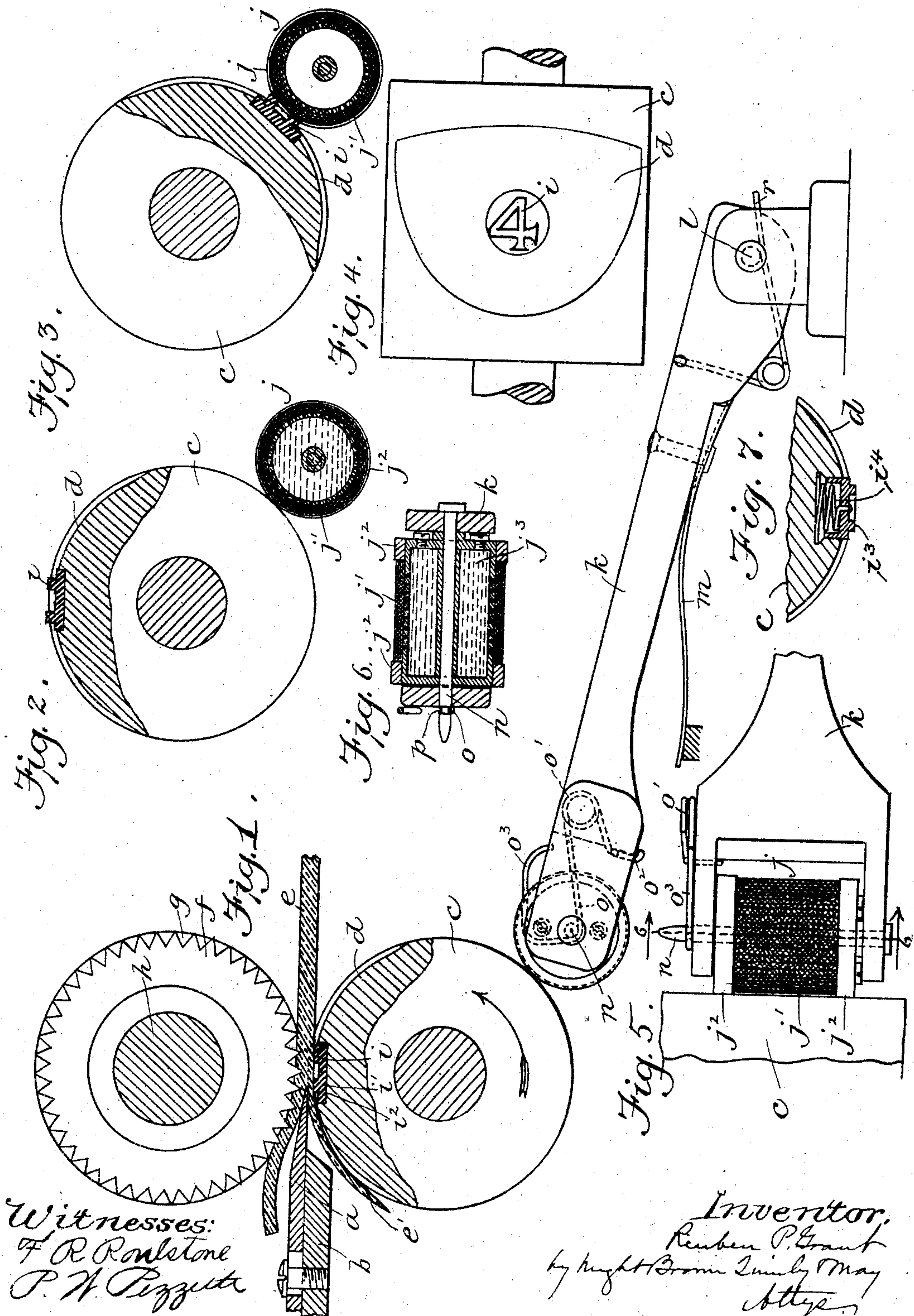


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MARKING OR PRINTING MEANS FOR LEATHER SKIVING MACHINES.
APPLICATION FILED JULY 23, 1908.

928,514.

Patented July 20, 1909.



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UNITED STATES PATENT OFFICE.

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MARKING OR PRINTING MEANS FOR LEATHER-SKIVING MACHINES.

No. 928,514.

Specification of Letters Patent.

Patented July 20, 1909.

Application filed July 23, 1908. Serial No. 444,939.

To all whom it may concern:

Be it known that I, REUBEN P. GRANT, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Marking or Printing Means for Leather-Skiving Machines, of which the following is a specification.

This invention relates particularly to box-toe blank skiving machines, the essential parts of which are a splitting knife and a pair of feed rolls, the nip of which is arranged to present the leather to be skived to the edge of the splitting knife, the bed roll having a depression in its periphery corresponding in contour to the skived blank to be produced, and constituting a matrix, while the companion or pressure roll is arranged to press a sheet of leather against the bed roll, and cause it to conform closely to the matrix. The action of the machine is to produce a blank which conforms accurately to the shape of the matrix, the portion of the leather which constitutes the blank, sinking into the matrix under the action of the pressure roll, so that all portions of the sheet that are not pressed into the matrix are cut away in the form of a skiving, leaving a blank which is perfectly skived around its entire margin.

The invention has for its object to provide an improved means for printing or marking the side of the blank that is in contact with the matrix, so that a mark indicating the size of the blank, or giving other information, may be impressed on the blank while it is being skived.

The invention consists in the improvements which I will now proceed to describe and claim.

Of the accompanying drawings forming a part of this specification,—Figure 1 represents a sectional view of a portion of a skiving machine embodying my invention, certain parts being shown in elevation. Figs. 2 and 3 represent end views of the bed roll in different positions and shown partly in section, the inking roll being shown wholly in section. Fig. 4 represents a side view of the bed roll. Fig. 5 represents a bottom plan view of the inking roll and a portion of the bed roll. Fig. 6 represents a section on line 6—6 of Fig. 5. Fig. 7 represents a sectional view of a modification.

The same letters of reference indicate the same parts in all the figures.

In the drawings, *a* represents a leather splitting knife, which may be of any suitable character, and may be either fixed, or movable as a band knife, the knife being here shown as affixed to a suitable support *b*.

c represents a bed roll, in the periphery of which is a depression *d* which constitutes a matrix, said depression being of appreciable depth at its central portion, and its depth gradually decreasing to its margin, where it joins the concentric portion of the periphery of the roll, as shown in Fig. 1. The feed or pressure roll which coöperates with the bed roll in pressing one side of a sheet of leather or other material *e* into the matrix, and in forcing the sheet *e* edge-wise against the splitting knife, has an acting face or periphery, which may be formed by a series of rigid collars *f* and a series of compressible elastic collars *g*, alternating with each other, and being mounted upon a cylindrical body or shaft *h*, which is tubular, and constitutes a hub adapted to be mounted on a fixed journal, as shown in Letters Patent of the United States, No. 887,625, dated May 12, 1908. The two rolls are so arranged relatively to the splitting knife that they nip the sheet *e*, and present it to the edge of the knife in the direction required to cause the skiving action. The said rolls are so spaced apart that when the matrix *d* is wholly at one side of the nip of the rolls, as shown in Fig. 1, the teeth *f'* will indent one side of the sheet *e* somewhat deeply, as shown in Fig. 2, the corresponding portions of the elastic sections *g* yielding, and being compressed by the sheet *e*, and at the same time maintaining a feeding engagement with the sheet. When the matrix is brought by the rotation of the bed roll into the nip of the rolls, the side of the sheet bearing on the bed roll is pressed by the feed roll into the matrix, so that the portions of the sheet which are outside the matrix are cut away by the skiving knife, the result being a skived blank *e'*, the margin of which conforms to the shape of the margin of the matrix.

In carrying out my present invention, I provide the bed roll *c* with a marking or printing member *i* which projects outwardly from the surface of the matrix *d*, and is

adapted to contact with the grain side of the leather which forms the blank e' , and thus mark said blank in such manner as to designate its size, or impart other information, the marking member i being here shown as a printing character adapted to print a numeral upon the blank e' . The marking member i is preferably of elastic material, and its printing surface normally projects to a considerable extent from the matrix surface, as indicated in Fig. 2, means being employed, as hereinafter described, to ink the outer face of the marking member, and thus cause it to impart a colored impression upon the blank. In this case, the yielding nature of the marking member permits it to yield to the pressure of the portion of the leather that is forced into the matrix by the pressure roller, as indicated in Fig. 1. It is obvious, however, that the marking member may be of rigid material, in which case its projection from the matrix surface would be less than that shown in Fig. 1, and would be only sufficient to enable it to properly mark the leather pressed into the matrix.

An inking roll j is employed which has an absorbent peripheral portion j' adapted to contact with the marking member i , and raised non-absorbent end portions j^2 which are in rolling contact with the perimeter of the bed roll c , and prevent contact between the absorbent portion j' and any part of the said perimeter, the said end portions j^2 being at opposite sides of the path of the marking member i , so that the latter is caused to pass between them, and make contact with the absorbent portion j' by the rotation of the bed roll. The inking roll j is preferably provided with a reservoir j^3 having a perforated periphery upon which the absorbent portion j' rests, so that ink flows from the reservoir to the absorbent portion, and saturates the latter. The raised portions j^2 are preferably metal rings secured upon the end portions of the reservoir. The raised end portions of the inking roll are pressed yieldingly against the perimeter of the bed roll so that they can follow the contour of the said perimeter as the latter revolves. The means here shown for pressing the inking roll yieldingly against the bed roll comprise an oscillatory arm or carrier k which is pivoted at l to a fixed ear on the skiving machine, the inking roll being journaled in bearings on the swinging end of the carrier, and a spring m adapted to press the inking roll against the bed roll. The inking roll may be detachably secured to the carrier k by means of a journal pin or stud n inserted in orifices formed for its reception in the arms of the forked outer end of the carrier, as shown in Figs. 5 and 6. Said journal pin passes through the ends of the inking roll, and is detachably held in place by means of a spring latch o attached to the

carrier and engaging a groove p in the journal. The latch is composed of a length of wire having a helical portion o' , one end of the wire being attached at o^2 to the carrier, and the helical portion being adapted to hold the engaging portion of the latch in contact with the journal n . The latch is provided with a handle portion o^3 whereby it may be disengaged from the journal. The pivot pin l which connects the carrier with the supporting ear may also be detachably secured in place by means of a spring latch r attached to the carrier, and engaging a groove in the pin l . It will be seen from the foregoing that provision is made for printing or marking the blanks e' while they are being skived, and for preventing the defacement of the blanks by ink improperly applied.

It is desirable that the acting face of the marking member i be normally projected from the face of the matrix into position to be inked, and adapted to yield to the blank, so that it will be substantially flush with the face of the matrix when the bed roll is in the position shown in Fig. 1, thus preventing a protuberance on the matrix surface, and a corresponding reduction of the thickness of the portion of the blank which is in contact with the marking member. This yielding action of the marking member is preferably secured by making the latter of elastic material, such as vulcanized rubber, the marking member having an elastic base i' formed as a plug having a close fit in a socket i^2 formed for its reception in the bed roll. The said plug may be inserted and removed like the stopper of a bottle, so that different marking members may be used interchangeably.

In Fig. 7 I show a marking member i^3 which may be of metal and is backed by a spring i^4 which permits the marking member to yield.

I claim:

1. A skiving machine comprising a bed roll having a matrix in its periphery, a feed roll opposed to the bed roll, and adapted to force a blank into the matrix, a splitting knife arranged to cooperate with said rolls in skiving the blank, and a marking member projecting from the matrix surface, whereby the blank is marked while it is being skived, the acting portion of the marking member being yieldingly projected above the face of the matrix, and adapted to be retracted by the blank to a position substantially flush with said face.

2. A skiving machine comprising a bed roll having a matrix in its periphery, a feed roll opposed to the bed roll and adapted to force a blank into the matrix, a splitting knife arranged to cooperate with said rolls in skiving the blank, a marking member projecting from the matrix surface, the acting portion of the marking member being

yieldingly projected above the face of the matrix, and adapted to be retracted by the blank to a position substantially flush with said face, and means for inking said marking member, said inking means being adapted to act on the marking member when the latter is projected.

3. A skiving machine comprising a bed roll having a matrix in its periphery, a feed roll opposed to the bed roll, and adapted to force a blank into the matrix, a splitting knife arranged to cooperate with said rolls in skiving the blank, a marking member projecting from the matrix surface, and an inking roll having an inking portion located in the path of the marking member and adapted to contact therewith, said roll having means for preventing contact between the inking portion and the bed roll.

4. A skiving machine comprising a bed roll having a matrix in its periphery, a feed roll opposed to the bed roll and adapted to force a blank into the matrix, a splitting knife arranged to cooperate with said rolls in skiving the blank, a marking member projecting from the matrix surface, and an inking roll having an absorbent periphery located in the path of the marking member, and raised non-absorbent end portions contacting with the perimeter of the bed roll.

5. A skiving machine comprising a bed roll having a matrix, a marking member attached to the bed roll and projecting from the matrix surface, an oscillatory carrier pivoted adjacent to the bed roll and pressed yieldingly toward the latter, and an inking

roll mounted on the carrier and pressed thereby against the bed roll, said inking roll having an absorbent peripheral portion located in the path of the marking member and adapted to contact therewith, and means for preventing contact between said absorbent portion and the bed roll.

6. A skiving machine comprising a bed roll having a matrix, a marking member attached to the bed roll and projecting from the matrix surface, an oscillatory carrier pivoted adjacent to the bed roll and pressed yieldingly toward the latter, and an inking roll mounted on the carrier and pressed thereby against the bed roll, said inking roll having a reservoir, an absorbent peripheral portion communicating with the reservoir and located in the path of the marking member, and raised non-absorbent peripheral end portions contacting with the perimeter of the bed roll.

7. A skiving machine comprising a bed roll having a matrix, a marking member attached to the bed roll and projecting from the matrix surface, an oscillatory carrier pivoted adjacent to the bed roll and pressed yieldingly toward the latter, an inking roll mounted on the carrier and pressed thereby against the bed roll, and means for detachably securing the inking roll to the carrier.

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

REUBEN P. GRANT.

Witnesses:

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P. W. PEZZETTI.