

(No Model.)

N. LEIDGEN.
LEATHER SPLITTING MACHINE.

No. 554,783.

Patented Feb. 18, 1896.

Fig. 1.

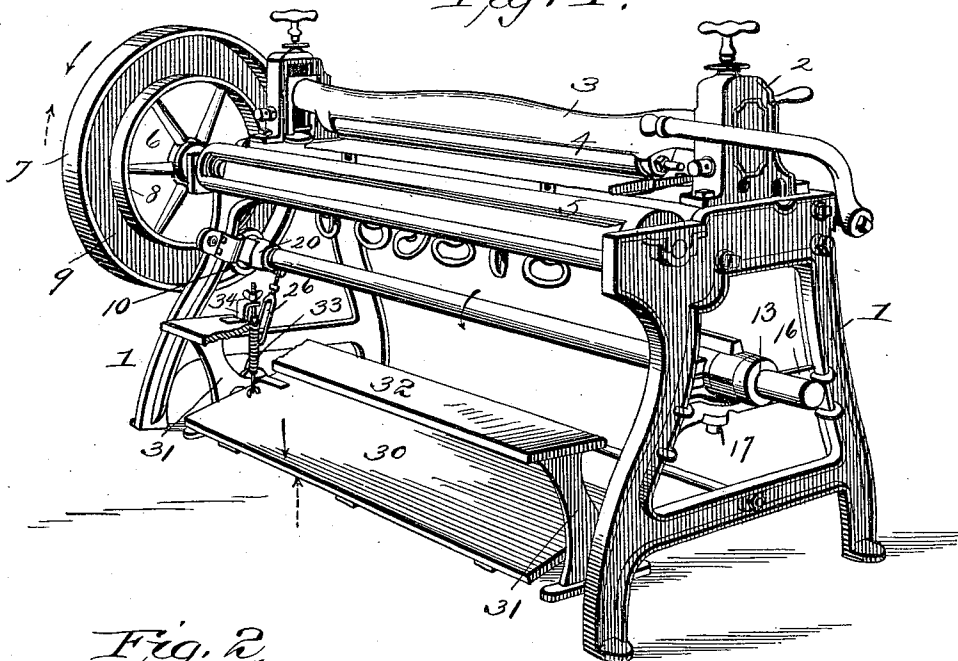


Fig. 2.

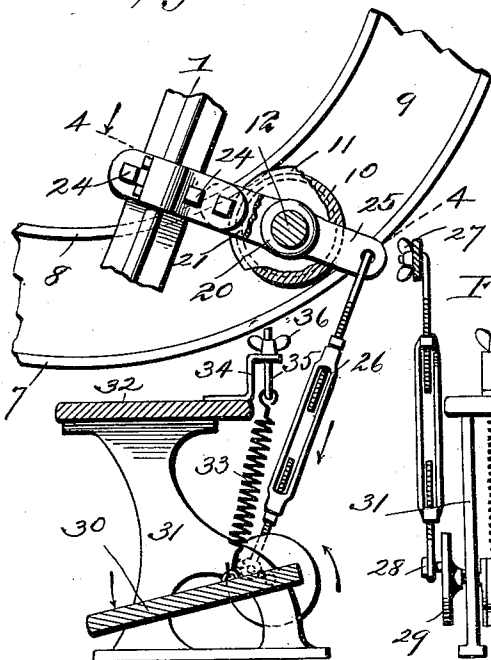


Fig. 3.

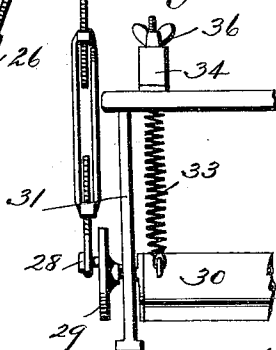


Fig. 4.

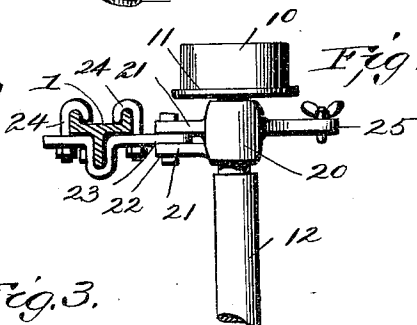
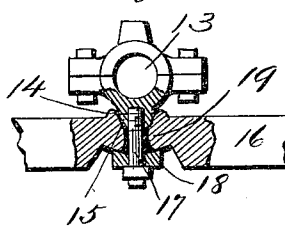


Fig. 5.



Witnesses
N. Leidgen
Alfred T. Gage.

Inventor
N. Leidgen
by *A. T. Gage*
Attorney

UNITED STATES PATENT OFFICE.

NICOLAUS LEIDGEN, OF MILWAUKEE, WISCONSIN.

LEATHER-SPLITTING MACHINE.

SPECIFICATION forming part of Letters Patent No. 554,783, dated February 18, 1896.

Application filed April 17, 1895. Serial No. 546,011. (No model.)

To all whom it may concern:

Be it known that I, NICOLAUS LEIDGEN, a citizen of the United States, residing at Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in Leather-Splitting Machines; and I do 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, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

My invention relates to leather-splitting machines, and it has for its object to provide simple, efficient, and quickly-operating means for revolving the drawing-roller in a direction to roll up the leather thereon while being split and afterward reversing the direction of rotation of the roller, so as to unwind the split leather therefrom.

To the accomplishment of the foregoing and such other objects as may hereinafter appear, the invention consists in the construction and also in the combination of parts hereinafter particularly described and then sought to be specifically defined by the claims, reference being had to the accompanying drawings, forming a part hereof, and in which—

Figure 1 is a perspective of a leather-splitting machine of the usual construction in its several parts, except where it embodies my invention. Fig. 2 is a detail view, on an enlarged scale, with parts broken away and in section, showing the features of my invention applied to the machine. Fig. 3 is a detail view looking from the left of Fig. 1, showing certain parts of the invention. Fig. 4 is a transverse section on the line 4 4 of Fig. 2, showing the friction-disk, however, in full lines; and Fig. 5 is a detail view of the bearing for one end of the driving and friction-disk shaft, partly in section.

In the drawings, the numeral 1 designates the frame of an ordinary splitting-machine sustaining at its upper ends in the brackets 2 the ordinary adjustable and rotatable beam 3, which carries the usual gaging-roller 4 above the splitting-knives arranged in the usual manner, and in front of which is the

drawing-roller 5 of usual construction, but provided at its end with the friction-wheel 6, which constitutes one element used in connection with my invention.

The friction-wheel 6 is formed with an outer rim, 7, and an inner rim, 8, and in the space 9 between these two ends lies a friction-disk 10, made of leather, paper, or other suitable material, and which in its normal position lies centrally between the two rims 7 and 8 so as not to be in contact with either. The disk 10 has preferably a flange 11, but the flange is not absolutely essential. The disk 10 is secured to one end of the driving-shaft 12, which is journaled at one end, say at the end where the driving-pulley (not shown) will be attached to it, in a suitable two-part box 13, the lower part of which has a stud or boss 14, which fits into a socket 15 formed in a transverse bar 16, supported by clips or otherwise from one end of the machine-frame. This bearing or box 13 is held in place by a bolt 17, which passes through a washer 18 and an opening 19 formed in the transverse bar 16, the opening 19 being of such size as to permit the bolt to have lateral play therein, so that the box or bearing 13 will have practically a ball-and-socket connection with the bar 16, thus allowing the proper movement of the friction-disk end of the shaft 12 in the working of this invention.

It will be observed that the inner face of the washer 18 is concave and that the portion of the bar 16 against which it bears has a convex surface, so as to permit the easy movement of the box or bearing 13. The friction-disk end of the shaft 12 is journaled in a suitable box or bearing which will have such a movement as will permit the friction-disk easily to be thrown into engagement with either the outer or the inner rim to the friction-wheel, as desired. The preferred construction of this movable box or bearing, which is designated by the numeral 20, is illustrated clearly in Fig. 4 of the drawings, and may be a sleeve, such as illustrated in that figure, and having projecting from one side one or more ears 21, which will be hinged by a bolt 22 to a bracket 23, which may be made to conform to the shape of the iron constituting one of the sides of the frame 1 and be secured thereto by clip-bolts 24, all as clearly illus-

trated in Fig. 4 of the drawings. This mode of supporting the box or bearing 20 permits the latter to swing so as to bring the friction-disk into contact with either of the rims 7 and 8, according as it is desired to turn the drawing-roller in one direction or the other. From one side of the bearing or box 20 projects an arm 25, so that the same can be connected by suitable means to a foot-pedal in such manner that by operating the pedal the friction-disk 10 can be thrown against either rim 7 or 8 at will. As a suitable connecting means I have illustrated a turnbuckle device 26 connected at one end to the arm 25 by a thumb-nut 27 or otherwise and at its lower end to a crank-pin 28, which may project from a disk 29, secured to one journal of the foot-pedal 30, and so located or positioned that when the foot-pedal is depressed in the direction indicated by arrows in Figs. 1 and 2 the friction-disk 10 will be drawn down into contact with the outer rim, 7, of the friction-wheel 6, and said wheel be caused to rotate in the direction indicated by the full arrow in Fig. 1 of the drawings, thus drawing the leather through the machine and winding it upon the drawing-roller 5. When it is desired to reverse the rotation of the drawing-roller so as to unwind the leather, the toe of the operator will be placed under the front edge of the foot-pedal 30 and the latter pressed upward, so that through the crank-pin and the turnbuckle device the friction-disk will be thrown up against the inner rim, 8, of the friction-wheel, and thus cause that wheel to turn in the direction indicated by dotted arrows in Fig. 1, and thus unwind the leather from the drawing-roller.

The foot-pedal 30 is suitably journaled in the two standards 31, which are connected together by the shelf or bar 32, and a spring 33 is illustrated as connected at one end to the pedal 30 and at the other end to a bracket 34, which may be supported on the shelf or bar 32, the spring being connected to the bracket by a hook or bolt 35 and a nut 36, by means of which the tension of the spring can be regulated. This spring sustains the foot-pedal in such position that the friction-disk 10, by reason of its connections with said foot-pedal, will be normally held centrally between the two rims 7 and 8 of the friction-wheel and out of contact with both of them. By a slight depression of the foot-lever 30 the friction-disk will be thrown in contact with one rim, and as soon as the pressure is taken off the foot-lever the spring will restore the friction-disk to its normal position. When the foot-lever is slightly raised to throw the friction-disk into contact with the outer rim of the friction-wheel the friction-disk, after the pressure is taken off, will drop by gravity to its normal position and the spring 33 will prevent the foot-pedal from dropping so low that the friction-disk would be thrown into contact with the outer rim of the friction-wheel. It will thus be seen that these parts are rendered

very prompt and sensitive in their direction, and while I prefer to use such particular construction and arrangement of parts still it is obvious that changes can be made therein without departing from the essential features of my invention considered in their most comprehensive scope. The same is true of other parts of the structure entering into the invention.

Having described my invention and set forth its merits, what I claim is—

1. In a leather-splitting machine, the combination with the drawing-roller, of a friction-wheel having two peripheries or rims, a driving-shaft having a friction-disk pivotally sustained out of contact with both of said peripheries or rims, and means for throwing said friction-disk into contact at will with either of said peripheries or rims for rotating the drawing-roller in either direction desired, substantially as and for the purposes described.

2. In a leather-splitting machine, the combination with the drawing-roller, of a friction-wheel having two peripheries or rims, a driving-shaft having a friction-disk pivotally sustained out of contact with both of said peripheries or rims, means for throwing said friction-disk into contact at will with either of said peripheries or rims for rotating the drawing-roller in either direction desired, and means for automatically restoring the friction-disk out of contact with both rims of the friction-wheel, substantially as and for the purposes described.

3. In a leather-splitting machine the combination with the drawing-roller, of a friction-wheel having two peripheries or rims, a driving-shaft supported in bearings permitting lateral movement of the shaft, a friction-disk at one end of said shaft and normally standing between the two peripheries of the friction-wheel, and means for throwing said disk into engagement with either of the peripheries or rims of the friction-wheel for the purpose of revolving the drawing-roller in either direction as desired, substantially as and for the purposes described.

4. In a leather-splitting machine, the combination with the drawing-roller, of the friction-wheel having two peripheries or rims, the driving-shaft adapted to have lateral play and provided at one end with a friction-disk normally out of engagement with both of the peripheries or rims of the friction-wheel, an operating pedal or lever, means connecting said lever with said driving-shaft for throwing the friction-disk into engagement with either of the peripheries or rims of the friction-wheel desired, and a spring for normally holding the friction-disk between the two peripheries or rims of the friction-wheel, substantially as and for the purposes described.

5. In a leather-splitting machine, the combination of the friction-wheel having two peripheries or rims, the driving-shaft having a lateral play and provided with a friction-disk between the two peripheries or rims of the

friction-wheel, the swinging journal bearing or box for the friction-disk end of the driving-shaft, the operating pedal or lever, means connecting said pedal or lever and swinging box or bearing, and means for normally maintaining the friction-disk out of contact with the two peripheries or rims of the friction-wheel, substantially as and for the purposes described.

10 6. In a leather-splitting machine, the combination of the friction-wheel having two peripheries or rims, the driving-shaft having a lateral play and provided with a friction-disk lying between the two peripheries or rims of
15 the friction-wheel, the swinging journal bearing or box for the friction end of the driving-shaft, the operating pedal or lever, means connecting said pedal or lever with the swinging box or bearing for the driving-shaft, and
20 a spring for maintaining the friction-disk centrally between the two peripheries or rims of the friction-wheel and for restoring the foot pedal or lever to its normal position when moved therefrom, substantially as and for
25 the purposes described.

7. In a leather-splitting machine, the combination with the drawing-roller, of the friction-wheel having the two peripheries or rims, the driving-shaft journaled at one end in a box or bearing having a universal movement and
30 provided at the other end with a friction-disk lying between the two peripheries or rims of the friction-wheel, a swinging box or bearing supporting the friction end of the driving-shaft, an operating pedal or lever, means connecting said pedal or lever with the swinging box or bearing, and means for maintaining the friction-disk normally out of contact with the two peripheries or rims of the friction-wheel, substantially as and for the purposes described. 40

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

NICOLAUS LEIDGEN.

Witnesses:

H. J. RIEMENSCHNEIDER,
FAURTIN PRINZ.