No. 864,835. PATENTED SEPT. 3, 1907.

F. G. DELBON.

MANUFACTURE OF SHOES.

APPLICATION FILED NOV. 27, 1906.

2 SHEETS—SHEET 1.

Fig. 1.

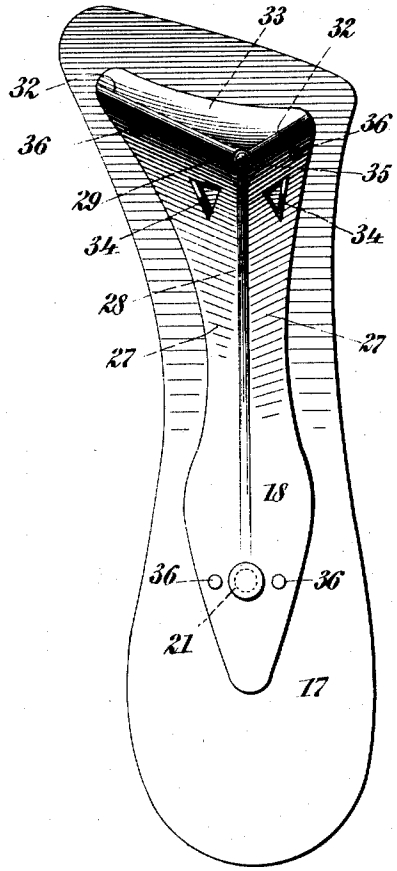


Fig. 2.

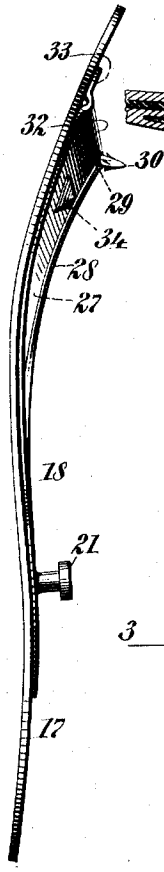
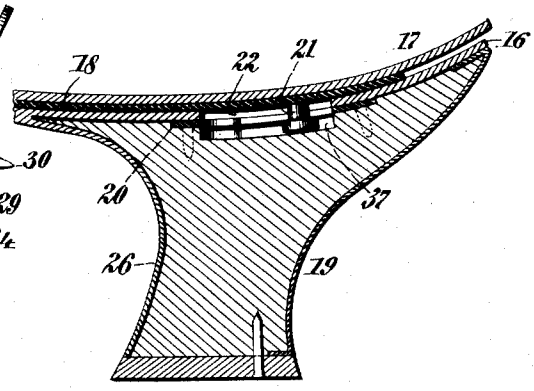


Fig. 3.



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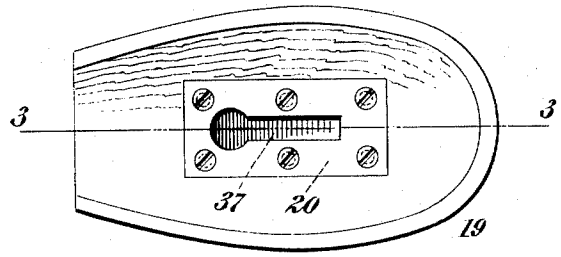

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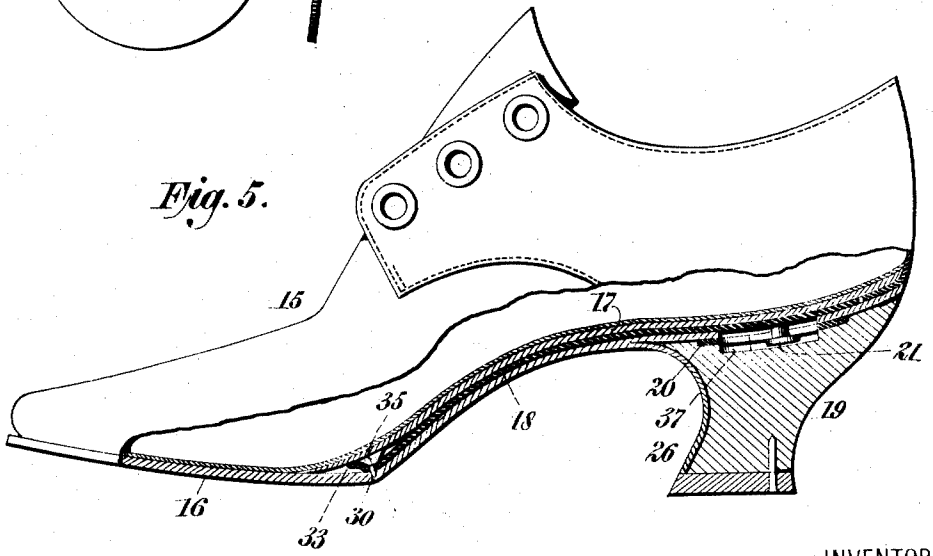

WITNESSES:

Gustave Dietrich

Edwin H. Dietrich.

INVENTOR

Frank G. Delbon

BY

Chas. C. Gill

ATTORNEY

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MANUFACTURE OF SHOES.

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2 SHEETS—SHEET 2.

Fig. 6.

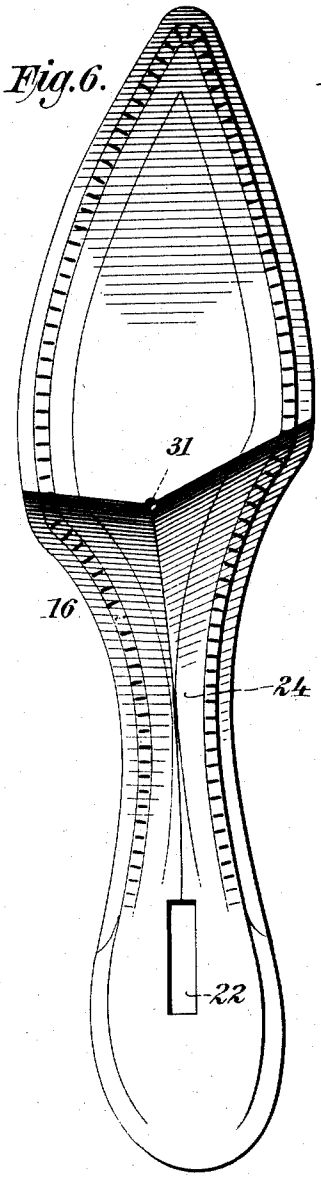


Fig. 7.

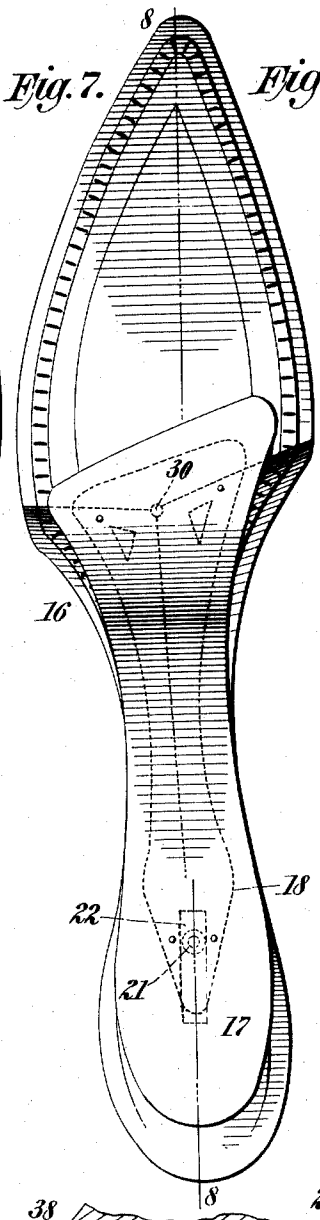


Fig. 8.

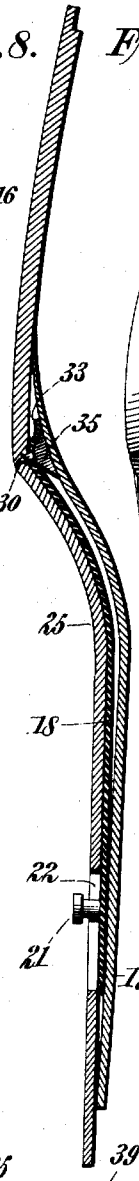


Fig. 9.

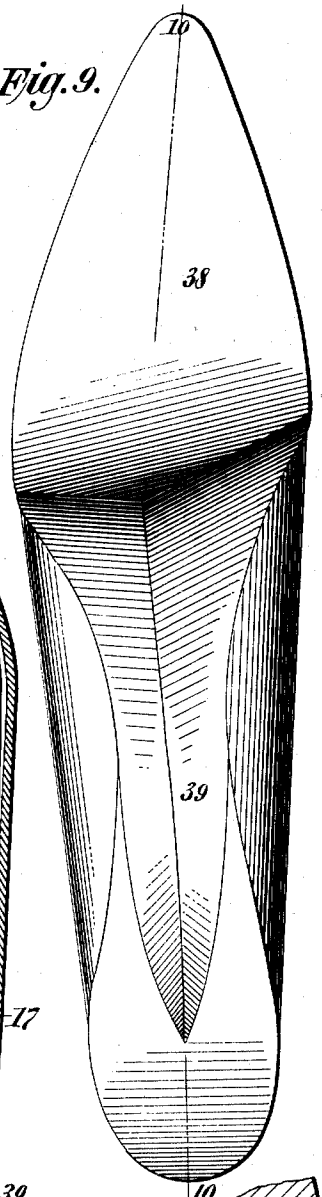
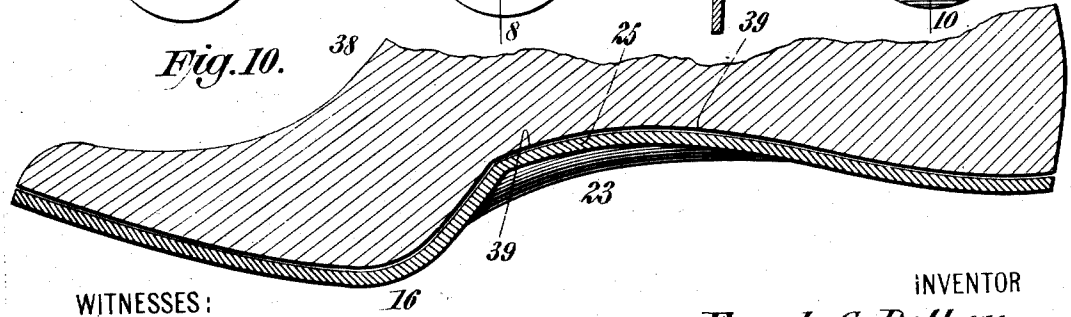


Fig. 10.



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ATTORNEY

UNITED STATES PATENT OFFICE.

FRANK G. DELBON, OF BROOKLYN, NEW YORK, ASSIGNOR TO WILLIAM LANE, OF BROOKLYN, NEW YORK, A CORPORATION OF NEW YORK.

MANUFACTURE OF SHOES.

No. 864,835. Specification of Letters Patent. Patented Sept. 3, 1907.

Application filed November 27, 1906. Serial No. 345,383.

To all whom it may concern:

Be it known that I, FRANK G. DELBON, a citizen of the United States, and a resident of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in the Manufacture of Shoes, of which the following is a specification.

The invention relates to the manufacture of shoes, and pertains more especially to methods and means for the manufacture of "turn-shoes" of the "cottage-roof" style.

Various difficulties have been encountered in the manufacture of turn-shoes of high-heel cottage-roof character, and among these it may be mentioned that it has been practically impossible heretofore to equip a shoe of this kind with a shank-stiffener capable of adequately supporting the arch of the foot and preserving the proper lines in the shoe, in consequence of which the shoes have not been durable or lasting and have been incapable of retaining their original shape. The manual labor incident to the formation and preservation of the cottage-roof in the sole of a turn-shoe has also been a source of considerable expense.

In accordance with my invention it is entirely convenient and practicable to produce a turn-shoe of the cottage-roof style and equip the same with a shank-stiffener of unyielding material extending from the heel to the tread of the sole.

Another feature accomplished by my invention is that the cottage-roof finish imparted to the sole prior to the lasting is preserved, in lieu of being broken down, during the lasting operation.

A further advantage of my invention is that it enables me to provide the shoe with a Louis heel and secure the same in a novel way, the heel being connected with the shank-stiffener and fastened to the shoe in a very secure manner.

In carrying out my invention, the sole of the shoe is molded or pressed into the cottage-roof form and, for the first lasting, is applied to a special last which is recessed to receive the roof formation of the sole, the wearing or outer side of the sole being placed against the sole of the last. The recess in the last preserves the cottage-roof formation of the sole during the lasting, and upon the last being withdrawn and the shoe turned the roof formation appears on the outer side of the sole, while within the shoe the sole presents an elongated recess extending entirely along the shank thereof and created by said roof formation. Within the said recess in the inner side of the sole I apply the shank-stiffener which is of steel and carried by a piece of leather or short insole covering the heel and shank portion of the sole, said stiffener extending from the heel portion to the tread to the sole. Preferably the shank-stiffener will carry a headed pin whose head will extend through a slot in the sole in position to engage a plate carried by the heel, as hereinafter explained. The second lasting or that after the shoe has been turned, will be performed in the usual way and on the customary form of last.

The invention will be readily understood from the detailed description hereinafter presented, reference being had to the accompanying drawings, in which:

Figure 1 is an elevation of the shank-stiffener and the short inner sole by which it is carried; Fig. 2 is an edge view of same; Fig. 3 is a central vertical section through a part of the heel portion of the shoe and illustrates the method of securing the "Louis XV" heel by means of the headed pin carried by the shank-stiffener and the slotted plate carried by the heel; Fig. 4 is a detached top view of the heel; Fig. 5 is a side elevation, partly broken away and partly in section, of a completed turn-shoe produced in accordance with my invention; Fig. 6 is an elevation of the inner side of the cottage-roof sole utilized in carrying out my invention; Fig. 7 is a like view of same with the shank-stiffener and short inner sole which carries the same applied thereto; Fig. 8 is a longitudinal section of same on the dotted line 8—8 of Fig. 7; Fig. 9 is a bottom view of the recessed last which during the first lasting of the shoe, while it is inside out, preserves the cottage-roof formation of the sole; and Fig. 10 is a central vertical longitudinal section, partly broken away, of the last with the sole applied thereto, the outer or wear-side of the sole being against the last with its cottage-roof formation pressed into the recess formed in the last to receive it.

In the drawings, 15 designates the upper of the shoe, 16 the cottage-roof sole, 17 the short inner sole to which the shank-stiffener 18 is secured and which covers the same, and 19 the "Louis XV" heel, said upper being of usual character and said heel being of known form and construction with the exception that in the present instance I secure in the top of the heel a slotted plate 20 to receive and enter into locking engagement with the headed pin 21 carried by the shank-stiffener 18 and which pin, in the finished shoe, extends through a slot 22 in the sole 16. The sole 16 is distinctive in that it is pressed or molded, as a separate step in my process of manufacture, with the cottage-roof formation 23, which thus becomes permanently set, creating the elongated V-shaped recess 24 (Fig. 6) extending along the inner side of the arch or shank of the sole and a corresponding ridge 25 (Fig. 10) along the outer side of the like part of said sole. The recess 24 increases in width as it approaches the tread of the sole (Fig. 6) and terminates

at the inner end thereof. The sole 16 when used for a Louis XV heel will preferably be split at its heel portion so as to form a section 26 (Figs. 3 and 5) adapted to lap against and be secured to the front of the heel 19, and that portion of the heel end of said sole which is intended to lie upon the heel 19 will preferably be formed with the longitudinal slot 22 hereinbefore referred to.

The shank stiffener 18 is of pressed steel and conforms as nearly as may be to the V-recess 24 formed in the sole 16, said stiffener having downwardly converging sides 27 to seat within said recess and form a ridge 28 which terminates at the point 29, whereat said stiffener is provided with a pin 30 adapted to enter a very close fitting hole 31 in the sole 16. The forward end of the stiffener 18 is broadened and formed with the sharp angular ridges 32 diverging from the terminus 29 of the main ridge 28 and forming between them a section 33 which is curved upwardly (Fig. 5) so as not to press upon the sole 16 and allow the ridges 32 to engage the inner edges of the tread of said sole and define the end of the cottage-roof formation and also to resist the downward pressure exerted by the wearer upon the arch of the sole. The heel end of the stiffener 18 is flat so as to lie upon the shoe-heel 19 and has secured to it the pin 21 whose head end extends downwardly (Fig. 5). The forward portion of the stiffener 18 has lips 34 cut in it and these lips are bent downwardly to form darts which are pressed into the sole 16 and coöperate with the pin 30 in securing the stiffener to said sole and maintaining the stiffener in proper position. Within the recess formed at the inner side of the forward end of the stiffener 18 by the junction of the ridges 28, 32 I place a filler 35, which in addition to serving as a filler furnishes a backing for the pin 30 and prevents the latter during the use of the shoe from being driven upwardly to the discomfort of the wearer. The stiffener 18 is secured to the short inner sole 17 by means of pins 36, said inner sole amply covering the top of said stiffener and being adapted to the sole 16.

The body of the heel 19 is of wood, as usual, and in the top of this heel I form a recess 37, over which is secured to said heel the slotted plate 20, the slot in this plate being enlarged at one end, in key-hole fashion, to permit the passage through it of the head of the pin 21 and being narrowed in its remaining parts to prevent the escape of said head. The slot in the plate 20 is sufficiently long to permit the proper adjustment of the heel 19 to the shoe. The heel 19 is secured to the shoe and to the shank-stiffener by the pin 21 and plate 20, and said stiffener being of steel the danger of the heel becoming detached from the shoe is reduced to the minimum. The heel 19 will further be secured to the shoe and properly positioned by a few nails driven from the inner side of the shoe through the sole 16 and into said heel in a familiar manner.

The upper 15 and sole 16, this being a turn-shoe, are first lasted while inside out, and this lasting is performed on the last 38, which is novel in that it is formed with the elongated V-shaped recess 39 in the arch portion of its sole or lower surface to receive the cottage-roof formation 23 of the sole 16 and preserve the same during the lasting operation. The sole 16 is applied to the last 38 with its outer or wear-side placed against said last, and in thus applying said sole the cottage-roof formation 23 will be pressed closely within the recess 39 of said last, as shown in Fig. 10. During the lasting of the shoe while inside out on the last 38, the recess 39 in said last preserves the cottage-roof formation in the sole 16 and in so doing prevents the same from becoming broken down or flattened out, which is a feature of very great importance. After the lasting on the last 38 has been completed, the last will be withdrawn and the shoe turned in the usual manner, the exterior surface of the cottage-roof formation then appearing on the outer side of the shoe and the elongated recess 24 formed thereby being positioned in the inner side of the shoe to receive the shank-stiffener 18, the latter being applied to said recess and secured by the pin 30 and darts 34 and covered by the inner sole 17. The second lasting of the shoe is performed with the shoe applied upon the usual form of last and in the customary way. In applying the stiffener 18 to the inner side of the sole 16, the head of the pin 21 is projected through the slot 22 in said sole, and upon this pin is applied the heel 19 as hereinbefore described. The section 26 of the sole is glued upon the front wall of the heel 19. The stiffener 18 extends from above the heel 19 to the edge of the tread of the sole, as shown, and affords an adequate support for the foot and preserves the shape of the shoe.

My invention renders it not only possible but entirely convenient to produce in a practicable and economical manner a turn-shoe of cottage-roof formation ready to receive a shank-stiffener of appropriate character adapted to properly support the weight which naturally comes upon it in use and preserve the shape of the shoe. The shoe as produced by my invention has an unyielding shank and a flexible tread, which is an ideal construction for the shoe, and in addition the shoe has a permanent cottage-roof formation which adds to its attractiveness. The method of and means for securing the Louis XV heel to the shoe are also of advantage in that the heel becomes not only very securely held but the upper end of the stiffener 18 and heel become locked together.

The novel features described in this application and which under existing rules it may not be permissible to claim herein are to be made the subject of one or more separate applications for Letters-Patent.

The shank-stiffener and the method and means of applying the Louis XV heel in themselves involve novel and advantageous features and protection is to be sought for them in one or more separate applications.

What I claim as my invention and desire to secure by Letters-Patent, is:

1. The method of making a turn-shoe of cottage-roof style which consists in forming the sole with the cottage-roof formation, applying the same and the upper with their inner side out upon a last having an elongated recess to receive the said cottage-roof formation, lasting the shoe on said last, withdrawing said last and turning the shoe, applying within the recess left within the shoe by the cottage-roof formation an elongated shank-stiffener extending from the heel to the tread portion of the sole, and lasting the shoe on a plain last; substantially as set forth.

2. The method of making a turn-shoe of cottage-roof style which consists in pressing into the sole the cottage roof formation, applying the same and the upper with their inner side out upon a last having an elongated recess to receive and preserve said cottage roof formation, lasting the shoe on said last, withdrawing said last and turning

the shoe, and then finishing the shoe; substantially as set forth.

3. The method of making a turn-shoe of cottage-roof style which consists in pressing into the sole the cottage roof formation, applying the same and the upper with their inner side out upon a last having an elongated recess to receive and preserve said formation, lasting the shoe on said last, withdrawing said last and turning the shoe, securing within the recess left within the shoe by said formation a rigid shank-stiffener conforming to said recess, and finishing the shoe; substantially as set forth.

Signed at New York city, in the county of New York and State of New York, this 17th day of November A. D. 1906.

FRANK G. DELBON.

Witnesses:
CHAS. C. GILL,
ARTHUR MARION.