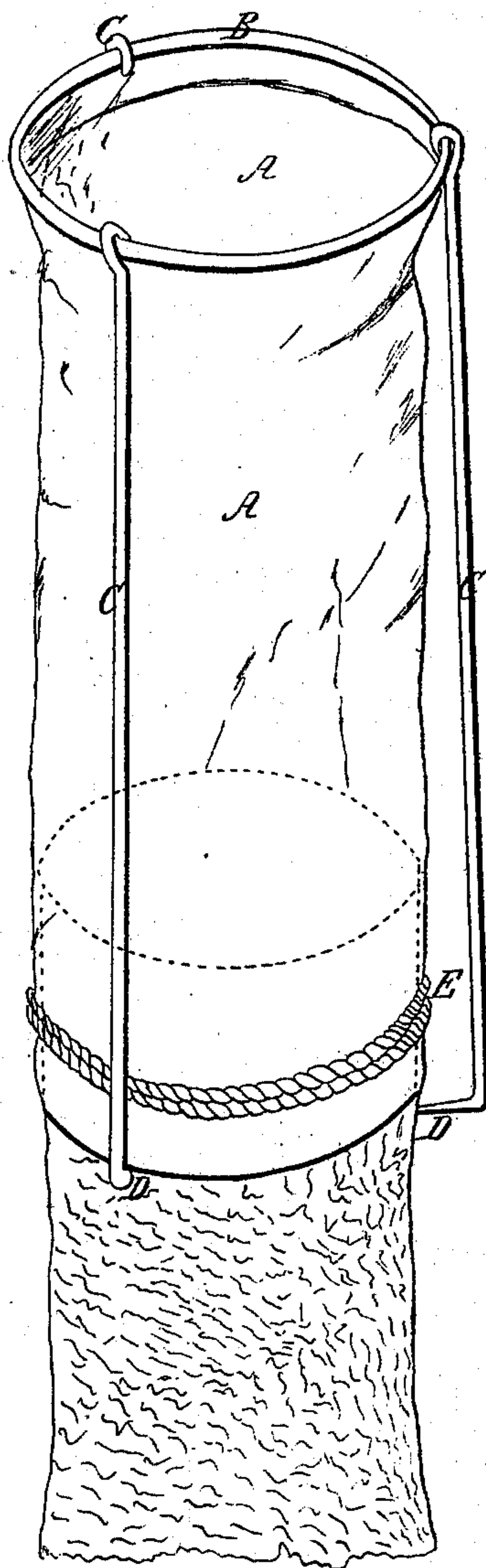


W. B. SMITH.
APPARATUS FOR SATURATING TIMBER.

No. 62,295.

Patented Feb. 19, 1867.



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W. B. SMITH, OF LA FAYETTE, ILLINOIS.

Letters Patent No. 62,295, dated February 19, 1867.

IMPROVED APPARATUS FOR SATURATING TIMBER.

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, W. B. SMITH, of La Fayette, in the county of Stark, and State of Illinois, have invented a new and useful improvement in Apparatus for Saturating Timber; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, in which—

The figure represents my device attached to the end of a small piece of timber.

My invention consists in forming a portable and convenient apparatus whereby timber may be saturated with substances which possess antiseptic qualities, in solution, without the erection of costly apparatus, and without removing from the spot where cut and prepared for market.

That others may understand my invention, I will particularly describe it.

My device is particularly useful in saturating small timbers, such as railroad ties, fence posts, &c., and its application to one of the latter will be described, though to apply it to larger timbers would simply involve the use of a larger apparatus and a longer period of time, and it would not be advisable to split a log intended to be saturated.

A is a sack of India-rubber cloth, or some other convenient or suitable water-proof fabric, of about two feet in length, and open at both ends. It should be of sufficient circumference to admit the end of a fence post or railroad tie, say twenty to thirty inches. Around the opening at one end of the sack A I place a metal band or ring, B, or, if more convenient, a wooden hoop may be used. To this hoop, B, are attached two or three legs, C C, with sharp-pointed toes, D, turned in at right angles to the shaft of the leg. The sack A hangs from the hoop B between these legs, and reaches nearly down to the toes D. A stout elastic band, or a stout cord or strap must be provided to tie the lower end of the sack to the top of the post. A band of flannel or felt inside of the lower end of the sack serves to make the joint more secure.

The apparatus above described, with a bucket in which to make the required solution, completes the equipment of the operator.

In saturating timber for purposes of preservation against the attack of moisture or insects, it has been found advisable to introduce the antiseptic solution within a short time after the timber has been felled, before the watery portions of the sap have evaporated and deposited the glutinous portions within the wood cells and passages, so as to obstruct the introduction of any liquid except under great pressure or by slow degrees. When the solutions are applied while the sap is still liquid in the wood, the pressure due to a column of fluid fifteen or twenty inches high will effectually expel the sap and saturate the wood with the applied solution in a very short time; in the case of an ordinary railroad tie or fence post from five to ten minutes will suffice to saturate thoroughly, even the bark.

My method is as follows: Prepared with a quantity of the desired substance to be introduced into the pores and cells of the wood, a vessel in which to prepare the solution, and the sack A, or several of them, if convenient, I repair to the place where my freshly-cut posts are stored. A post is supported against some convenient resting-place, but end uppermost. To this but end I secure the lower end of one of my sacks by slipping the end of the sack over the end of the post, and binding it there by the cord or band E. I then raise the hoop B as high as the sides of the sack will permit, and drive the pointed toes D into the side of the post. I have now a reservoir at the upper end of my post for the reception of the antiseptic solution, which I pour therein from the vessel and leave to do its work while I prepare another post in like manner. In a few minutes I find that the sap has been almost entirely expelled, and the wood is saturated as desired. The solution which remains in the reservoir may then be returned to the bucket, and the sack removed to be applied in like manner to another post or timber.

With my apparatus, which is evidently inexpensive, timber may be saturated at such place as is most convenient, the only condition being that the saturation should be effected within a few days after being felled, as heretofore explained. This it is seldom inconvenient to do. Slight changes may be made in the construction of this apparatus without at all departing from the invention; as, if the hoop B and the toes D should be omitted, and the legs C secured to the side of the post by a cord or strap like E, precisely the results described would be produced. the object being to attach with facility a reservoir to the end of the post and support the same so that a quantity of antiseptic solution may be placed therein to penetrate the wood, as described, in accordance with the natural laws governing the case.

Having described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The sack A, constructed and applied substantially in the manner and for the purpose set forth.

W. B. SMITH.

Witnesses:

A. GRANT,

H. R. HALSEY.