

(No Model.)

2 Sheets—Sheet 1.

H. C. RIEFE.
MATTRESS MAKING MACHINE.

No. 578,466.

Patented Mar. 9, 1897.

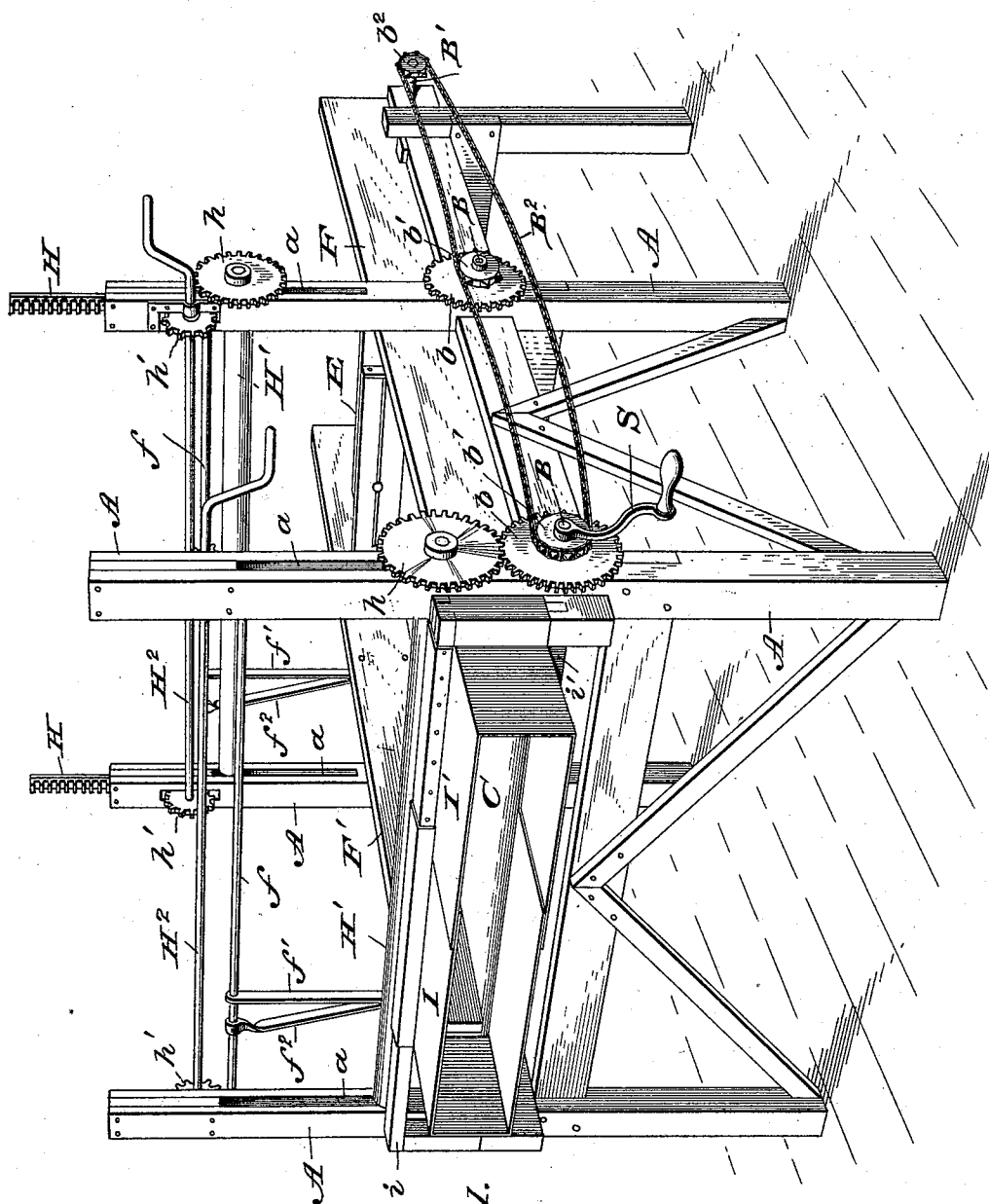
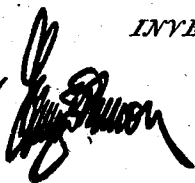


Fig. 1.

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L. S. Elliott.
M. Johnson.

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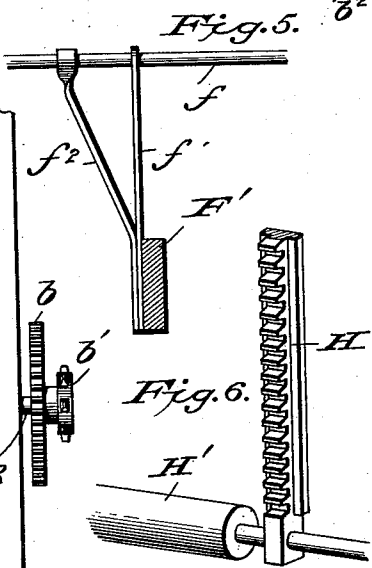
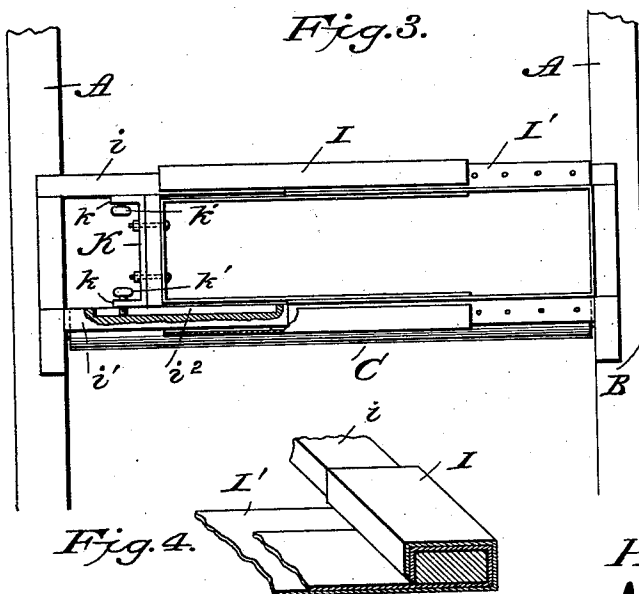
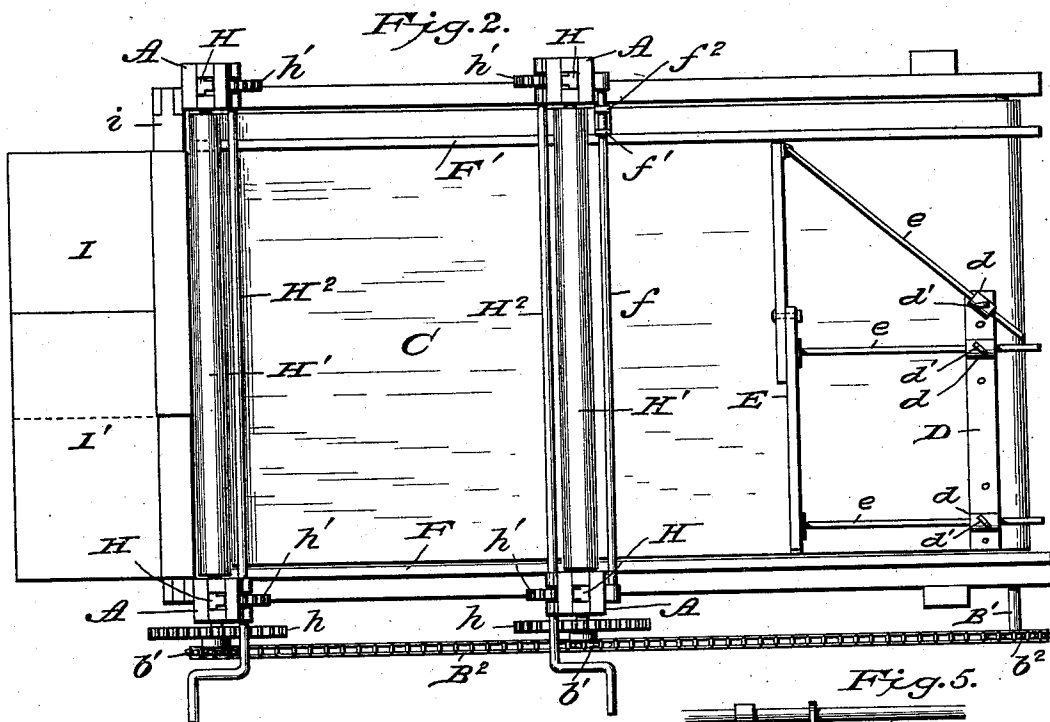
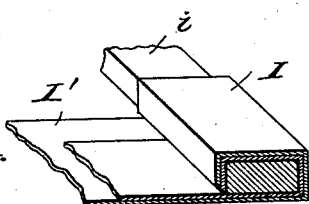
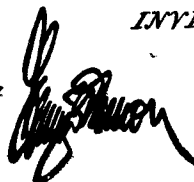


Fig. 4.



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UNITED STATES PATENT OFFICE.

HENRY C. RIEFE, OF MASON CITY, IOWA.

MATTRESS-MAKING MACHINE.

SPECIFICATION forming part of Letters Patent No. 578,466, dated March 9, 1897.

Application filed October 22, 1896. Serial No. 609,667. (No model.)

To all whom it may concern:

Be it known that I, HENRY C. RIEFE, a citizen of the United States of America, residing at Mason City, in the county of Cerro Gordo and State of Iowa, have invented certain new and useful Improvements in Mattress-Making Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

The object of this invention is to provide an apparatus for use in the manufacture of mattresses in which an endless apron is employed to feed the filling material to the ticking through a mouthpiece, said apron carrying a follower to facilitate the operation, and the several parts of the machine being adjustable to accommodate tickings of different sizes.

The invention consists in the construction and combination of the parts, as hereinafter fully set forth, and particularly pointed out in the claims.

In the accompanying drawings, forming part of this specification, Figure 1 is a perspective view of a mattress-making machine constructed in accordance with my invention. Fig. 2 is a plan view. Fig. 3 is an end view, partly in section, showing the manner of adjusting the spout or mouth. Fig. 4 is a detail sectional view showing the manner of connecting the sections of the spout or mouth to its supporting-bars. Fig. 5 is a detail view illustrating the manner of supporting the adjustable side board of the apparatus. Fig. 6 is a detail perspective view of one of the rack-bars.

The frame of the machine is made up of vertical posts, connected by longitudinal, transverse, and diagonal braces, as shown, the posts A A on each side of the frame being provided with vertical slots *a*, the upper ends of which are partly closed to form guides for a sliding rack-bar, hereinafter referred to. Below the slots *a* the posts A are provided with bearings for transverse shafts B B, said shafts projecting beyond one side of the frame to have mounted thereon a gear-wheel *b* and

sprocket-wheel *b'*, and at the rear end of the machine, in the longitudinal side pieces thereof, is mounted a corresponding shaft B', carrying a sprocket-wheel *b*². The transverse shafts at the opposite ends of the frame have rollers, over which passes an endless apron C, and said shafts are geared to each other by a sprocket-chain B², that passes over the sprocket-wheels thereon, the chain also engaging the sprocket-wheel on the intermediate shaft.

Upon the endless apron C is secured a transverse board D, having apertured lugs *d* with set-screws *d'*, and through these lugs pass rods *e*, to the forward ends of which is secured a follower E, said follower being made up of two sections, which are adjustable one upon the other by means of a bolt carried by one engaging a slot in the other. To provide for this adjustment, the lug *d*, which engages the rod that extends to one of said sections, is swiveled to the board D.

Within the frame at one edge of the endless apron C is secured a stationary board F, and upon the opposite edge of said apron is mounted a board F', which can be moved transversely of the frame to reduce the space between said boards F and F', the follower E being adjustable, as hereinbefore described, to occupy this space. The longitudinal board F' is supported from transverse rods *f*, carried by the posts A, by means of bars *f'* and *f*², one being vertical and the other inclined, so that when the board is adjusted or moved to its desired position upon the endless apron any pressure against the same will be received by the inclined bars.

Between the strips at the upper ends of the vertical slots *a* in the posts A are located sliding rack-bars H, in the lower ends of which are mounted transverse shafts, upon which are mounted rollers H', and the shafts which carry these rollers project beyond one side of the frame of the machine and have mounted thereon gear-wheels *h*, adapted to mesh with the gear-wheels *b* on the transverse shafts B, and when these gear-wheels are in mesh the rollers are located a suitable distance above the endless apron and rotate to assist in feeding the material into the ticking. The rack-bars are raised to elevate the rollers H' by means of transverse shafts H², which are sup-

ported by the posts A and carry pinions h' , that pass through openings in said posts and engage the rack-bars. A pawl or dog may be employed to engage one of the pinions h' and thereby hold the rack-bars elevated to support the rollers, so that they will not be in the way of placing the filling material upon the endless apron.

At the forward end of the machine is mounted a frame that supports the spout or mouth over which the open end of the ticking is placed, and this spout or mouth is made up of two sections I and I', adjustable one upon the other to accommodate tickings of different sizes. The stationary section I' is secured to the upper and lower bars of the supporting-frame by being bent around the same and then nailed thereto, as shown, while the movable section I is simply bent around said bars to lap the other section at one end. By this arrangement the section I can be slid upon the section I' to vary the width of the mouth, and in order to secure said movable section in an adjusted position I have provided means for this purpose consisting of a slide K, located between the horizontal bars i and i' and secured to the outer end of the section I in any suitable manner. This slide is made up in part of a metal plate having outwardly-bent ends k , carrying thumb-screws k' , which engage grooves i'' in said longitudinal bars and impinge against the bottom of said grooves to hold the slide against movement.

It will be noted that in a mattress-making machine constructed as hereinbefore described there are three adjustable features—the mouth, the longitudinal side board, and the follower carried by the endless apron—and these parts are adjusted to suit the size of mattress to be made. After such an adjustment has been made, the filling material placed upon the endless apron in front of the follower, and the open end of the ticking placed over the mouth the crank S, attached to the forward shaft B, is turned, which will move the apron and feed the material thereon into the ticking through the spout or mouth, such operation being assisted by the rollers H' and the follower E. When the ticking has been filled, the rotation of the crank-handle is reversed to move the follower back to its initial position.

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

1. In a mattress-making machine, the combination with the supporting-frame, of an endless apron mounted therein, a cross-piece D secured upon the apron at one side and provided with apertured lugs d one of which is swiveled, set-screws carried by the lugs, rods passed through said apertured lugs and held in engagement therewith by the set-screws, and an adjustable follower attached to the forward ends of the rods, said follower consisting of two sections in sliding engagement with each other; the press-box mounted above

the endless apron and having one side laterally adjustable with respect to the frame, substantially as shown and described.

2. In a mattress-making machine, the combination with the supporting-frame having an endless apron mounted therein, of a follower secured to the apron and adjustable laterally thereon; the press-box having a longitudinal board mounted upon the apron at one side thereof, transverse rods secured at their ends to the upper part of the supporting-frame, and bars f' and f'' secured to the longitudinal board and extending to the transverse rods which pass through apertures therein, one of each pair of bars being at an angle to provide an inclined brace, substantially as shown and described.

3. In a mattress-making machine, the combination with the supporting-frame and press-box, an endless apron therein, of a supplemental frame attached to the forward end of the main frame on a line with the endless apron and presenting upper and lower cross-bars i and i' , a laterally-adjustable mouth or funnel supported by the supplemental frame and consisting of telescopic sections I and I', the inner edges of one section being turned over the cross-bars i and i' and secured thereto, while the inner edges of the other section are turned over side cross-bars and permitted to slide thereon; together with a bracket or slide K having projections k carrying thumb-screws which impinge against the cross-bars of the supplemental frame, substantially as shown and described.

4. In a mattress-making machine, the combination with the supporting-frame and press-box, an endless apron therein, the supporting-frame presenting uprights which project above said apron and provide guides, of bars mounted to slide vertically in said guides, rollers H' journaled in the bars, gear-wheels mounted on the ends of the rollers, and means for raising and lowering the bars; together with the rollers or shafts over which the endless apron passes, means for turning said shafts in unison, and gear-wheels on the ends of said shafts adapted to mesh with the gear-wheels of the rollers H' when the bars are lowered, substantially as shown and for the purpose set forth.

5. In a mattress-making machine, the combination with the supporting-frame and press-box, an endless apron therein, the supporting-frame presenting uprights which project above said apron and provide guides, of vertical rack-bars mounted to slide in said guides, rollers H' journaled in the rack-bars, gear-wheels mounted on the ends of the rollers, and transverse shafts having pinions which mesh with the rack-bars; together with the rollers or shafts over which the endless apron passes, means for turning said shafts in unison, and gear-wheels on the ends of said shafts which mesh with the gear-wheels of the rollers H' when the rack-bars are lowered, substantially as shown and described.

6. In a mattress-making machine, the combination with the supporting-frame and press-box, an endless apron therein, the supporting-frame presenting uprights which project
5 above said apron and provide guides, of vertical rack-bars mounted to slide in said guides, rollers H' journaled in the rack-bars, gear-wheels *h* mounted on the ends of the rollers, and transverse shafts having pinions which
10 mesh with the rack-bars; together with the rollers or shafts over which the endless apron passes, gear-wheels *b* and sprocket-wheels *b'* and *b''* mounted on the ends of said shafts, and

a chain connecting the sprocket-wheels, substantially as shown, whereby the gear-wheels 15 *h* will be brought into mesh with the gear-wheels *b* when the rollers H' are lowered, and thereby turn the latter when the apron is operated, for the purpose set forth.

In testimony whereof I affix my signature 20 in presence of two witnesses.

HENRY C. RIEFE.

Witnesses:

W. G. C. BAGLEY,
C. H. McNIDER.