

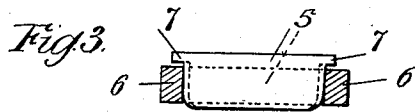
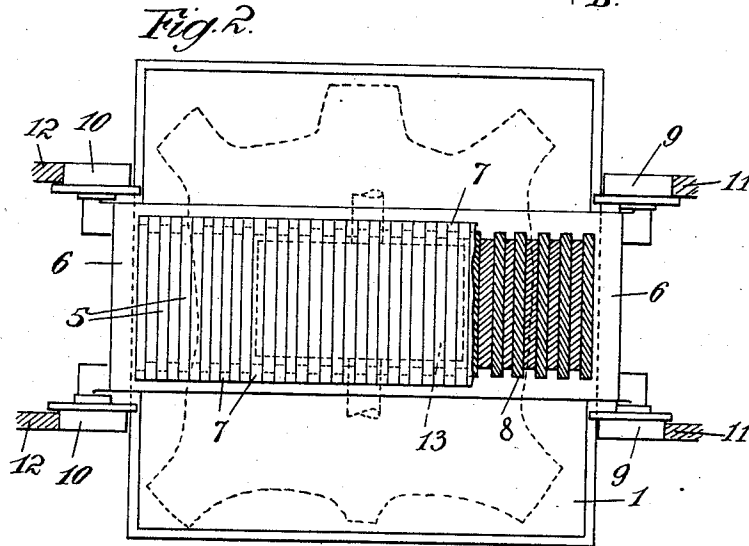
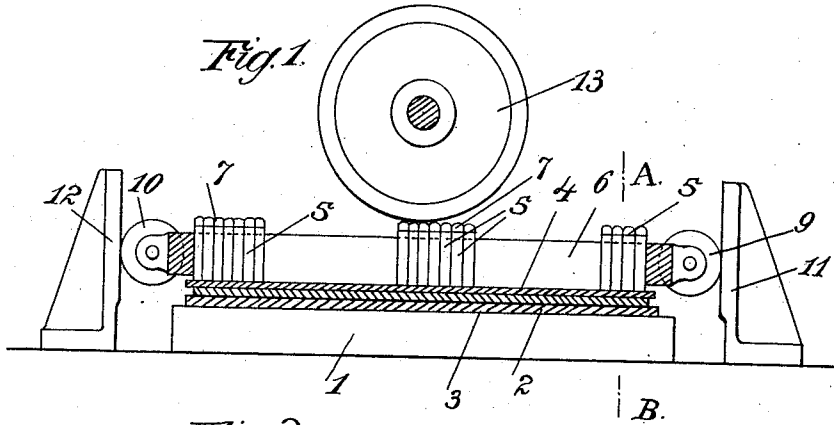
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APPARATUS FOR IMPRESSING PATTERNS ON LEATHER AND LIKE SOFT MATERIALS.

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1,063,084.

Patented May 27, 1913.



Witnesses.

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UNITED STATES PATENT OFFICE.

JULIUS THOMSON, OF OFFENBACH-ON-THE-MAIN, GERMANY.

APPARATUS FOR IMPRESSING PATTERNS ON LEATHER AND LIKE SOFT MATERIALS.

1,063,084.

Specification of Letters Patent.

Patented May 27, 1913.

Application filed January 3, 1912. Serial No. 669,285.

To all whom it may concern:

Be it known that I, JULIUS THOMSON, manufacturer, a subject of the German Emperor, and resident of Offenbach-on-the-
5 Main, Germany, with post-office address Tulpenhofstrasse 31, have invented new and useful Improvements in Apparatus for Impressing Patterns on Leather and Like Soft Materials, of which the following is a specification.

The known apparatus for impressing patterns on leather and like soft materials have the disadvantage that as the roller travels over the material the latter is shifted somewhat in the direction of travel by the roller.
15 In this manner not only is the material stretched but the pattern impressed is not quite sharp when the roller travels to and fro several times. In order to overcome this trouble it has been proposed to provide a layer of material stretched laterally beneath the roller; but with this arrangement there is a shifting of the layer and with it the material being rolled. It follows that this
20 attempt to overcome the difficulty has not been completely successful.

The present invention eliminates the objectionable shifting of the material under treatment by interposing between the roller and the material a series of blocks which transmit the pressure, over which the roller travels, thus bringing them successively into action. These blocks are arranged in a guide which prevents them from shifting laterally.
35 They are only movable vertically so that there can be no lateral push on the material being impressed in the direction of the movement of the roller. The travel of the roller over the several blocks subjects the latter successively to the vertical pressure of the roller, which is thus transmitted to the material lying beneath the blocks, while the lateral push produced by the passage of the roller is taken up by a frame surrounding
40 the blocks and is transmitted to fixed supports. In this manner therefore the vertical pressure alone can take effect upon the material to be impressed and this pressure is caused to act in succession on all parts of the material.

The accompanying drawings show an example of an apparatus constructed according to the invention.

55 Figure 1 is a sectional front elevation of the apparatus, Fig. 2 a sectional plan and Fig. 3 a cross section on line A—B of Fig. 1.

On the table 1 is laid the grain plate 2 in known manner and upon this the material to be impressed, for example a piece of leather. On this leather is laid an elastic
60 sheet 4 upon which the blocks 5 rest. These blocks consist of plates separately suspended side by side in a frame 6; the plates are somewhat rounded transversely at their upper edges but their lower edges have sharp
65 angles and lie in close contact with each other. The upper part of each end of the plate is extended in the form of a projection 7 so that all the plates can be raised together by lifting the frame 6.
70

In the example shown every alternate plate fits in grooves 8 in the sides of the frame in order to insure correct guiding in the vertical direction. The frame 6 carries
75 rollers 9 and 10 which abut against supports 11 and 12 and thus prevent lateral shifting of the frame. The roller 13 is caused to travel to and fro in known manner over the blocks 5.

As the roller passes over the blocks 5 the
80 latter are successively pressed against the yielding sheet 4 only in the vertical direction as lateral pressure is taken up by the frame and transmitted by means of rollers 9 and 10 to the supports 11 and 12. Stretching
85 of the leather in the direction of travel of the roller is therefore prevented. The yielding sheet 4 distributes the pressure somewhat laterally so that projections on the leather between the two blocks are not pro-
90 duced.

The rounding of the upper edges of the blocks prevents concussion of the roller against those blocks which have not yet been pressed down. The vertical guiding of the
95 several blocks 5 may be effected in other manners than that shown. It is not essential that alternate plates shall be guided in grooves in the frame; such grooves may be provided at greater distances apart or may
100 be omitted altogether if the play between the several blocks is kept as small as possible. For the frame 6 rods may be substituted engaging in slots in the blocks 5.

When the pressing operation is completed
105 the roller 13 is run off laterally from the blocks and then the whole frame together with the blocks is lifted, whereupon the table 1 is shifted through the breadth necessary for applying the pressure to the next
110 part of the leather. Blocks may also be used in accordance with this invention in appa-

ratus in which the material under treatment is rolled from below or in which the roller can be shifted transversely by the distance equal to its own pressure path while the table with the material under treatment remains stationary.

Now what I claim and desire to secure by Letters Patent is the following:

1. In apparatus for impressing patterns on leather, a stationary impression plate, a series of pressure-transmitting blocks, means for guiding these blocks and means for successively depressing the aforesaid blocks.

2. In apparatus for impressing patterns on leather, a stationary impression plate, a series of pressure-transmitting blocks, means for guiding these blocks, a protecting sheet placed between the said series of blocks and the leather to be impressed, and means for successively depressing the aforesaid blocks.

3. In apparatus for impressing patterns on leather, a stationary impression plate, a series of pressure-transmitting blocks, means for guiding these blocks, a protecting sheet placed between the said series of blocks and the leather to be impressed, and a roller for successively depressing the aforesaid blocks.

4. In apparatus for impressing patterns on leather, a stationary impression plate, a series of pressure-transmitting blocks, means for guiding these blocks perpendicularly to the surface of the leather to be impressed, a protecting sheet placed between the said series of blocks and the said leather, and a

roller adapted to travel over and successively depress the aforesaid blocks.

5. In apparatus for impressing patterns on leather, a stationary impression plate, a series of pressure transmitting blocks, a stationary frame adapted for guiding these blocks perpendicularly to the surface of the leather to be impressed, a protecting sheet placed between the said series of blocks and the said leather, and a roller adapted to travel over and successively depress the aforesaid blocks.

6. In apparatus for impressing patterns on leather, a stationary impression plate, a stationary guide frame, a series of pressure-transmitting blocks having plain under surfaces and assembled in this frame so as to allow them to move independently of each other perpendicularly to the surface of the leather to be impressed, a protecting sheet placed between the under side of the said series of blocks and the flesh side of the said leather, and a roller adapted to travel over and successively depress the aforesaid blocks.

In testimony, that I claim the foregoing as my invention, I have signed my name in presence of two witnesses, this 20th day of December 1911.

JULIUS THOMSON.

Witnesses:

AUGUST PETRI,
HERMANN LENNIG.