

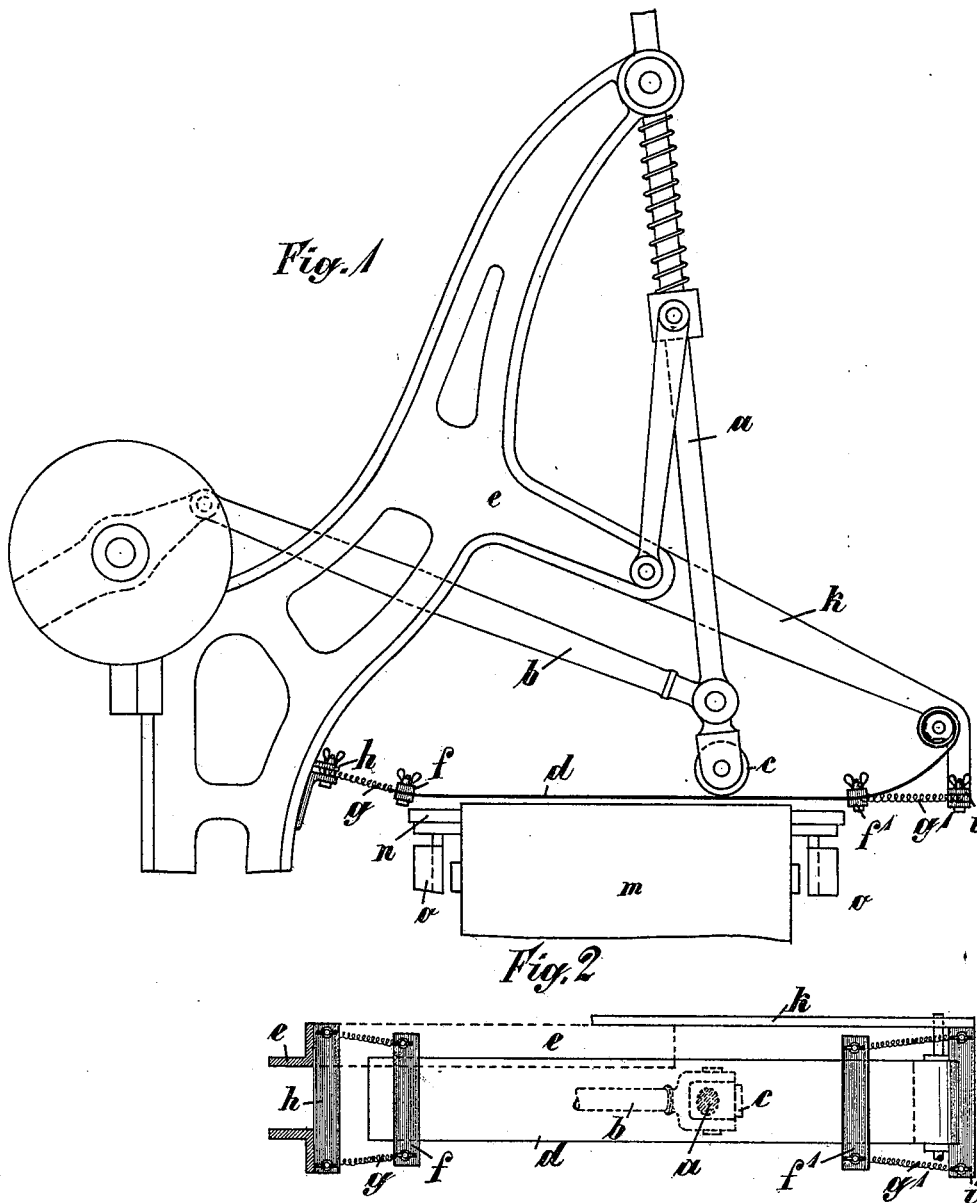
No. 645,886.

Patented Mar. 20, 1900.

F. BREIDENBACH.
MACHINE FOR POLISHING LEATHER.

(Application filed Feb. 4, 1899.)

(No Model.)



Witnesses:
Gerrit Grifmann
Otto Blossen

Inventor:
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UNITED STATES PATENT OFFICE.

FRANZ BREIDENBACH, OF BERLIN, GERMANY.

MACHINE FOR POLISHING LEATHER.

SPECIFICATION forming part of Letters Patent No. 645,886, dated March 20, 1900.

Application filed February 4, 1899. Serial No. 704,577. (No model.)

To all whom it may concern:

Be it known that I, FRANZ BREIDENBACH, leather-dyer, a subject of the King of Prussia, German Emperor, residing at 17 Gerichtstrasse, Berlin, in the Kingdom of Prussia, Germany, have invented certain new and useful Improvements in Machines for Polishing or Glazing Leather, (for which I have applied for a patent in Germany, dated December 5, 1898; in Austria, dated December 7, 1898; in Hungary, dated December 13, 1898; in Belgium, dated December 28, 1898; in France, dated January 3, 1899; in England, dated December 9, 1898, and in Russia, dated December 18, 1898,) of which the following is a specification.

In machines for the polishing or glazing of leather which work by passing a roller attached to the free end of a vertically-swinging rod under heavy pressure across the surface of the leather the defect has made itself manifest that the manipulated surface, in consequence of the not-always-uniform thickness of the leather, is subjected at different places to unequal pressure. In this way there is produced not only an irregular stretching of the upper skin, with the consequent formation of ridges on it; but the places which are harder pressed—that is, where the roller bears with the greatest force—also receive a higher polish than the places which are treated less vigorously. Further, the appearance and the utility of the finished article is more or less deteriorated. It happens, moreover, that in consequence of the direct action of the roller on the texture of the leather at each change in the direction of the swinging carrying-rod a blow is given by the roller on that part of the leather which it first touches, whereby indentations are produced that are very difficult to get rid of. On this account also the most careful guiding of the leather under the roller acting upon it is necessary—that is to say, at each change in the direction of the latter it is to be directed toward the part to be treated by starting always at the middle of the surface. By the dropping of the lubricating substance from the bearings of the roller as it passes rapidly backward and forward under great pressure sometimes spots of grease are made on the upper surface of

the leather, which is unprotected, which, especially in the case of brightly-colored goods, are very difficult or impossible to remove. All these objections are removed by the present improvements. These are illustrated by the accompanying drawings.

Figure 1 is a side elevation in outline of the machine; Fig. 2, plan of same.

The fundamental idea of the whole arrangement is not to allow the smoothing or pressing roller to bear directly on the surface of the leather, but on a covering protecting that surface.

Underneath the traverse of the press-roller *c*, which is attached to the swinging lever *a* and actuated by the rod *b*, is a thin band of sheet-brass or other suitable material of a breadth equal to or somewhat greater than the length of the roller and placed parallel to its stroke. The end of this band which is toward the frame *e* of the machine is fixed between a clamp *f*, from which either spiral springs or elastic cords *g* extend, which again are firmly attached to the frame by clamps *h* or in any other manner. In the same manner by using clamps *f'* and spiral springs or elastic cords *g'* the band is fixed at the opposite end by a detachable connection to an arm *k*, which stretches out from the frame *e* at a point *i* rather beyond the farthest point of oscillation of the roller. This arm *k* is at the same time a carrier for the roller *l*, which takes up in several folds the free end of the band, which extends beyond the clamp *f'*. For placing the band exactly in its right position it is arranged to be adjustable within fixed limits.

For the manipulation of the leather *m* it is placed with the right side upward between the band *g* and the upper surface of the table *n* when the latter, which is adjustable vertically upon the upright supports *o*, is in its lowest position. By then elevating the table the band *d* lies directly upon the surface of the leather, against which it is pressed with great force by the roller *c*, which is at once set in action at the places where this is in contact. This pressure coming only indirectly on the leather and being distributed by the intervening material, while the surfaces of the roller and the leather do not

touch each other, combined with the rubbing to which the surface of the leather is subjected by the motion backward and forward of the band *d* caused by the roller pressing upon it and assisted by the action of the spiral springs *g g'*, is the means of obviating all the defects which are produced in the finished goods by the appliances hitherto in use. The polish or glaze on the surface of the leather is now perfectly uniform, and the ridges are entirely obviated or are inconsiderable. The leather can now be brought under the pressure of the roller, starting from any arbitrary place on its surface, and may be spread out so that every place is subjected during an equal time to the influence of the roller. The oil also which may happen to drop from the axle of the roller is caught by and rendered harmless by the band, which lies as a protection under the places of leakage and over the leather.

Having now described my invention, what

I claim, and desire to secure by Letters Patent, is—

In a machine for manipulating leather the combination of a band *d* of brass or other material swinging freely, and attached at both ends by means of spiral springs or elastic cords *g g'* to points of suspension *h i* and occupying a position immediately over the leather to be manipulated and close under and parallel to the stroke of the operating press-roller preventing direct contact between the surfaces of the roller and of the leather and obviating the objectionable form of the impressions made on the texture of the leather which results from the revolution of the roller substantially as described.

In witness whereof I have hereunto set my hand in presence of two witnesses.

FRANZ BREIDENBACH.

Witnesses:

ERURIS L. GOLDSCHMIDT,

HENRY HARPER.