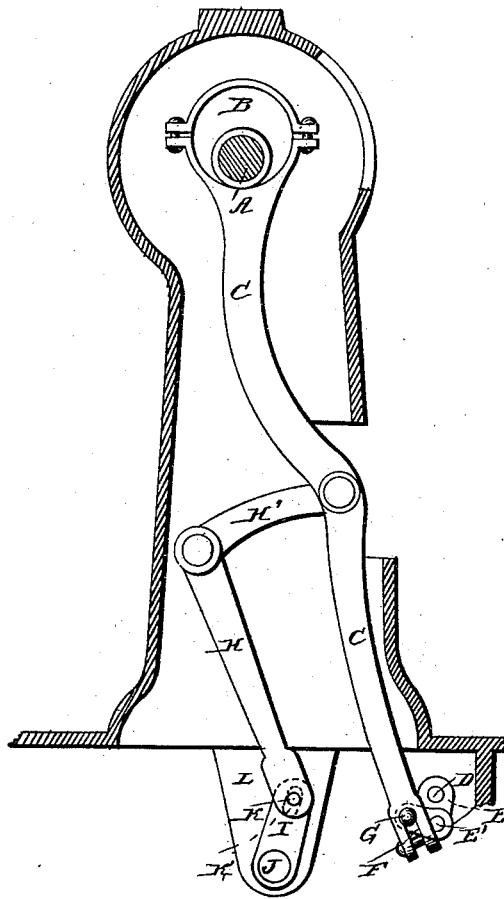
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Fig. 2.



WITNESSES:

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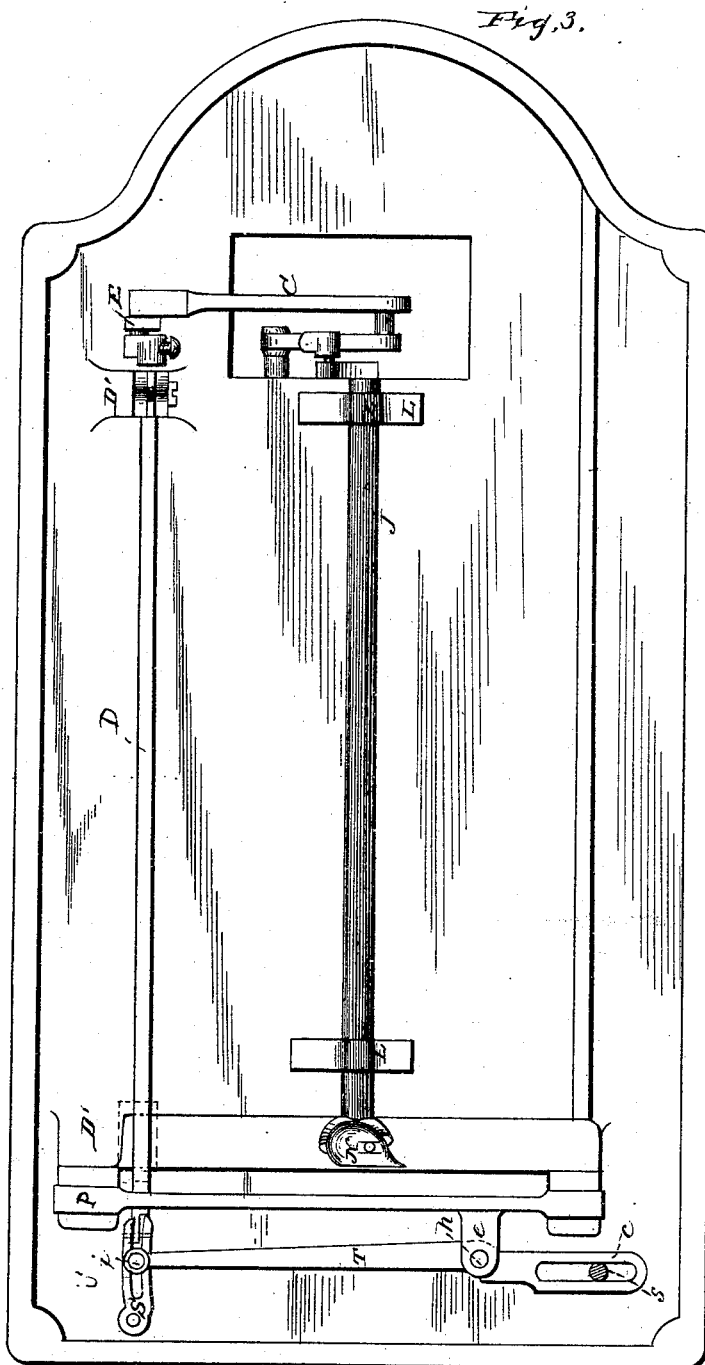
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T. A. MACAULAY.  
SEWING MACHINE.

No. 265,686.

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WITNESSES:

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# UNITED STATES PATENT OFFICE.

THOMAS A. MACAULAY, OF NEW YORK, N. Y.

## SEWING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 265,686, dated October 10, 1882.

Application filed July 1, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, THOMAS A. MACAULAY, of the city, county, and State of New York, have invented certain new and useful Improvements in Sewing-Machines, of which the following, with the accompanying drawings, is a specification, which will enable others skilled in the art of making sewing-machines to make and use the same, reference being had to the accompanying drawings, forming part of the same.

My invention relates to that class of sewing-machines in which an eccentric on the main shaft by intervening mechanism oscillates a rock-shaft for operating a shuttle or hook and revolves a feed-operating shaft; also, to an improved device for changing the length of the stitch, which will be hereinafter more fully described.

In the drawings, Figure 1 is a sectional side elevation. Fig. 2 is an end view of Fig. 1 through the line *x x*. Fig. 3 is a plan view of the parts beneath the bed-plate. Fig. 4 is an enlarged view of parts of the feed-operating mechanism shown in Fig. 1; Figs. 5 and 6, detail views of the feed mechanism. Fig. 7 is a view showing the usual form of cam for operating the feed.

A is the main shaft. B is an eccentric thereon. C C is a pitman-lever. D is a revolving feed-shaft. D' D' are bearings for the feed-shaft. E is a crank on the feed-shaft. E' is a link-pin. F is a link. G is a link-pin. H H' is a bell-crank lever. J is a rock-shaft. I is a rock-shaft arm. K is a pin in the long arm of the bell-crank. K' is a slot in the arm I. L L are projections from the bed, and have bearings for the rock-shaft J. M is an arm carrying the shuttle N. O is a cam-pin on the front end of the shaft D. O' is an extension of O. P is the feed-bar. R is a slotted projection from the rocking lever S. T is a stitch-regulating lever. V is a stud by which the rocking lever S is pivoted to the bed-plate. *a* is a spring-brake forked and fitting into a groove on the shaft or stem *d*. *c* is a crank-pin. *b* is a milled headed thumb-nut fitting into a countersunk on the top side of the bed-plate.

Motion being given to the main shaft A, the

eccentric B imparts motion to the pitman-lever C C, which revolves the feed-shaft D at the same time it rocks the bell-crank lever H H', which in turn rocks the rock-shaft J through the arm I. This rock-shaft has a shuttle-carrying arm, M, which has a shuttle, N, and operates in a vertical plane. The feed-shaft D is provided at its front end with a double cam-pin, O O', of the usual construction, which enters a slot in the feed-bar P, and gives to it its vertical motion through the portion O, while the portion O' of the cam-pin enters a slotted projection, R, of the rocking lever S, which is provided with another slot, *v*'. A pin, *i*, from the stitch-regulating lever T enters this slot *v*', and the motion of the rocking lever S is imparted to the lever T, which is pivoted by pin *h* to an extension-lug, *e*, of the feed-bar P, thereby imparting the motion of the rocking lever S to the feed-bar P. The length of stitch is regulated by turning the milled head *b*, which is connected to shaft *d*, having a crank-pin, *c*. This crank-pin *c* enters a slot, *s*, in the rear end of the stitch-regulating lever T, and, as the motion of the rocking lever S is greatest at its end farthest from its center of motion the motion of the feed-bar P is long or short as the pin *i* of the feed-regulating lever T is near or far from the center of motion of the rocking lever S. The bell-crank lever H H' is shown as connected to the arm I above the shaft J, but it may be connected below it. This lower connection will permit a greater axial motion of the shaft J.

It is obvious that the feed mechanism may be placed in other positions as well as in the one shown without departing from the spirit of my invention.

I am aware that a shuttle-driving rock-shaft has been heretofore used in connection with a pitman-lever for operating a feed-shaft, and I do not claim such mechanism.

Having thus described my invention, I claim--

1. The combination of the bell-crank lever H H' with the main shaft A, eccentric B, and pitman-lever C C, and with the crank-arm I and rock-shaft J, substantially as set forth.

2. The combination of the shaft D, cam-pin O O', feed-bar P, rocking lever S, regulating-

lever T, having the slot *s*, and crank-pin *c* upon the shaft *d*, substantially as described.

3. The regulating-lever T, having the slot *s*, and the shaft *d*, having crank-pin *c*, in combination with the feed-bar P and devices for operating the same through the lever T, substantially as set forth.

4. The combination of the slotted lever S,

regulating-lever T, having the slot *s*, shaft *d*, having the crank-pin *c*, and feed-bar P, substantially as described.

THOS. A. MACAULAY.

Witnesses:

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