

H. W. Adams,

Tan Vat.

No. 91,402.

Patented June 15. 1869.

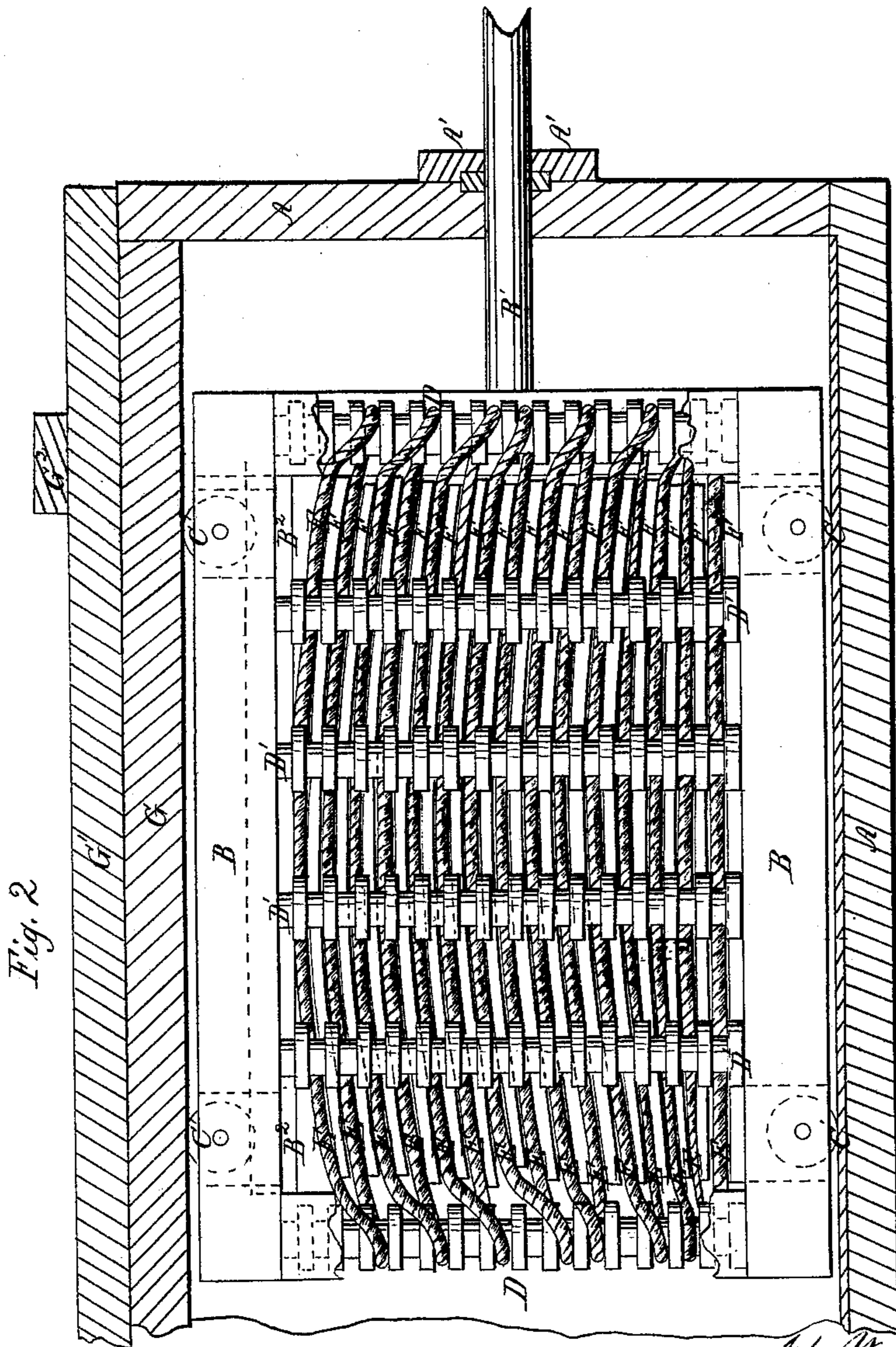


Fig. 2

Inventor
H. W. Adams

Witnesses
Edw. J. Eils
A. Ruffert.

D. P. Holloway & Co
Atty

H. W. Adams,

Trans. Nat.

No. 91,402.

Patented June 15, 1869.

Fig. 1

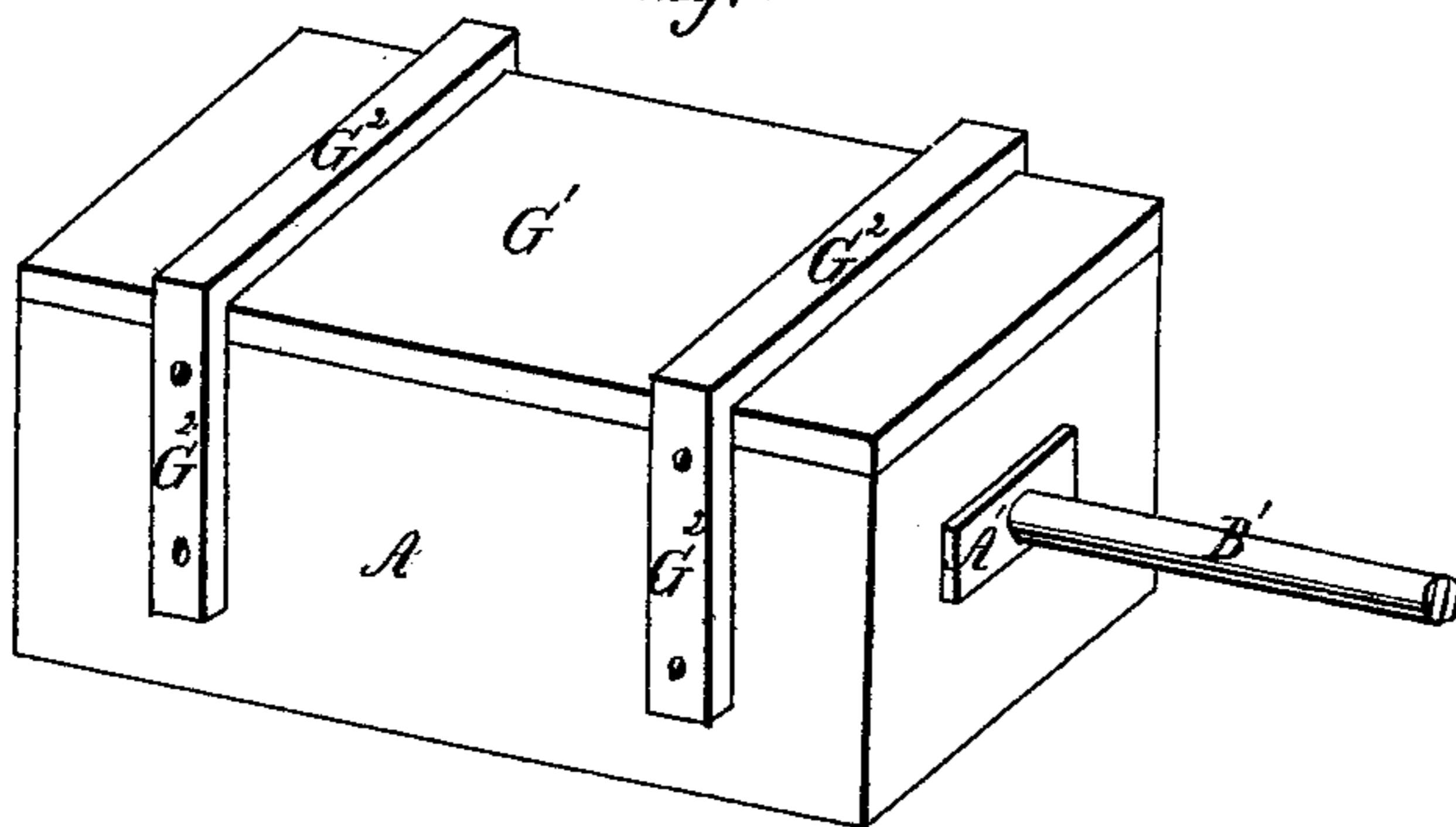
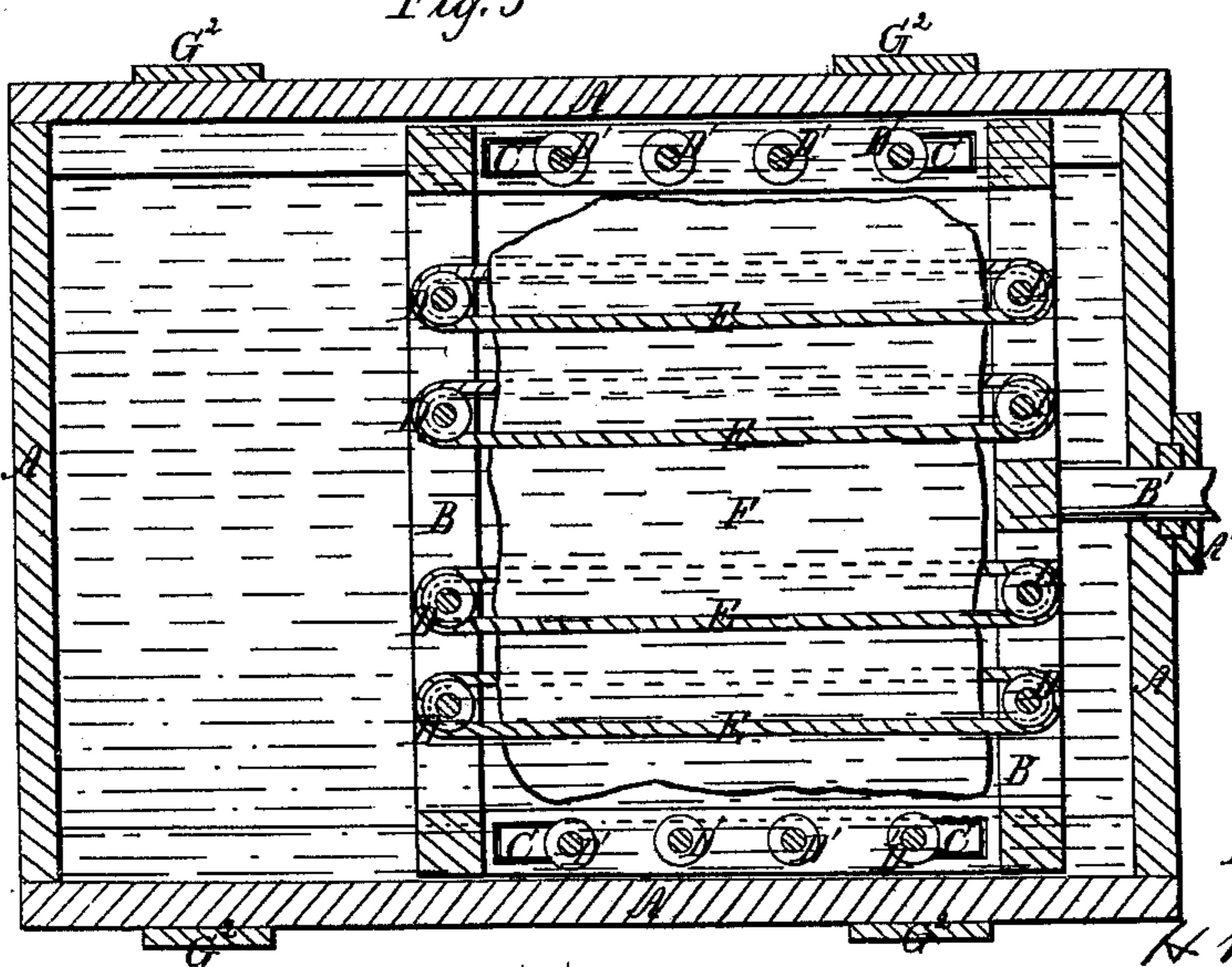


Fig. 3



Inventor

H. W. Adams

Witnesses
O. J. Eids
A. Ruppert.

D. P. Holloway & Co
Atty.

United States Patent Office.

HENRY W. ADAMS, OF PHILADELPHIA, PENNSYLVANIA.

Letters Patent No. 91,402, dated June 15, 1869.

IMPROVED APPARATUS FOR TANNING HIDES.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, HENRY W. ADAMS, of Philadelphia, in the county of Philadelphia, and State of Pennsylvania, have invented a new and useful Improvement in Apparatus for Tanning Hides; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the annexed drawings, making part of this specification, in which—

Figure 1 is a perspective view of a vat;

Figure 2 is a vertical section of the same; and

Figure 3 is a horizontal section thereof.

Corresponding letters refer to corresponding parts in the several figures.

My invention relates to an improved mode of tanning hides, in which the process is more rapidly conducted than in ordinary modes; and

It consists in confining the tanning-liquor within a close vat, and placing the hides in parallel horizontal planes, separated by interposed substances, in a reciprocating plunger, operated by any suitable power, and moving through the vat in the direction of the edges of the hides, so that the tanning-liquor is caused to pass along the surfaces of the hides, and be forced by compression into the pores thereof, rapidly effecting the chemical changes necessary to the tanning of the hides.

To enable those skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

In the annexed drawings—

A is a tight vat, in which the tanning-liquor is placed. Within it is placed a plunger, B, which consists of an open frame to contain the hides.

These hides (F in the drawings) are placed in series in the frame, one over the other, in horizontal, or nearly horizontal and parallel planes. They must be separated by something to keep them in place, and maintain their relative position as to one another and to the plunger. I have shown in the drawings one mode of doing this, which is cheap and convenient.

The posts D are placed between the upper and lower timbers of the frame. They have grooves cut around them, as shown, and around these grooves cords E are passed from end to end of the frame. One series of cords is carried across the frame, and then a hide is laid thereon, the cords are carried around the posts D, and returned, and another hide laid upon them, and so on until all that are to be, or can be confined in the plunger are placed therein and firmly secured.

The vat is then to be filled with the liquor, and the cover B² put on the plunger. The vat is then covered by the cover G, and on this another cover, G¹, the whole being confined by clamps G², or in some other convenient manner, so that the vat shall be water-tight, and strong enough to resist the pressure of the plunger.

The plunger is connected by the piston-rod B¹, which passes through the stuffing-box A', with any suitable power to give a reciprocating motion to the plunger.

The motion of the plunger compressing the liquor in one end of the vat, forces it to flow in a rapid current through the spaces left between the hides, forcing it into the substance thereof, and effecting rapidly those chemical changes incident to the conversion of raw hides into leather.

In order to obviate friction, the plunger runs upon rollers C, while the rollers C' in the top of the frame, bracing against the lower face of the cover G, will reduce friction on that side.

In describing the cords for separating the hides, I have only suggested one of the many ways in which they can be separated, as, for instance, slats may be interposed between them; my invention is, therefore, not limited to the use of the particular device herein described.

Having thus described my invention,

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

1. In combination with a close vat, containing tanning-liquor, a reciprocating plunger, in which the hides are confined in horizontal parallel planes, and caused to move in the direction of their edges through the liquor by the application of a suitable force, substantially as set forth.

2. The combination of the vat, the reciprocating plunger, the cover, and a clamping-device, substantially as set forth.

3. The combination, in the plunger, of the hides and cords, or equivalents, for holding the hides in parallel horizontal planes, substantially as set forth.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

HENRY W. ADAMS.

Witnesses:

B. EDW. J. ELLS,

A. RUPPERT.