C. B. TRUE.

SEWING-MACHINE.

No. 186,441. Patented Jan. 23, 1877.

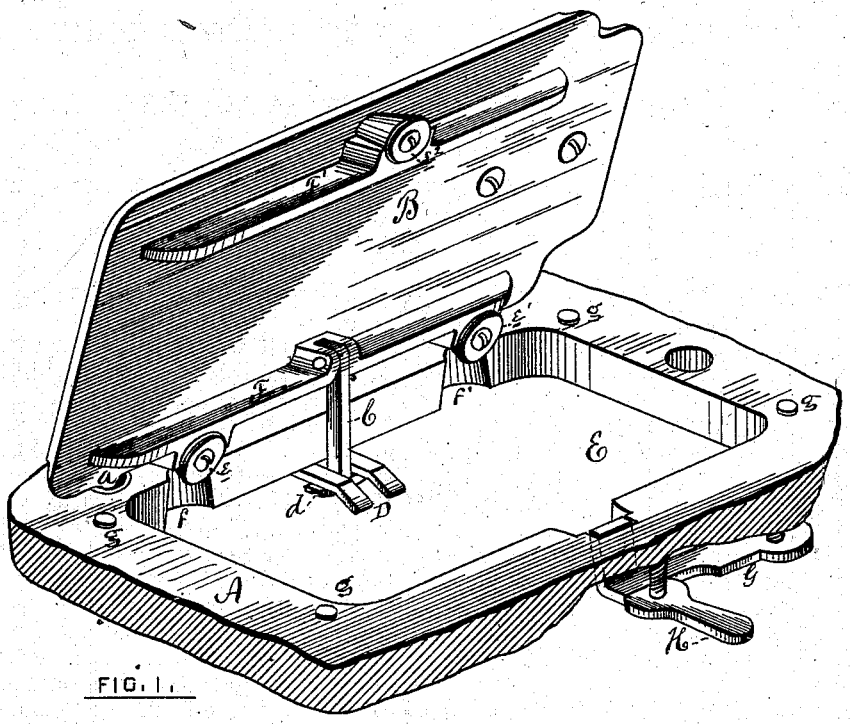

FIG. 1.

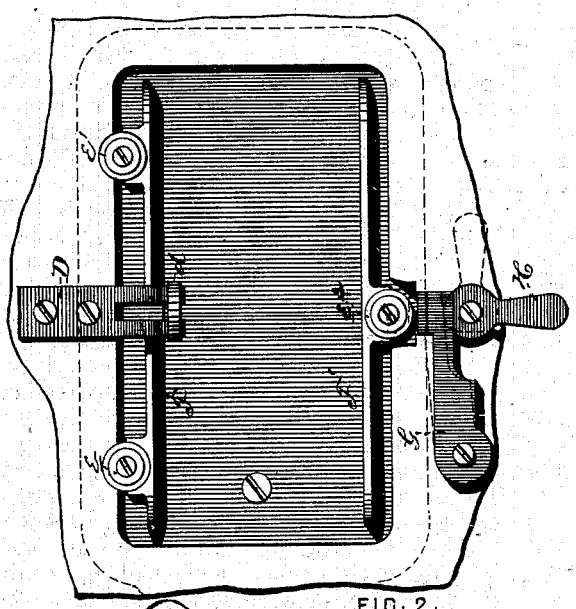

FIG. 2.

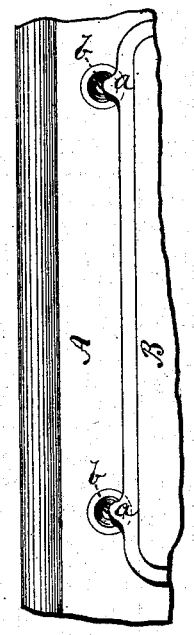

FIG. 3.

WITNESSES.

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CYRUS B. TRUE, OF PROVIDENCE, RHODE ISLAND.

IMPROVEMENT IN SEWING-MACHINES.

Specification forming part of Letters Patent No. **186,441**, dated January 23, 1877; application filed September 19, 1876.

To all whom it may concern:

Be it known that I, CYRUS B. TRUE, of the city and county of Providence, in the State of Rhode Island, have invented certain new and useful Improvements in Devices for Attaching Sewing-Machine Heads to their Tables; and I do hereby declare that the following specification, taken in connection with the drawings making a part of the same, is a full, clear, and exact description thereof.

In the accompanying drawings, A represents a portion of the table or stand upon which a common sewing-machine "head," B, is to be placed. One object of my invention is to provide a means for conveniently attaching such head to the table, so as to admit of its ready removal, if desired, and also, if preferred, enable the operator to tilt the head, as shown at Fig. 1, with the same facility as if the plate of the head were hinged to the table.

The rear edge of the head-plate is furnished with two projecting ear-pieces, *a a*, Fig. 3, and when the sewing-machine head is in its proper position on the table these ear-pieces lie directly over two sockets or depressions, *b b*, made in the table A.

To the under side of the head-plate, and near its rear edge, there is hinged by a pivot-pin, passing through one end, a short link, C, which has upon its other end a cross-bar, *d*. This link, when the machine-head is in position flat upon the table, hangs downward between the legs of a bifurcated piece of metal, D, Figs. 1 and 2, which is attached to the under side of the table A; but when the head is tilted, as shown at Fig. 1, the cross-bar *d* will bear against the under surface of such bifurcated piece, and the link, being of the right length, will hold the head from falling backward. At the same time the ear-pieces *a a* will, in consequence of the tilting of the head, enter the sockets *b b*, and prevent the head from sliding backward on the table. Thus by the combination of the ear-pieces or fulcrum-bearings *a a* on the head-plate, the sockets *b b* in the table, and the check or safety link attachment described, the operator can tilt the machine-head with the same facility as if it were hinged to the table, and have it held in a tilted position from the effect of its tendency to fall backward, due to its gravity, counteracted by the check-link C.

It is preferable to bend downward the front ends of the legs of the bifurcated piece D, or other equivalent stop-plate, used in combination with the pivoted check-link, for the reason that an inclined plane is thereby made, along which the cross-bar of the link will naturally slide as the machine-head is being tilted, until the link reaches a perpendicular position, or nearly so, and in which position the angle of inclination of the head is such that its tendency from gravity will be to fall backward. With this attachment described, if the operator desires to remove the machine-head from the table, it is only necessary to draw the link out of engagement with the stop-plate D, when the head can be lifted clear of the table.

Another feature of my invention consists in the means by which the machine-head is clamped or fastened to the table. A portion of the table is required to be cut out, as shown at E, so as to furnish an opening through the same to allow space for such parts of the machinery of the head as may be located on its under side. In this instance the strengthening-ribs F F′ are cast upon the under side of the head, as seen at Fig. 1. On the back side of the rib F two recesses are formed, and in these recesses are placed blocks of rubber *e* e^1, which are in the form of truncated cones, and are secured by screws passing through their axes to the bottom plate of the machine-head. The edge of the opening through the top of the table is formed with two recesses, *f f′*, corresponding in form with a section of the surface of frusto-conical blocks *e* e^1; and the location of these recesses is such that when the machine-head rests flat upon the table, the sides of the rubber blocks will bear against the surfaces of the recesses, so that each block, with its fellow recess, will form a species of dovetail-connection.

Upon the front rib F′, and on a transverse line, midway, or nearly so, between the blocks *e* e^1, is placed another frusto-conical rubber block, e^2, in all respects like those already described; but in combination with it there is a clamping device, which may consist of a bar,

G, Fig. 2, pivoted to the under surface of the table, and worked by a turn-buckle, H, for which may be substituted any known equivalent device for applying pressure. Now, it is apparent that when the machine-head is placed in proper position upon the table, and pressure is applied by the clamping device G H against the side of the rubber block e^2, the head will be firmly attached, so that it cannot be lifted off. By releasing the clamp, the machine-head can be readily tilted backward, or removed entirely from the table, as already explained.

It is not indispensably necessary that the rubber blocks should be frusto-conical in form. Cylindrical blocks, with recesses in the table corresponding in form, will generally be sufficient, from the elasticity of the rubber, and by the adhesion of the material to the surfaces of the recesses, to attach the head firmly to the table. For the rubber blocks described, non-elastic blocks of wood or metal may be substituted; but the advantage of yielding blocks is, that the machine-head is thereby so cushioned (especially when the usual rubber cushions *g*, for the bottom plate to rest on, are used) that the vibrations induced by the operation of the machine in sewing are materially deadened, and, consequently, the machine is less noisy.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination of the head of a sewing-machine, provided with projecting ear-pieces, a table-top provided with sockets for receiving said ear-pieces when the head is tilted, and a check-link for counteracting the tendency of the head to fall backward, by its gravity, beyond a fixed angle of inclination, substantially as described.

2. In combination with projecting ear-pieces, and a table-top provided with sockets, as described, a check-link whose stop-plate D is formed inclined on its under surface, substantially as described, for the purpose specified.

3. The means for securing a machine-head to its table, which consists in a dovetail-connection formed by the blocks e e^1 e^2, having inclined surfaces, in combination with a table-top having recesses, which have correspondingly-inclined surfaces, and the turn-buckle and bar G H, for applying pressure to hold the surfaces of the blocks and recesses in contact, substantially as described.

4. In combination with a machine-head and its supporting-table, elastic cushions e e^1 e^2, applied substantially as described, so as to yield to the lateral vibration incident to the machine when in operation, and thereby render it less noisy.

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Witnesses:

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