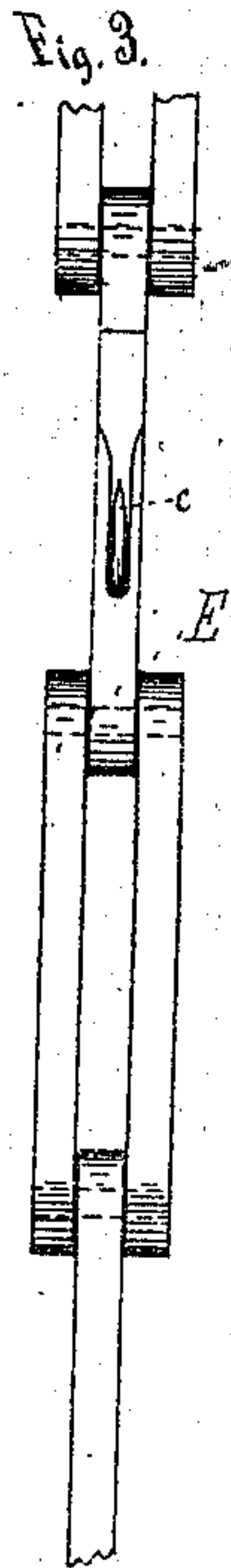
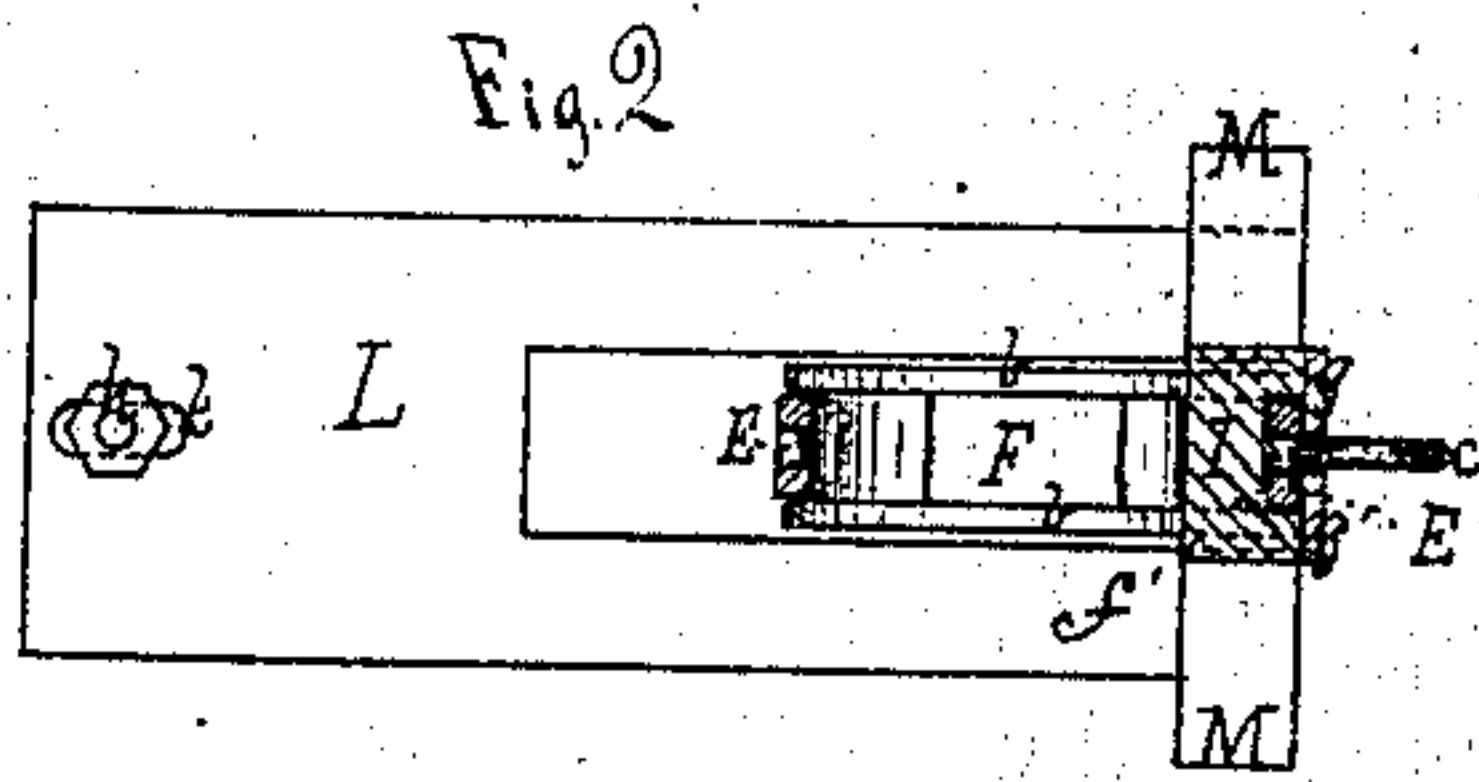


# Geo. Sprague.

Elevator for Tanneries.

PATENTED JUL 4 1871

116769



Witnesses,  
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# UNITED STATES PATENT OFFICE.

GEORGE SPRAGUE, OF SOUTH ADDISON, NEW YORK.

## IMPROVEMENT IN HOISTING APPARATUS.

Specification forming part of Letters Patent No. 116,769, dated July 4, 1871.

*To all whom it may concern:*

Be it known that I, GEORGE SPRAGUE, of South Addison, in the county of Steuben and State of New York, have invented a certain new and useful Improvement in Elevators for Raising Leather in Tanneries, of which the following is a specification:

This invention consists of a chain armed with hooks, running through a guide and having an adjusting-block and pulley at the bottom, the whole arranged, combined, and operating in the manner and for the purpose hereafter described.

In the drawing, Figure 1 is an elevation of my improvement combined with the several floors of a tannery; Fig. 2, a horizontal section in line *x x*, Fig. 1; Fig. 3, a view of the elevating-chain.

A B C represent the several floors of a tannery. At top and bottom are mounted pulleys D F, respectively, over which passes the elevating-chain E. The driving-wheel or pulley G may be located either at the top or bottom, and driven by a band, H, or any other means. The chain is made of square links pivoted together, and the peripheries of the pulleys over which it passes may be correspondingly squared in a well-known way to give motion. The upper one may have sprockets *a a* to prevent slipping, and the lower one may have flanges *b b* to prevent displacement of the chain. This arrangement of the pulleys is optional with the user. To the flat outer sides of the chain are riveted steel hooks *c c*, on which the sides of leather are hung to be elevated. They are placed at suitable distances apart, and their ends point outward, so that the leather may be easily lifted and removed therefrom while the chain is still in motion. The front side of the chain rests against a guide, I, which preferably stands at a slight angle so as to facilitate the passage of the leather

upward. This guide is stayed at each floor by braces K K, and extends from the bottom to the top, or to any suitable height desired. A groove, *f*, is cut in the face of the guide, in which runs the chain; and guide-strips *g g* are secured upon the outer face, leaving a space between of only such width as will allow the hooks to pass easily up through. This guide and these strips are of importance in keeping the chain stiff under the weight of leather and preventing any swaying or swinging of the same. Without this the chain would be practically inoperative. The lower pulley is hung in an adjusting-block, L, which is pivoted at the rear by a single bolt, *h*, which passes through an elongated hole, *k*. Being bolted down tightly it allows a degree of elasticity to the front end of the block, which thus allows the free springing and yielding of the pulley to the chain. The front end of the block rests in a suitable guide-frame, N, which keeps it in position as it springs up or down. This I consider a novel feature of my invention.

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

1. The upright guide I provided with the groove *f* and plates *g g*, in combination with the pulleys D F and the endless belt or chain E with its hooks *c c*, substantially as and for the purpose set forth.

2. The adjusting-block L, bearing the pulley F, in combination with the endless chain E, hooks *c c*, guide I, and pulley D, arranged and operating substantially as and for the purpose set forth.

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

Witnesses: GEORGE SPRAGUE.  
JESSE W. RAWLEY,  
JOHN SHUMWAY.