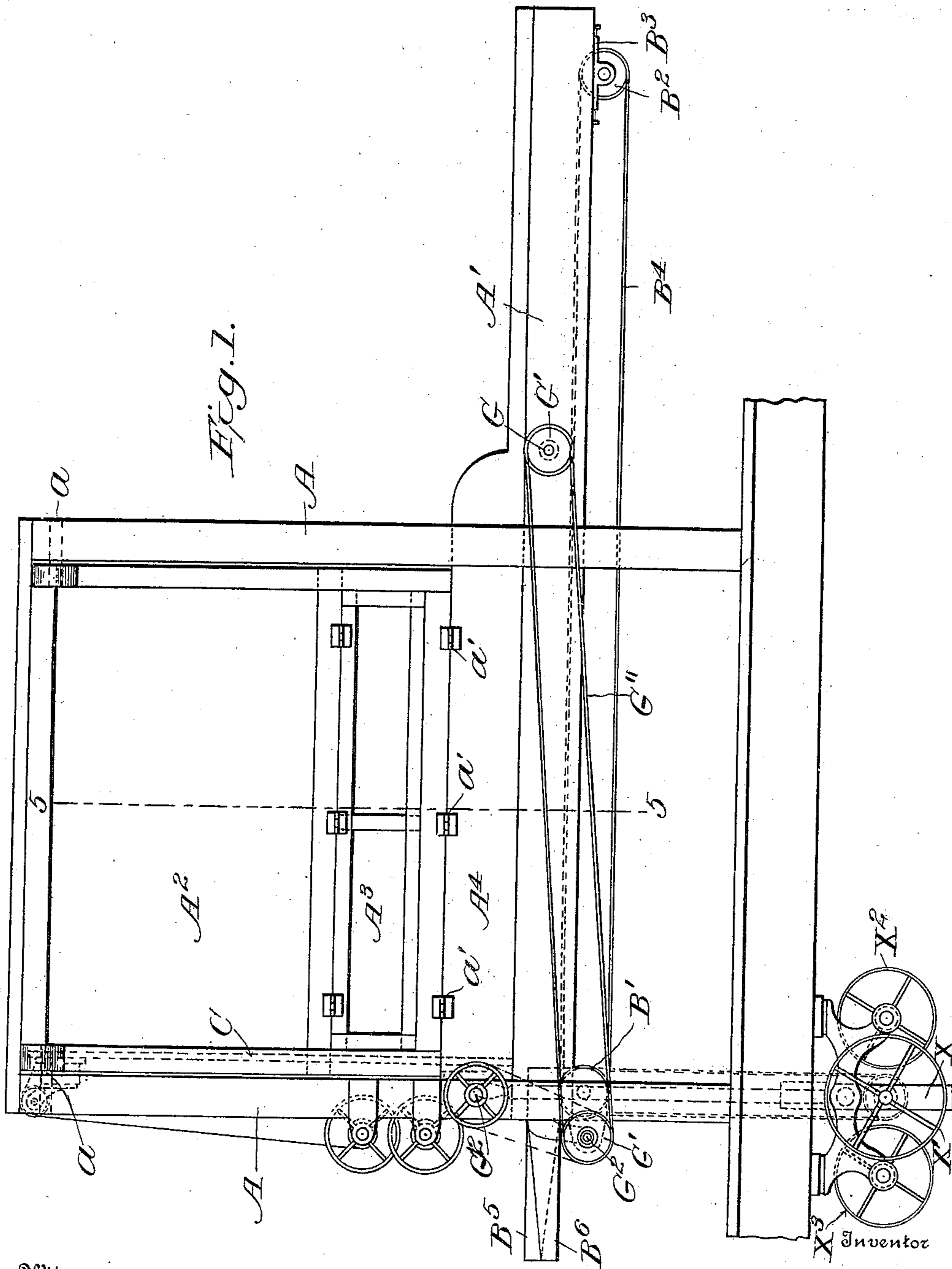


917,221.

C. W. WHITE.  
MATTRESS MAKING MACHINE.  
APPLICATION FILED AUG. 2, 1907.

Patented Apr. 6, 1909.

4 SHEETS—SHEET 1.



Witnesses

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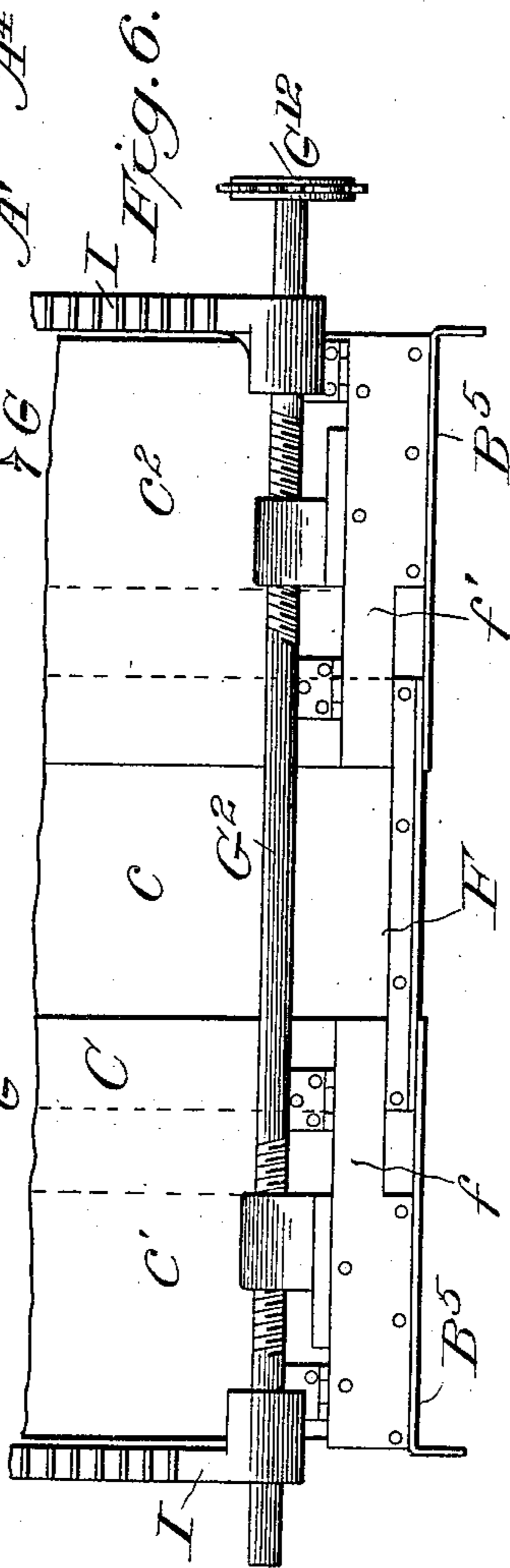
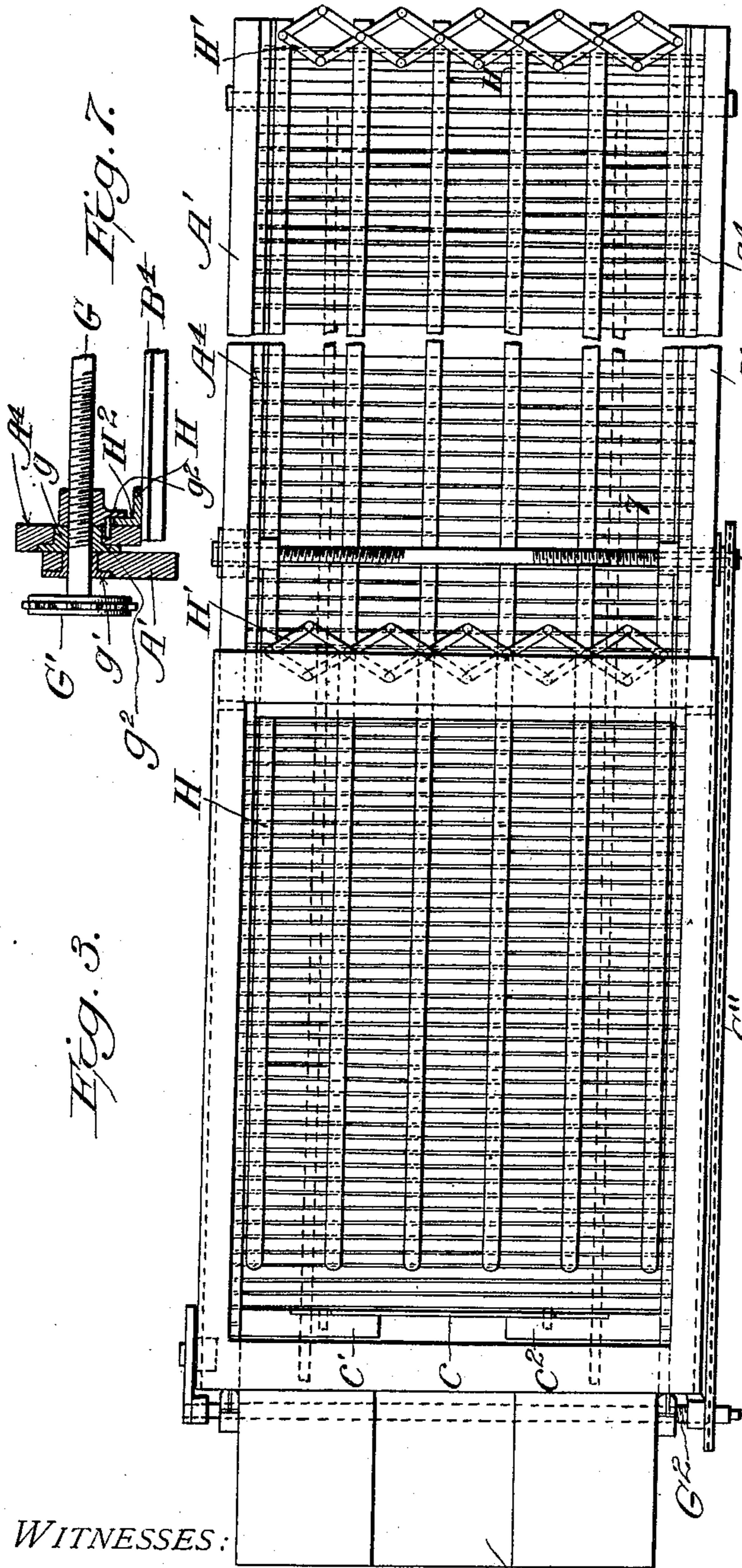


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4 SHEETS—SHEET 3.



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4 SHEETS—SHEET 4.



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# UNITED STATES PATENT OFFICE.

CHARLES W. WHITE, OF WACO, TEXAS.

## MATTRESS-MAKING MACHINE.

No. 917,221.

Specification of Letters Patent.

Patented April 6, 1909.

Application filed August 2, 1907. Serial No. 386,740.

*To all whom it may concern:*

Be it known that I, CHARLES W. WHITE, a citizen of the United States, residing at Waco, in the county of McLennan and State of Texas, have invented certain new and useful Improvements in Mattress-Making Machines, of which the following is a specification.

The present invention relates to mattress making machines of the general type wherein the material to be assembled and condensed to the proper shape is fed into a suitable frame, which is then bodily moved into the tick and withdrawn therefrom, leaving the mattress forming material in the tick.

The present invention is designed more particularly as an improvement on Patent No. 813,470, issued to me February 27, 1906, and to said patent attention is directed for a general understanding of this type of machine.

The invention herein described is an improvement on the prior patented structure in several particulars, whereby a more simple and equally efficient machine is produced and it consists of the parts and combinations to be hereinafter described and claimed.

Referring to the drawings wherein similar characters of reference are used to indicate corresponding parts in each of the several views:—Figure 1 represents in side elevation a machine embodying the features of the present invention; Fig. 2 is an end view thereof; Fig. 3 is a plan view of the machine; Fig. 4 is a longitudinal sectional view; Fig. 5 is a cross-section on line 5—5, Fig. 1; Fig. 6 is a detail view, showing the adjustable door supporting beam and adjustable door and means for adjusting the same; and Fig. 7 is a detail sectional view on line 7—7 of Fig. 3.

Referring to Fig. 1 of the drawings, the main supporting frame for the operating parts of the machine comprises suitable uprights A, which, near their lower ends, are joined by sides A' suitably secured thereto and preferably braced in any desired manner to constitute a convenient and suitable framework. The uprights A are extended above the side pieces A' to constitute a receiving chamber, having, as shown in Fig. 1, the pivotally mounted swinging panels A<sup>2</sup> provided with hinged extensions A<sup>3</sup> and A<sup>4</sup>; extensions A<sup>3</sup> constituting doors through which access may be had to the interior of the chamber for purposes of inspection.

Supported on the main framework in any suitable manner and extending transversely between the sides A' are the sprocket wheels or pulleys B' and B<sup>2</sup>, Figs. 1 and 4, and about these sprockets or pulleys a slatted apron B<sup>4</sup> passes, said apron constituting the bottom of the main frame between the sides A', as more clearly shown in Fig. 3. One of the sprocket wheels or pulleys B<sup>2</sup> is adjusted toward and from the other by suitable means, as B<sup>3</sup>, which may be similar to that disclosed in my former patent referred to.

At one end of the machine, as in Figs. 1 and 3, is the tick support B<sup>5</sup>, B<sup>6</sup>, formed substantially as in my former patent so as to support the tick. Both the upper and lower sections, B<sup>5</sup> and B<sup>6</sup>, of the tick support, are, as shown in Fig. 3, adjustable in width, as in my said patent, to provide for mattresses of different widths.

In my former patent the slatted apron was given both a forward and a reverse feed, whereby it performed the double function of inserting the mattress frame and mattress into the tick and then withdrawing the forming frame therefrom. This is also true of the machine herein described and, therefore, need not be further set forth, as a sufficient general disclosure may be had by referring to my said former patent, No. 813,470.

In my present machine the compression frame C and the means for raising and lowering the same are, generally speaking, similar to the respective parts in my former patent, No. 813,470, to which reference is hereby given for a clear and thorough description of the same. In the present form of my invention this mattress forming frame consists of a series of slats H, which are adjustably connected together and operated by lazy tongs H'. To the exterior series of slats are rigidly connected uprights H<sup>2</sup>. A plunger D similar to that described in the patent referred to and similarly adjustable with the slats H of the mattress forming frame is connected to said frame either fixedly or in such manner as to be longitudinally adjustable on the same, as will be readily understood on reference to the above patent.

One feature of this invention is a device for holding the mattress material in position during compression. Heretofore in machines of this general class, when the compression frame, similar to frame C, was lowered into operative position, the mattress material of a light feathery nature was forced outward

from the lower end of the frame and gathered in a thick mass near the opposite end thereof, thus producing a filling of varying uneven density which afterward had to be given additional treatment to put it in proper shape. To overcome this serious objection, I have provided a plurality of long, wide slats E, pivotally connected in the preferred form to blocks  $e$  attached to plunger D, said blocks being sufficiently high to have the hinged connection above the plunger D and to allow said slats to swing down onto the mattress material previous to the lowering of the compression frame C. The slats, acting separately, as they do, tend to hold the material in position to be uniformly compressed by the frame C. Owing to the fact that the slats are spaced apart, as clearly shown in Fig. 3, as well as to the fact that they act separately on the mattress material, said material is not bunched or gathered, as is the case where the solid compression frame is used alone.

In order to hold slats E in their operative position, I have provided a bar or plank E', hinged to the end of the mattress forming chamber and adapted to drop and overhang the slats when they are raised. In order to completely and tightly inclose the mattress forming frame in all its adjusted positions so as to prevent any of the mattress material falling between the sections A<sup>4</sup> and the uprights H<sup>2</sup>, it is necessary to adjust the adjacent panels A<sup>2</sup> of the chamber wherein the mattress material is compressed. The panels A<sup>2</sup> are pivotally mounted at  $a$  on the uprights A so as to swing bodily inward. Sections A<sup>4</sup>, hinged at  $a'$  to panels A<sup>2</sup>, are extended beyond the framework of the machine to completely inclose the entire run of the apron. These sections so extended are provided with internally screw-threaded nuts  $g$  adapted to receive the opposite reversely threaded ends of a rod G lying above the upper run of the apron and being supported in beams  $g'$  in the framework of the machine. A like rod is similarly mounted at the opposite end of the machine beneath the lower run of the belt, and the two geared together for simultaneous operation through sprocket wheels G', mounted respectively on them and a coöperating sprocket chain G''. In the preferred form of the device, the nut  $g$  is made in two parts and formed with a flange or toe  $g^2$  on each part adapted to embrace between one of said flanges and the opposed face of section A<sup>4</sup> the upright H<sup>2</sup> to thereby draw said upright in one or the other direction, as said nut  $g$  travels on the aforesaid screw G. Obviously, these may be separate and individual nuts for moving the slats and the sections A<sup>4</sup>, if desired.

In order to adapt the compression frame C to the various widths of the mattresses to be formed, I have constructed it of several sec-

tions adjustably connected, comprising a central relatively stationary member  $c$  and two relatively adjustable side sections,  $c'$  and  $c^2$ , said side sections being adapted to slide upon said central section, as clearly shown in Figs. 2 and 6. Sections  $c'$  and  $c^2$  are respectively hinged to adjustable sections  $f$  and  $f'$  of compression frame support F. The sections of the tick support members B<sup>5</sup> and B<sup>6</sup> are also connected to the sections of the compression frame support F in such manner as to be adjustable therewith, as will be readily understood from Figs. 2 and 6 of the drawings. For adjusting said sections  $f$  and  $f'$  and their connected compression frame sections, I have provided a rod G<sup>2</sup> similar in construction and operation to rods G, said rod being mounted in journals in the compression frame lifting racks, I. Rod G<sup>2</sup> is provided with a sprocket wheel G<sup>12</sup>, and is operated simultaneously with rods G through sprocket chain G<sup>13</sup>, as is apparent on reference to Fig. 2 of the drawing.

The operation of the machine is as follows: Material is fed onto the compression chamber, slats E are lowered to hold the material in place, compression frame C is lowered onto the slats E to compress the material, lever X is operated to throw the friction drive wheel X' into driving contact with the direct drive friction gear X<sup>2</sup>, whereby the entire mattress forming frame through its connection with the slatted apron is fed into the tick through the tick support. At the end of the feed the lever is operated to throw driver X' into contact with reversing friction gear X<sup>3</sup>, whereby through the sprocket chain connections a reverse movement of the apron and connected mattress forming frame is given and the frame is thereby withdrawn. If a mattress of different width is desired, the rods G and G<sup>2</sup> are operated as previously set forth, thereby adjusting side pieces A<sup>4</sup>, the slats E, the slats H, the plunger D, the door sections C' and C<sup>2</sup>, and the adjustable sections of the tick support, all in proper proportion. If a mattress of different length be required, the plunger D is adjusted longitudinally, as will be readily understood in reference to my former patent.

It is obvious that many changes may be made in the details of construction and operation of the various parts of my machine without in any way departing from the scope of my invention.

Having thus fully described my invention, what I claim as new and desire to secure by Letters Patent of the United States is:

1. In a mattress making machine, the combination of the main frame for receiving the material to be formed into a mattress, a ram or plunger, a compression frame, means secured to said ram or plunger operative independently of said compression frame for holding the mattress material in position

during compression, a slatted apron, and an adjustable mattress forming frame supported on said apron, and means for moving said slatted apron, first in one, and then in the opposite direction.

2. In a mattress making machine, the combination of the main frame for receiving the material to be formed into a mattress, an adjustable compression frame, an adjustable ram or plunger, means pivotally secured to said ram or plunger and operative independently of said compression frame for holding the mattress material in position during compression, a slatted apron, and an adjustable mattress forming frame comprising a series of slats supported on said apron, and means for moving the slatted apron first in one and then in the opposite direction.

3. In a mattress making machine, the combination of the main frame for receiving the material to be formed into a mattress, an adjustable ram or plunger means pivotally secured to said ram or plunger for holding the mattress material in position during compression, an adjustable compression frame, a slatted apron, and an adjustable mattress forming frame comprising a series of slats supported on said apron, and means for moving the slatted apron first in one and then in the opposite direction.

4. In a mattress making machine, the combination of the main frame for receiving the material to be formed into a mattress, an adjustable compression frame, an adjustable ram or plunger a series of slats pivotally connected to said plunger and operative independently of said compression frame for holding the mattress material in position during compression, a slatted apron, and an adjustable mattress forming frame comprising a series of slats supported on said apron, and means for moving the slatted apron first in one and then in the opposite direction.

5. In a mattress making machine, the combination of the main frame for receiving the material to be formed into a mattress, an adjustable compression frame, an adjustable ram or plunger, means operative independently of said compression frame for holding the mattress material in position during compression, comprising slats pivotally connected to the plunger, a slatted apron, and an adjustable mattress forming frame, comprising a series of slats supported on said apron, means for moving the slatted apron first in one and then in the opposite direction, and means for simultaneously adjusting all of said parts other than the slatted apron.

6. In a mattress making machine of the class described, a mattress forming frame comprising a plurality of sections adjustably connected together, a ram or plunger mounted thereon, comprising a plurality of adjustable sections, said plunger being adjustable with said mattress forming frame, an adjustable compression frame, and a plurality of slats pivotally connected to said plunger and operative independently of said compression frame for holding the mattress material in position during compression.

7. In a mattress making machine of the class described, a box or chamber comprising adjustable side sections, a mattress-forming frame therein, said frame comprising a plurality of adjustable sections, a plunger comprising a plurality of adjustable sections, said plunger being mounted on said mattress forming frame, means for simultaneously adjusting said adjustable parts, a compression frame and means operative independently of said compression frame for holding the mattress material in position during compression.

8. In a mattress making machine of the class described, a mattress forming frame comprising a plurality of adjustable sections, lazy tongs connecting said sections, means for operating said lazy tongs to thereby adjust said sections, a compression frame and means operative independently of said compression frame for holding the mattress material in position during compression.

9. In a mattress making machine of the class described, the combination of a main frame for receiving material to be formed into a mattress, a mattress forming frame, a ram or plunger mounted thereon, a compression frame, and means operative independently of said compression frame for holding the mattress material in position during compression, substantially as described.

10. In a mattress making machine of the class described, the combination of a main frame for receiving material to be formed into a mattress, a mattress forming frame, a ram or plunger mounted thereon, a compression frame, and means operative independently of said compression frame for holding the mattress material in position during compression, comprising slats pivotally connected to the plunger, substantially as described.

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

CHARLES W. WHITE.

Witnesses:

CHAS. E. RIORDAN,  
ANNIE R. HUNTER.