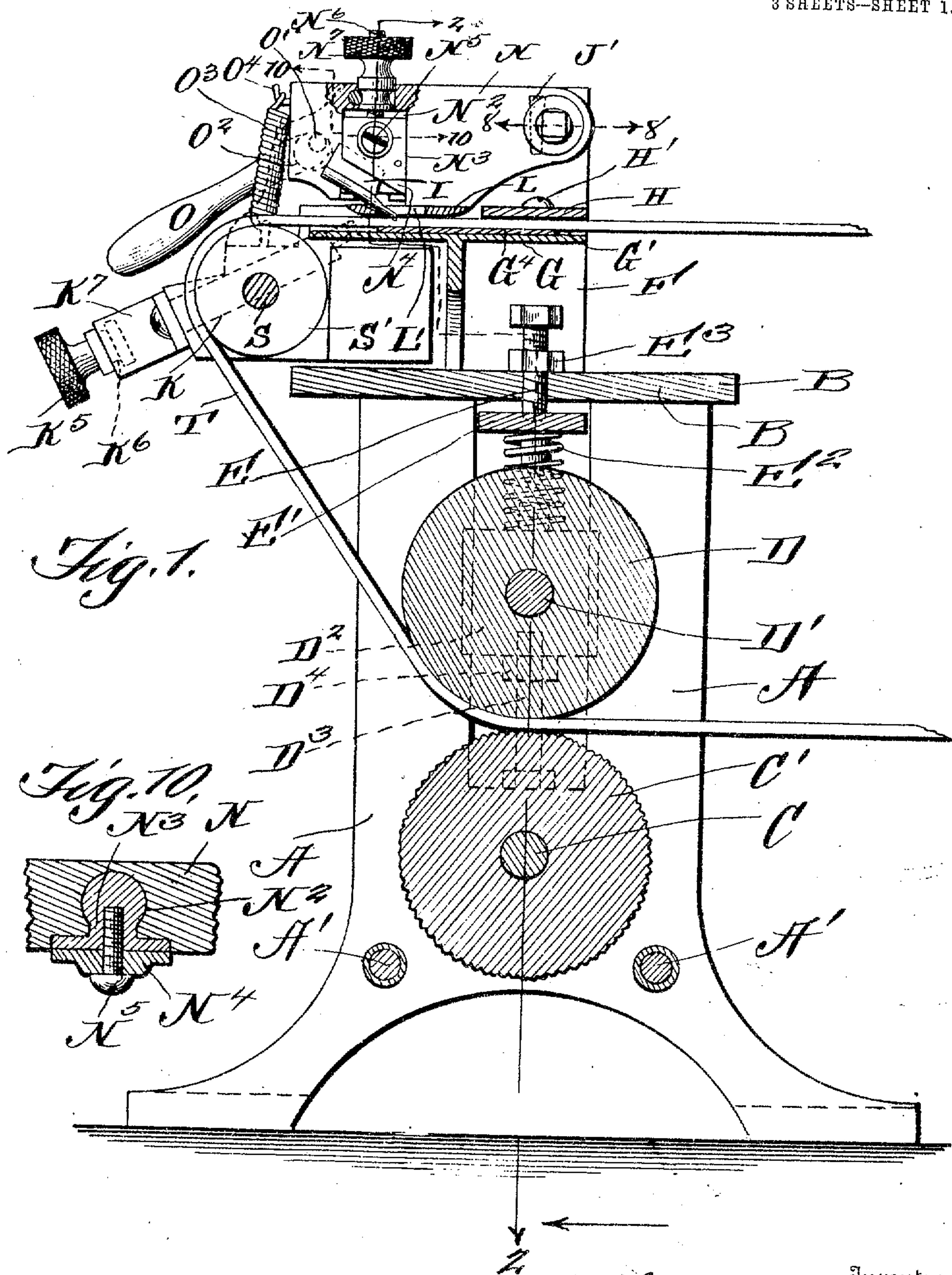


No. 883,525.

PATENTED MAR. 31, 1908.

G. R. CHEESMAN.  
WELT DRESSING MACHINE.  
APPLICATION FILED MAY 28, 1907.

3 SHEETS—SHEET 1.



Witnesses

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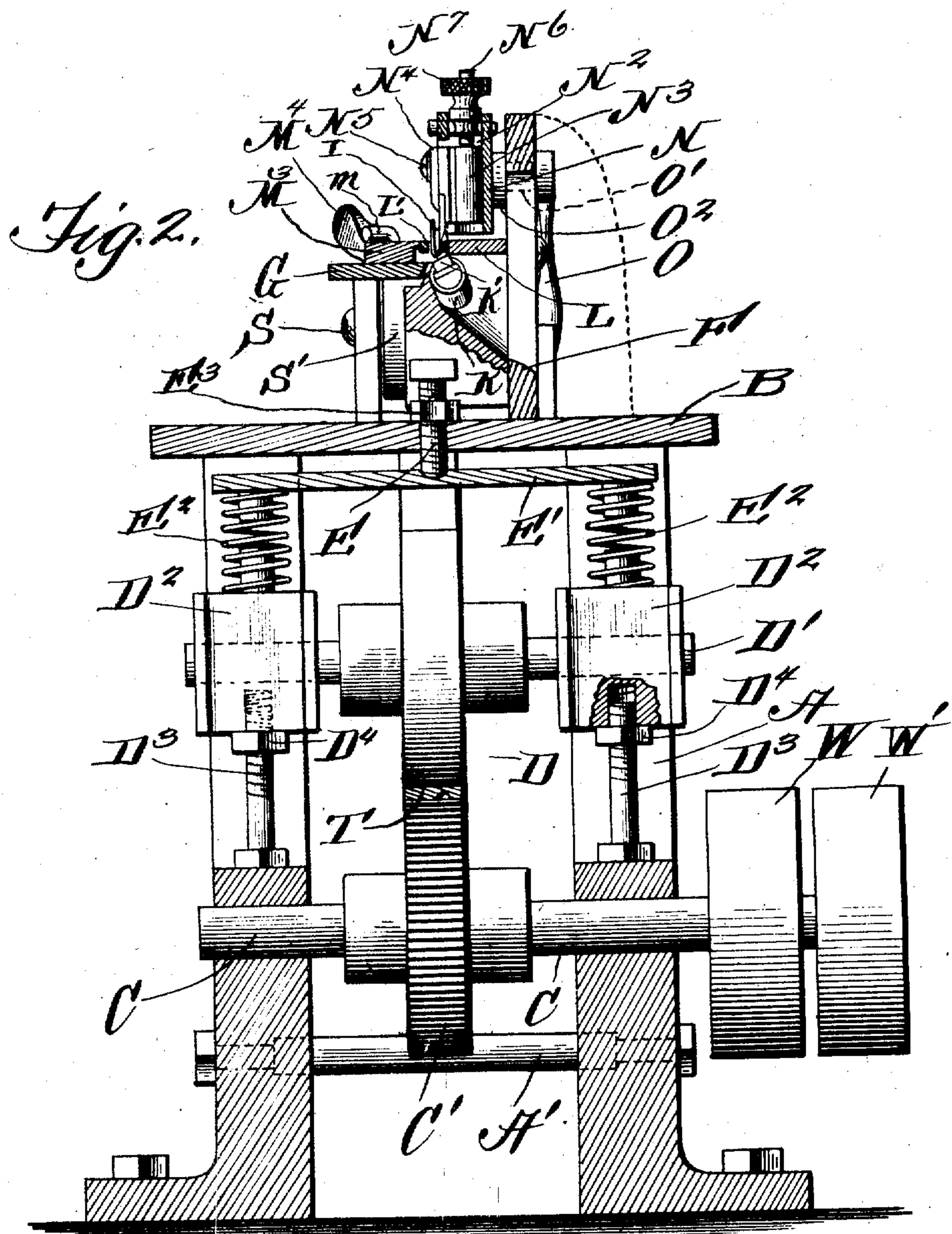
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3 SHEETS—SHEET 2.



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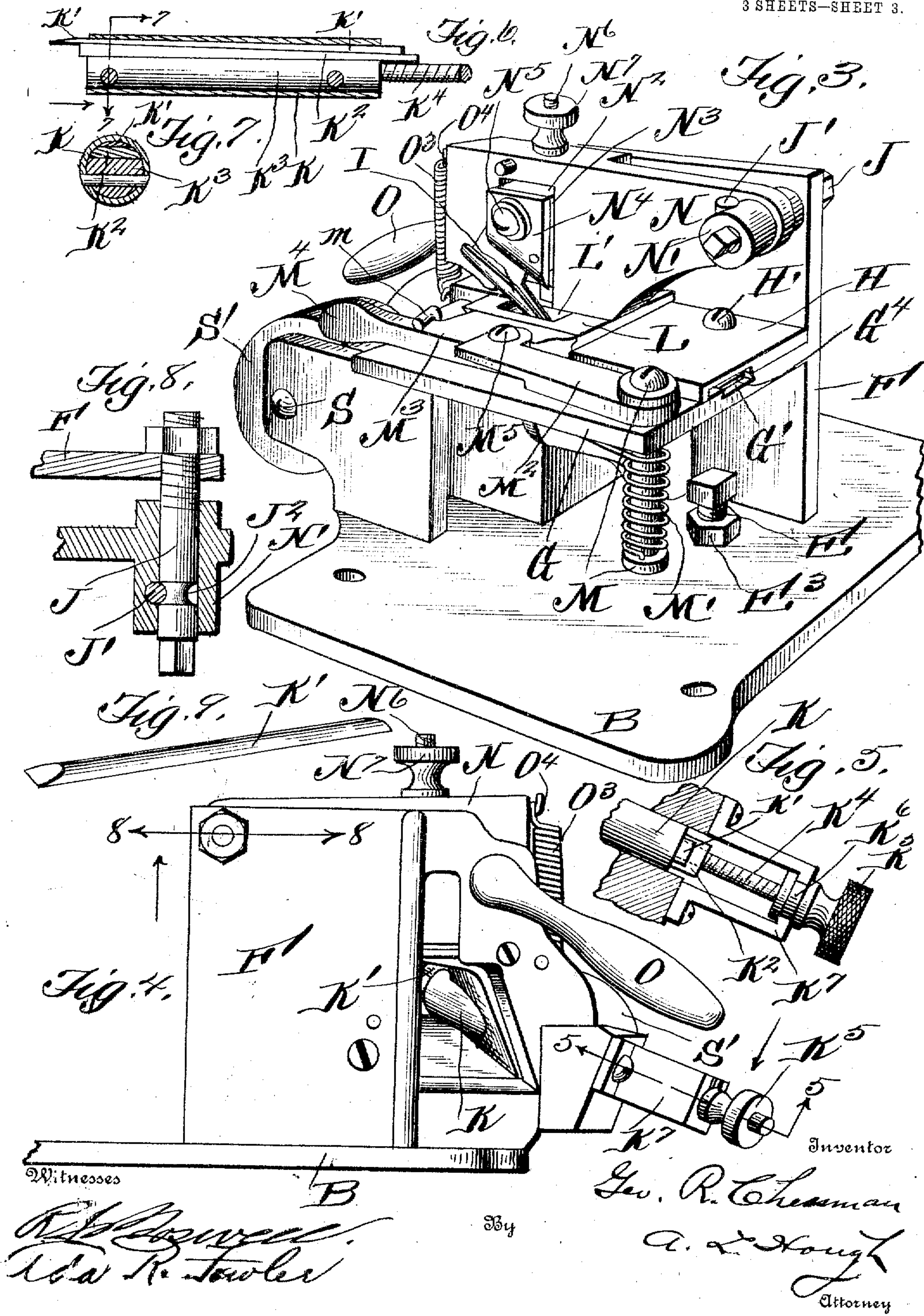
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3 SHEETS—SHEET 3.





# UNITED STATES PATENT OFFICE.

GEORGE R. CHEESMAN, OF AUBURN, NEW YORK, ASSIGNOR TO DUNN AND MCCARTHY, OF AUBURN, NEW YORK, A CORPORATION.

## WELT-DRESSING MACHINE.

No. 883,525.

Specification of Letters Patent.

Patented March 31, 1908.

Application filed May 28, 1907. Serial No. 376,056.

*To all whom it may concern:*

Be it known that I, GEORGE R. CHEESMAN, a citizen of the United States, residing at Auburn, in the county of Cayuga and State of New York, have invented certain new and useful Improvements in Welt-Dressing Machines; and I do 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 the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to new and useful improvements in welting machines, and the object in view is to produce a simple and efficient apparatus of this nature whereby a uniform groove and bevel may be formed upon a welt, and more specifically comprising flexible adjusting means, making it possible to cut welts which may be uneven, or of a spongy nature in places.

The invention consists in various details of construction and combinations and arrangements of parts which will be hereinafter fully described and then specifically defined in the appended claims.

I illustrate my invention in the accompanying drawings, in which:—

Figure 1 is a sectional view vertically through my improved welting machine, parts being shown in elevation. Fig. 2 is a cross sectional view taken on line 2—2 of Fig. 1, showing parts of the invention in elevation. Fig. 3 is a perspective view showing the superstructure of the machine, and showing the relative positions of the flexible means upon the table for holding the welt to receive a groove and have the edge thereof beveled. Fig. 4 is a rear elevation of the superstructure. Fig. 5 is a sectional view taken on line 5—5 of Fig. 4. Fig. 6 is a sectional view through the casing holding a beveling knife. Fig. 7 is a cross sectional view on line 7—7 of Fig. 6. Fig. 8 is a sectional view on line 8—8 of Figs. 1 and 4. Fig. 9 is a detailed view of the beveling knife and Fig. 10 is a sectional view on line 10—10 of Fig. 1.

Reference now being had to the details of the drawings by letter, A designates a frame, upon the upper portion of which a table B is mounted, the standards of the frame being connected together by rods A', which pass

through a pipe of suitable size, which are recessed into the frame on either side and serve to hold the frame true and acts as a washer to hold the standards proper distance apart.

Journaled in suitable bearings in the standards of the frame is a shaft C to which is fixed a pulling wheel C', the circumference of which is preferably corrugated in order to prevent slipping of the wheel which is frictionally engaged thereby.

D designates a second wheel which is fixed to a shaft D' mounted in suitable boxings D<sup>2</sup>, shown in Fig. 1 of the drawings, said boxings being supported upon the adjusting screws D<sup>3</sup> having nuts D<sup>4</sup> mounted upon the threaded portions thereof. The circumference of the wheel D is made up preferably of a paper composition or may be of any suitable fibrous nature, and is adapted to bear against the finished face of the welt as it is fed frictionally between the two rollers.

Mounted in threaded apertures in the table B are the adjusting screws E, the ends of which bear against the cross-piece E', between which and the boxings D<sup>2</sup>, the coiled springs E<sup>2</sup> are mounted. A jam nut E<sup>3</sup> is mounted upon each of the screws E and adapted to bear against the upper surface of the table, as shown, whereby the tension upon the springs E<sup>2</sup> may be regulated to cause the wheel D to bear with more or less friction against the welt which is to be fed between the two rollers C' and D.

Rising from the table is a plate F which has a laterally projecting shelf G over which the welt is fed through the grooved way G', as shown clearly in Fig. 3 of the drawings. Fixed to said shelf is a plate H which is held in place by means of a screw H'. The under surface of the plate H is provided with a groove which registers with the groove in said shelf. A case-hardened steel plate G<sup>4</sup> is dove-tailed in the groove G' formed in the shelf and the upper surface of said plate G<sup>4</sup> is flush with the upper surface of the shelf and upon which strip the welt is supported as it is fed over the shelf to be acted upon by the grooving knife.

The shoe N is mounted upon an adjustable bearing stud J, which passes through an aperture in the plate F, as shown clearly in Fig. 8 of the drawings, said shoe being held in place by means of a key J' which passes through a groove formed in a boss N' which



is integral with the shoe and an annular groove  $J^2$  formed in the circumference of said stud. Said shoe is provided with a recess  $N^2$  cut in from the under edge thereof and adapted to receive a knife holding carriage  $N^3$ , which is grooved upon its outer face and adapted to receive the knife  $I$  which is clamped to the carriage by means of the plate  $N^4$ , the lower edge of which is diagonally disposed and beveled and held in clamped relation against the outer face of said knife by means of the screw  $N^5$ , shown clearly in Fig. 3 of the drawings. Fixed to said carriage is a screw  $N^6$  which extends up through an aperture in the shoe  $N$  and has an adjusting nut  $N^7$  mounted upon its threaded end and adapted to bear against the top of the shoe whereby, as said nut is moved in one direction or the other, the carriage and the knife  $I$  mounted thereon may be raised and lowered as may be desired.

Referring to Figs. 1 and 4 of the drawings will be seen a lever  $O$  having a stud  $O'$  which is journaled in an aperture in said plate  $F$ , and  $O^2$  designates an eccentric forming a part of said boss, which eccentric is adapted to contact with the curved wall of the recess formed in the rear face of the shoe, whereby, as said lever is raised or lowered, the carriage may also be raised and lowered therewith. A coiled spring  $O^3$  is fastened at one end to the frame and its other end is fixed to a lug  $O^4$  projecting from the shoe, the office of which spring is to normally hold the shoe at its lowest limit and allow the shoe to yield if desired. Fixed to the bottom of the shoe and projecting laterally therefrom is a plate  $L$  having an elongated slot  $L'$  formed therein and through which the grooving knife  $I$  is positioned, and in which said knife is adjustable vertically by the raising and lowering of the carriage carrying the same.

Referring to Figs. 4 and 5 of the drawings will be seen a tubular casing  $K$  carrying a beveling knife  $K'$ , detail of which is shown in Fig. 9 of the drawings, which knife is held in an adjusted position by means of the wedge-shaped members  $K^2$  and  $K^3$ , shown in Fig. 7 of the drawings. Said member  $K^3$  has a screw  $K^4$  secured thereto and has mounted upon the outer threaded end thereof a swiveled nut  $K^5$  with an annular groove  $K^6$  therein mounted in a bearing in the yoke  $K^7$ , shown clearly in Figs. 4 and 5 of the drawings. The beveling knife is held preferably at an angle to the path of the welt, whereby a draw cut may be effected as the welt contacts with the knife. Said beveling knife  $K$  is positioned with its sharpened end projecting at an angle to the table and groove  $G'$  through which the welt is fed in order to trim off the corner thereof. By adjusting the nut  $K^5$ , the cutting edge of the knife  $K$  may be readily adjusted to cut the requisite bevel upon the welt. Mounted upon said

shelf is a stud  $M$  having a spring  $M'$  fixed at one end thereof and its other end fastened to the frame of the apparatus and  $M^2$  is a plate which is fastened to said stud  $M$  and rests upon the upper surface of said shelf. The under surface of said plate  $M^2$ , near its forward end, is recessed and is adapted to receive a plate  $M^3$  having a handle  $M^4$  integral therewith. The two plates  $M^2$  and  $M^3$  are held together by means of a pivot screw  $M^5$ . The inner edge of the plate  $M^3$  is recessed and its wall forms a portion of the wall of the grooved way through which the welt is fed.

$m$  designates a stop which is mounted upon the shelf and against which the handle  $M^4$  is adapted to contact to limit the movement of the plate toward the grooving knife. The two plates  $M^2$  and  $M^3$  therefore form the gage mechanism which will yield to allow the apparatus to conform to irregularities in the edges of the welt and, by the yielding adjustment of the shoe carrying the knife, provision is made for allowing the grooving knife to be raised or lowered to conform to irregularities in the surfaces of the welt, thereby producing flexible means, both laterally and vertically to conform to various thicknesses of welt, and which adjusting means form an essential part of the present invention.

Mounted upon the shaft  $S$  journaled in suitable bearings upon the frame of the apparatus is a roller  $S'$  over which the welt, designated by letter  $T$ , is adapted to travel after receiving its groove and having an edge thereof beveled. Said welt, which is preferably passed through the grooved way in the plate  $H$  with its finished face downward, passes over the roller  $S$ , thence downwardly and through the two rollers  $C'$  and  $D$ , where a pulling force is frictionally exerted upon the welt causing the same to be drawn over the shelf where the grooving and beveling is effected. It will be noted that the roughened surface of the welt is presented to the corrugated surface of the roller  $C'$ , while the upper or finished surface of the welt comes in contact with the circumference of the roller  $D$ , which is preferably of a fibrous material and will not have a tendency to mar the welt.

Fixed to the shaft  $C$  are the pulleys  $W$  and  $W'$  the former of which is mounted idly upon the shaft and the other is fixed thereto and suitable belted connection may be had with said pulleys for operating the apparatus.

The operation of the invention will be readily understood and is as follows:—The welt to be passed over the shelf and through the grooved way and over the roller  $S$  and passed between the wheels  $C'$  and  $D$  is pulled forward by the friction intermediate the wheels  $C'$  and  $D$ . The grooving knife is adjusted vertically and disposed in the path of the welt at a position where the groove is to



be formed in the upper surface thereof and the beveling knife adjusted so that the proper bevel to one corner of the welt will be made. In the event of the welt varying in width or  
 5 having irregular portions, the yielding gage plates will cause the welt to be held in proper position to receive the grooving adjacent to the opposite edge thereof. By the mechanism shown and described, the wheel D will  
 10 be adjustably held so that, when the welt is drawn between the two wheels, it will be slightly out of contact with the corrugated wheel and, by the provision of the supporting knife carrying shoe, the grooving knife may  
 15 be adjusted in order to cut the groove at the proper distance from the edge of the welt.

While I have shown and described in my apparatus the grooving and beveling knives upon the top of the machine, they may, if de-  
 20 sired, be placed at various locations in order to allow the welt to pass direct from the groover to the rollers, and other variations of my invention may be made without in any way departing from the principle involved.

25 What I claim is:—

1. A welting machine comprising a frame provided with a grooved way, friction wheels between which a welt passes and whereby the latter may be fed through said grooved  
 30 way, a knife holding shoe adjustably mounted upon the frame, a knife carried by said shoe, horizontal yielding gage mechanism designed to bear against the edge of the welt when in said grooved way, as set forth.

35 2. A welting machine comprising a frame having friction wheels between which the welt passes and whereby the latter may be fed through a grooved way upon the frame, a knife carrying shoe adjustably mounted  
 40 upon the frame, a knife carried by said shoe, an apertured plate extending over the grooved way and through which the cutting edge of the knife is adapted to pass, horizontally yielding gage mechanism adapted  
 45 to bear against the edge of the welt, and a roller over which the welt passes, as set forth.

3. A welting machine comprising a frame having friction wheels between which the welt passes and whereby the latter may be  
 50 fed through a grooved way upon the frame, a knife carrying shoe adjustably mounted upon the frame, a knife carried by said shoe, an apertured plate extending over the grooved way and through which the cutting edge of the knife is adapted to pass, and gage mechanism comprising two members which  
 are pivotally connected together, one of said members being spring-actuated and adapted to hold the other against the marginal edge  
 60 of a welt as it is drawn by the friction wheels through said grooved way, as set forth.

4. A welting machine comprising a frame having friction wheels between which the welt passes and whereby the latter may be  
 65 fed through a grooved way upon the frame, a

knife carrying shoe adjustably mounted upon the frame, a knife carried by said shoe, an apertured plate extending over the grooved way and through which the cutting edge of the knife is adapted to pass, gage  
 70 mechanism comprising two members which are pivotally connected together, a spring-actuated stud fixed to one of said members and adapted to hold the other of the gage members against the edge of a welt posi-  
 75 tioned within said guideway, as set forth.

5. A welting machine comprising a frame, friction feed wheels mounted therein, a shelf projecting laterally from the frame and provided with a grooved way through which the  
 80 welting is adapted to be passed, a roller at one end of the shelf, plates fixed to the shelf and projecting over said grooved way, a shoe pivotally mounted upon the frame above said shelf, a grooving knife adjustably  
 85 mounted upon said shoe and having its cutting edge projecting through an aperture in one of said plates and in said grooved way, yielding gage mechanism mounted horizontally upon the shelf and adapted to bear  
 90 against an edge of the welt in said grooved way, and a beveling knife positioned adjacent to the marginal edge of the grooved way, as set forth.

6. A welting machine comprising a frame, 95 friction feed wheels mounted therein, a shelf projecting laterally from the frame and provided with a grooved way through which the welting is adapted to be passed, a roller at one end of the shelf, plates fixed to the shelf  
 100 and projecting over said grooved way, a shoe pivotally mounted upon the frame above said shelf, a grooving knife adjustably mounted upon said shoe and having its cutting edge projecting through an aperture in  
 105 one of said plates and in said grooved way, yielding gage mechanism mounted horizontally upon the shelf and adapted to bear against an edge of the welt in said grooved way, a beveling knife, and a block mounted  
 110 underneath the shelf and in which said beveling knife is adjustably held, as set forth.

7. A welting machine comprising a frame, friction feed wheels mounted therein, a shelf projecting laterally from the frame and provided with a grooved way through which the  
 115 welting is adapted to be passed, a roller at one end of the shelf, plates fixed to the shelf and projecting over said grooved way, a stud projecting horizontally from the frame, a shoe pivotally mounted thereon, a grooving knife adjustably mounted upon said shoe and held spaced apart from the side thereof  
 120 and having its cutting edge extending through a slot in one of said plates, a yielding gage mechanism mounted upon the shelf and adapted to bear against the edge of a welt passing through said grooved way, as  
 125 set forth.

8. A welting machine comprising, in com- 130



5 bination with a frame having a shelf with a  
grooved way therein, a shaft mounted in  
suitable bearings therein, a wheel fixed to  
said shaft and having a corrugated circum-  
ference, a second wheel mounted in yielding  
bearings, the two wheels adapted to co-  
operate to draw a welting over a shelf upon  
the frame, a roller at one end of the shelf  
over which the welt is adapted to be drawn,  
10 a shoe pivotally mounted upon the frame, a  
knife adjustably mounted upon said shoe  
and having an edge extending into said  
grooved way, and yielding gage mechanism  
upon said shelf adapted to bear against the  
15 edge of a welt fed through said way, as set  
forth.

9. A welting machine comprising, in com-  
bination with a frame having a laterally pro-  
jecting shelf with a grooved way therein,  
20 means for drawing a welt through said way,  
a pivotally mounted shoe upon said frame, a  
spring connected at one end to said shoe and  
its other end to the frame, a knife pivotally  
mounted upon said shoe and having its cut-  
ting edge extending into said grooved way,  
25 and a yielding gage mechanism mounted  
upon the shelf and adapted to bear against  
the edge of a welt as it is drawn through said  
way, as set forth.

30 10. A welting machine comprising, in com-  
bination with a frame having a laterally pro-  
jecting shelf with a grooved way therein, a  
grooved plate mounted upon said shelf, a  
shoe adjustably mounted upon the frame, a  
35 slotted plate upon said shelf, a grooving  
knife adjustably held upon said shoe and ex-  
tending through the slot in the plate under-  
neath the same, means for raising and lower-  
ing said knife, a dove-tailed slotted plate  
40 mounted in a groove in said shelf and over  
which the welt is supported, a beveling knife  
for trimming the edge of the welt and means  
for feeding the latter, as set forth.

45 11. A welting machine comprising, in com-  
bination with a frame having a laterally pro-  
jecting shelf with a grooved way therein, a  
grooved plate mounted upon said shelf, a  
shoe adjustably mounted upon the frame, a  
slotted plate upon said shelf, a grooving  
50 knife adjustably held upon said shoe and ex-  
tending through the slot in the plate under-  
neath the same, means for raising and lower-  
ing said knife, a dove-tailed slotted plate  
mounted in a groove in said shelf and over  
55 which the welt is supported, an adjustable  
beveling knife and means for presenting the  
edge thereof at an angle in the path of the  
advancing welt while the latter, as it is fed  
forward, is drawn against said beveling knife  
60 effecting a draw cut and means for raising  
and lowering the carriage, as set forth.

12. A welting machine comprising, in com-  
bination with a frame having a laterally pro-  
jecting shelf with a grooved way therein, a  
grooved plate mounted upon said shelf, a 65  
shoe adjustably mounted upon the frame, a  
slotted plate upon said shelf, a grooving knife  
adjustably held upon said shoe and extend-  
ing through the slot in the plate underneath  
the same, means for raising and lowering 70  
said knife, a dove-tailed slotted plate mount-  
ed in a groove in said shelf and over which  
the welt is supported, an adjustable beveling  
knife and means for presenting the edge  
thereof at an angle in the path of the advanc- 75  
ing welt while the latter, as it is fed forward,  
is drawn against said beveling knife effecting  
a draw cut, a lever pivotally mounted upon  
an upright plate of the frame, an eccentric  
fixed to said lever and adapted to contact 80  
with the edge of the recess in said shoe where-  
by, as said lever is rocked, the carriage may  
be raised and lowered, as set forth.

13. A welting machine comprising, in com-  
bination with a frame having a laterally pro- 85  
jecting shelf with a grooved way therein, a  
grooved plate mounted upon said shelf, a  
shoe adjustably mounted upon the frame, a  
slotted plate upon said shelf, said shoe hav-  
ing a recess formed in the under edge thereof, 90  
a carriage mounted in said recess, a grooving  
knife fixed to said carriage, a screw connect-  
ed to said carriage and extending through an  
aperture in the shelf and an adjusting nut  
upon said screw, an adjustable bevel knife 95  
positioned with its cutting edge in the path  
of said welt, as set forth.

14. A welting machine comprising, in com-  
bination with a frame having a laterally pro-  
jecting shelf with a grooved way therein, a 100  
grooved plate mounted upon said shelf, a  
shoe adjustably mounted upon the frame, a  
slotted plate upon said shelf, said shoe hav-  
ing a recess formed in the under edge thereof,  
a carriage mounted in said recess, a grooving 105  
knife fixed to said carriage, a screw connect-  
ed to said carriage and extending through an  
aperture in the shelf and an adjusting nut  
upon said screw, a yoke fixed to the frame of  
the apparatus, an adjusting nut swiveled in 110  
the recessed end of said yoke, a screw passing  
through said adjusting nut, a beveling knife,  
a cylindrical shell in which said beveling  
knife is mounted, a wedging mechanism with,  
in said shelf and connected to said screw, as 115  
set forth.

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

GEORGE R. CHEESMAN

Witnesses:

HAMILTON CREQUE,  
W. L. HANKINS.