G. W. Smith,

Leaching Apparatus,

No. 13,403, Patented Aug. 7, 1855.

Fig. 1

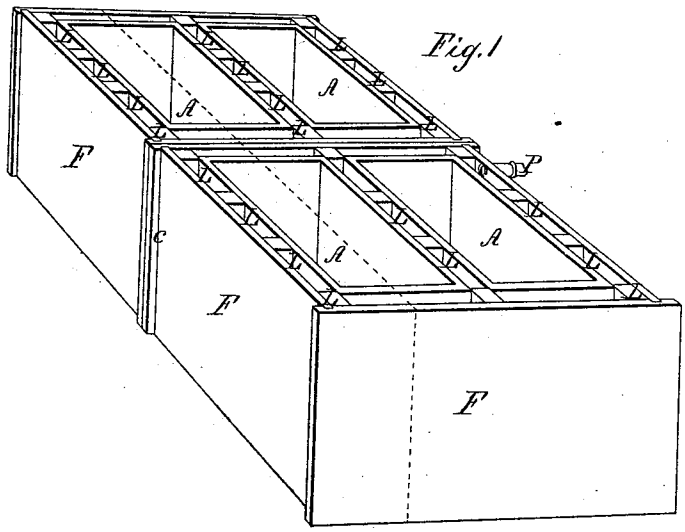


Fig. 2

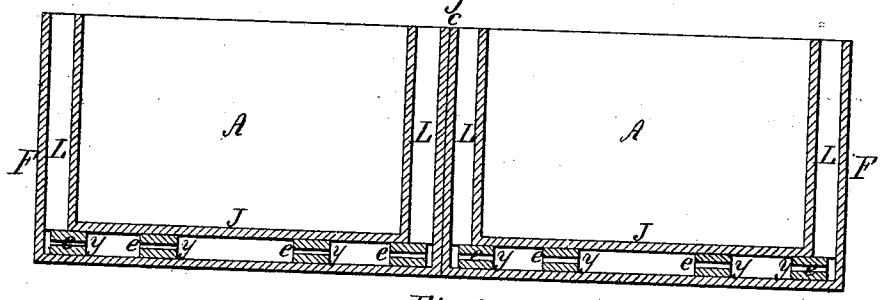
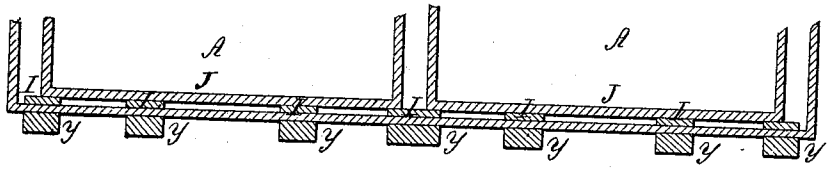


Fig. 3



Witnesses
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UNITED STATES PATENT OFFICE.

G. W. SMITH, OF NANTICOKE, NEW YORK.

TANNING APPARATUS.

Specification of Letters Patent No. 13,403, dated August 7, 1855.

To all whom it may concern:

Be it known that I, G. W. SMITH, of Nanticoke, in the county of Broome and State of New York, have invented a new and useful Improvement in the Mode of Constructing Leaches for Leaching Tan-Bark, of which the following description, in connection with the accompanying drawings and references, is sufficiently clear and comprehensive to enable others of competent skill to make and use my invention.

It is well known that a very great inconvenience is felt among tanners and much loss of time, and money, by the rapid decay of the tan leaches. Those that are well put up will last but a few years, not often more than four or five. This rapid decay is in consequence of the necessity of exposing some portion of the outside of the leach to an intermittent wet and dry surface, and also to a considerable degree of heat as the leaches are used in extracting the tannin, while the inner surface of the leach to a slight depth becoming saturated with tannin, renders it hard, and thus prevents the tannin (which would otherwise itself preserve the wood) from passing through. It is also well known that wood on being constantly saturated with water will not decay. Flumes in mills, where the water meets but one side of the planking will last fifty or sixty years, and if constructed of durable kinds of wood even a hundred years.

The above facts and principles are embodied in the nature of my invention, which consists in surrounding the ordinary tan leaches with a water chamber so that the outside of the leach will at all times be saturated with water.

In the drawings hereto annexed Figure 1 is a perspective view of four single leaches with the water spaces &c. Fig. 2 is a section on the line X, X, of Fig. 1, and Fig. 3, is a section of the lower part of the leaches, cut in the same manner, showing a different mode of constructing the bottoms from that represented in Fig. 2.

A, Figs. 1 and 2, are the tan leaches, the floors or bottom planks J, resting upon timbers or sleepers Y, represented in Fig. 2, which extend through from side to side under two leaches. Upon each of these timbers are three uprights, or posts L, one upon each end, and one in the center, passing up between the two leaches under which the sleepers pass. This frame work of sleepers and posts is surrounded by planking F put together and made water tight in the usual manner, this planking being made fast to the frame on the outside as also may be the planking for the leach on the inside. The partition planks C may be left out and the outside planks made continuous if it is deemed advisable, in which case one sleeper also and its three uprights should be omitted. Water is admitted through the pipe P, into that portion of the water chamber, and from thence is allowed to pass to all portions of the chamber through openings in the sleepers as shown at *e* Fig. 2, and in case the sleepers are cross tied openings must be made through the crossties also. Should it be desired to have sleepers below the lower planking they may be arranged in the manner shown in Fig. 3, the posts being erected at the same places as before described and passing up through the lower planking (through water tight fittings). The base of the water chamber in this case is formed by laying strips of thick plank between the leaches and this lower outside planking above and parallel to the sleepers, as shown at I Fig. 3. Auger holes should be made through these strips to admit the water from one space to another, as in the other arrangement already described. The outside of the outer planking may be more perfectly preserved from decay by making the top of the water chamber one half inch lower than the leaches, and permit the water to run or drip over the top, and thus keep the outside of the plank as well as the inside, constantly saturated with water.

What I claim as my improvement is—

Surrounding the ordinary tan leaches with a water chamber constructed in the manner and for the purposes herein set forth, not intending to limit myself to a particular form or mode of structure but comprising any form by which the leaches are surrounded by water spaces substantially as above described.

GEORGE W. SMITH.

Witnesses:

M. B. GODDARD,

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