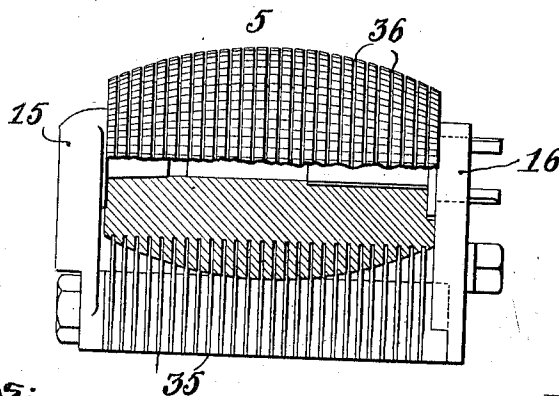
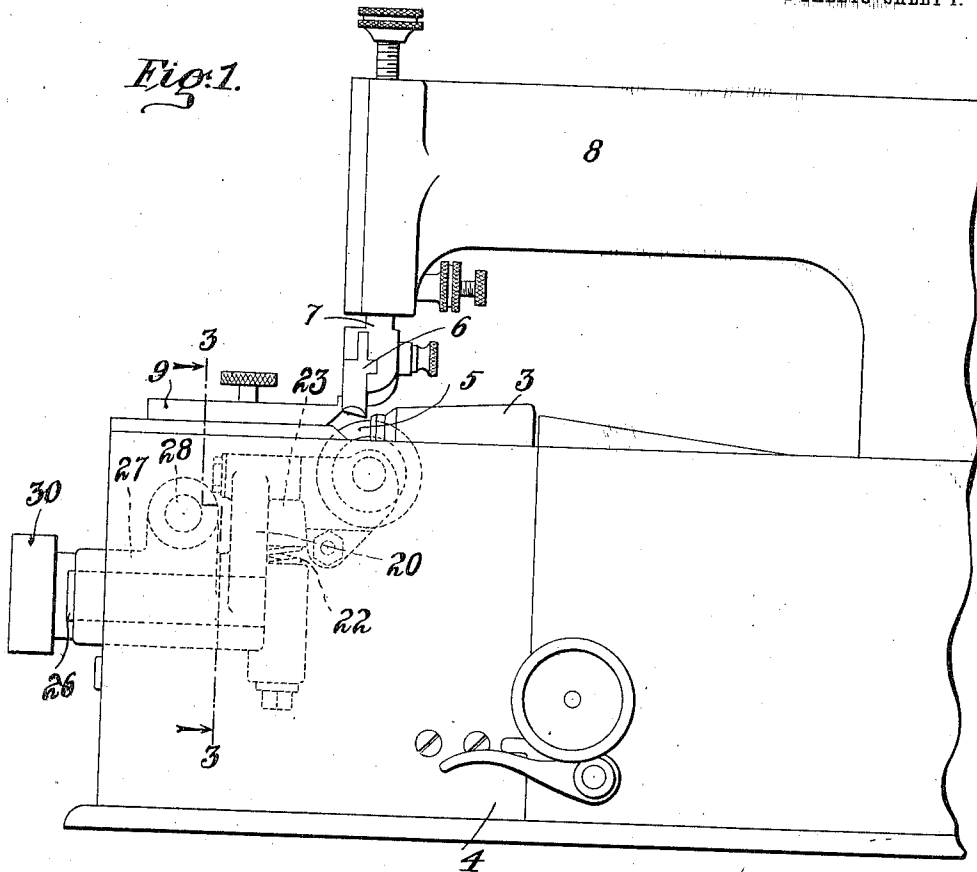


E. F. DAVENPORT.
SKIVING MACHINE.
APPLICATION FILED DEC. 28, 1911.

1,029,176.

Patented June 11, 1912.
2 SHEETS-SHEET 1.

Fig. 1.



Witnesses:

Bozell F. Hatch.
Burton W. Cary.

Fig. 2.

Inventor:

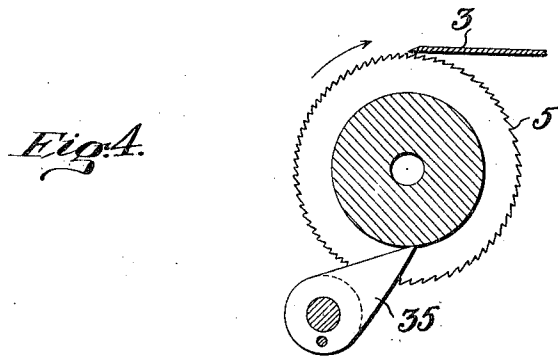
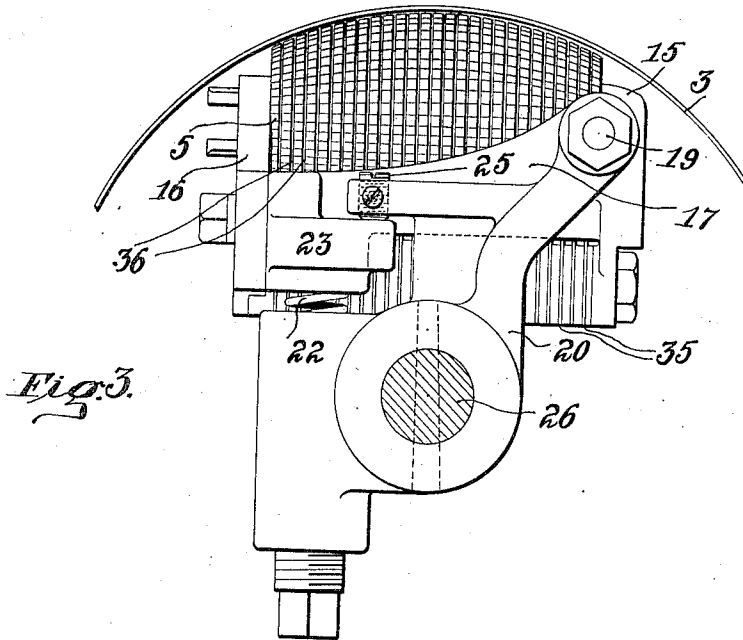
Eugene F. Davenport
by his attorney
Phillips, Van Orman & High

E. F. DAVENPORT.
SKIVING MACHINE.
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1,029,176.

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2 SHEETS-SHEET 2.



Witnesses:
Roswell F. Hatch.
Barton W. Cary.

Inventor:
Engine F. Davenport
by his Attorneys
Phillips, Van Curen & Cook

UNITED STATES PATENT OFFICE.

EUGENE F. DAVENPORT, OF MELROSE, MASSACHUSETTS, ASSIGNOR TO UNITED SHOE MACHINERY COMPANY, OF PATERSON, NEW JERSEY, A CORPORATION OF NEW JERSEY.

SKIVING-MACHINE.

1,029,176.

Specification of Letters Patent.

Patented June 11, 1912.

Application filed December 26, 1911. Serial No. 667,584.

To all whom it may concern:

Be it known that I, EUGENE F. DAVENPORT, a citizen of the United States, residing at Melrose, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Skiving-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.

The present invention relates to skiving machines, and more particularly to machines which comprise a rotary cylindrical skiving knife, a presser foot and a feed roll arranged to hold the leather in position and feed it to the knife. Among the various types of feed rolls which are employed with this class of machines, it is found that metal feed rolls provided with a toothed periphery have many advantages but that if these feed rolls are not cleaned continually they clog with skivings and particles of leather and soon become inoperative. In order to maintain these rolls in an efficient working condition it is necessary to positively remove and eject the foreign accumulations from the surface of the roll however firmly they may adhere thereto and in whatever position the roll may be.

The object of the present invention is to effectually remove the skivings and other material from the surface of the roll and maintain the feed roll free and clean enabling it to operate efficiently for an indefinite period. With this object in view, the various features of the invention comprise certain novel features of construction, combinations and arrangements of parts hereinafter described and claimed, the advantages of which will be obvious to those skilled in the art from the following description.

In the accompanying drawings illustrating the preferred form of the invention, Figure 1 represents a side elevation of a skiving machine embodying the invention; Fig. 2 is a detail illustrating a rear side elevation partly in section of a metal feed roll and stripper cooperating therewith; Fig. 3 is a detail illustrating a front side elevation of the feed roll and mounting therefor taken upon the line 3-3 of Fig. 1; and Fig. 4 is a detail illustrating a cross section of the feed roll with the skiving

knife and stripper arranged in coöperative relation thereto.

Certain parts of the machine are similar in construction and mode of operation to the machine shown and described in the co-pending application of Alexander, Serial No. 621,679, filed April 17, 1911, and will be only briefly described herein in consequence thereof.

The machine is provided with a cylindrical skiving knife indicated at 3 which is mounted within a casing 4 and projects upwardly through an opening in the same into a position to act upon the material. The material to be skived is fed to the knife 3 by a positively driven feed roll 5 which is yieldingly supported within the knife and which coöperates with a presser foot 6 mounted without the knife and arranged to act as a gage for properly presenting the work to the knife. The presser foot 6 is carried by a block 7 slidably mounted in vertical guideways formed in the end of an overhanging arm 8 and an adjusting mechanism (not shown) is provided for determining the initial vertical position of the presser foot in order to bring it into co-operative relation with the knife edge. The work is guided under the presser foot by an adjustable side gage 9 which engages the edge of the material as it is fed to the knife. The feed roll 5 is journaled at its opposite ends in the arms 15 and 16 of a head 17 which is pivotally connected at 19 to a supporting arm 20. In order to yieldingly retain the roll in its working position, a spring 22 is positioned beneath the free end of the head 17 and bears against the under face of a laterally projecting lug 23 formed upon the head. The upward movement of the head is limited by a stop member 25 threadedly mounted in the arm 20 and bearing against the upper face of the lug 23. The arm 20 is fixedly secured to a stud shaft 26 which is journaled in a carrier 27 rotatably mounted upon a cross rod 28 as indicated in Fig. 1. A spring (not shown) bears against the carrier and serves to retain the carrier in engagement with a stop to position the roll in operative relation to the knife and presser foot. The shaft 26 may be rotated in the carrier 27 by an operating handle 30, thus oscillating the arm 20 to adjust the feed roll 5 circumferentially of the skiving knife. With the above described

construction, the feed roll has provision for a yielding movement about one end in the plane of the knife edge, a bodily movement to and from the knife edge, and an adjustment circumferentially of the knife.

When employing a metal feed roll, it is essential that the periphery of the roll be provided with teeth or other means for insuring a positive feed of the work. The roughened or toothed periphery of the feed roll accumulates leather skivings which are carried around upon the roll clogging the teeth, and preventing the positive feed of the work. In addition the material often collects in bunches on the roll causing the formation of an imperfect skiving, as the surface of the feed roll is made uneven and does not conform to the curvature of the knife. In the present invention, the skivings and other material are positively removed from the roll by a stripper supported adjacent to the under side of the feed roll and consisting of a series of rigid fingers which enter and fit closely in narrow slots formed in the surface of the feed roll. The feed roll shown in the illustrated embodiment of the invention is provided with a plurality of teeth arranged to grip and feed the work positively forming what is known as a "sewing machine feed." The stripper is supported by downward extensions formed on the arms 15 and 16 respectively and is provided with a series of fingers 35 which project upwardly into the annular recesses 36 formed in the surface of the feed roll. All of the stripper fingers are rigidly secured to a transverse rod 37 carried by the downward extensions, and this construction constitutes means for maintaining the fingers in permanent engagement with the bottom of the slots 36. Each finger 35 as shown clearly in Fig. 4 consists of a thin wedge-shaped member tapering to a point which bears upon the bottom of the recess and fits closely within it. By constructing the fingers of the stripper in this manner, they may be made exceedingly thin without impairing the rigidity, thereby enabling narrow slots to be used and preventing the material to be skived from working into the slots and forming an imperfect skiving. The slots are too narrow to allow the skivings and chips to work into them to any considerable depth and as the ends of the fingers are located beneath the surface they engage under and positively remove all the material even when it adheres firmly to the surface of the roll. With the above de-

scribed construction, a simple and compact mechanism is provided for positively ejecting any accumulation from the surface of the roll which partakes of all movements of the roll during the operation of the machine, avoiding the necessity of a separate adjustment or the provision of a yielding support to compensate for movement between the stripper and feed roll.

While it is preferred to employ the specific construction and arrangement of parts shown and described, it will be understood that this construction and arrangement is not essential except so far as specified in the claims and may be changed or modified without departing from the broader features of the invention.

Having thus described the invention, what is claimed is:—

1. A skiving machine having, in combination, a knife, a presser foot, a feed roll provided with a series of grooves formed in its surface and having provision for a tipping movement in the plane of the knife edge, a bodily movement to and from the knife edge, and stripper fingers supported adjacent to the feed roll and projecting into said grooves formed in the surface of the roll, substantially as described.

2. A skiving machine having, in combination, a knife, a presser foot, a feed roll provided with a series of narrow slots formed in its surface and having provision for a tipping movement in the plane of the knife edge, a bodily movement to and from the knife edge and thin wedge-shaped fingers closely received in the slots, each finger having a pointed end engaging with the bottom of its respective slot, and means for rigidly maintaining the fingers in permanent engagement with the feed roll, substantially as described.

3. A skiving machine having, in combination, a cylindrical knife, a presser foot supported above the knife, a feed roll supported within the knife and provided with a series of slots in its surface, a pair of arms in which the feed roll is journaled having downward extensions, a transverse rod mounted in the extensions and a plurality of stripper fingers rigidly secured to the rod and received closely into said slots formed in the feed roll, substantially as described.

EUGENE F. DAVENPORT.

Witnesses:

ELIZABETH C. COUPE,
EMILY M. MENN.