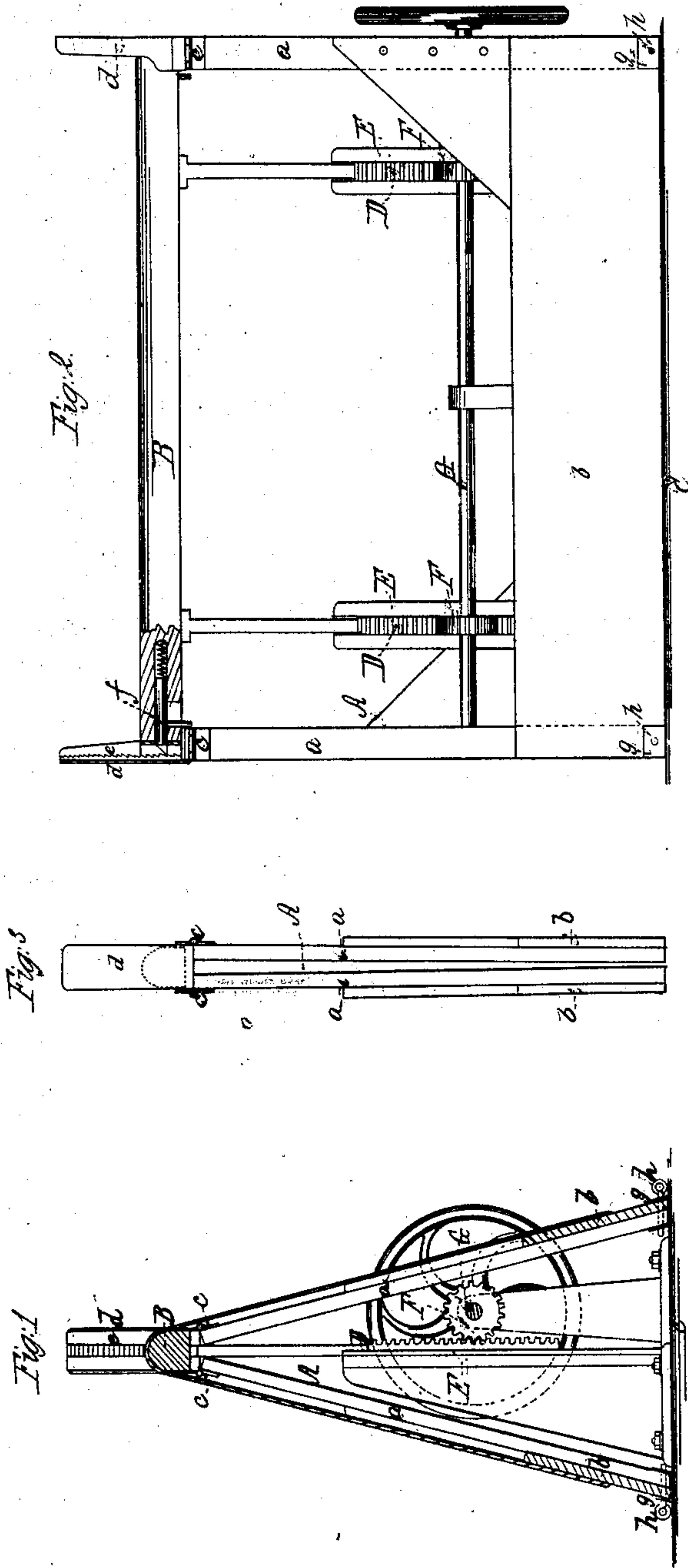


Connelly & Hughes *Stretching Leather*

N^o 69,633.

Patented Oct. 8, 1867.



Witnesses:
Gustav Berg
Saml. W. Tuttle.

Inventor:
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UNITED STATES PATENT OFFICE.

J. F. CONNELLY AND W. B. HUGHES, OF NEWARK, NEW JERSEY.

IMPROVED MACHINE FOR STRETCHING LEATHER.

Specification forming part of Letters Patent No. 69,633, dated October 8, 1867.

To all whom it may concern:

Be it known that we, J. F. CONNELLY and W. B. HUGHES, of Newark, Essex county, New Jersey, have invented a new and Improved Machine for Stretching Leather; and we do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which drawings—

Figure 1 represents a transverse vertical section of this invention. Fig. 2 is a sectional side elevation of the same. Fig. 3 is an end view of the stretching-frame detached and folded.

Similar letters indicate corresponding parts.

This invention consists in the arrangement of serrated racks and spring-catches or other equivalent devices, in combination with the movable beam of the stretching-frame, in such a manner that said beam, on being forced out, is retained in its position by the racks and catches, and prevented from being forced back by the elasticity of the stretched leather when the power which has been employed to force the beam out is released or taken off. The stretching-frame is secured to the platform or bed supporting the power mechanism by suitable sockets and pins or other equivalent devices in such a manner that if a hide or other piece of leather has been stretched on a frame said frame can be readily removed from over the power mechanism and replaced by another frame, and one and the same power mechanism serves to stretch leather on a number of frames.

The power mechanism consists of two or more racks, which slide in suitable standards, and which are made to rise by means of pinions secured to a shaft in such a manner that said racks can be forced up against the stretching-beam with considerable power, and when the stretching operation has been accomplished they can be conveniently lowered, ready for a subsequent operation.

A represents a frame, made of wood or any other suitable material, and composed of two end pieces, *a a*, which are connected at their bottom ends by longitudinal strips *b b*. Each of the end pieces, *a a*, is composed of two legs, which are connected at their upper ends by

hinges *c*, so that when the frame is not used it can be readily folded up and stored away in a comparatively small space.

From the top of the end pieces, *a a*, rise two guides, *d d*, between which moves the stretching-beam B. Each of the guides *d d* is provided with a serrated rack, *e*, and in the ends of the stretching-beam are secured spring-catches *f*, which engage with the teeth of the serrated racks, so that when the beam is raised it is retained in position and prevented from dropping back by said catches and racks. Instead of these catches and racks, other devices might be employed for retaining the beam in position—such, for instance, as two rollers or balls working in wedge-shaped slots; and we reserve the right to substitute such devices for the racks and catches shown in the drawings.

When the frame is to be used it is secured on the platform or bed C, which is provided with sockets or flanges *g* to receive the lower ends of the end pieces, *a*, and pins or screws *h* serve to secure said end pieces in the sockets. By withdrawing these pins the frame can be readily taken off from the bed and replaced by another.

On the bed C, and between the sockets *g*, is mounted the power mechanism, which serves to act on the stretching-beam B. This mechanism consists of two or more racks, D, which slide up and down in suitable standards, E, and which are provided with cogs gearing into pinions F, that are mounted on a horizontal shaft, G. This shaft has its bearings in standards H, secured to the bed C, and a revolving motion is imparted to it by hand or by any other suitable power. In order to increase the power a suitable power-gear may be connected with the shaft G. The upper ends of the racks D are enlarged, so that they will present good bearing-surfaces.

The leather to be stretched is hung over the beam B in a wet state, and it is secured to the strips *b b* of the frame A by means of tacks; or, instead of tacks, blocks of wood with pins or suitable clamps may be employed. After the leather has been thus secured, power is applied to the shaft G, and the beam B is forced up until the leather has been stretched to the desired degree. The racks D are then allowed to drop back, the beam B being retained in position by the racks *e* and catches *f*, and the

frame A is removed from the bed C and set aside until the leather is dry. In the meantime another frame can be fastened on the bed and a second hide or piece of leather can be stretched with the same power mechanism, and the operation of stretching hides or pieces of leather can be continued without interruption.

If the stretching-frames are not used, they can be folded up and stored away in a comparatively small compass.

What we claim as new, and desire to secure by Letters Patent, is—

1. The arrangement of serrated racks *e* and catches *f*, or their equivalents, in combination with the stretching-beam B, substantially as and for the purpose set forth.

2. The arrangement of hinges *c*, in combi-

nation with the end pieces, *a a*, of the stretching-frame A, substantially as and for the purpose described.

3. Making the stretching-frames detachable from the power mechanism, substantially as and for the purpose described.

4. The arrangement of racks D and pinions F, in combination with the stretching-beam B, constructed and operating substantially as and for the purpose set forth.

This specification signed by us this 8th day of August, 1867.

JAS. F. CONNELLY.
W. B. HUGHES.

Witnesses:

GUSTAV BERG,
W. HAUFF.