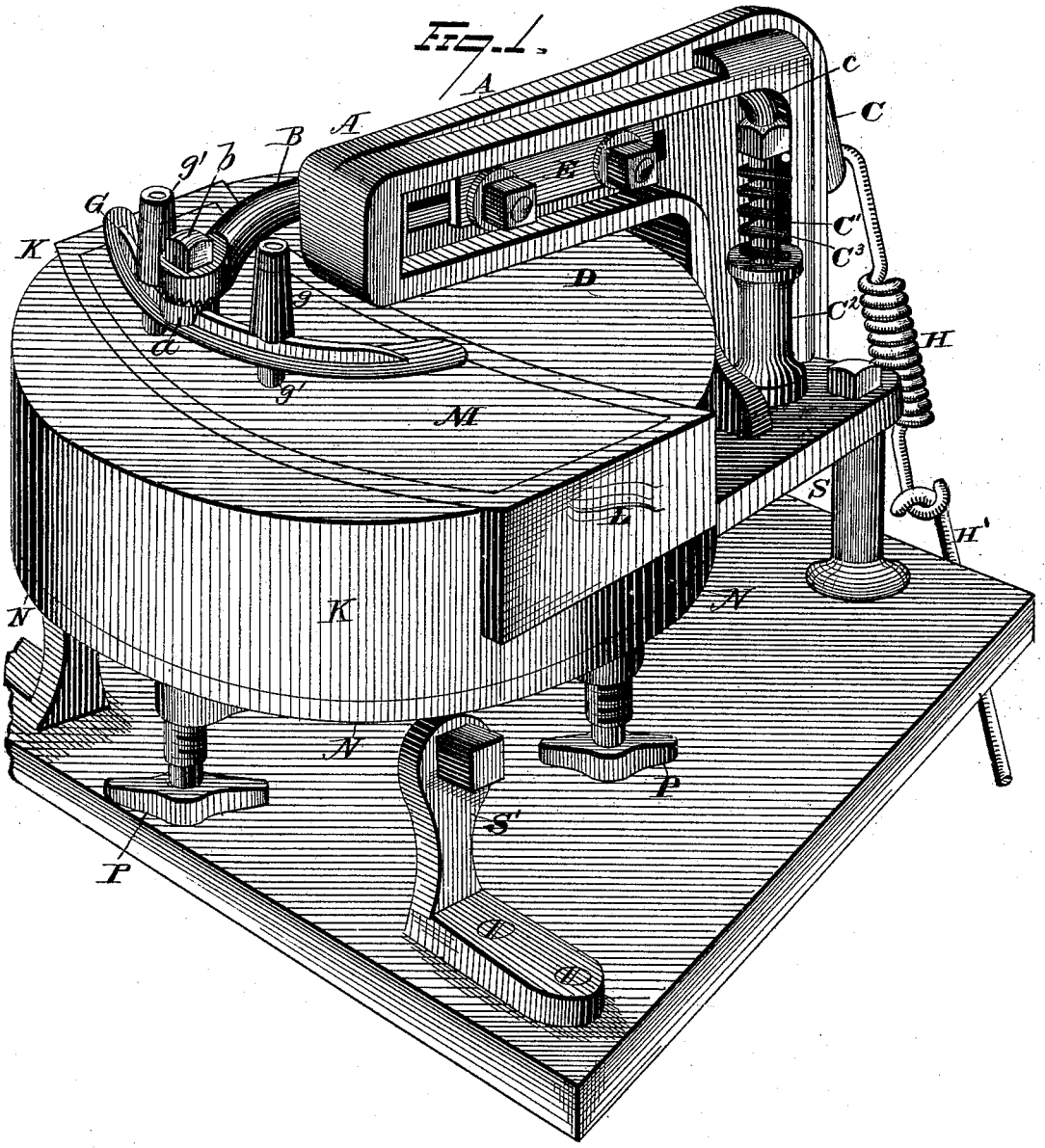
3 Sheets—Sheet 1.

W. MANLEY.

Shoe-Scolloping Machine.

No. 212,718. Patented Feb. 25, 1879.

Fig. 1.



WITNESSES

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3 Sheets—Sheet 2.

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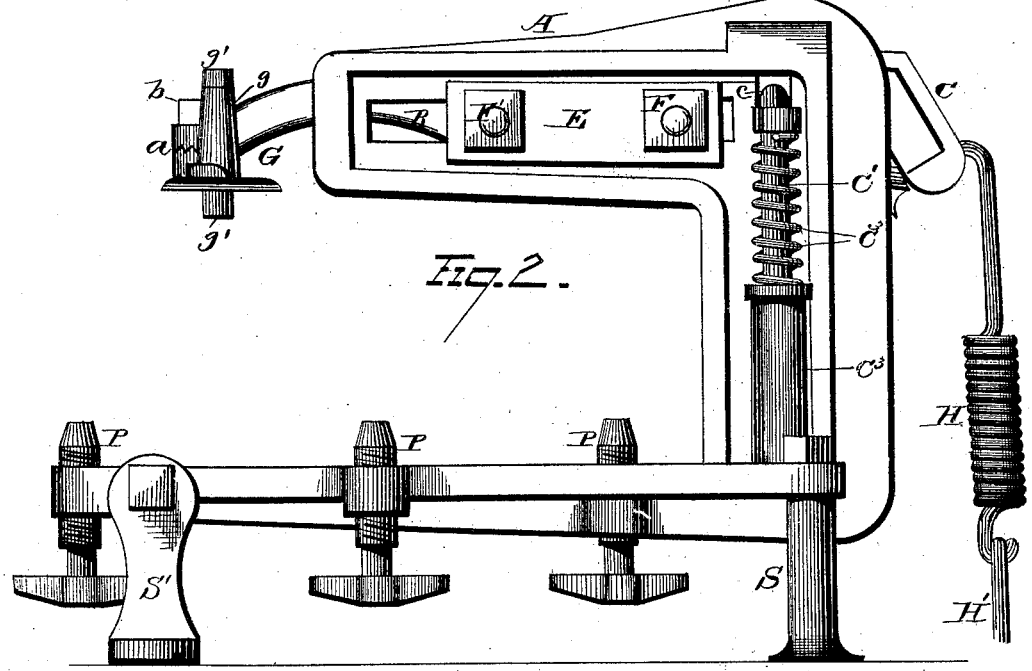

Fig. 2.

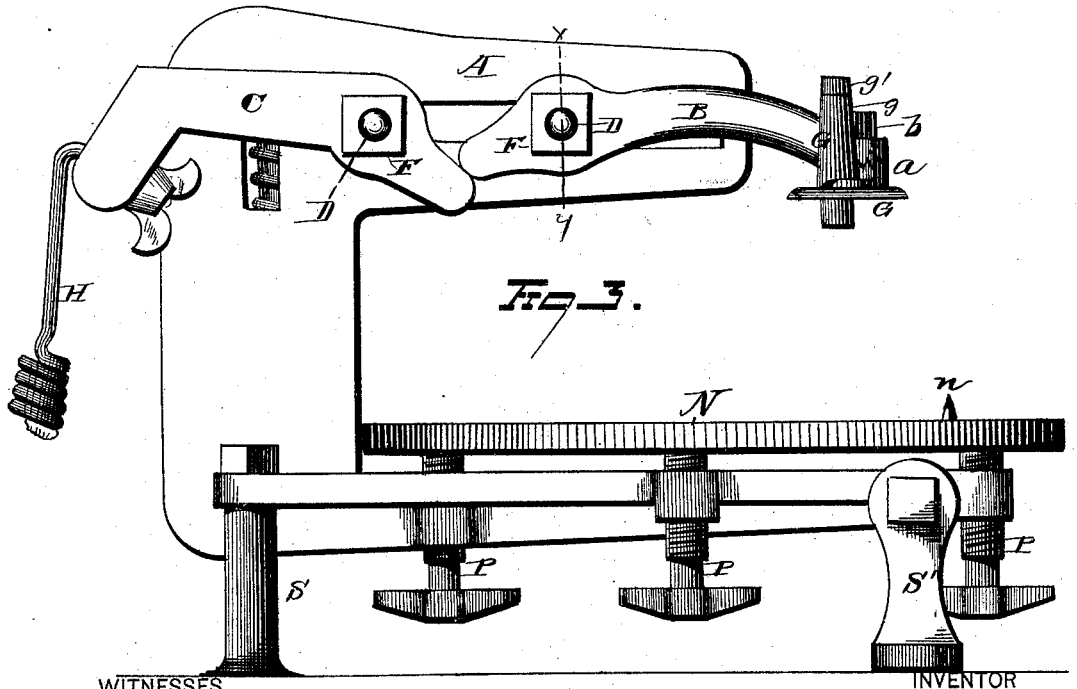

Fig. 3.

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3 Sheets—Sheet 3.

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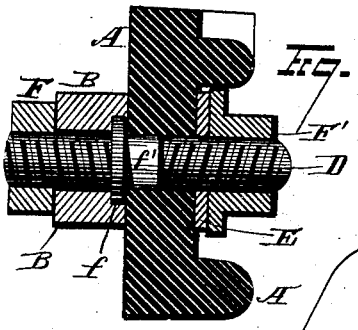
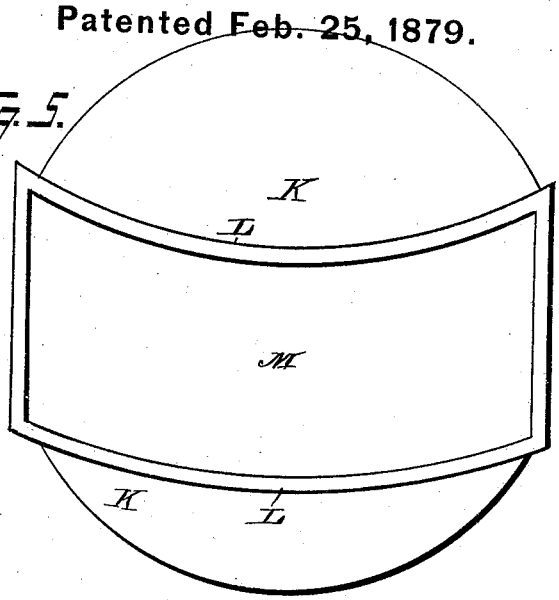


Fig. 4.

Fig. 5.



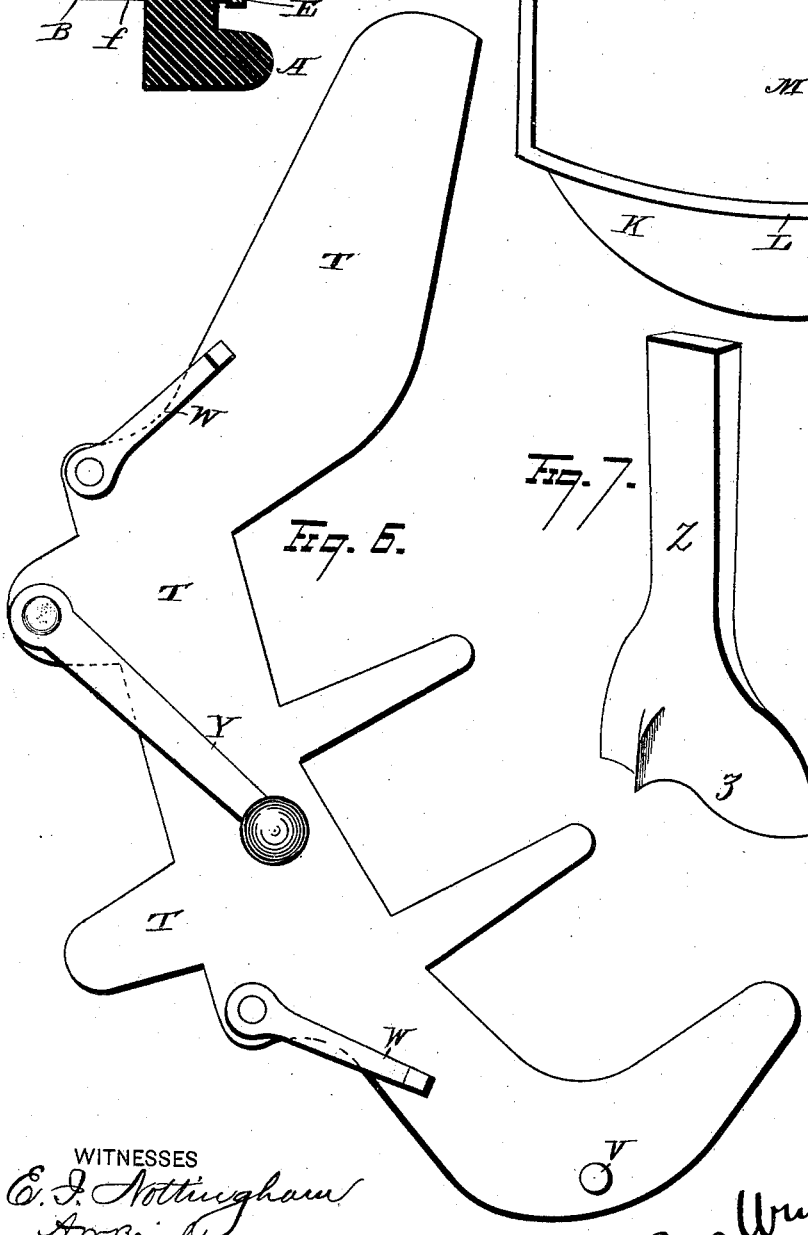
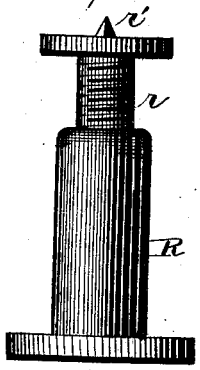


Fig. 6.

Fig. 7.

Fig. 8.



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UNITED STATES PATENT OFFICE.

WILLIAM MANLEY, OF ROCHESTER, NEW YORK.

IMPROVEMENT IN SHOE-SCALLOPING MACHINES.

Specification forming part of Letters Patent No. **212,718**, dated February 25, 1879; application filed December 27, 1878.

To all whom it may concern:

Be it known that I, WILLIAM MANLEY, of Rochester, in the county of Monroe and State of New York, have invented certain new and useful Improvements in Shoe-Scalloping 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 pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to shoe-scalloping machines, and is designed to provide mechanism adapted to adjust and hold securely the button-flies of ladies', misses', and children's shoe-uppers in proper position, whereby the same may be scalloped with uniformity and dispatch, cutting from one to twenty pieces at a single operation.

The invention consists, first, in the combination, with a presser-bar and mechanism adapted to cause the same to bear down upon the button-flies, of an independent adjuster adapted to be withdrawn from beneath said button-flies when the latter are secured in position by the presser-bar; second, in the combination, with a presser-bar and its lever, of an actuating-lever adapted to be operated by suitable treadle mechanism in causing said presser-bar to hold the button-flies upon a cutting-block; third, in the combination, with a presser-bar, its lever, and an actuating-lever, of connecting mechanism adapted to cause the same to be moved together in forward or rearward movement upon a suitable support; fourth, in the combination, with a horizontal slotted arm, of a presser-bar lever and an actuating-lever, the two respectively pivoted upon bolts which work transversely in said slotted arm; fifth, in the combination, with a presser-bar formed with upright thimbles, of downwardly spring-pressed pins working in the latter; sixth, in the combination, with a presser-bar provided with downwardly spring-pressed pins, of a lever connected with the central portion thereof, and intermediate between said pins; seventh, in the combination, with the two bolts which work transversely in the horizontal slotted arm, and upon which the presser-bar lever and the actuating-lever are respectively pivoted, of a plate formed with perforations, through which latter said bolts pass and connect the latter together, so as to be simultaneously moved in said slotted arm; eighth, in the combination, with the horizontal slotted arm, the presser-bar lever, and the actuating-lever, of bolts upon which the levers are pivoted, together with a plate connecting the latter together, each bolt being formed with threads, respectively, upon its extremities, and also provided with a shoulder, against which the corresponding lever has lateral bearing; ninth, in a shoe-scalloping machine, the combination, with the presser-bar lever and the actuating-lever, of a spring-pressed device adapted to engage with the latter and maintain it free from engagement with the presser-bar lever when not operated by the treadle mechanism; tenth, in the combination, with the actuating-lever, pivoted to a bolt which works transversely in the horizontal slotted arm, of an upwardly spring-pressed device, which engages with the lower side of the long arm of said lever, and tends to maintain the short arm of the latter free from engagement with the presser-bar lever; eleventh, in the combination of the two bolts upon which the presser-bar lever and the actuating-lever are severally pivoted, each bolt being formed with both extremities screw-threaded, and a shoulder, against which latter the eye of the corresponding lever has lateral bearing; twelfth, in the combination of the two bolts upon which the presser-bar lever and the actuating-lever are severally pivoted, each bolt being formed with both extremities screw-threaded, and a shoulder, against which latter the eye of the corresponding lever has lateral bearing, the central stems of said bolts being respectively adapted, by their rectangular form, to prevent the same from turning in the horizontal slotted arm; thirteenth, in the combination, with the actuating-lever and the treadle-pitman, of a spiral spring intermediately connecting the two; fourteenth, in the combination, with the presser-bar, of a cutting-block provided with a metallic-composition bed, the same being adapted to secure the button-flies between them while being scalloped; fifteenth, in a cutting-block, of wood or similar light material, and formed

with an inlaid metallic mold, within which latter a metallic-composition cutting-bed is held; sixteenth, in the combination, with the presser-bar formed with an upright tubular stud, of a lever formed with an eye at the end of its long arm, which is secured thereto by bolt engagement, the connecting edges of said stud and eye being formed with interlocking serrations or corrugations; seventeenth, in the combination, with the platform of a shoe-scalloping machine, provided with vertically-adjusting devices, of a cutting-block resting on the latter, and adapted to be raised or lowered at one or more points by suitable movement of the same; eighteenth, in the combination, with the platform-plate of a shoe-scalloping machine, of fixed legs rigidly secured to the forward portion thereof, and swinging legs pivoted to the rear portion; nineteenth, in the combination, with the cutting-block, of an independent bed or plate, upon which the same rests, said bed or plate being formed with one or more upwardly-projecting pointed studs, adapted to keep said block from slipping; twentieth, in the combination, with the presser-bar, of an adjuster provided with movable guides and a spring-pressed holder, the same being adapted to adjust and hold the button-flies and pattern properly together preparatory to being secured by the presser in place upon the cutting-bed; twenty-first, in an adjuster for shoe-scalloping machines, the same consisting in the combination, with a plate provided with a fixed upright, of one or more movable upright guides, and a spring-holder pivoted thereto; twenty-second, in an adjuster for shoe-scalloping machines, the combination, with the main plate, of one or more movable upright guides pivoted thereto; twenty-third, in the combination, with the cutting-block, of a vertically-adjustable jack formed with a pointed stud, and adapted to prevent said block from moving while the flies are being scalloped.

Referring to the drawings, Figure 1 is a view, in perspective, of a machine embodying my invention. Fig. 2 is a view of the machine proper detached from a supporting-stand, the same being shown with both the cutting-block and the plate upon which the latter rests removed therefrom. Fig. 3 is a similar view, but with the plate upon which the cutting-block rests in position upon the vertically-adjusting screws. Fig. 4 is a detail sectional view through line *x y* of Fig. 3. Fig. 5 is a detail view of the cutting-block and plate upon which the same rests. Fig. 6 is a detail view of the adjuster. Fig. 7 is a view of my cutting-chisel. Fig. 8 is a view of the jack.

The horizontal slotted arm supports the presser-bar lever B and the actuating-lever C by means of bolts D, which latter work transversely within the slot of said arm, and are connected together by a plate, E, so as to have simultaneous and even movement either forward or rearward. Each of said bolts is formed with both extremities screw-threaded, and which, respectively, project out beyond the slot, and are engaged with suitable nuts F F′ in clamping the levers to the machine. Each bolt is also formed with a shoulder, *f*, against which the eye of the corresponding lever has lateral bearing, while that portion, *f′*, of the bolt-stem which is within the slot is made rectangular, so as to prevent the bolt from turning. By loosening nuts F said bolts are freed from their clamped position within the slot, and can therefore be readily moved in transverse line to and fro in the same, corresponding to the position required of the presser-bar in holding different-sized button-flies in position upon the cutting-block.

Presser-bar G is preferably formed curved, so as to be adapted to the form of the button-flies, and is provided with two upright thimbles, *g*, within which work, respectively, the downwardly spring-pressed pins *g′*. Centrally between said pins the presser-bar is provided with a tubular upright stud, *a*, formed with serrations or notches on its upper edge, with which the extremity of the long arm of the presser-bar lever engages, corresponding teeth being formed on said extremity, so as to interlock with the teeth of said stud, and thus prevent the presser-bar from being moved out of position relative to its angle with the presser-bar lever. A screw-bolt or other suitable fastening device, *b*, passes through a corresponding perforation in said extremity of the presser-bar lever, and engages with said tubular stud. The upper surface of the short arm of the actuating-lever engages with the under surface of the short arm of the presser-bar lever, and when in operation serves to hold said presser-bar securely down upon the button-flies. An upwardly spring-pressed device tends to maintain the two levers free from engagement with each other, and hence, when the actuating-lever is not operated by the treadle mechanism, the presser-bar is automatically released from the position in which it clamps the button-flies upon the cutting-bed.

The particular form of device used may be changed as desired, but preferably consists, as shown, of a vertical rod, C^1, whose lower extremity works within a tubular standard, C^2, while its vertical body is incased by a spiral spring, C^3, which latter engages therewith, and serves to hold the rod in raised position. Its upper bent extremity, *c*, works within a vertical slot in the machine-frame, and engages with the under side of the long arm of the actuating-lever.

A spiral spring, H, intermediately connects the extremity of the long arm of the actuating-lever with the pitman H′, which latter connects with any suitable foot-treadle.

The cutting-block K is preferably made of wood or equivalent light material, and is provided with a metallic mold, L, within which latter a metallic-composition bed, M, is incased. Said cutting-bed may be composed of tin and lead, or any other analogous metallic substances capable of answering the purpose in view. A plate, N, supports the cutting-block,

and is provided with one or more pointed studs, *n*, which latter engage with the under surface of said block, and prevent the same from moving out of position thereon. Adjusting-screws P, working in the platform of the machine, give vertical movement to one or more parts of the plate-body, so as to adjust the cutting-block at any point thereof, as occasion may demand. Sharp-pointed pins may be formed on the working end of the adjusting-screws, if desired, for purpose of securing the cutting-block in position. When said block is drawn out on its supporting-plate it may be maintained in working position by means of a suitable jack, R, provided with a flanged base, which latter is fastened to the bench upon which the machine may rest. The vertically-adjustable screw *r* of said jack is provided with a pointed stud or pin, *r'*, whereby the block is prevented from undue movement.

The platform of the machine is provided with two fixed legs or standards, S, in its forward part, and swinging legs or standards S', pivoted, respectively, to opposite sides of the rear or farther part of the platform, said swinging legs being secured by nuts upon horizontal pivots, so as to have movement when unclamped in a vertical plane. Said adjustable legs adapt the cutting-block to be moved in operative position as may be required under different circumstances. An adjuster, T, of any suitable form, is preferably provided with one fixed upright, V, two movable upright guides, W, and a spring-holder, Y. The button-flies, in any suitable number from one to twenty, are placed upon the adjuster together with the pattern. By means of the movable guides the button-flies are adjusted in position, and then the spring-holder secures the same. The adjuster, provided with the button-flies, is placed on the cutting-bed and beneath the presser. The spring-pressed pins then press slightly upon the button-fly scallop-pattern and the button-flies over the open spaces formed in the adjuster, and the presser-bar itself does not yet bear upon the same. When the adjuster is withdrawn by means of the actuating-lever and treadle mechanism, the entire pressure of the presser-bar is exerted upon the button-flies, and the number of pieces are held securely in position until duly scalloped, which latter operation only requires a few seconds.

By this mechanism all work of this general character, from an infant's up to a woman's shoe-upper is accomplished with great rapidity and uniformity, while in changing from one style to another no expense is entailed, excepting such as is required in providing a few pieces of straw-board.

In connection with this machine I use a button-fly chisel, Z, especially adapted to cut the lower end of a button-fly in a ready manner. Heretofore such cutting has been done with a knife, or in the shape of a pattern which shoe-cutters work by; but both of the above processes are slow and defective.

My chisel is formed with a long wing, *z*, made curved, as shown, whereby it is adapted in shape to cut the lower end of each button-fly as the latter may be placed, in any suitable number, in position to be operated upon, and to make the cut in an efficient and quick manner.

The cutting-chisel shown in Fig. 7 is represented in the drawings, that the operation of the machine may be fully understood; but no claim is herein made to the same.

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

1. In a shoe-scalloping machine, the combination, with a presser-bar and mechanism adapted to cause the same to bear down upon the button-flies, of an independent adjuster adapted to be withdrawn from beneath said button-flies when the latter are secured in position by the presser-bar, substantially as set forth.

2. In a shoe-scalloping machine, the combination, with a presser-bar and its lever, of an actuating-lever adapted to be operated by suitable treadle mechanism in causing said presser-bar to hold the button-flies upon a cutting-block, substantially as set forth.

3. In a shoe-scalloping machine, the combination, with a presser-bar, its lever, and an actuating-lever, of connecting mechanism adapted to cause the said parts to be moved together, in forward or rearward movement, upon a suitable support, substantially as set forth.

4. In a shoe-scalloping machine, the combination, with a horizontal slotted arm, of a presser-bar lever and an actuating-lever, the two respectively pivoted upon bolts which work transversely in said slotted arm, substantially as set forth.

5. In a shoe-scalloping machine, the combination, with a presser-bar formed with upright thimbles, of downwardly spring-pressed pins working in the latter, substantially as set forth.

6. In a shoe-scalloping machine, the combination, with a presser-bar provided with downwardly spring-pressed pins, of a lever connected with the central portion thereof, and intermediate between said pins, substantially as set forth.

7. The combination, with the two bolts which work transversely in the horizontal slotted arm, and upon which the presser-bar lever and the actuating-lever are respectively pivoted, of a plate formed with perforations, through which latter said bolts pass and connect the latter together, so as to be simultaneously moved in said slotted arm, substantially as set forth.

8. The combination, with the horizontal slotted arm, the presser-bar lever, and the actuating-lever, of bolts upon which the levers are pivoted, together with a plate connecting the latter together, each bolt being formed with right and left hand threads, respectively, upon its extremities, and also provided with a shoulder, against which the corresponding

lever has lateral bearing, substantially as set forth.

9. In a shoe-scalloping machine, the combination, with the presser-bar lever and the actuating-lever, of a spring-pressed device adapted to engage with the latter and maintain it free from engagement with the presser-bar lever when not operated by the treadle mechanism, substantially as set forth.

10. The combination, with the actuating-lever, pivoted to a bolt which works transversely in the horizontal slotted arm, of an upwardly spring-pressed device which engages with the lower side of the long arm of said lever, and tends to maintain the short arm of the latter free from engagement with the presser-bar lever, substantially as set forth.

11. The combination of the two bolts upon which the presser-bar lever and the actuating-lever are severally pivoted, each bolt being formed with both extremities screw-threaded, and a shoulder, against which latter the eye of the corresponding lever has lateral bearing, substantially as set forth.

12. The combination of the two bolts upon which the presser-bar lever and the actuating-lever are severally pivoted, each bolt being formed with both extremities screw-threaded, and a shoulder, against which latter the eye of the corresponding lever has lateral bearing, the central stems of said bolts being respectively adapted by their rectangular form to prevent the same from turning in the horizontal slotted arm, substantially as set forth.

13. The combination, with the actuating-lever and the treadle-pitman, of a spiral spring intermediately connecting the two, substantially as set forth.

14. The combination, with the presser-bar, of a cutting-block provided with a metallic-composition bed, the same being adapted to secure the button-flies between them while being scalloped, substantially as set forth.

15. In a shoe-scalloping machine, a cutting-block, of wood or similar light material, and formed with an inlaid metallic mold, within which latter a metallic-composition cutting-bed is held, substantially as set forth.

16. The combination, with the presser-bar formed with an upright tubular stud, of a lever formed with an eye at the end of its long arm, which is secured thereto by bolt engagement, the connecting edges of said stud and eye being formed with interlocking serrations or corrugations, substantially as set forth.

17. The combination, with the platform of a shoe-scalloping machine provided with vertically-adjusting devices, of a cutting-block resting on the latter, and adapted to be raised or lowered at one or more points by suitable movement of the same, substantially as set forth.

18. The combination, with the platform-plate of a shoe-scalloping machine, of fixed legs rigidly secured to the forward portion thereof, and swinging legs pivoted to the rear portion, substantially as set forth.

19. In a shoe-scalloping machine, the combination, with the cutting-block, of an independent bed or plate, upon which the same rests, said bed or plate being formed with one or more upwardly-projecting pointed studs, adapted to keep said block from slipping, substantially as set forth.

20. In a shoe-scalloping machine, the combination, with the presser-bar, of an adjuster provided with movable guides and a spring-pressed holder, the same being adapted to adjust and hold the button-flies and pattern properly together preparatory to being secured by the presser in place upon the cutting-bed, substantially as set forth.

21. An adjuster for shoe-scalloping machines, the same consisting in the combination, with a plate provided with a fixed upright, of one or more movable upright guides, and a spring-holder pivoted thereto, substantially as set forth.

22. In an adjuster for shoe-scalloping machines, the combination, with the main plate, of one or more movable upright guides pivoted thereto, substantially as set forth.

23. In a shoe-scalloping machine, the combination, with the cutting-block, of a vertically-adjustable jack formed with a pointed stud, and adapted to prevent said block from moving while the flies are being scalloped, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 18th day of December, 1878.

WILLIAM MANLEY.

Witnesses:
THOMAS BOLTON,
F. A. COPWELL.