

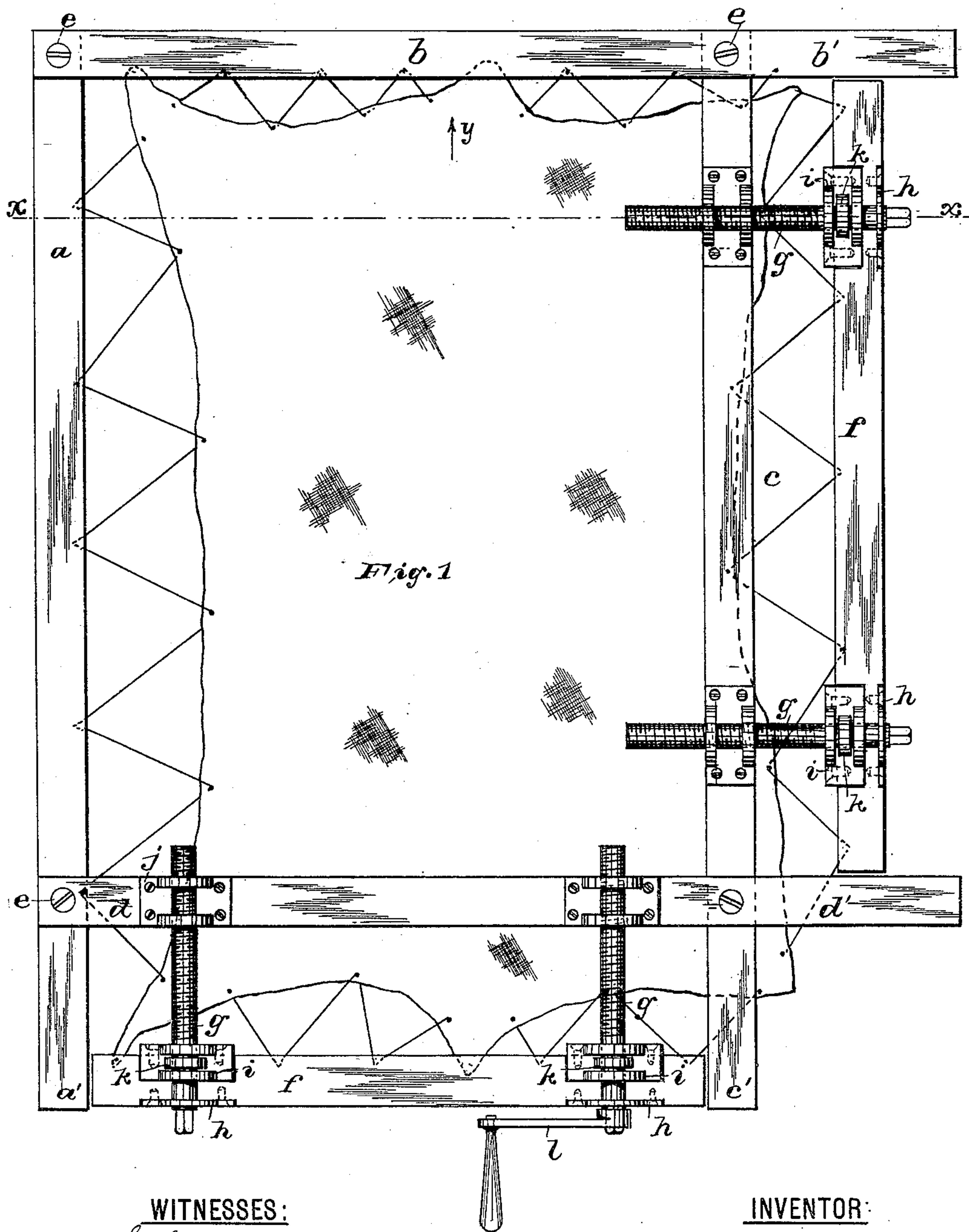
(No Model.)

2 Sheets—Sheet 1.

G. F. STENGEL.  
STRETCHING FRAME.

No. 410,745.

Patented Sept. 10, 1889.



WITNESSES:

L. S. Coon,  
J. R. Bartine

INVENTOR:

George F. Stengel.

BY Campbell & Co. ATTYS.

(No Model.)

2 Sheets—Sheet 2.

G. F. STENGEL.  
STRETCHING FRAME.

No. 410,745.

Patented Sept. 10, 1889.

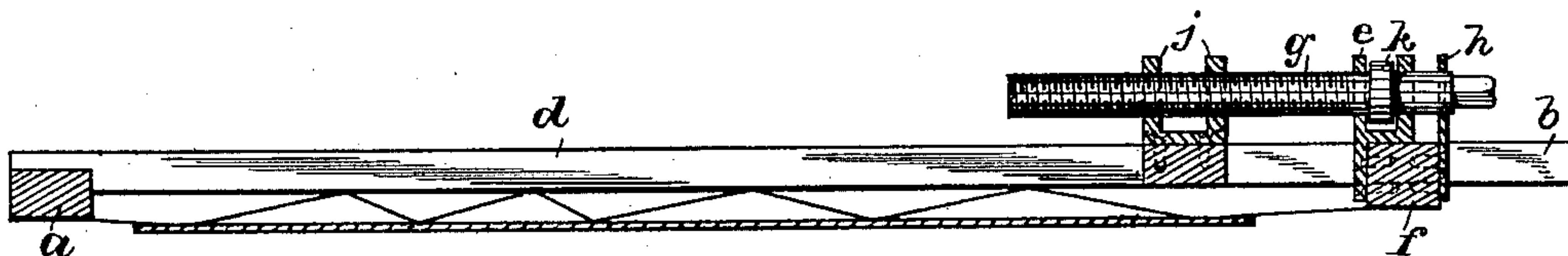


Fig. 2

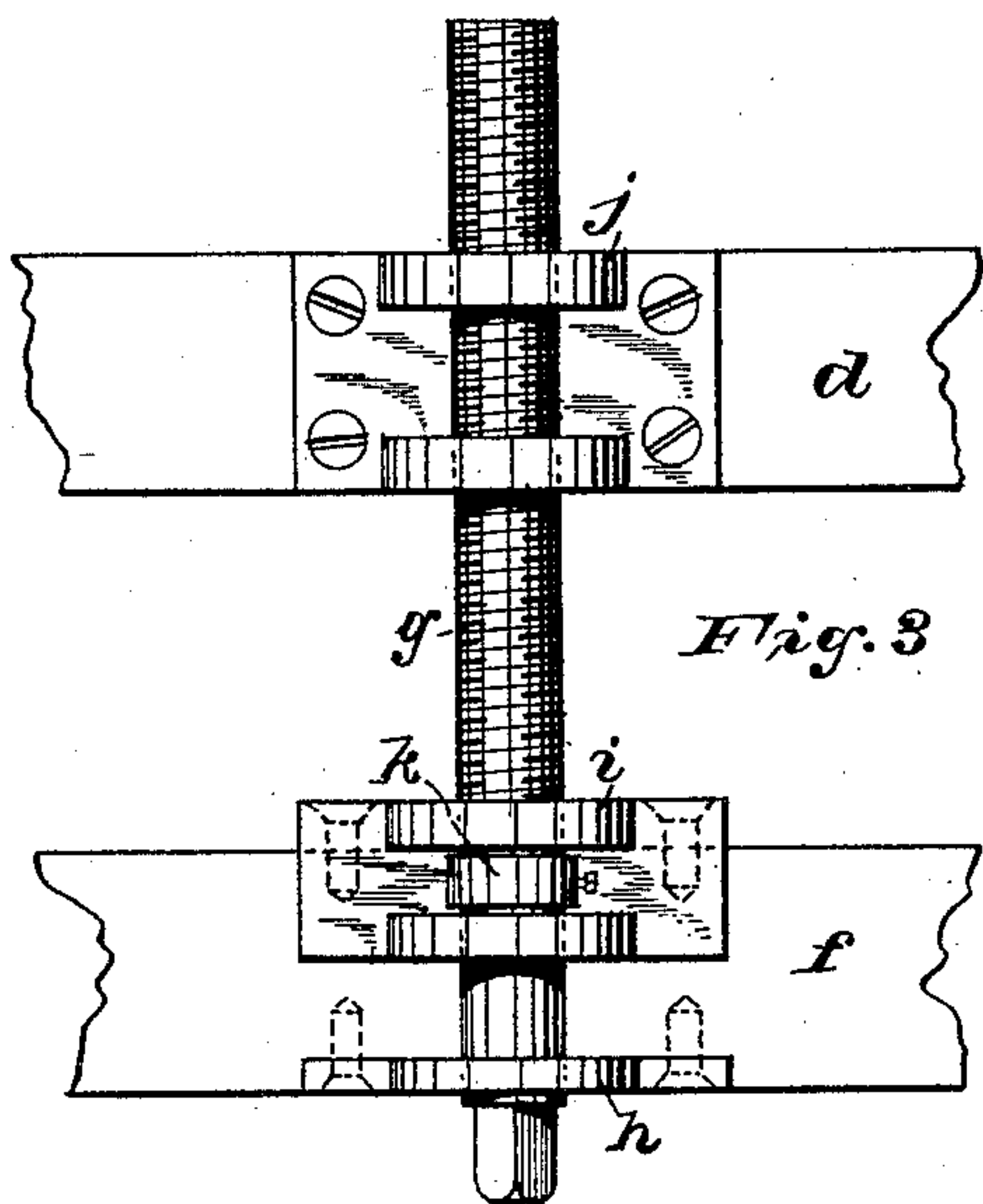


Fig. 3

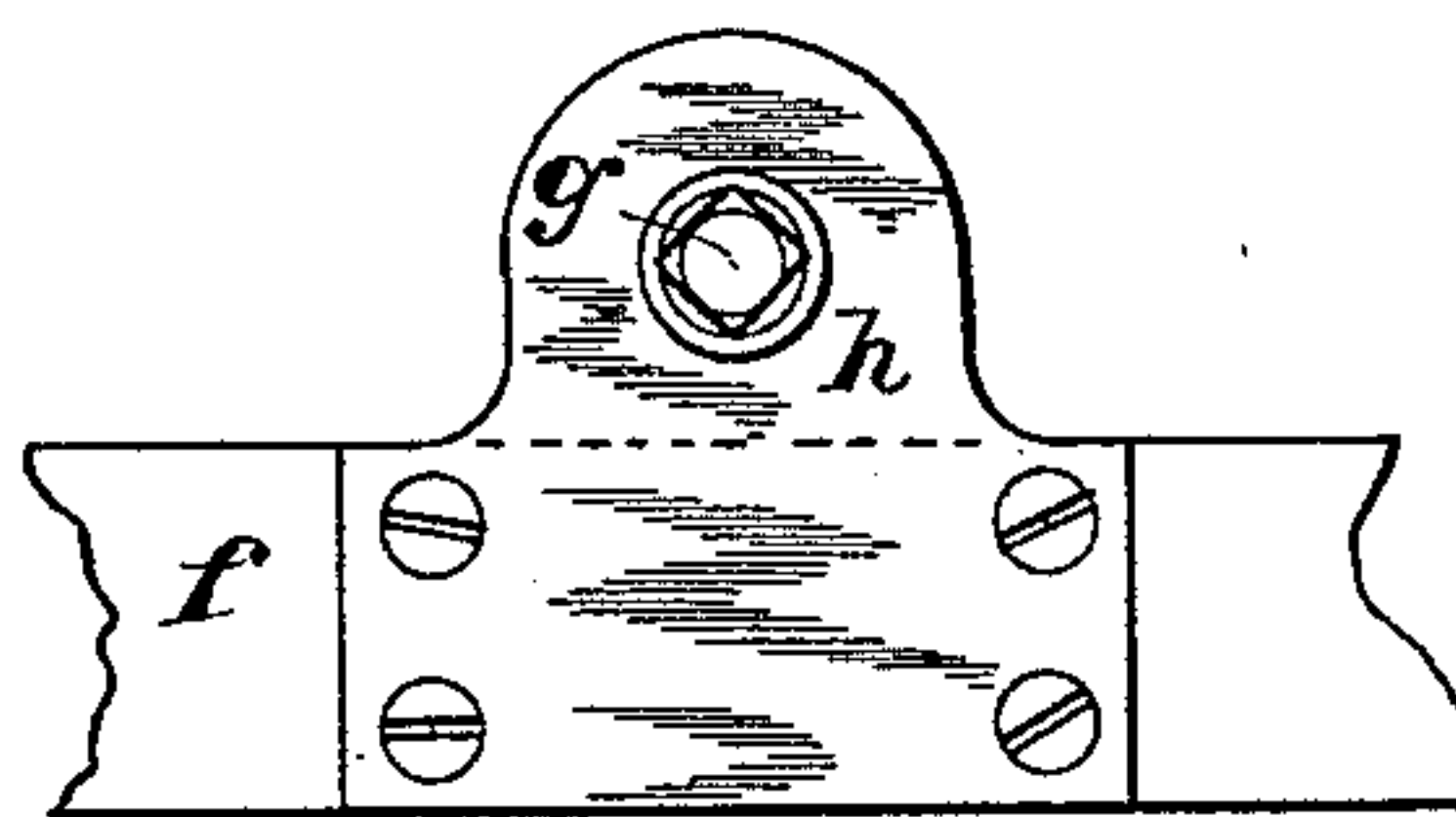


Fig. 4

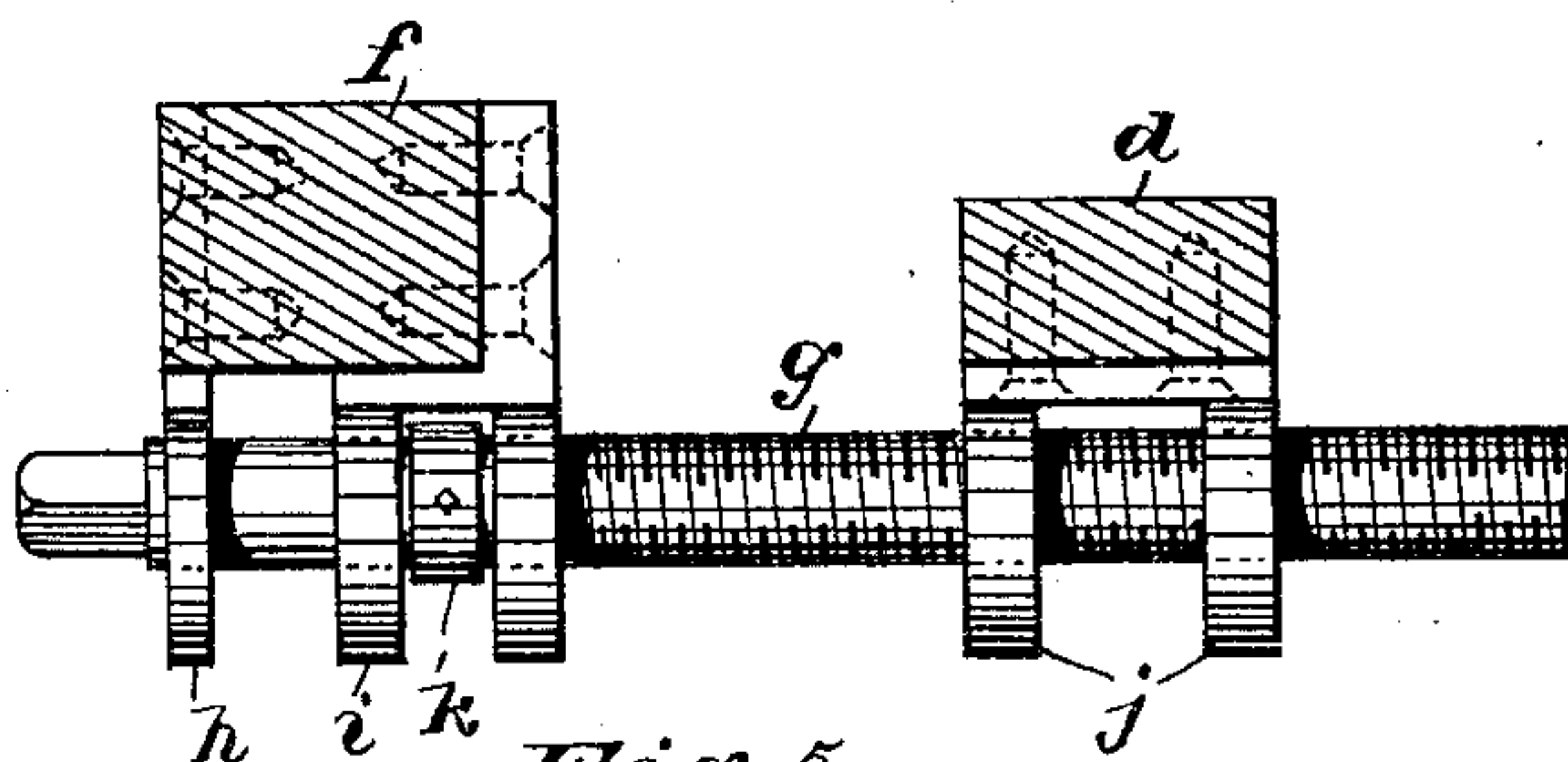


Fig. 5

WITNESSES:

L. S. BOOK.  
J. L. BURTON

INVENTOR:

George F. Stengel

BY Sampson & Co. ATTYS.



# UNITED STATES PATENT OFFICE.

GEORGE F. STENGEL, OF NEWARK, NEW JERSEY.

## STRETCHING-FRAME.

SPECIFICATION forming part of Letters Patent No. 410,745, dated September 10, 1889.

Application filed August 9, 1887. Serial No. 246,495. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE F. STENGEL, a citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Stretching-Frames; and I do hereby 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 letters of reference marked thereon, which form a part of this specification.

The purpose of this invention is to provide a stretching-frame of the improved construction for hides, by means of which the said hide, while in the process of drying or stretching, can be still further stretched until the leather is set. To this end I have devised a stretching-frame illustrated in the drawings, which is provided with adjustable sides, to which the hide is fastened, and which, by reason of their adjustability, can be spread apart from time to time, thus increasing the number of square feet of leather in the hide.

In the accompanying sheet of drawings is illustrated my improved stretching-frame, in which Figure 1 is a plan view of the same, showing the relation of the parts and the hide secured thereto. Fig. 2 is a section of Fig. 1 through line *x*. Fig. 3 is an enlarged plan in detail of the adjusting-screws and sockets. Fig. 4 is an elevation of one of the sockets on the adjustable pieces, and Fig. 5 is a side elevation of the adjusting bolt or screw and section of the frame.

As indicated in said drawings, the stretching-frame consists of four frame-pieces *a*, *b*, *c*, and *d*, bolted or otherwise secured together at four points *e*, as shown. On two sides of said stretching-frame the frame-pieces extend, forming guiding-pieces *b'*, *d'*, *c'*, and *a'*, as indicated. Between said guiding-pieces, on two sides of the frame, are arranged the adjustable stretching-bars *f*, which move toward and from the rigid portions of the frame *c* and *d*.

The device shown in the drawings for adjusting said bars *f* between the guiding-pieces consists of a threaded rod *g*, which passes through the sockets *h* and *i*, secured to said adjustable pieces, and through the threaded

socket *j*, secured to the rigid frame-pieces *d* and *c* of the stretching-frame. A collar *k* is secured on said rod between the separated portions of the socket *i*, to prevent any longitudinal movement of the threaded rod in relation to the adjustable pieces *f*, and at the same time to permit the free rotation of said adjustable threaded rods.

The threaded rod may be squared on the outer end to receive a crank-handle *l*, or may be provided with finger-pieces, whereby the same may be turned by hand, as desired.

The operation is as follows: The hide having been tacked or attached to the two rigid frame-pieces *a* and *b* on two of the edges of said hide, the two remaining edges are secured or attached to the adjustable bars *f*, as shown in Fig. 1. The threaded rods are then turned and the hide stretched in the direction of its width and its length, as will be understood.

The guiding-pieces *a'*, *b'*, *c'*, and *d'* act to prevent any lateral movement of the guiding-bars *f*.

By reference to Fig. 3 it will be seen that the adjusting-screws and sockets are arranged on the back of stretching-frame, and the leather is tacked to the raised faces of the frame-pieces *a* and *b* and the adjustable pieces *f*. The views shown in Fig. 1 represent the back of the stretching-frame to more clearly bring out the relation of the adjusting-screws to the frame.

The stretching-frame here described may be used for wet stock, either hides or skins, but more particularly for stretching the dry stock.

In japanning or finishing the same, during the process of japanning several coats or applications of daub or japan are made to the leather and the japanned surfaces rubbed with pumice. This rubbing causes the leather to sag in parts, forming pocket-like depressions. In frames ordinarily constructed this pocket or depression must remain in the leather, and consequently there is not as perfect a finish as is desirable; but by means of my improved stretching-frame after each application of the daub and pumice the leather is stretched, so that when finished the surface is free from any imperfections.

Having thus described my invention, what I claim as new is—

1. A leather-stretching frame consisting of frame-pieces *a*, *b*, *c*, and *d*, provided with projecting ends *a'*, *b'*, *c'*, and *d'*, adjustable pieces *f*, arranged on two adjacent sides of said frame-pieces between the projecting ends, and means for adjusting said pieces *f* in relation to the rigid portion of the frame, for the purposes  
10 set forth.

2. A stretching-frame consisting of the rigidly-attached frame-pieces *a*, *b*, *c*, and *d*, provided with projecting ends *a'*, *b'*, *c'*, and *d'*, adjustable pieces *f*, arranged on two adjacent  
15 sides of said rigid frame-pieces between the projecting ends, threaded adjusting-rods con-

necting said adjustable pieces with the rigid portion of the frame, threaded sockets secured to said rigid portion of the frame, through which the adjustable rods pass, and holding- 20 sockets secured to said adjustable pieces, which also receive the said adjustable rods, all of said parts being arranged substantially as and for the purposes set forth.

In testimony that I claim the invention set 25 forth above I have hereunto set my hand this 2d day of August, 1887.

GEORGE F. STENGEL.

Witnesses:

FREDK. F. CAMPBELL,

FREDK. C. FRAENTZEL.