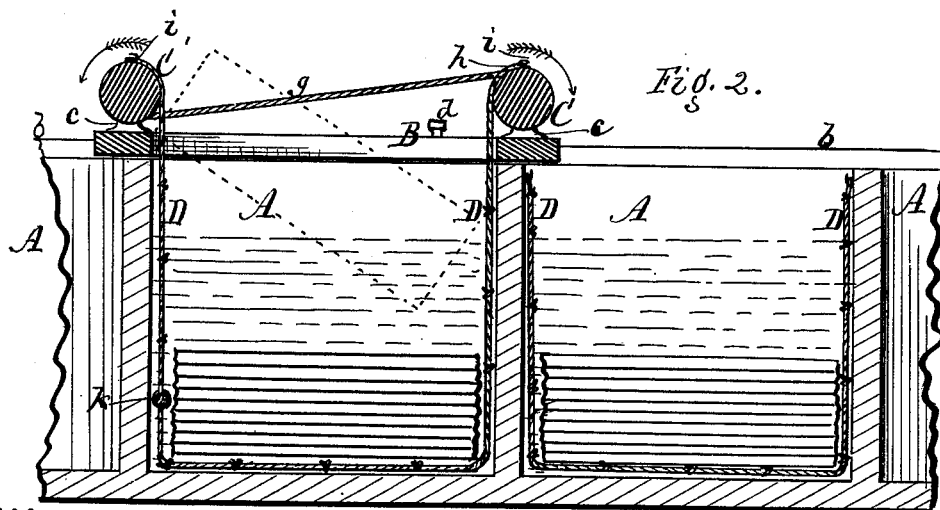
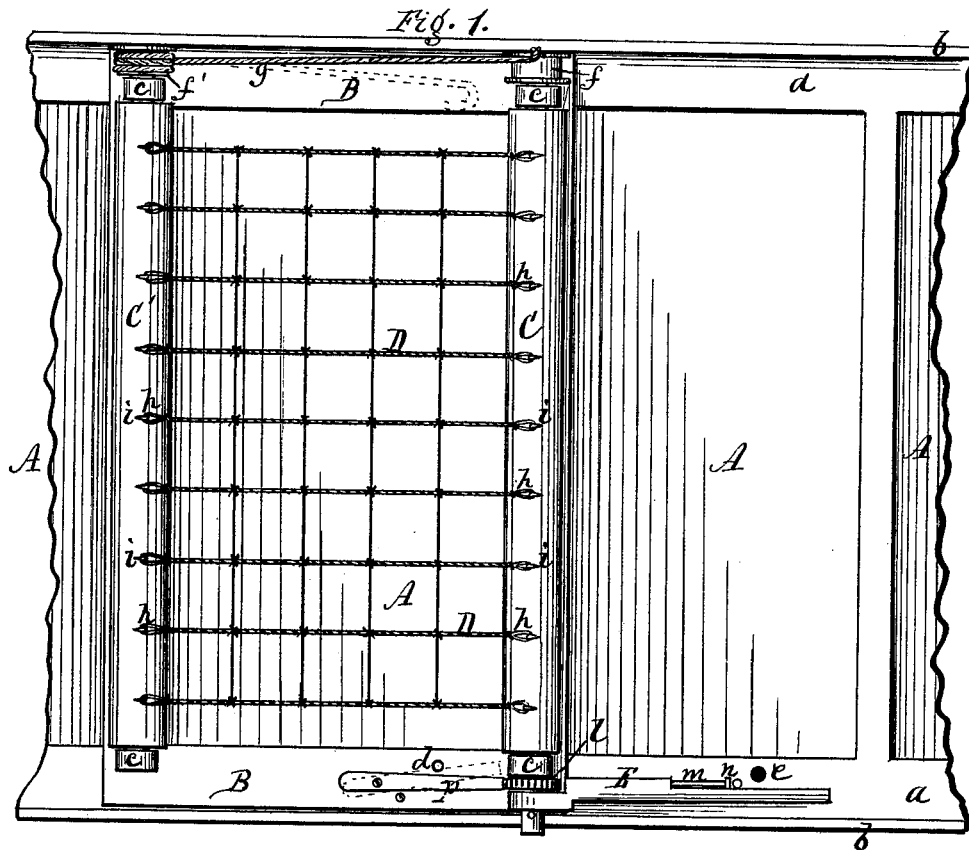


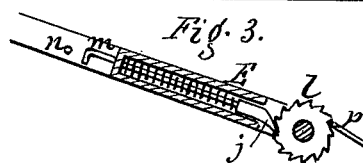
A. PALMER.
Elevators for Tanner's Vats.

No. 214,439.

Patented April 15, 1879.



Attest.
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UNITED STATES PATENT OFFICE.

AARON PALMER, OF ROCHESTER, NEW YORK, ASSIGNOR OF THREE-FOURTHS
HIS RIGHT TO EDGAR HOLMES, OF SAME PLACE.

IMPROVEMENT IN ELEVATORS FOR TANNERS' VATS.

Specification forming part of Letters Patent No. **214,439**, dated April 15, 1879; application filed
January 24, 1879.

To all whom it may concern:

Be it known that I, AARON PALMER, of the city of Rochester, county of Monroe, and State of New York, have invented a certain new and useful Improvement in Elevators for Tanning-Vats, &c.; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, in which—

Figure 1 is a plan of my improved apparatus. Fig. 2 is a vertical cross-section of the same. Fig. 3 is an elevation of the ratchet arrangement.

My improvement relates to hoisting apparatus for tanning-vats, &c. It is particularly useful for tanners' purposes, where the hides have to be raised daily from the vats and handled over in order to produce proper action of the tanning-liquor.

The invention consists in the construction and arrangement of parts hereinafter more fully described, whereby the apparatus can be readily removed from one vat to another, and can raise the hides either vertically and bodily or angularly, so that when they reach the top they will be turned over bottom upward, as hereinafter more fully set forth.

A A A represent a series of tanners' vats, bordered at the ends by the usual alleys *a a*. On these alleys are erected vertical flanges *b b*, which form the ways or guides for the sliding carriage.

B is the sliding carriage, which carries, at its opposite sides, the hoisting-rollers C C', mounted in bearings *c c*, so as to turn freely. The carriages may be of the rectangular form shown, or of such other form as will best answer the purpose. It rests flat, its ends projecting over the alley-ways *a a*, and resting against the vertical flanges *b b*, which form the guides. In this condition the carriage carrying the hoisting-rollers may be slid from one vat to another with the greatest facility, and the use of a large hoisting-frame, which must be raised and moved from one vat to another, as is usually done, is avoided. The carriage is provided with a loose pin, *d*, which stands vertically in a socket in one side, and the top of the alley-way is provided with a series of holes opposite the vats, so that as the

carriage is slid from one vat to another the pin will drop into a hole and center the carriage relatively to the vat.

The rollers at one end have spools *f f'*. A cord, chain, or other connection, *g*, is wound several times around one of the spools, *f'*, as shown at the left in Fig. 1, and the opposite end is attached removably to the other spool, *f*. When the roller with the last-named spool is turned, it will be seen that the opposite roller will also be turned, but in the opposite direction, as indicated by the arrows in Fig. 2, the cord winding up on one roller and unwinding from the other. Instead of using spools, the cord might be attached directly to the rollers themselves. It will also be seen that by disengaging the loose end of the cord from its spool, as indicated by the dotted line at the top in Fig. 1, one roller only will turn. Instead of using the cord *g*, a system of gearing might be used connecting the two rollers, and so arranged with a sliding clutch as to disengage, allowing one or both rollers to be turned at pleasure.

D is a net-work forming a flexible support for holding the hides in the vat. It is made of cords, straps, chains, or other connections, crossing each other at right angles, as shown in Fig. 1. It is provided with loops or other attachments *h h*, which hook onto hooks *i i* of the rollers, in such a manner as to be readily detachable. One or more stay-rods, *k*, may be attached to the net-work on the back side, to keep the latter properly expanded.

l is a ratchet-wheel fast on one end of roller C. E is a lever turning on the same center and provided with a pawl, *j*, which engages with the ratchet, and whose stem *m* passes up by the side of the lever, by which means the pawl may be disengaged at any time and be held up by a hook on the end of the stem engaging with a stud, *n*, of the lever, or by other means. *p* is a detent which catches into the ratchet and prevents the roller from running back. It may swing off sideways in disengaging, as shown by dotted lines at the bottom in Fig. 1.

If desired, the roller may be operated by other means than above described.

The operation is as follows: The hides are

placed upon the net-work support D and lowered to the bottom of the vat. This turns both of the rollers back to the full extent.

If it is desired to raise the hides bodily the end of cord *g* is connected with spool *f*, as shown in Fig. 1, in which case both rollers turn equally, but in opposite directions, and the pack will be raised without tipping.

If it is desired to turn the hides over automatically as they are raised, cord *g* is disconnected from spool *f*, as shown in dotted lines, in which case roller C only turns, and the pack is raised in an angular direction, and turns over as it comes to the top, as indicated by dotted lines. It is frequently necessary to so turn it over for facility in handling, and also to loosen it up and allow the liquor to penetrate the center. In such case it is not necessary to touch the hides, as when they are lowered again they will resume their former position. The arrangement above described presents great facilities in arranging or placing the hides, as the net-work support may be raised up level and held there while the skins are placed on top. The same facilities are presented in unloading. The great advantage is that the load may be elevated, either level or in an inclined position.

A net-work support, D, may be placed in each of the vats A, suspended by hooks or

otherwise, ready for use when the machine is slid over the vat. The machine above described may be used for other purposes than raising hides.

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

1. The hoisting-machine herein described, consisting of the carriage B, the rollers C C', mounted on said carriage, and adapted to revolve in opposite directions, and the net-work support L, attached to said rollers, as shown and described, and for the purpose specified.

2. The combination of the carriage B, the rollers C C', the support D, and a connection, *g*, or equivalent gearing, whereby either or both rollers may be turned to elevate the load.

3. In a hoisting-machine, as described, the combination of two oppositely-revolving rollers, C C', a flexible support, D, and a connecting and disconnecting device, *g*, which will permit either or both rollers to turn to elevate the load.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

AARON PALMER.

Witnesses:

R. F. OSGOOD,
JACOB SPAHN.