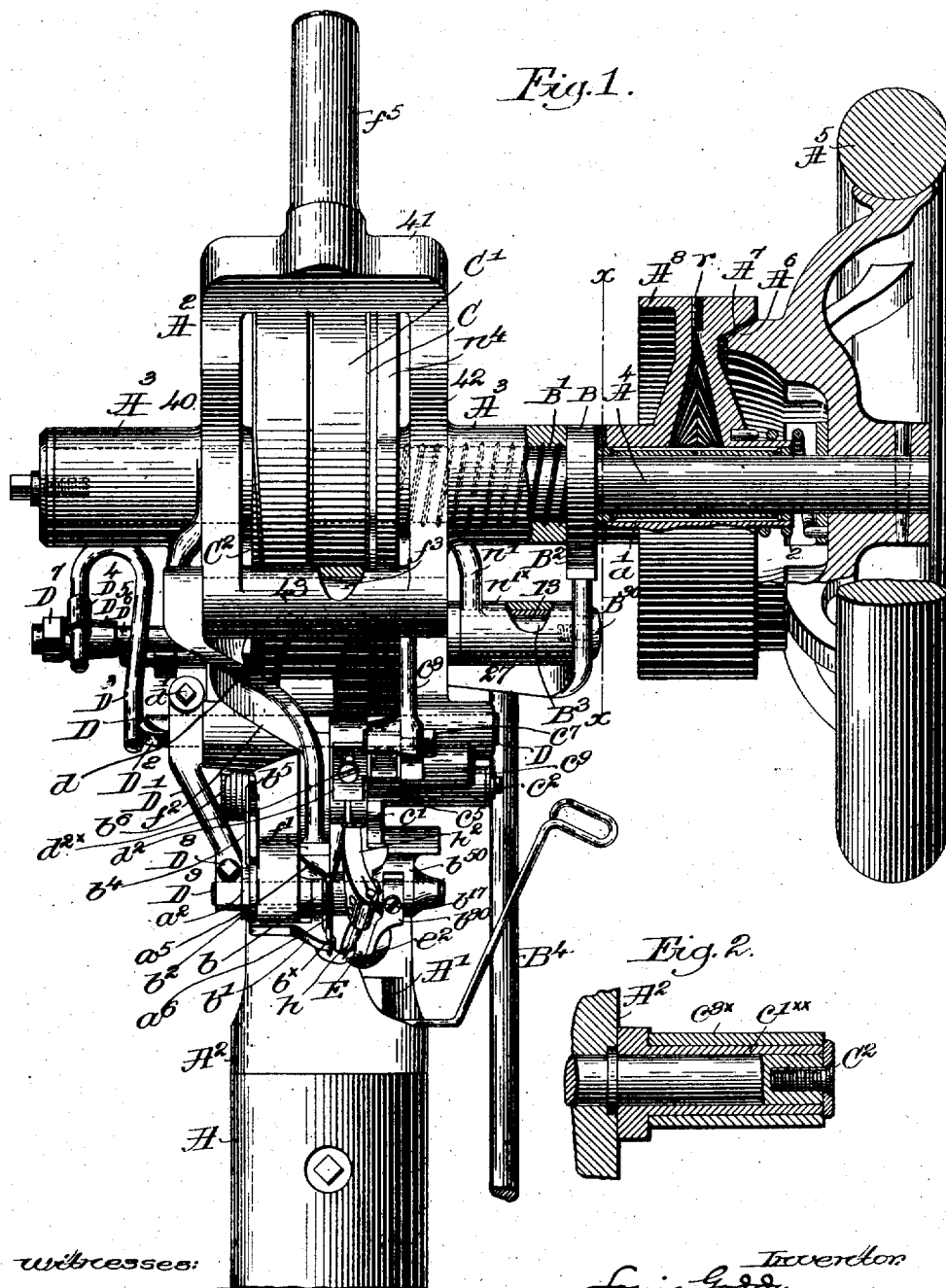


L. GODDU.
SHOE SEWING MACHINE.
APPLICATION FILED AUG. 31, 1900.

1,030,995.

Patented July 2, 1912.

6 SHEETS—SHEET 1.



Witnesses:

Fred C. Fish
Horace Van Eunen

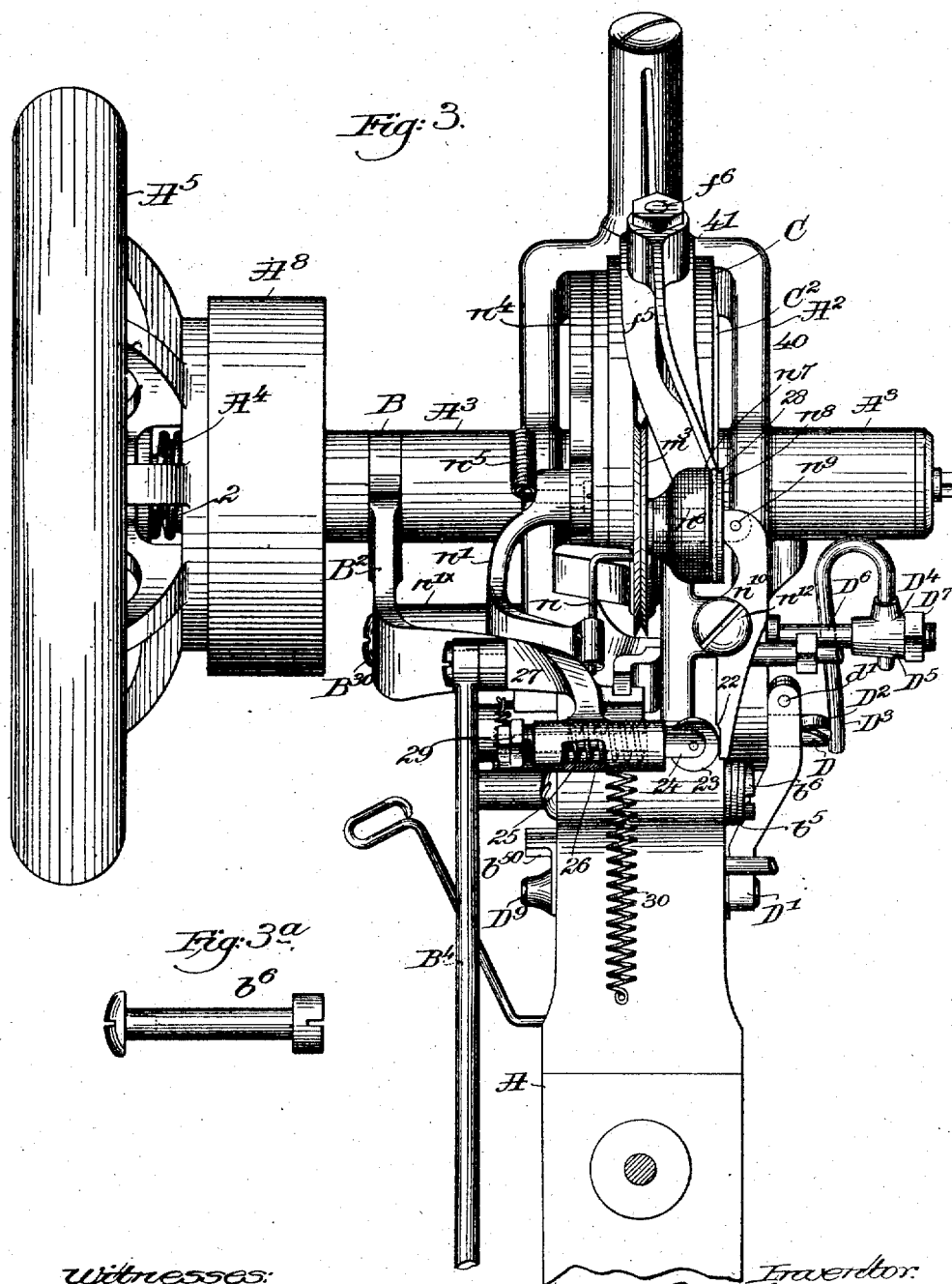
Inventor
Louis Goddu
by his Attorney
Benjamin Phillips

1,030,995.

L. GODDU.
SHOE SEWING MACHINE.
APPLICATION FILED AUG. 31, 1900.

Patented July 2, 1912.

6 SHEETS-SHEET 2.



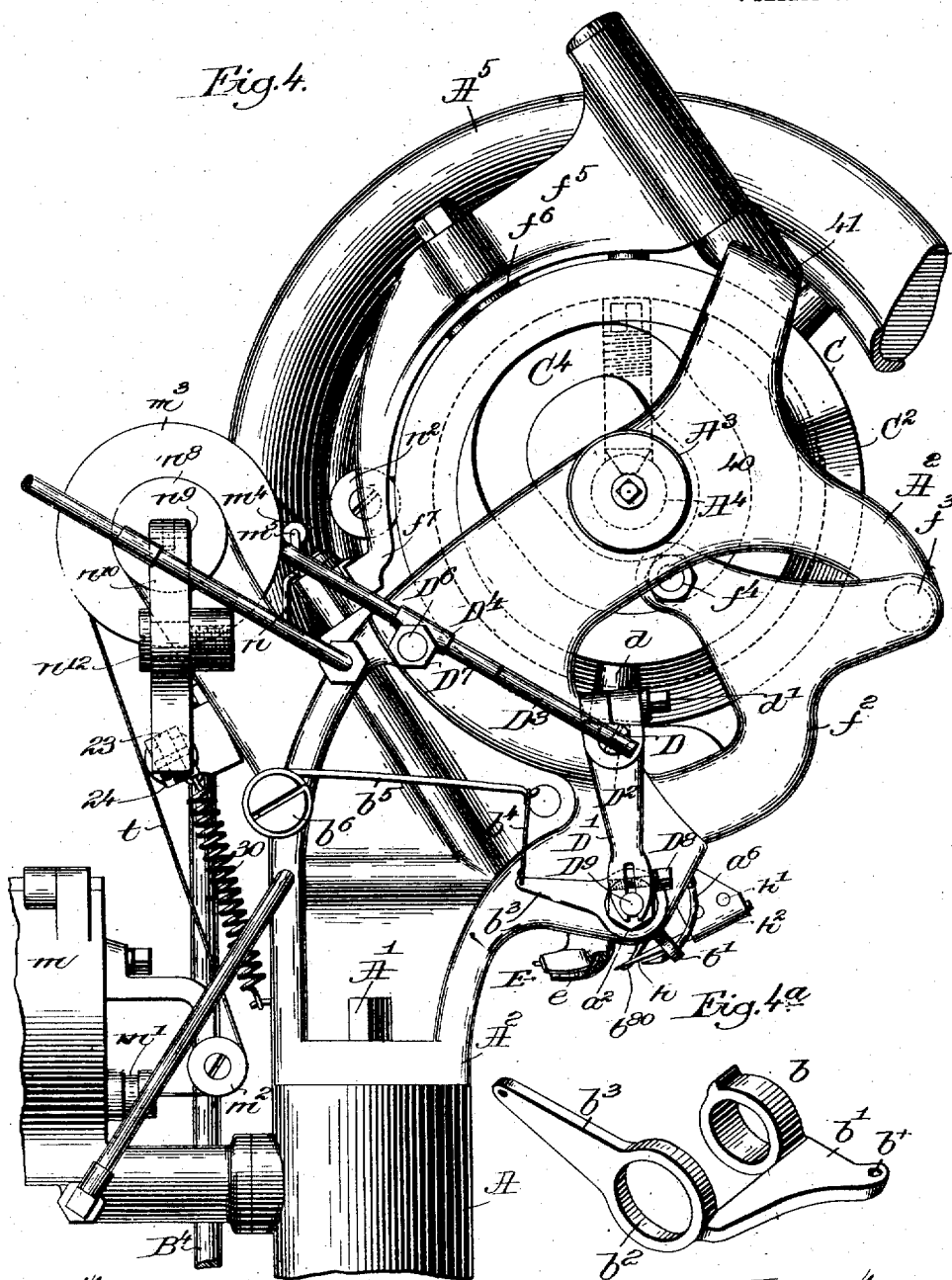
Witnesses:
John F. C. Brinkert
Harri Van Euren

Inventor:
Louis Goddu
by his Attorney
Benjamin Phillips

1,030,995.

L. GODDU.
SHOE SEWING MACHINE.
APPLICATION FILED AUG. 31, 1900.

Patented July 2, 1912.
6 SHEETS—SHEET 3.



Witnesses:
Fred C. Fish
Horace Van Euren

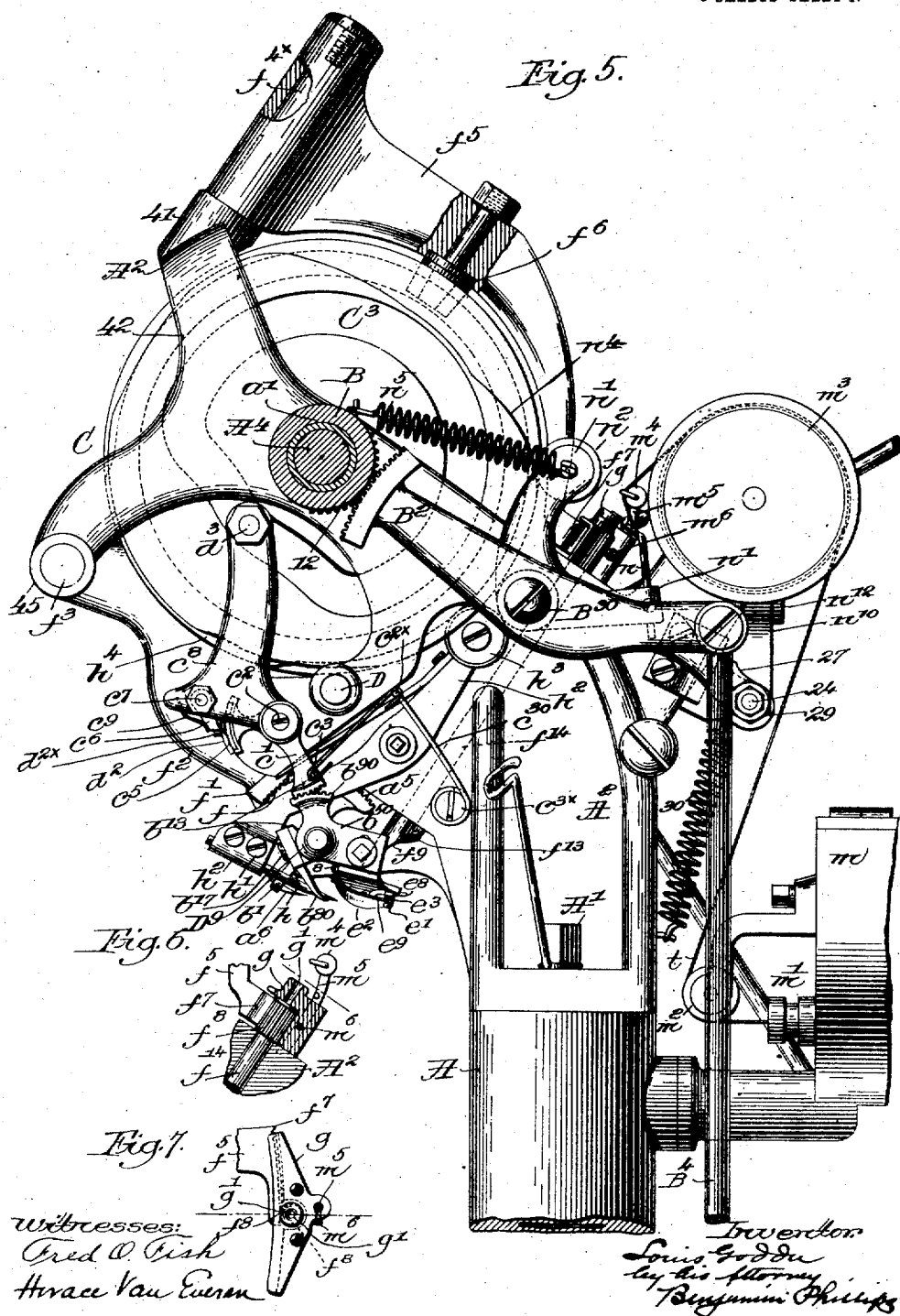
Inventor.
Louis Goddu
by his Attorney
Benjamin Phillips

L. GODDU.
SHOE SEWING MACHINE.
APPLICATION FILED AUG. 31, 1900.

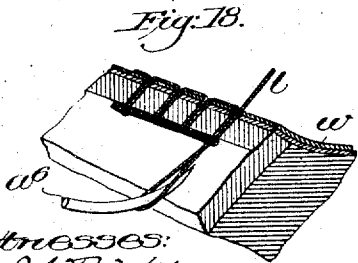
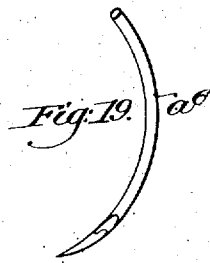
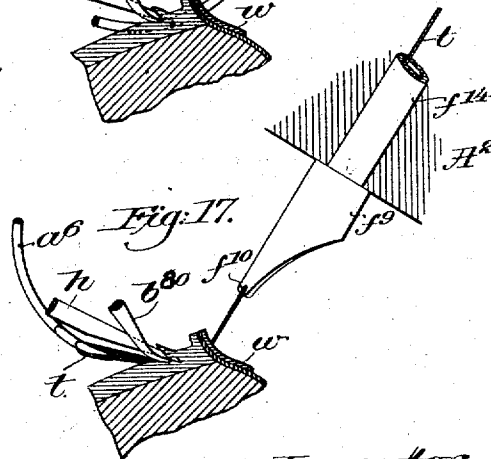
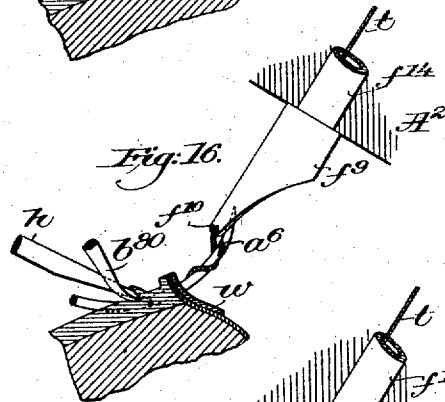
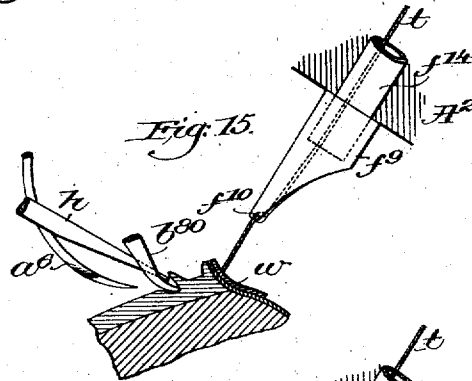
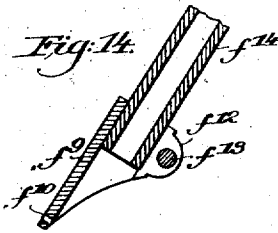
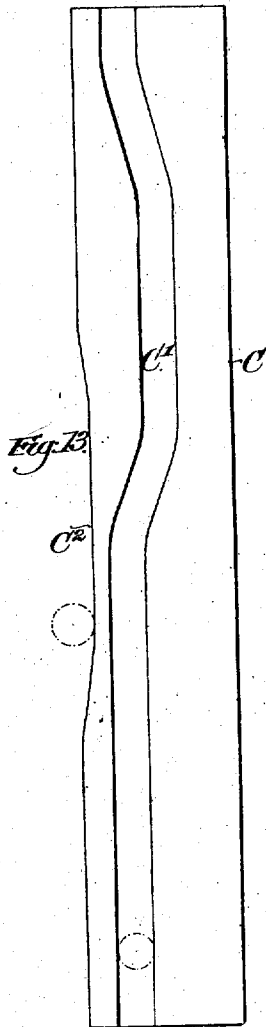
1,030,995.

Patented July 2, 1912.

6 SHEETS-SHEET 4.



1,030,995.



Witnesses:
John R. L. Vremler
Hraco Van Euren

Inventor:
Louis Goddu
by his Attorney,
Benjamin Phillips

UNITED STATES PATENT OFFICE.

LOUIS GODDU, OF WINCHESTER, MASSACHUSETTS, ASSIGNOR TO GODDU SEWING MACHINE COMPANY, OF PORTLAND, MAINE, A CORPORATION OF MAINE.

SHOE-SEWING MACHINE.

1,030,995.

Specification of Letters Patent.

Patented July 2, 1912.

Application filed August 31, 1900. Serial No. 23,623.

To all whom it may concern:

Be it known that I, LOUIS GODDU, a citizen of the United States, residing at Winchester, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Shoe-Sewing 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.

This invention has for its object the production of an improved machine by which to sew an upper to an inner-sole, or an upper and welt to an inner-sole.

In the machine to be herein described, a hooked needle enters a channel cut in the inner sole, and, emerging from the sole, it passes through the upper pressed firmly against it, and also passes through a welt, if one is used, and the hook of the needle is then supplied with thread by means of a circularly moving looper open centrally to receive the point of the needle, and the needle is vibrated, taking with it a loop of thread which is drawn from the looper, the stitch being of the form called "chain".

The feeding of the shoe or stock is effected by a rigidly held but longitudinally reciprocating channel gage or foot, which enters the channel in the sole, and a welt-guide which acts against the upper where it overlaps the edge of the sole, said welt-guide being adapted to be moved positively toward the channel gage to clamp the upper closely to the sole, and force the channeled part of the sole against the gage preparatory to sliding them longitudinally in unison to effect the feeding of the work.

The welt-guide is attached to a welt-guide segment, normally under the control of a spring, which serves to keep the welt-guide against the upper of whatever thickness, but preparatory to each feed stroke, the said welt-guide is acted upon by a depressing device containing, as shown, a pawl, which forces the welt-guide firmly in contact with the upper, and keeps it in such position until the feed is completed, the needle during the feeding of the stock being out of the stock.

The machine has a piercer which is thrust into the sole about or substantially as the needle point enters; the same, said piercer acting to hold the stock in fixed position

while the needle operates to make the stitch, and while the channel gage and welt-guide, which feed the stock, move backward into their starting position, the welt guide while so moved backwardly being unlocked by the rising of the depressing lever leaving the welt guide controlled only by a spring.

Figure 1 represents, in front elevation, the main operating parts of the machine to be herein described, the driving mechanism for the main shaft being shown partially in section; Fig. 2 is a detail view showing in side elevation and partly in section the stud for supporting the levers which actuate the welt guide segment and in section the hubs of said levers; Fig. 3 is a rear side elevation of the machine shown in Fig. 1; Fig. 3^a is a detail view of the stud which supports the spring for actuating the needle guide; Fig. 4 is a partial left hand side elevation of the machine shown in Fig. 1; Fig. 4^a, a detail showing the needle guide; Fig. 5 is a section looking to the left of the dotted line *x*, Fig. 1; Figs. 6 and 7 are details showing the upper end of the looper-shaft and its operating means; Fig. 8 is an enlarged detail showing the operative parts in position with relation to the shoe being acted upon; Fig. 9 is a detail sectional view taken on the line 9—9 of Fig. 8; Fig. 10 is a detail sectional view taken on the line 10—10 of Fig. 8; Fig. 11 shows the guide detached from its segment; Fig. 12 shows the needle segment detached with its needle; Fig. 13 shows the cam C laid out or developed; Fig. 14 is a sectional view of the lower end of the thread-guide which winds its thread about the shank of the needle in presenting the same to the hook thereof; Figs. 15, 16, and 17 are details showing the stitch forming mechanism in several different positions; Fig. 18 shows the stitch uniting the inner sole, upper and welt; and Fig. 19 shows the needle detached.

The column A, in practice, has a suitable base or foot to rest upon the support, and it has secured to it at its upper end, by suitable bolts A', the head A² which supports the working parts. The head A² is of peculiar construction, that is it has a loop shaped part, 40, 41, 42, 43, and extending from the parts 40 and 42 are the bearings A³ which receive the main shaft A⁴ of the machine.

The acting cam hub to be described for

imparting motion to the operating parts of the machine has its periphery standing and turning between the parts 40 and 42 on its opposite sides, the parts 41 and 43 crossing the said cam hub in the direction of the length of the main shaft. This loop-shaped part or yoke, as it may be designated, made in one piece has suitable other bearings to sustain not only the lever for actuating the looper, to be described, but also the lever for actuating the needle segment. This shaft at its right hand end has suitably keyed or attached to it a fast pulley or hand wheel A⁵, having a conical hub A⁶ which coöperates with a conical face or cavity A⁷, made in a loose pulley A⁸ surrounding said shaft.

A spring 2 interposed between the hub of said loose pulley and the hub of the hand wheel normally acts to keep the loose pulley from frictional engagement with the conical part of the fast pulley.

The loose pulley is chambered and has an opening which is closed by a set screw *r*, and when said set screw is removed, oil may be let in to said pulley by which to lubricate it on the shaft.

The hub of the loose pulley has a detachable bearing *a'* provided with holes through which oil put into the chamber of the pulley may pass on to the main shaft.

Interposed between the end of the bearing A³ and the hub of the loose pulley is a flanged collar B, having teeth 12 partially around it, see Fig. 5, and extending from the flange is a sleeve B' having projecting threads which enter grooves in the interior of the bearing A³.

To cause the continuously running loose pulley A⁸ to be forced into driving contact with the hand wheel so as to take-up and rotate the main shaft, I employ a starting lever B², having at one end teeth, see Fig. 5, it having an extended sleeve hub 13 which surrounds a stud B³, a screw B³⁰ entering a threaded hole in said stud keeping the lever in place, said sector lever having attached to it a rod B⁴ which is extended to the floor, where it in practice has attached to it a suitable treadle, so that by moving said sector lever the collar may be turned, and in its rotation the treadle sleeve will be moved longitudinally on the shaft A⁴.

The main shaft has fast upon it a cam disk C, and as herein provided for this one disk is so shaped as to operate the entire working parts. This disk has an irregular cam groove C', and it has a face cam C², and in its sides there are cut grooves C³ and C⁴.

The head has suitable openings to receive in it a slide-rod D, provided with a roller or other stud *d*, see Figs. 1 and 4, which engages the face cam C². This slide rod near its left hand end, as herein shown, has clamped upon it by a clamping screw *d'* an

arm D', and the slide rod beyond said arm is provided with an anti-friction roller D², the latter being acted upon by a strong spring, D³, one end of which is inserted solidly in a sleeve D⁴ forming a part of a hub D⁵ which is slipped over a rod D⁶ and abutted against a shoulder thereon, the opposite end of said hub D⁵ being acted upon by a nut D⁷ screwed onto the rod to thus clamp firmly the hub D⁵ and hold the part D⁴, and keep the spring D³ fixed in the proper position to enable its free end to bear against the anti-friction roller D². The free end of said spring normally acts to keep the slide-rod D pressed toward the right viewing Fig. 1. The lower end of the arm D' receives a clamp screw D⁸ which serves to clamp its split end upon the end of a rod D⁹. The rod D⁹ is extended through a tubular bearing *a*, see Fig. 10, having a shoulder *a'* to rest against a part of the head A², the opposite end of said bearing receiving upon it a nut *a''* by which to retain it in position. The inner end of the sleeve bearing *a*, has a flange *a''* which acts against one end of an extended hub *a''* of the needle segment *a''*, provided with teeth *f* and carrying a hooked needle *a''*, said needle being held clamped in position by any usual or suitable screw *a''*. The needle segment has a groove *a''* about the junction with it of the hub *a''*, and said groove receives a loop or eye *b* of a needle guide *b'*, said guide having a second loop or eye *b''*.

In assembling the parts the eye *b* of the needle guide is put over the extension *a''* of the needle segment, and then the segment is put in place at one side of the part A², see Fig. 10, and the eye *b''* is put in line with the hole in said part A², and then the sleeve bearing is inserted through the extension and the hole in A² and through the eye *b''* and the nut *a''* is put onto the bearing *a* and screwed up, said nut, as shown, entering the eye *b''* and acting against one side of A². The needle-guard *b'* has a hole *b''* through which the needle works, said guard operating to guide and steady the needle in usual manner.

The guard has an extended arm *b''*, see Fig. 4^a, which, as shown, receives one end of a link *b''* connected to a spring *b''*, having its coiled end surrounding a bolt *b''* on Figs. 4 and 3^a fixed to the head, said spring normally acting to move the needle guard toward the stock being stitched, the spring acting to cause the projection *b''* of the eye *b* to meet a projection *b''* of the needle segment and cause the said guard to follow with the needle segment in the same direction, it stopping only when the needle is in the stock.

The rod D⁹ has in it at a distance from its right hand end, a small pit which receives the end of a set screw *b''*, shown by dotted

lines in Fig. 8, inserted through an irregularly shaped block b^{12} . This block fixed to the shaft D^9 is surrounded loosely by a notched part b^{40} of the welt-guide segment b^{50} , the said block and segment being slipped over the end of the rod D^9 loosely, so that a hub b^{60} of said segment fits over the head a^3 of the sleeve bearing and overlaps the tubular hub a^4 of the needle segment, and with said parts in the position shown in Fig. 10, the set screw b^{12} is tightened, thus fixing the block on the said rod D^9 , leaving, however, the welt-guide segment loose thereon so that it may be rotated, as desired, about said rod and block.

The irregular block b^{12} has a face represented in Fig. 8, provided with a threaded hole to receive a set screw b^{17} , said set screw being extended through a hole or slot in the shank of the combined channel guide and feed b^{80} .

The welt-guide carrying segment has teeth at b^{90} which are engaged by the teeth c^1 of a lever c' , pivoted at c^2 . This lever has a stud c^3 , which is engaged by a link c^{1x} , engaging a pin c^{2x} , of a spring c^{30} held at one end by a stud c^{3x} , said spring normally acting to turn said lever in the direction of the arrow on it in Fig. 8. The opposite end of the lever c' has a series of ratchet teeth c^5 , made, as shown, in a detachable plate, said teeth having cooperating with them a pawl c^6 , pivoted at c^7 on a lever c^8 , a spring c^9 acting on said pawl normally pressing it toward the ratchet teeth. Cooperating with the ratchet teeth, see Fig. 8, is a shield d^2 , held in place by a screw d^{2x} , against which the point of the pawl acts as it rises, to thereby disengage the pawl from the ratchet teeth. The lever c^8 has an extended sleeve hub c^{8x} , see also Fig. 2, which embraces a like hub c^{1xx} surrounding a stud c^2 . The upper end of the lever c^8 has a suitable roller or other stud d^3 which enters the cam groove C^3 .

The welt-guide segment has at one end a slot 4, which receives a bolt 5, said bolt being extended through a hole 6 in the shank 7 of the welt-guide E, said welt-guide consisting essentially of a foot e to which is secured by a screw e' one end of a plate e^2 , said plate resting against a block e^3 , a screw being passed through the plate and block and entering a threaded hole in the foot e . The opposite end of the plate e^2 is attached to the shank 7 by suitable screws 8, shown in Fig. 5. The block e^3 has a suitable groove which receives the shank e^8 of a guide e^9 , against which acts the outer edge of the welt w , see Fig. 8. By loosening the nut on the bolt 5 the welt guide may be adjusted to bring it into its desired or proper operative position.

The teeth of the needle segment are engaged by the teeth f' of a lever f^2 , mounted

on a stud or shaft f^3 in ears of the head A^2 , said lever having a roller or other stud f^1 , see Fig. 4, which enters the cam groove C^4 in the cam block C.

The peculiarly shaped head carrying the working parts is provided with an inclined stud f^{4x} , see Fig. 5, over which is fitted the hub of a looper actuating lever f^5 , said lever having a roller or other stud f^6 which enters the peripheral cam groove C' . The free end of the lever f^5 , has sector teeth as at f^7 , see Fig. 7, which engage a pinion f^8 at the upper end of a hollow shaft f^{14} , to which is attached the looper f^9 , the latter consisting essentially, as herein shown, of a partial sleeve cut away, see Figs. 14 to 17, to leave a point which may be provided with a hole f^{10} for the reception of the thread t , said sleeve being split at its upper end to present ears f^{12} through which is inserted a clamp screw f^{13} by which to clamp the said sleeve on the said hollow shaft f^{14} .

To prevent wax from contacting with the pinion f^8 and the teeth of the lever f^5 , I provide a shield g which extends over and protects the upper end of the pinion and the teeth f^7 . The shield is provided with a thread guiding orifice g' .

The spring c^{30} acts normally to move the lever c' in a direction to cause it to turn the welt guide segment in a direction to press the plate e^2 of the welt guide on the upper lying against the last and edge of the sole, as in Fig. 8.

The channel gage b^{80} , which enters the usual channel cut in the inner sole occupies at all times a fixed position in a defined plane, so as to constitute, as it were, a support against which the lip or bottom of the channel is forced, but the channel gage is adapted to slide back and forth in a horizontal plane, it having such movement when feeding the stock. Prior to feeding the stock, however, the lever c^8 is actuated causing the pawl c^6 to act on the ratchet teeth c^5 and move the lever c' and welt guide segment in a direction to cause the plate e^2 to be borne hard against the upper and inner sole and force the channeled part of the sole onto the channel gage, and while so clamped the rod D^9 is moved to the left, viewing Fig. 1, to feed the stock for the desired length of stitch. During the feeding of the stock the needle is out of the stock and also the piercer to be described.

The piercer h is held by screws h' in the end of a lever h^2 having a sleeve-like hub h^{2x} , see Fig. 9, embracing a stud h^{30} , the rear end of said lever having, see Fig. 5, a roller or other stud h^3 which runs against the cam h^4 made at one edge of the cam block C. The piercer approaches the stock and enters the same preferably in the channel of the inner sole just or about as the needle meets the stock to enter the same,

take the thread t , and draw a loop of the same through the welt upper and inner sole, and said piercer remains in the stock while the needle so acts and while the channel gage and welt guide, they having fed the stock, are being moved backwardly to their starting position, the welt guide during such movement being held duly under the stress of the spring c^{30} , so that it and the channel guide may slide respectively on the upper and in the channel into position to be again closed and grasp the work for again feeding it. The piercer has no feeding movement whatever, and its purpose is to pierce and hold the stock in position substantially at all times except when the stock is to be fed.

The thread t is taken from the wax pot m' through a suitable stripper m' , and thence over a sheave m^2 and about a tension device m^3 , said tension device being represented as a wheel having any usual or suitable surface to contact with the thread. Beyond this tension device the thread is passed over a supporting roll m^4 , pivoted upon an upright m^5 , shown as secured to the guard g by a suitable set screw m^6 , and thence the thread is led through the guide g' the pinion f^8 and the hollow shank f^{14} of the looper and thence through the eye f^{10} thereof.

Between the support m^4 and the thread passage g' the thread is acted upon by a pull-off n , shown as a hooked rod connected with a lever n' , having a sleeve-like hub n^{1x} , which surrounds the hub 13 mounted on the stud screw B^3 , said lever having a roller or other stud n^2 which is acted upon by the part n^4 of the cam C , a suitable spring n^5 acting to keep said roller or other stud against said cam so that the said pull-off may be operated at the proper time, to pull off from the tension device and the wax pot the desired amount of thread.

The tension device m^3 is fixed on a short shaft n^6 , shown by dotted lines in Fig. 3, being extended through a portion of the head A^2 , the opposite end of said shaft being provided with a fixed washer or plate n^7 . Coöperating with said plate is a friction device n^8 , shown as a disk pivoted at n^9 upon the upper end of lever n^{10} , pivoted at n^{12} , the lower end of said lever having a cam face 22, which is acted upon by a roller 23 carried by a rod 24, surrounded by a spring 25, located in the hub 26 of an extension 27 of the lever B^2 .

The welt going to the welt guide may be conducted through a suitable guide w^2 .

When the operator puts his foot on the treadle to lift the rod B^4 , to thus cause the loose pulley A^8 to be forced in engaging contact with the conical part of the hand wheel A^5 , the roller 23 acts on the cam face of the lever m^{10} and forces the felt or other washer 28 carried by the disk n^8 against the

washer n^7 , to thus exert an amount of friction requisite to produce the tension required. This amount of tension may be regulated by turning the nut 29 and compressing the spring 25. The tension is on the tension wheel at all times when the stitching is taking place, but immediately that the machine is stopped the tension is released so that the thread when the operator is removing the work may run readily from the tension wheel. As soon as the operator removes his foot from the treadle, the spring 30 controls the movement of the lever B^2 , to effect the release of the running pulley A^8 from the fast pulley.

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

1. A shoe sewing machine, having, in combination, stitch forming mechanism, a channel gage, a welt guide, means to move the welt toward the channel gage to intermittently clamp the stock, and means for actuating the welt guide and channel gage to feed the stock, substantially as described.

2. A shoe sewing machine, having, in combination, stitch forming mechanism, a channel gage and means to move it in a horizontal plane, a welt guide and means to move the welt guide toward the channel gage, means to lock the welt guide in such position and means to actuate the welt guide and channel gage to feed the stock, substantially as described.

3. A shoe sewing machine, having, in combination, stitch forming mechanism, a channel gage, a welt guide, a rod on which said channel gage is fixed and on which said welt guide is mounted loosely, means to turn the welt guide toward the channel gage, means to lock the welt guide in such position, and means to move said rod in a horizontal direction while the said welt guide is so held locked, substantially as described.

4. A shoe sewing machine, having in combination, stitch forming mechanism, a channel gage, a welt guide segment, an attached welt guide, a connected segmental lever operatively connected with the welt guide segment and provided with ratchet teeth, a pawl, and means to operate it to engage said ratchet teeth and cause the welt guide to be borne toward and held positively against the stock while the same is supported in opposition to the said welt guide by the channel gage, substantially as described.

5. A shoe sewing machine, having, in combination, stitch forming mechanism, a rod having fixed to it a channel gage, a welt guide segment mounted loosely on said rod and provided with a welt guide, means to move said welt guide toward said channel gage, means to lock the said welt guide segment in position, an arm connected at one end with said rod, and at its opposite end to

a second slide rod, means to move said second slide rod positively in one direction, and a spring to move said second rod in the opposite direction, substantially as described.

5 6. A shoe sewing machine, having, in combination, stitch forming mechanism including a curved hooked needle, a needle segment, a hollow stud upon which the needle
10 needle segment, a rod extended through said stud and needle segment, a welt guide segment applied to said rod and adapted to be moved with it in its longitudinal movement and be free to be partially rotated on said
15 rod, a channel gage carried by said rod, a welt guide carried by said welt guide segment, means to turn said segment and welt guide toward said channel gage, and means to thereafter move said rod longitudinally,
20 substantially as described.

7. A shoe sewing machine, having, in combination, stitch forming mechanism including a curved hooked needle, a needle segment, a hollow stud upon which the needle
25 segment is mounted, means to actuate the needle segment, a rod extended through said stud and needle segment, a welt guide segment applied to said rod and adapted to be moved with it in its longitudinal movement and be free to be partially rotated on
30 said rod, a channel gage carried by said rod, a welt guide carried by said welt guide segment, means to turn said segment and welt guide toward said channel gage, means
35 to lock said welt guide segment and welt guide, and means to thereafter move said rod, channel gage and welt guide longitudinally to effect the feeding of the stock, substantially as described.

40 8. A shoe sewing machine, having, in combination, a piercer, and a hooked needle, each located to enter the sole from the same direction, a looper, means to actuate the said
45 hooked needle to enter the stock and take thread from said looper, means to actuate said piercer to cause it to enter the stock and hold the same fixedly in place while the needle is in the stock, and while the needle
50 draws the thread through the stock, and means to thereafter remove the piercer from the stock, substantially as described.

9. A shoe sewing machine, having, in combination, a piercer, and a hooked needle, each located to enter the sole from the same
55 direction, a looper, means to actuate the said hooked needle to enter the stock and take thread from said looper, means to actuate said piercer to cause it to enter the stock and hold the same fixedly in place while the
60 needle is in the stock, and while the needle draws the thread through the stock, means to thereafter remove the piercer from the stock, and a channel gage, substantially as described.

65 10. A shoe sewing machine, having, in

combination, a needle guide segment, a hooked needle connected therewith, means to actuate said segment to cause said needle to penetrate and retire from the stock, a looper, means to move it to supply the said needle
70 with thread, a piercer, means to actuate it to penetrate and remain in the stock during the time that the needle enters said stock and retires therefrom, means to thereafter remove the said piercer from the stock and
75 feeding mechanism to feed the stock, comprising a welt guide and channel gage and means for actuating them to clamp and feed the stock, the needle and piercer being removed from the stock while the feeding
80 mechanism acts to move the same, substantially as described.

11. A shoe sewing machine, having, in combination, a needle segment and its attached needle, a stud on which said segment is mounted loosely, means to turn said
85 segment, and a needle guide having two eyes surrounding said stud loosely, substantially as described.

12. A shoe sewing machine, having, in combination, a needle segment and its attached needle, a stud on which said segment is mounted loosely, means to turn said segment, a needle guide having two eyes surrounding said stud loosely, and a spring to
90 act on said guide to move it normally in one direction, substantially as described.

13. A shoe sewing machine, having, in combination, a needle segment and its attached needle, a stud on which said segment is mounted loosely, means to turn said segment, a needle guide having two eyes surrounding said stud loosely, one of said eyes having a projection to cooperate with the
100 shoulder of the needle segment, and a spring to act on the shoulder of said guide and normally keep said projection against said shoulder, permitting the needle guide to yield after the needle has entered the stock, substantially as described.

14. A shoe sewing machine having, in combination, stitch forming mechanism, a channel gage to enter and remain in the channel, means to support said gage and move it in a horizontal plane while feeding
115 the stock, a piercer, and means to actuate it to enter said channel at one side of the between substance and hold the stock substantially at all times except when the channel gage is moving in its feeding stroke, substantially as described.

15. A shoe sewing machine, having, in combination, stitch forming mechanism including a curved hook needle and devices cooperating therewith to form a chain
125 stitch, a channel gage, a welt guide, means for relatively actuating the welt guide and channel gage to clamp and feed the stock, and mechanism acting automatically to engage the shoe and hold it during the return
130

movement of the guide and gage, substantially as described.

16. A shoe sewing machine, having, in combination, a piercer, a hook needle, a looper, means to actuate the hook needle to enter the stock to take thread from the looper, and means for actuating the piercer to cause it to enter the channel at one side of the between substance and hold the stock while the needle draws the thread through the stock, substantially as described.

17. A shoe sewing machine, having, in combination, stitch forming mechanism, a channel gage, a welt guide, means for moving the welt guide toward the channel gage to clamp the stock, means for actuating the welt guide and channel gage to feed the stock, and means for holding the stock during the return movement of the welt guide and channel gage, substantially as described.

18. A shoe sewing machine, having, in combination, stitch forming mechanism, a channel gage, a welt guide, means for relatively actuating the welt guide and channel gage to clamp and feed the stock, a piercer, and means for actuating the piercer to cause it to enter the stock and hold the same during the return movement of the welt guide and channel gage, substantially as described.

19. A shoe sewing machine, having, in combination, stitch forming mechanism, a channel gage movable horizontally in a fixed plane, means for actuating said gage, a welt guide movable with said gage to feed

the stock during the movement of the gage in one direction, a piercer and means for actuating the piercer to cause it to enter the stock and hold the same during the movement of said gage in the opposite direction, substantially as described.

20. A shoe sewing machine, having, in combination, stitch forming mechanism, a channel gage, a welt guide, yielding means for relatively actuating the welt guide and channel gage to engage the stock, means for relatively actuating the welt guide and channel gage to clamp the stock and for locking the channel gage and welt guide in clamping position, and means for actuating the welt guide and channel gage to feed the stock, substantially as described.

21. A shoe sewing machine, having, in combination, stitch forming mechanism including a curved hook needle and devices cooperating therewith to form a chain stitch, a channel gage, a welt guide, means for relatively actuating the welt guide and channel gage to clamp and feed the stock, a device movable toward and from the shoe, and means for actuating said device to engage the shoe and hold it during the return movement of the welt guide and channel gage, substantially as described.

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

LOUIS GODDU.

Witnesses:

HORACE VAN EVEREN,
ALFRED H. HILDRETH.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."

Corrections in Letters Patent No. 1,030,995.

It is hereby certified that in Letters Patent No. 1,030,995, granted July 2, 1912, upon the application of Louis Goddu, of Winchester, Massachusetts, for an improvement in "Shoe-Sewing Machines," errors appear in the printed specification requiring correction as follows: Page 1, line 40, for the word "it" read *is*; page 2, line 51, for the word "treadle" read *threaded*; page 4, line 87, after the word "welt" insert the word *guide*; and same page, line 94, for the word "horizontal" read *horizontal*; and that the said Letters Patent should be read with these corrections therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 13th day of August, A. D., 1912.

[SEAL.]

E. B. MOORE,

Commissioner of Patents.

movement of the guide and gage, substantially as described.

16. A shoe sewing machine, having, in combination, a piercer, a hook needle, a looper, means to actuate the hook needle to enter the stock to take thread from the looper, and means for actuating the piercer to cause it to enter the channel at one side of the between substance and hold the stock while the needle draws the thread through the stock, substantially as described.

17. A shoe sewing machine, having, in combination, stitch forming mechanism, a channel gage, a welt guide, means for moving the welt guide toward the channel gage to clamp the stock, means for actuating the welt guide and channel gage to feed the stock, and means for holding the stock during the return movement of the welt guide and channel gage, substantially as described.

18. A shoe sewing machine, having, in combination, stitch forming mechanism, a channel gage, a welt guide, means for relatively actuating the welt guide and channel gage to clamp and feed the stock, a piercer, and means for actuating the piercer to cause it to enter the stock and hold the same during the return movement of the welt guide and channel gage, substantially as described.

19. A shoe sewing machine, having, in combination, stitch forming mechanism, a channel gage movable horizontally in a fixed plane, means for actuating said gage, a welt guide movable with said gage to feed

the stock during the movement of the gage in one direction, a piercer and means for actuating the piercer to cause it to enter the stock and hold the same during the movement of said gage in the opposite direction, substantially as described.

20. A shoe sewing machine, having, in combination, stitch forming mechanism, a channel gage, a welt guide, yielding means for relatively actuating the welt guide and channel gage to engage the stock, means for relatively actuating the welt guide and channel gage to clamp the stock and for locking the channel gage and welt guide in clamping position, and means for actuating the welt guide and channel gage to feed the stock, substantially as described.

21. A shoe sewing machine, having, in combination, stitch forming mechanism including a curved hook needle and devices cooperating therewith to form a chain stitch, a channel gage, a welt guide, means for relatively actuating the welt guide and channel gage to clamp and feed the stock, a device movable toward and from the shoe, and means for actuating said device to engage the shoe and hold it during the return movement of the welt guide and channel gage, substantially as described.

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

LOUIS GODDU.

Witnesses:

HORACE VAN EVEREN,
ALFRED H. HILDRETH.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."

Corrections in Letters Patent No. 1,030,995.

It is hereby certified that in Letters Patent No. 1,030,995, granted July 2, 1912, upon the application of Louis Goddu, of Winchester, Massachusetts, for an improvement in "Shoe-Sewing Machines," errors appear in the printed specification requiring correction as follows: Page 1, line 40, for the word "it" read *is*; page 2, line 51, for the word "treadle" read *threaded*; page 4, line 87, after the word "welt" insert the word *guide*; and same page, line 94, for the word "horizontal" read *horizontal*; and that the said Letters Patent should be read with these corrections therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 13th day of August, A. D., 1912.

[SEAL.]

E. B. MOORE,

Commissioner of Patents.