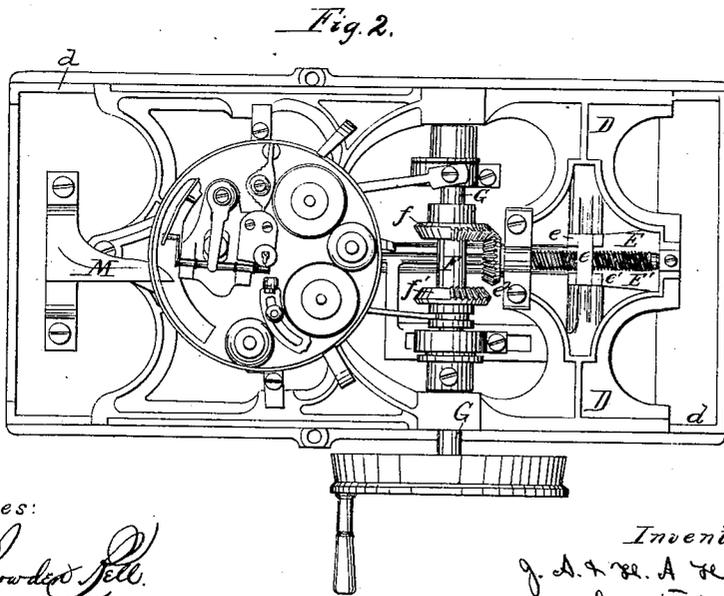
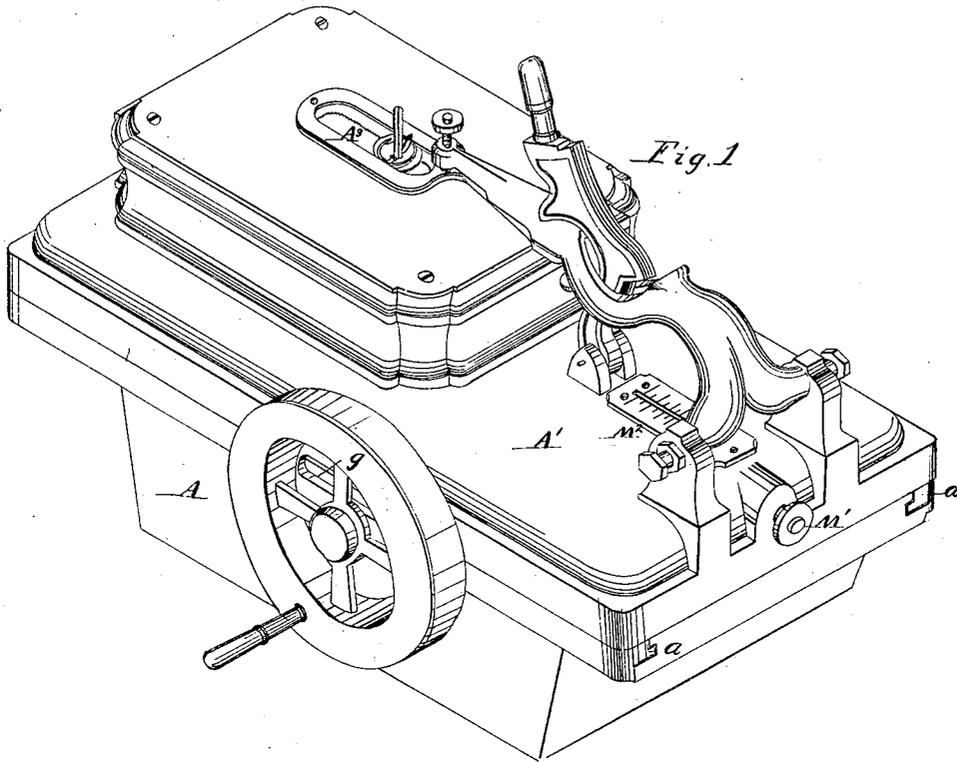


J. A. & H. A. HOUSE.
SEWING MACHINE.

No. 39,442.

Patented Aug. 4, 1863.



Witnesses:

J. Snowden Sell.
Albrooke Jones.

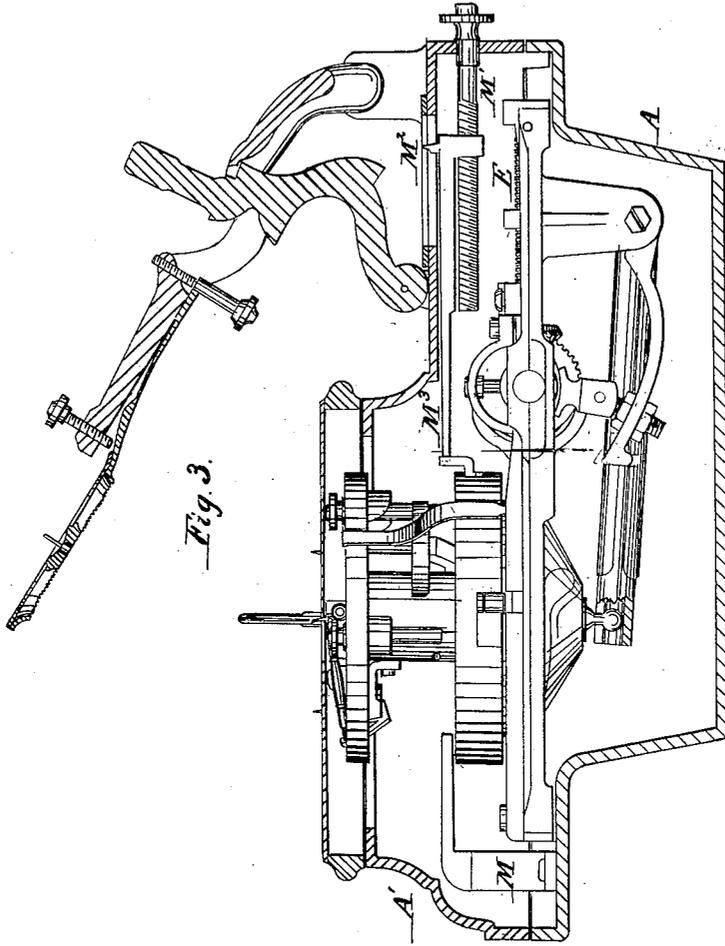
Inventors.

J. A. & H. A. House
by their Attorney
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UNITED STATES PATENT OFFICE.

JAMES A. HOUSE AND HENRY A. HOUSE, OF BROOKLYN, ASSIGNORS TO
THEMSELVES AND AUGUSTUS G. SEAMAN, OF NEW YORK, N. Y.

IMPROVEMENT IN SEWING-MACHINES.

Specification forming part of Letters Patent No. 39,442, dated August 4, 1863.

To all whom it may concern:

Be it known that we, JAMES A. HOUSE and HENRY A. HOUSE, both of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Sewing-Machines, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, which make part of this specification, and in which—

Figure 1 represents a view in perspective of a machine for working button-holes, embracing our improvements, with its parts in position for operation; Fig. 2, a plan or top view of the same with its upper casing removed; and Fig. 3, a view in elevation of one side of the same, the casing and a portion of the mechanism being shown in section and the presser-lever raised, in order to permit the removal or adjustment of the work.

The improvements claimed under this patent consist, first, in making the frame or casing of a sewing-machine in sections, so constructed and connected that the parts of the casing may readily be separated and the mechanism within it removed, and yet when the portions or sections are united the mechanism shall be inclosed and protected from dust and meddling or tampering with it prevented; secondly, in mounting one of the guides by which the movements of the frame which carries the stitching mechanism are controlled upon one section of the casing of a sewing-machine, while the other guide and the gage which determines the size of the button-hole to be worked are secured upon the other section, which arrangement renders the mechanism more compact, and also facilitates its removal from the casing; thirdly, in mounting the stitching mechanism of a sewing-machine in a frame which traverses upon the main framing or casing, is inclosed within it, and which can readily be detached or removed therefrom, whereby great advantages are attained in adjusting or repairing the machine; fourthly, in combining with a frame which carries the stitching mechanism and gearing a traversing-screw mounted upon one end of the frame and acting upon a fixed point on the casing, whereby a compact and convenient arrangement of mechanism is secured; fifthly, in mounting the nut of the traversing-screw by which the frame which carries the

stitching mechanism is traversed in an open bracket upon the casing, by which means the operator is enabled to remove the mechanism from the casing by simply lifting it from its bed without removing screws, bolts, or other fastenings.

In order to carry out the objects of our invention, we mount the driving-gearing and stitching mechanism of the machine in a stout frame and inclose it in a tight casing to exclude dust and other matters and to prevent meddling with the machinery. In order to obtain access to the mechanism when desired, we divide the casing horizontally into two sections, the adjacent edges of which fit closely together. The frame which contains the gearing slides on ways in the casing, being traversed back and forth by a screw actuated by the driving-gear. This screw works in a nut mounted in an open box or bearing on the casing, so that the frame can be removed at any time by simply removing the upper casing and lifting out the frame containing the mechanism. The two sections may be locked together for greater security by any device which will admit of their being readily connected and disconnected.

The accompanying drawings exemplify one mode of carrying out the objects of our invention. In this instance the casing or framing of the machine is shown as consisting of two tight cast-iron sections, A A', placed one upon the other, and with their adjacent edges made to fit each other accurately. Tenons *a* upon the ends of the upper section take into corresponding slots or mortises on the lower one and hold the two firmly together. The stitching mechanism and gearing are mounted in a strong frame, D, which slides on ways *d* on the lower section, A, of the casing. This frame is caused to traverse back and forth at proper intervals by means of a screw, E, which works in a nut, *e*, having a female screw cut in it. This nut fits accurately edgewise between vertical standards *e'*, mounted on a horizontal bracket, E', projecting from the lower casing, A, by which arrangement the frame D, as well as the entire gearing and mechanism, can be removed from the casing by simply lifting the screw out of its bearings, while it is held perfectly secure until so lifted. The traversing-screw E is rotated by means of a

bevel-wheel, e^2 , upon its end, which alternately engages with two bevel half-gears, $f f'$, on a sliding collar, F, which moves freely on the driving-shaft G, which is mounted in the sliding frame D. A slot, g , Fig. 1, is made in one side of the casing to permit this shaft to travel with the frame. A fixed stop or detent, M, is secured upon one end of the lower casing, A, and a corresponding adjustable one, M^3 , upon the other end of the upper casing, A'. (See Fig. 3.) A set-screw, M' , and gage M^2 regulate the position of this guide, and consequently the movements of the stitching mechanism and the size of the button-hole.

A detailed description of the construction and operation of the other portions of the mechanism is deemed unnecessary here, as they are shown and described in three other applications for Letters Patent filed by us simultaneously with this, and respectively marked divisions "B," "C," and "D."

The inventions claimed under this patent are applicable to other sewing-machines, but are more especially designed as improvements upon a sewing-machine for which Letters Patent were granted to A. G. Seaman and ourselves (as our assignees) November 11, 1862, which patent contains a full description of the operation of our machine and of the stitch formed by it.

It is obvious that the details of our arrangements might be varied in many ways without departing from the spirit of our invention, which modifications would readily suggest themselves to a skillful mechanic after seeing our invention.

What we claim under this patent as our invention is—

1. Making the casing of a sewing-machine

in sections, so constructed and connected that they may readily be separated and the mechanism removed, and yet when the sections are united the mechanism shall be inclosed and protected, substantially in the manner described.

2. Mounting one of the guides by which the movements of the frame which carries the stitching mechanism are controlled upon one section of the casing of a sewing-machine, while the other guide and the adjusting-gage are mounted upon the other section, substantially in the manner described.

3. Mounting the stitching mechanism of a sewing-machine in a frame which traverses upon the main framing or casing, is inclosed within it, and which can readily be detached therefrom, substantially in the manner described.

4. The combination, in a sewing-machine, of a traveling frame which carries the stitching mechanism and gearing with a traversing-screw mounted upon one end of the frame and acting upon a fixed point on the casing, substantially in the manner described, for the purpose of traversing the frame, as set forth.

5. Mounting the nut of the traversing-screw by which the frame carrying the stitching mechanism is traversed in an open bracket upon the casing, substantially in the manner described, for the purpose of readily detaching and removing the traversing frame, stitching mechanism, and gearing, as set forth.

In testimony whereof we have hereunto subscribed our names.

JAMES A. HOUSE.
HENRY A. HOUSE.

Witnesses:
E. N. HOUSE,
G. H. DIMOND.