D. HARRIS.

MACHINES FOR STITCHING MATTRESSES.

No. 185,228. Patented Dec. 12, 1876.

Fig. 1

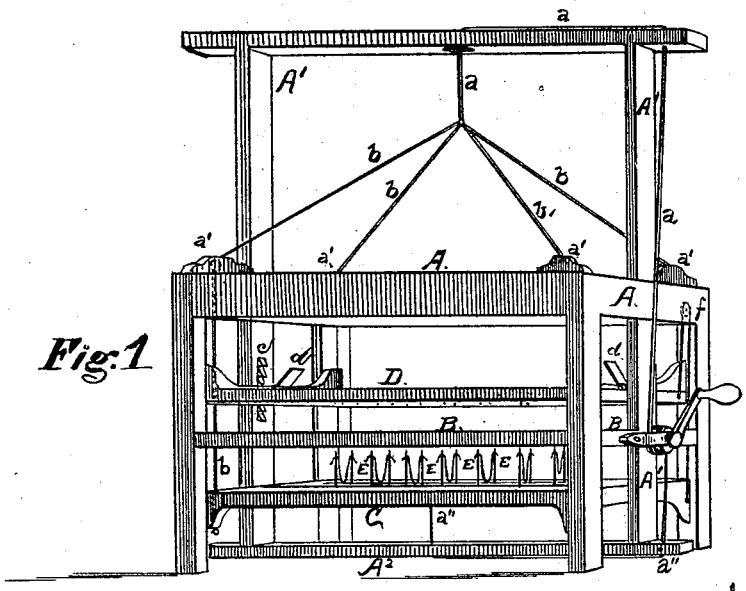


Fig. 2.

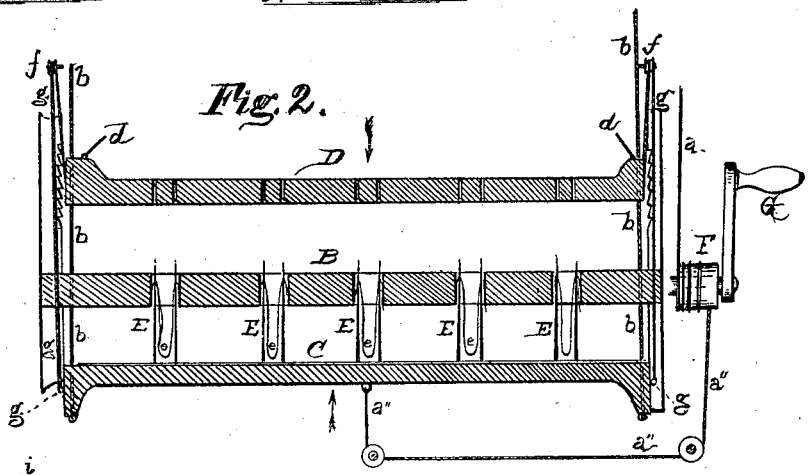
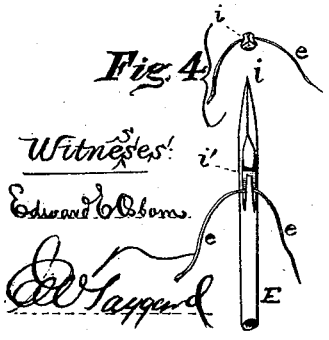


Fig. 4.

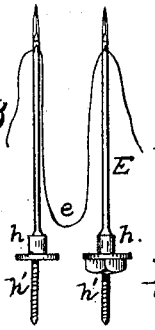


Witnesses:

Edward C. Adams.

E. Gaynard

Fig. 3.



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UNITED STATES PATENT OFFICE.

DAVID HARRIS, OF SAN FRANCISCO, CALIFORNIA.

IMPROVEMENT IN MACHINES FOR STITCHING MATTRESSES.

Specification forming part of Letters Patent No. **185,228**, dated December 12, 1876; application filed June 29, 1876.

To all whom it may concern:

Be it known that I, DAVID HARRIS, of the city of San Francisco, State of California, have invented an Improved Machine for Stitching Mattresses, of which the following is a specification:

My invention relates to a machine for stitching mattresses. It consists in the construction and arrangement of one stationary supporting bed or platform and two movable reciprocating platforms above and below the stationary bed, one carrying a set of needles arranged in pairs, and the other acting as a clamp to press upon the mattress. Suitable mechanism is provided for operating these movable platforms, whereby the mattress placed upon the supporting-table is held to it by one platform and perforated by the needles of the other, as will be more fully shown and described in the following specification.

Figure 1 of the accompanying drawing is a perspective view of my improved machine. Fig. 2 is a longitudinal section through the supporting-table and the two reciprocating platforms. Fig. 3 is a view, in detail, of the needles, showing the manner of arranging them in pairs. Fig. 4 is an enlarged view of the point of the needle, illustrating its form of construction.

The frame A supports a fixed horizontal table or platform, B, and two movable reciprocating platforms, C D, and its upper part or cross-head A′ is provided with two pulleys, over which the cord *a* moves. At its side is a roller, F, and a crank, G, and upon the top are four pulleys, *a′ a′*. The cord *a* passes over the pulleys at the top of the frame, and is wound several times around the roller F, and from thence its lower end runs over pulleys at the bottom of the frame, and is secured to the under side of the lower reciprocating platform. The upper end of this cord *a* is secured to four cords, *b b*, that extend from it to the four corners of the frame, and pass over the pulleys *a′ a′* down to the lower platform. These cords are not connected with the platforms B D, but pass through holes in them, and are secured one at each end of the lower reciprocating platform C. This mechanism gives motion to the platform C toward and away from the table B as the crank G is turned. The upper clamping-platform D moves within the frame A toward and away from the fixed table B; but it is allowed to fall of its own weight toward and upon the mattress at the same time as the lower platform moves upward. Its motion in a contrary direction is produced by means of the four cords *g g*, that pass over pulleys *f f* in the frame, and are secured the one end to the platform D, and the lower end to the platform C. Thus, as the lower platform C moves away from the table B it pulls upon these four cords *g g* and draws up the platform D, and its movements are simultaneous with those of the platform C.

The fixed table B is slotted to allow the needles E and their threads *e e* to pass up through it; and the clamping-platform D is perforated with holes in line with the needles, that when they are forced through the mattress the ends of the needles may pass up through the platform D as it is pressed down. This upper platform is held down, when a pressure or resistance is required, by means of the pawls *d d* on the platform and the racks on the inner sides of the frame, as shown in the sectional view, Fig. 2.

The needles are arranged in pairs to carry two ends of a thread, *e e*, through the mattress. They are furnished with open or slit eyes at the point to facilitate threading, and are also made with angular faces and cutting-edges, that extend from the point to the eye, one of such cutting-edges, *i*, Fig. 4, being in line with the slit *i′*, that opens into the eye. This construction is for the purpose of separating the material for the passage of the needle and its thread, and to spread and keep it open, to facilitate the entrance into the goods of the point of the needle and its slit *i′*, or open eye, without catching into or engaging with either the goods or the stuffing or filling within the mattress. By this construction of needle E I am enabled to secure ease of penetration into the material with facility and rapidity of threading.

The ends of these needles are provided with a shoulder, *h*, and a screw-thread and nut, *h′*, to secure them in position upon the reciprocating platform C.

By this construction and arrangement of the several parts hereinabove described I pro-

duce a machine capable of stitching mattresses and like articles of upholstery of any size in a perfect and thorough manner, and with but one motion of the reciprocating tables or platforms, and thus I greatly economize the time and labor required to stitch the same by hand labor.

Having thus fully described my invention, what I desire to secure by Letters Patent, and claim as being new therein, is—

In a machine for stitching mattresses, the combination, with the frame A A′, of the reciprocating platforms C D, the roller F, and cords *a b g*, constructed and arranged substantially as described and shown.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 13th day of June, 1876.

DAVID HARRIS. [L. S.]

Witnesses:

C. W. M. SMITH,

EDWARD E. OSBORN.