No. 702,450. Patented June 17, 1902.

C. J. MILLER.

METHOD OF FINISHING THE SURFACE OF LEATHER.

(Application filed May 2, 1902.)

(No Model.)

Fig. 1.

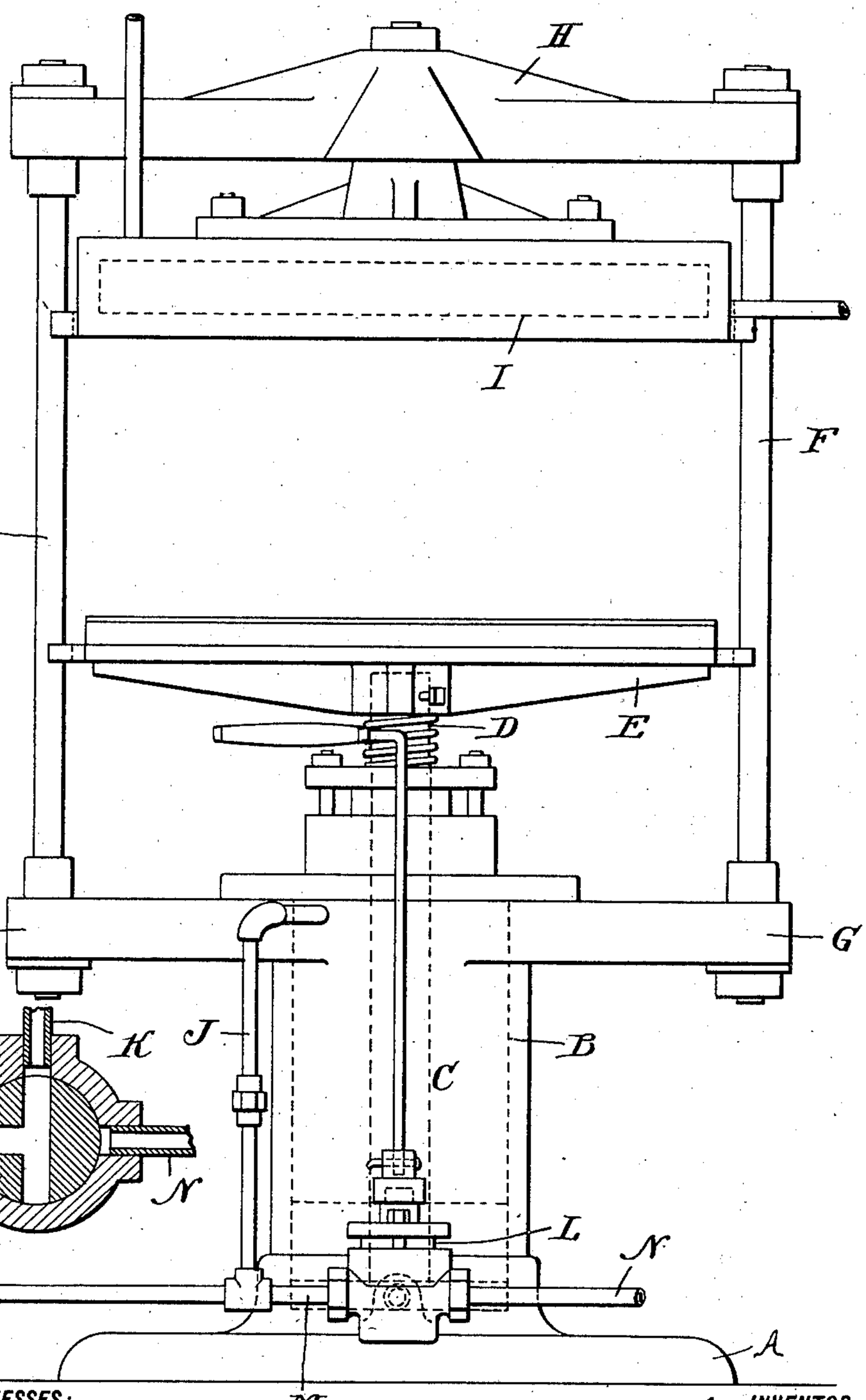

Fig. 2.

WITNESSES:
M. M. Hamilton
M. H. Ellis

INVENTOR
Chas. J. Miller
BY
Harding & Harding
ATTORNEYS.

UNITED STATES PATENT OFFICE.

CHARLES J. MILLER, OF PHILADELPHIA, PENNSYLVANIA.

METHOD OF FINISHING THE SURFACE OF LEATHER.

SPECIFICATION forming part of Letters Patent No. 702,450, dated June 17, 1902.

Application filed May 2, 1902. Serial No. 105,576. (No specimens.)

To all whom it may concern:

Be it known that I, CHARLES J. MILLER, a citizen of the United States, residing at Philadelphia, county of Philadelphia, and State of Pennsylvania, have invented a new and useful Improvement in Methods of Finishing the Surface of Leather, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, which form a part of this specification.

It is very desirable that the surface of leather as marketed should have a smooth surface devoid of appearance of the grain or wrinkles. Many methods have been tried to accomplish this result; but while they do reduce the surface imperfections considerably they still remain to a degree sufficient to substantially impair the appearance of the leather. I have discovered that if the leather to be treated is pressed between two parallel surfaces, either straight or curved, one of which is heated, the resultant surface of the leather will be practically smooth and free from wrinkles and the appearance of the grain will be practically eliminated. In place of having one of the surfaces heated both of the surfaces may be heated. By pressing the leather between two parallel surfaces, one or both of which is heated, the surface of the leather is subjected to heat and pressure, which evens and smooths the surface, bringing the grain more closely together, eliminating wrinkles and danger of separating the joints or grain of the leather.

To carry out my process, the details of the machine are immaterial. In the accompanying drawings I illustrate one form of machine which is adapted for this purpose.

Figure 1 is a perspective view of machine. Fig. 2 is a detail sectional view of valve.

A is the base of the machine. In the upright B is the cylinder C, in which is the piston D, carrying the plate E, guided in its vertical movement by the uprights F, secured to the bracket G, projecting from the upright B. At the top the uprights F are connected by the frame H, to which in line of movement of plate E is connected the hollow plate I, which is heated internally by steam, hot water, or gas in the ordinary manner.

J is a passage extending from the upper portion of cylinder C to the exhaust.

K is a passage leading from the valve L to the lower portion of cylinder C. M is a passage from the valve L to the exhaust, and N is a passage from the valve L to the source of pressure-supply. By operating the valve L the lower portion of cylinder C may be connected either with the exhaust or with the pressure-supply, the upper portion of the cylinder being at all times connected with the exhaust.

The leather to be treated by my method is placed flat upon the plate E, the valve L operated to admit pressure beneath piston D, and the plate E is moved against the plate I, and the leather upon the plate E is maintained under pressure against the fixed heated surface of plate I, and until the valve L is turned to connect the lower portion of cylinder C with the exhaust the leather is pressed between two parallel surfaces. When the operation is completed, the valve L is operated to connect the lower portion of cylinder C with the exhaust, and the weight of plate E and piston D causes them to descend, and the leather may be removed.

In practice I have found that the surface of leather treated by my method is highly improved and the leather much more salable.

As specific examples of my improved method of treating skins I have treated goat and sheep skins with the following temperatures and pressures: The heated surface or plate was at approximately 270° Fahrenheit. The applied pressure was approximately from five thousand to nine thousand pounds, and the duration of the application of the pressure was from five seconds to a minute and a half, the difference in the amount of applied pressure and its duration being dependent upon the thickness of the skins and the thickness or coarseness of the grain. I desire to be understood as not in any way limiting myself to these details, as the heat, pressure, and duration will necessarily vary with

the thickness, character, and quality of the skins to be treated; nor, of course, do I intend to limit myself to goat or sheep skins alone, as the above were intended merely as specific examples of the application of my method.

Having now fully described my invention, what I claim, and desire to protect by Letters Patent, is—

The hereinbefore-described method of finishing the surface of leather, which consists in pressing the leather between two parallel surfaces, one or both of which are heated.

In testimony of which invention I have hereunto set my hand, at Philadelphia, on this 30th day of April, 1902.

CHAS. J. MILLER.

Witnesses:
M. F. ELLIS,
M. M. HAMILTON.