

Warner & Crooks, 4. Sheets. Sheet. 1.

Tanning Appar.

No. 98651.

Patented Jan. 4. 1870.

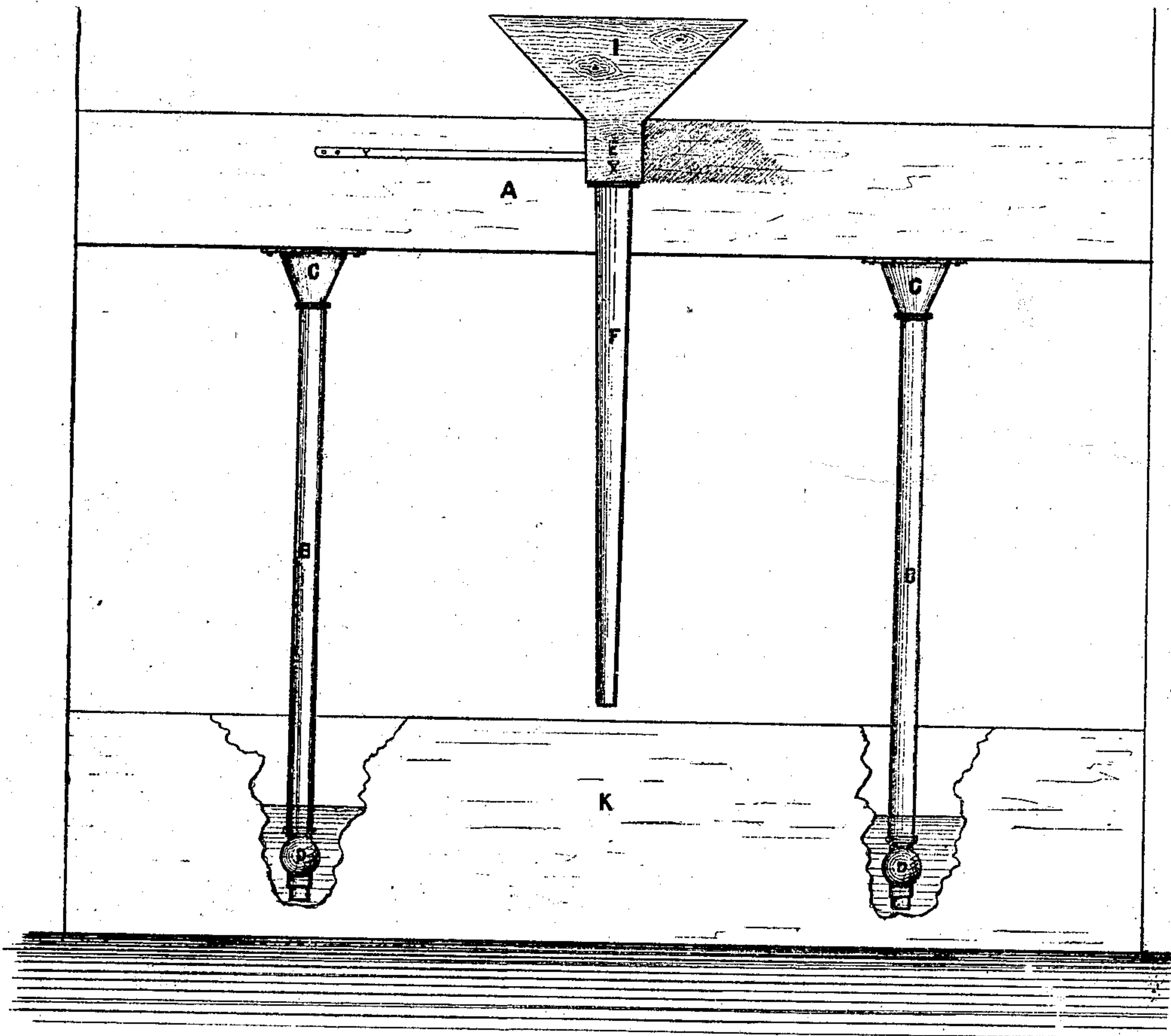


FIG. 1.

WITNESSES.

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INVENTORS.

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James Crooks

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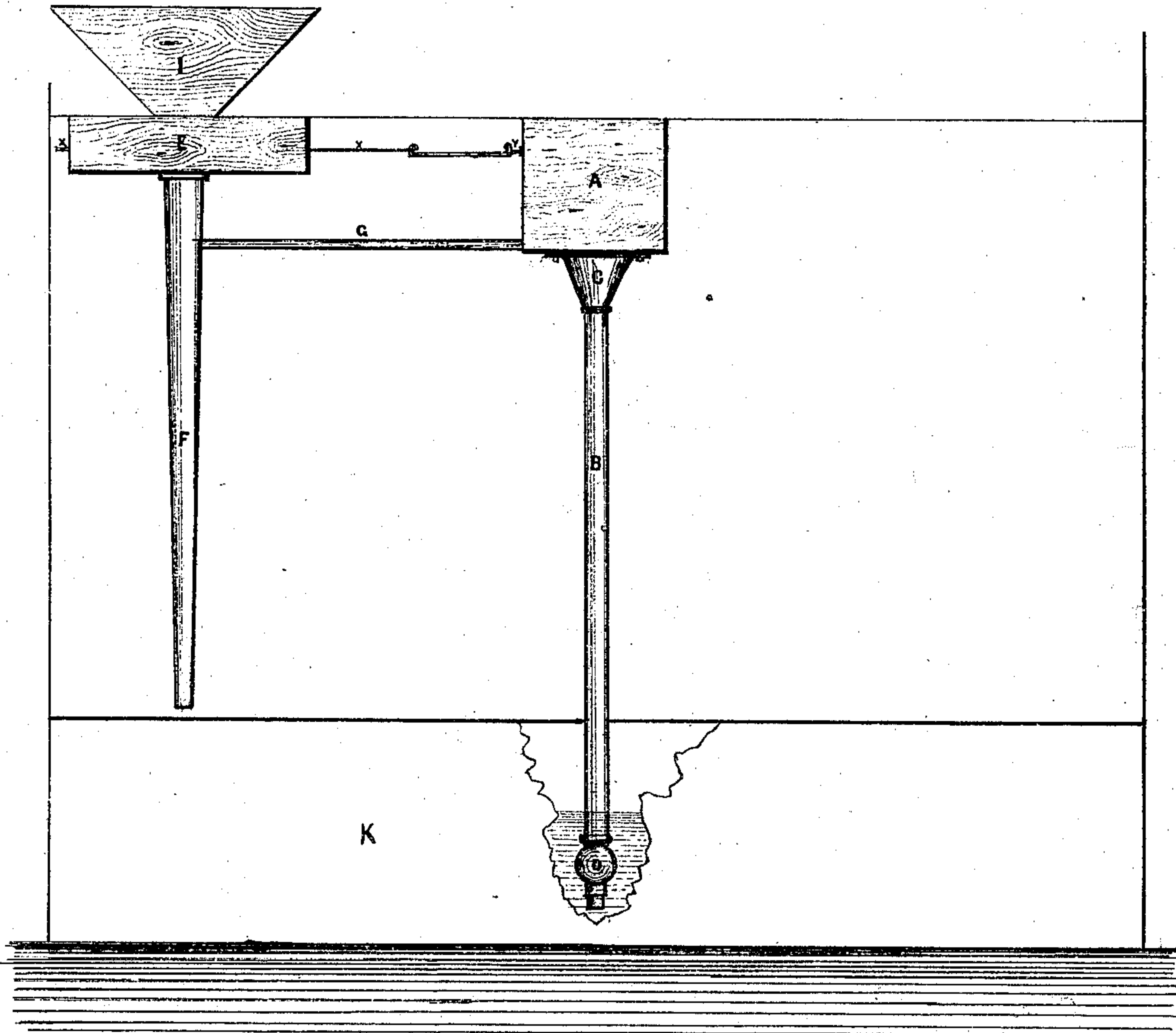


FIG. 2.

WITNESSES.

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4. Sheets. Sheet. 3.

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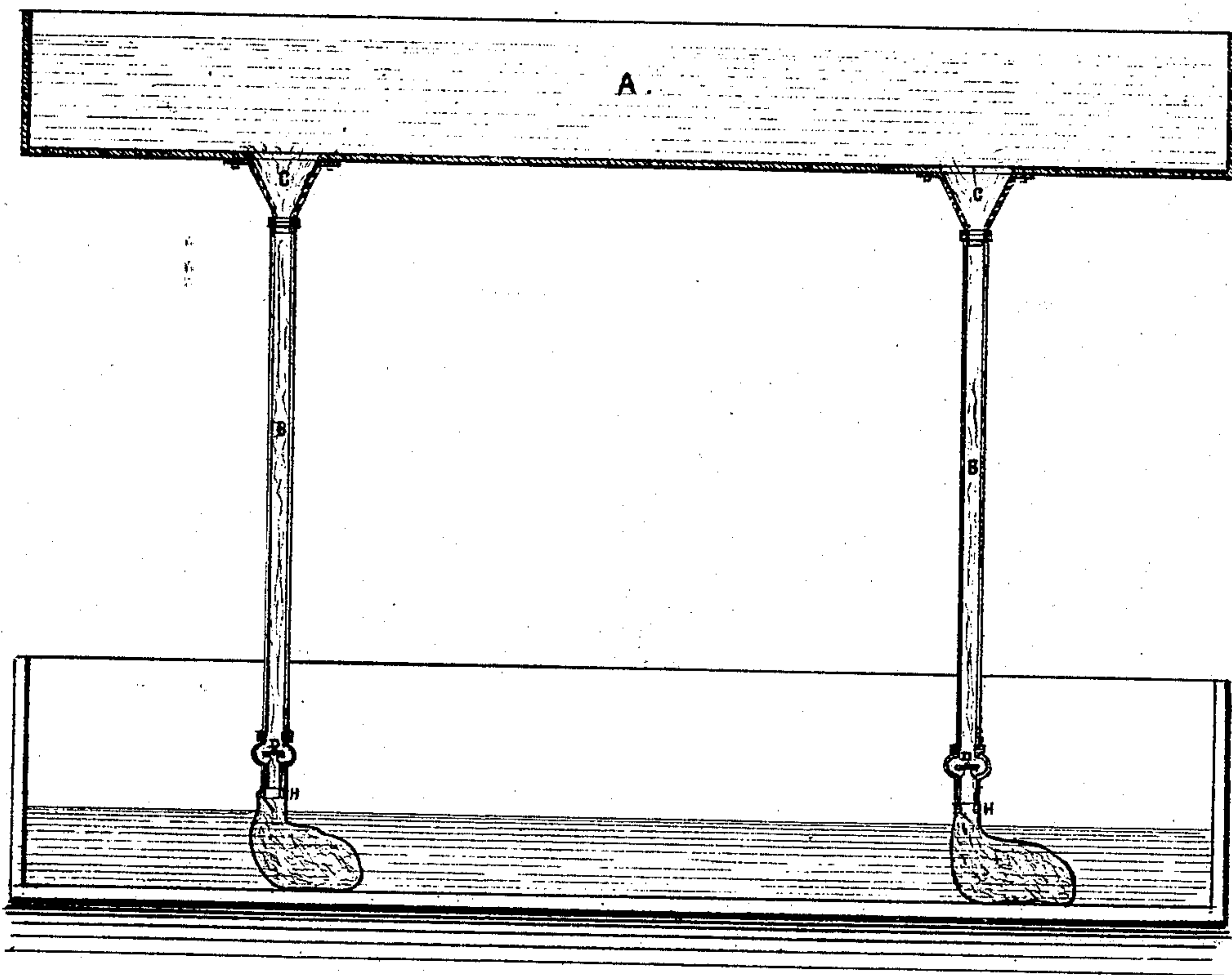


FIG. 3.

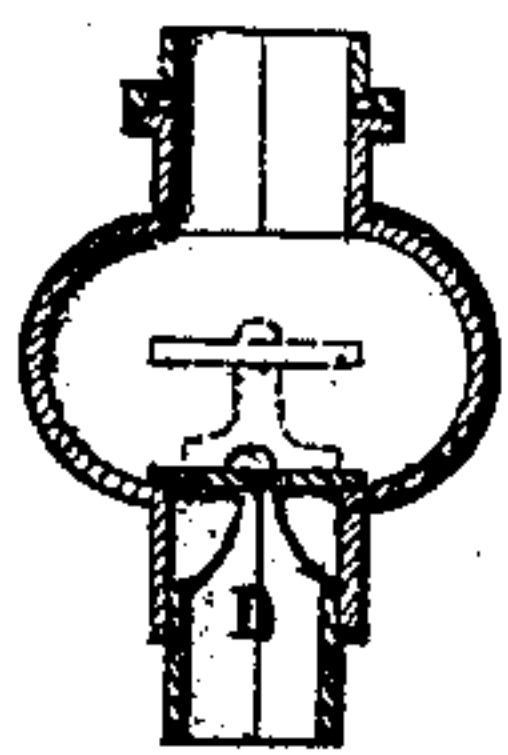


FIG. 4.

WITNESSES

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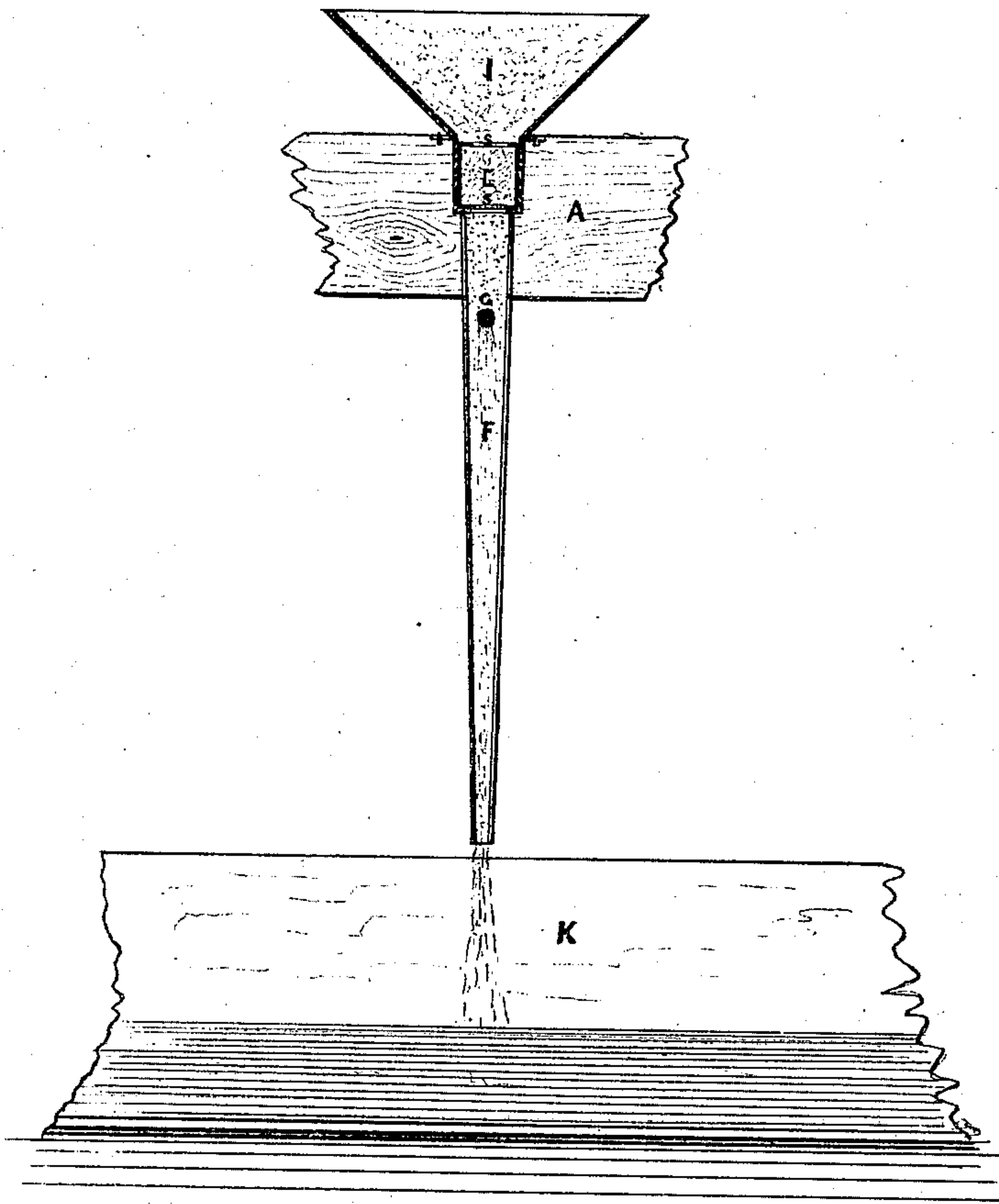


FIG. 5.

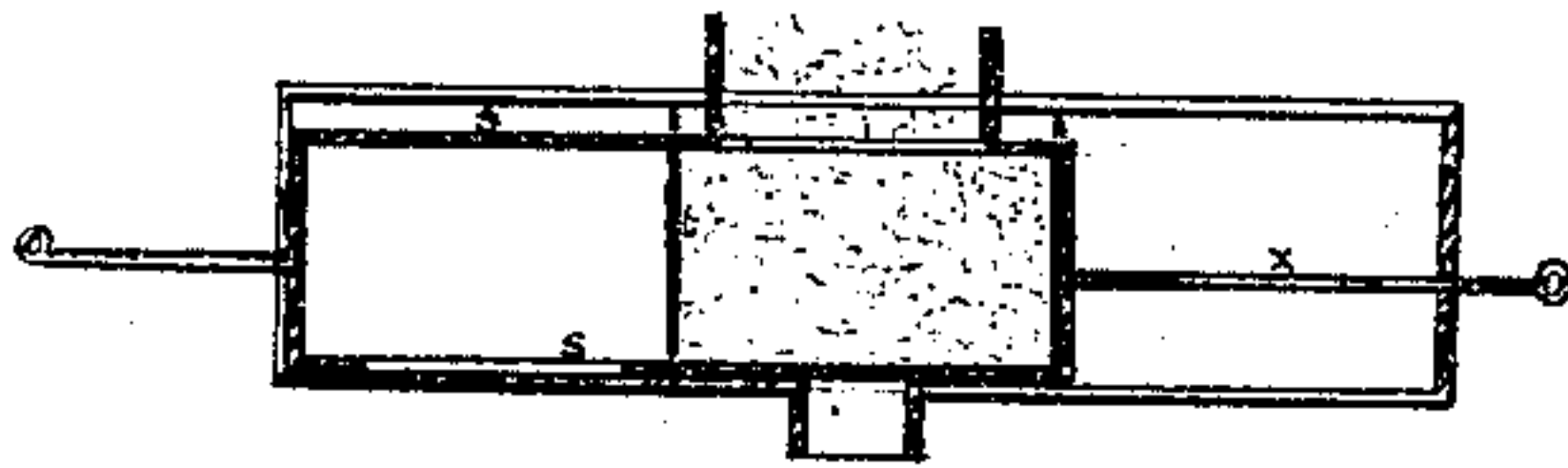


FIG. 6.

WITNESSES

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INVENTORS

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# United States Patent Office.

WILLIAM Y. WARNER AND JAMES CROOKS, OF WILMINGTON, DELAWARE.

Letters Patent No. 98,651, dated January 4, 1870

## IMPROVEMENT IN APPARATUS FOR TANNING HIDES AND SKINS.

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

To all whom it may concern:

Be it known that we, WILLIAM Y. WARNER and JAMES CROOKS, of the city of Wilmington, in the county of New Castle, and State of Delaware, have invented a new and improved Apparatus for Tanning Skins and Hides; and we do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a front view of a machine embodying our invention;

Figure 2, an end view;

Figure 3, a longitudinal section;

Figure 4, a section of the valve in the hose;

Figure 5, a vertical transverse section, showing the end of the machine, which is at the right hand in fig. 1; and

Figure 6 is a section through the centre of the gauge-box and its slides.

### *Nature and Object of the Invention.*

The first part of our invention consists in the combination of a feeding-trough containing tanning-liquor, filling-hose with funnel-connections and valved ends, a gauge-box with slides for feeding tanning-materials into the skins or hides, operated by means of a rod and spring, having attached to it a tapering pipe, which receives the tanning-material in its passage into the skins or hides, and a smaller pipe, which leads the water from the liquor-feeding trough into this tapering pipe.

The object of this part of our invention is to obviate the necessity of using a funnel and dipper in the filling of the skins with tanning-material and liquor, and to enable the workman to fill both at the same time, without waste.

The second part of our invention consists of a valve, which is applied to the mouth or opening of the skin or hide which retains the liquor, when distended or filled.

The object of this second part of our invention is to dispense with the troublesome process of tying and untying the mouths or necks of the skin, in filling, and, at the same time, retain the tanning-material.

### *General Description.*

A is the feeding-trough, which is attached to the joists of the floor above the workman's head.

B is the filling-hose, with funnel-head C and valve D attached.

E is the gauge-box, with its slides S S, operated by means of the rod X and spring Y, for regulating the quantity of tanning-material used.

F is the tapering pipe, through which the material passes into the skins.

G is the pipe which carries the tanning-liquor from the feeding-trough A into the tapering pipe F, for the purpose of forcing the tanning-material into the skins or hides.

H is the valve, which is fastened to the mouth of each skin or hide.

I is the bin for holding the sumac, or tanning-material.

K is the tan-tub, in which the skins are filled, and from which the liquor is pumped back in the feeding-trough A, when required.

The skins to be tanned, after sewing, have the valve H attached. The liquor is pumped from the tan-tub K into the trough A, which runs the whole length of the tan-tub.

The sumac, or other tanning-material, is fed from the bin I through the gauge-box E.

In filling, the skins or hides are taken to the tapering pipe F, the end of which is inserted in the mouth or neck of the skin, forcing open the valve H. The slides S S, in the gauge-box E, are pulled forward, the tanning-material descends, the valves S S closing instantly, while the liquor, which is constantly running through the small pipe G, washes all into the skin, which is then removed, and passed to the workman stationed in charge of the filling-hose B, who brings the mouth of the skin under the valved end of the hose, which forces up the valve D, and the skin is entirely filled. Here, the operation is complete, and the skins or hides remain in the tan-tub until it becomes necessary to refill them.

We claim, as our invention—

1. The feeding-trough A, in combination with the series of pipes B, B, F, and G, substantially as and for the purposes set forth.

2. The hose B, with its funnel-head C and valve D, when used for like purposes, substantially as set forth.

3. The gauge-box E, with its slides S S, operating substantially as described, for the purposes mentioned.

4. The gauge-box E, with its slides S S, in combination with the tapering pipe F and connecting-pipe G, and bin I, substantially as and for the purposes hereinbefore specified.

5. The valved mouth-piece H, substantially as and for the purposes hereinbefore described.

6. The combination of the following elements or parts: the feeding-trough A, the filling-hose B with its funnel C and valve D attached, the bin I, the gauge-box E with its slides S S, the tapering pipe F and its connecting-pipe G, and the valve H, substantially as hereinbefore described, as and for the purposes hereinbefore set forth.

W. Y. WARNER.  
JAMES CROOKS.

Witnesses:

E. J. DOUGHERTY,  
J. S. VALENTINE.