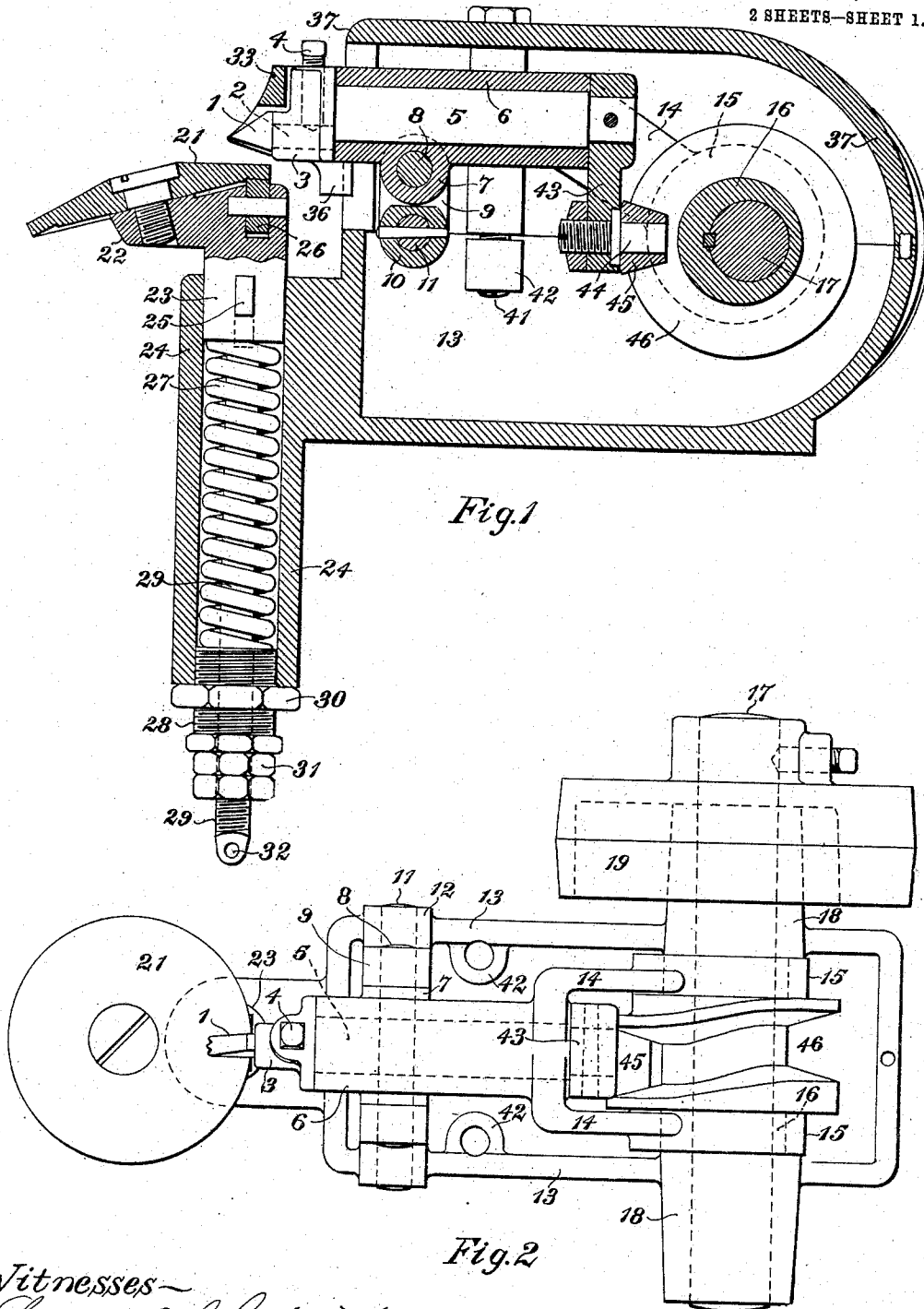


F. F. DORSEY.
STITCH IMPRESSION MACHINE.
APPLICATION FILED MAY 18, 1907.

947,149.

Patented Jan. 18, 1910.

2 SHEETS—SHEET 1.



Witnesses—

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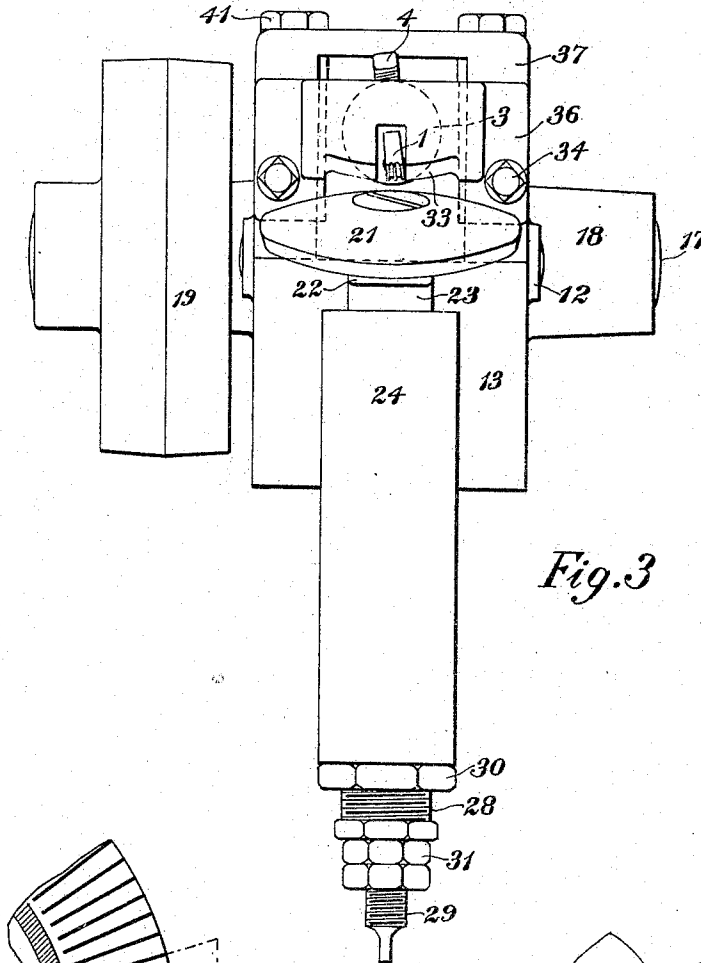


Fig. 3

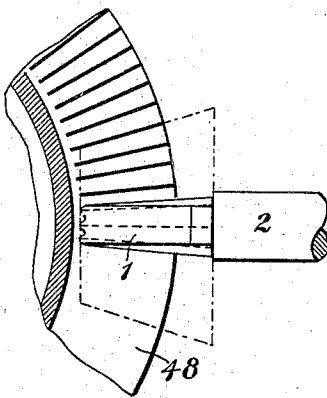


Fig. 4

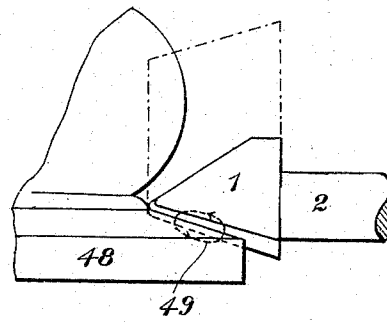


Fig. 5

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UNITED STATES PATENT OFFICE.

FARNUM F. DORSEY, OF NEW YORK, N. Y., ASSIGNOR TO UNITED SHOE MACHINERY COMPANY, OF PATERSON, NEW JERSEY, A CORPORATION OF NEW JERSEY.

STITCH-IMPRESSION MACHINE.

947,149.

Specification of Letters Patent.

Patented Jan. 18, 1910.

Application filed May 18, 1907. Serial No. 374,406.

To all whom it may concern:

Be it known that I, FARNUM F. DORSEY, a citizen of the United States, and resident of New York, in the county and State of New York, have invented certain new and useful Improvements in Stitch-Impression Machines, of which the following is a specification.

My invention relates generally to machines for producing stitch impressions or indentations on the welt or the margin of the sole of a shoe, either to separate stitches therein or to simulate the appearance of stitches.

15 One object of the invention is to produce a machine by which the curved portions of the welt or the sole margin, particularly at the tip of the toe, may be operated on with greater facility and efficiency, and to this end the machine is provided with a tool having a working extremity or tooth of improved form, and a feeding movement of novel character is imparted to the tool.

25 Another object of the invention is to produce a machine by which the stitch impressions are impressed and burnished at a single operation, and to this end the machine is constructed to impart both impressing and burnishing movements to the tool or the 30 work.

Other objects and features of the invention will be noted in connection with the following description of the illustrated embodiment of the invention.

35 In the accompanying drawings Figure 1 is a vertical median section of a machine embodying the invention. Fig. 2 is a plan view of the machine with the cover and the work rest removed. Fig. 3 is a front elevation of the machine. Figs. 4 and 5 are a 40 diagrammatic plan view and side elevation, respectively, illustrating, on an enlarged scale, the mode of operation of the tool.

45 The illustrated embodiment of the invention is a machine adapted particularly for producing imitation stitches or stitch impressions. The tool 1 has a shank 2 fixed in a socket 3 by means of a set-screw 4. The socket is formed in the front end of the tool 50 carrier 5, which has the form of a shaft journaled in a sleeve 6. Near its forward end the sleeve has a downwardly-projecting lug 7 by which it is pivotally mounted on a shaft 8 carried in the upper ends of two

arms 9 projecting upwardly from a sleeve 10. The sleeve 10 is journaled on a shaft 11 which turns in bearings 12 on the base member 13 of the machine. 55

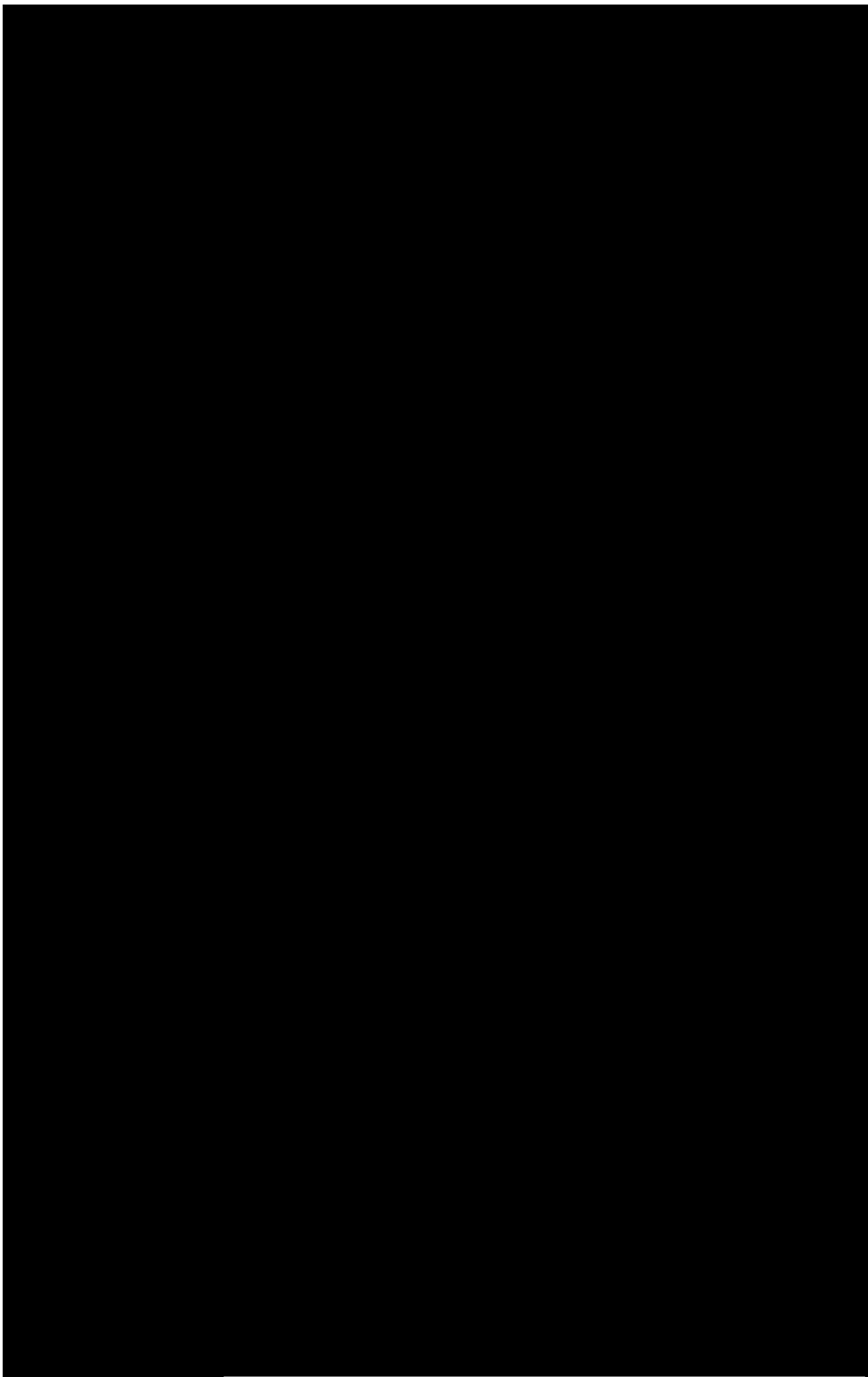
The construction above described is such that lateral rocking movements may be imparted to the tool by turning the tool carrier 5 in the sleeve 6, while the sleeve 6 may be moved longitudinally to advance or retract the tool and tilted vertically upon the shaft 8 to move the tool vertically. 60 65

The sleeve 6 forms part of a lever having rearward extensions 14 terminating in eccentric straps 15 which embrace eccentrics 16 by which the sleeve 16 is actuated. The eccentrics 16 are mounted on a drive shaft 17 70 journaled in sleeves 18 on the base 13 and connected, by a pulley 19, with a suitable source of power.

The sole of the shoe operated on is supported by a rotary work support 21 of ordinary form, which is journaled on an arm 22 projecting from a stem 23 sliding vertically in a sleeve 24 on the base 13. A gib 25 engaging vertical slots in the sleeve 24 prevents rotation of the stem, and a roller 26 80 supports the inner margin of the work support against the pressure of the tool. The work support is pressed upward by a spring 27 located in the sleeve 24 and adjustable by means of a threaded sleeve 28. A rod 29 85 fixed to the stem 23 passes loosely through the sleeve 28 and is provided with stop nuts 31 to engage the sleeve 28 and limit the upward movement of the work support when no work is in the machine. A nut 30 fixes 90 the sleeve 28 in adjusted position. The rod 29 is perforated at 32 for connection with a suitable treadle (not shown) by which the work support is drawn down to facilitate the insertion of the work. 95

The upper surface of the work is normally pressed upwardly by the action of the spring 27 against a work rest 33 which bridges the tool 1 and has lower rounded work-engaging surfaces at either side thereof. The work rest is fixed to the front of the cover 37, which incloses the actuating mechanism of the machine, by screws 34 engaging lugs 36 on the work rest. The cover 37 is secured to the base by screws 41 105 engaging lugs 42 on the base.

The oscillating movements of the tool carrier 5 in the sleeve 6 are caused by mechan-



tool a movement transverse to the tooth and of greater amplitude at the rear end than at the front end of the tooth.

2. A stitch-impression machine comprising a work support, a rotatable tool support, a tool mounted thereon and having an impression-forming tooth disposed at an angle with the axis of the tool support and with its forward end nearer the axis than its rear end, and means for imparting an intermittent partial rotation to the tool support and the tool.

3. A stitch-impression machine comprising a work support, a rotatable tool support, a tool mounted thereon and having a working extremity provided with a plurality of impression-forming teeth and formed substantially as a segment of a toothed truncated cone with its small end forward, and means for imparting intermittent partial rotations to the tool support.

4. A stitch-impression machine comprising a work support, a tool, and means for moving the tool, in a plane substantially perpendicular to the surface of the work and to the direction of feed, through a continuous curved path toward and from the surface of the work and also along the surface to burnish the impressions.

5. A stitch-impression machine comprising a work support, a tool provided with an impression-forming tooth, and means for actuating the tool to move the tooth first toward the work transversely with respect to the surface thereof, to form a stitch impression, and then substantially in the plane of the work and in the direction of the length of the tool to cause the tool to have a sliding burnishing movement in the stitch impression.

6. A stitch-impression machine comprising a work support, a tool, and means for imparting to the tool first a movement toward and into contact with the work, and then a combined impression-forming and burnishing movement in a general retracting direction longitudinally with respect to the impressions.

7. A stitch-impression machine comprising a work support, a tool, and means for moving the tool first into contact with the work, then retracting the tool along the surface of the work longitudinally with respect to the impressions, and then moving the tool out of contact with the work.

8. A stitch-impression machine comprising a work support, a tool, and means for moving the tool in a plane substantially perpendicular to the surface of the work and the direction of feed in a substantially-elliptical path of which the minor axis is substantially normal to the surface of the work.

9. A stitch-impression machine comprising a work support, a tool, means for vibrat-

ing the tool into and out of contact with the surface of the work, and means for imparting a rolling movement to the tool, when it is in contact with the work about a center located above the plane of the work.

10. A stitch-impression machine comprising a work support, a tool provided with a plurality of impression-forming teeth, and means for moving the tool to cause it successively to engage the work, perform a burnishing movement longitudinally with respect to the impression, disengage the work, advance through the space of one tooth, and again engage the work and repeat the burnishing operation.

11. A stitch-impression machine comprising a work support, a tool, a rotatable tool support, a tool-support carrier constituting a lever and movably mounted at its forward portion, crank mechanism for actuating the rear end of the tool-support carrier, and means for imparting oscillating feeding movements to the tool support.

12. A stitch-impression machine comprising a work support, a tool, a tool carrier, a tool-carrier support in which the tool carrier is journaled, a drive shaft, eccentrics on the drive shaft engaged by and actuating the tool-support carrier, a cam on the shaft, and connections between the cam and the tool carrier for oscillating the latter in the tool-support carrier.

13. A stitch-impression machine comprising a work support, a narrow tool having a working extremity tapered at an acute angle in a vertical plane so as to enter the crease between the upper and the sole or welt of a shoe, said working portion being provided with an impression-forming tooth tapered longitudinally toward its front end so as to make a stitch impression tapering from the edge of the sole toward the crease, and means for imparting intermittent relative impressing and feeding movements to the tool and the work support.

14. A stitch-impression machine comprising a work support, a narrow tool having a working extremity tapered at an acute angle in a vertical plane so as to enter the crease between the upper and the sole or welt of a shoe, said working portion being provided with a plurality of impression-forming teeth converging toward the front extremity of the tool, and means for imparting intermittent relative impressing and feeding movements to the tool and the work support.

15. A stitch-impression machine comprising cooperating work-supporting members engaging the upper and lower surfaces of the work and operating to restrict the vertical movements thereof, a tool, and tool-actuating means operating to vibrate the tool into and out of contact with the surface of the work and to impart a rolling move-

ment to the tool, when it is in contact with the work about a center located above the plane of the work.

16. A stitch-impression machine comprising a work support, a tool, and tool-actuating means operating to vibrate the tool into and out of contact with the work to form stitch impressions, and to move the tool both longitudinally with respect to the impres-

sions and with a rolling movement, when it is in contact with the work.

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

FARNUM F. DORSEY.

Witnesses:

LANCELOT COPLESTON,
MINNIE M. DEUNEBAUM.

It is hereby certified that in Letters Patent No. 947,149, granted January 18, 1910, upon the application of Farnum F. Dorsey, of New York, N. Y., for an improvement in "Stitch-Impression Machines," errors appear in the printed specification requiring correction as follows: Page 2, line 3, the words "engaged by the cam roll and formed in the" should be stricken out; page 3, line 99, the word "narrow" should be stricken out and inserted before the word "working;" line 100, and same page, line 112, the word "narrow" should be stricken out and inserted before the word "working;" line 113; 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 15th day of March, A. D., 1910.

[SEAL.]

C. C. BILLINGS,
Acting Commissioner of Patents.