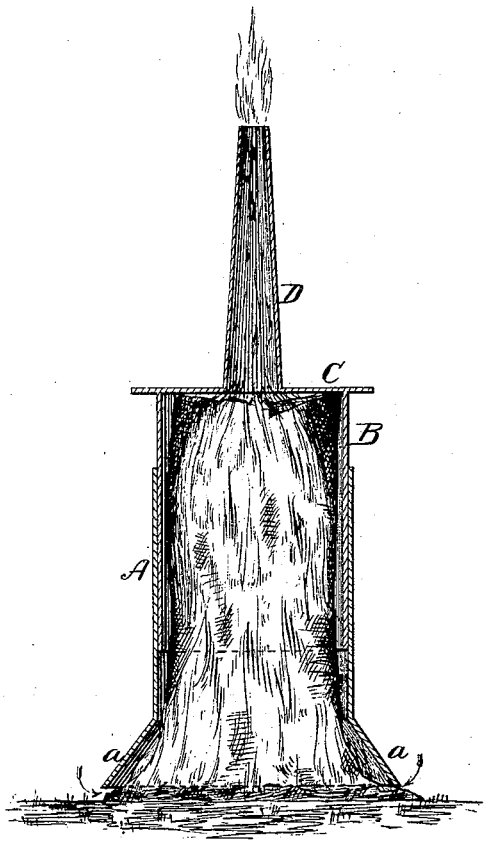
D. BATES.

Stump-Burner.

No. 205,465. Patented July 2, 1878.



WITNESSES

Harry King

W. C. Jordinston

INVENTOR

David Bates

By Hill & Ellsworth

His ATTORNEYS

UNITED STATES PATENT OFFICE.

DAVID BATES, OF FORT BRANCH, INDIANA.

IMPROVEMENT IN STUMP-BURNERS.

Specification forming part of Letters Patent No. **205,465**, dated July 2, 1878; application filed April 12, 1878.

To all whom it may concern:

Be it known that I, DAVID BATES, of Fort Branch, in the county of Gibson and State of Indiana, have invented a certain new and Improved Stump-Burner; and I do hereby declare the following to be a full and exact description of the same, reference being had to the accompanying drawing, forming part of this specification, in which the invention is represented by a longitudinal vertical sectional view.

This invention has for its object to provide for public use a stump-burner that will effectually consume both body and roots of a stump, and operate equally well on high or low stumps.

To these ends the invention consists, first, in constructing the burner in two or more sections, adapted to slide within each other, for the purpose of accommodating stumps of different heights; secondly, in flaring the lower end of the outer section so as to embrace the spur-roots of the stump; thirdly, in constructing the adjustable inner section with a flat top and smoke-discharge pipe, for the purpose to be hereinafter explained; and, lastly, in the combination of the various parts, all of which I will now proceed to describe.

In the accompanying drawing, A and B represent the outer and inner portions of the burner, each consisting preferably of a cylinder of sheet metal. The outer cylinder A is flared at its lower end, as seen at *a*, so that when the latter is placed over a stump it will embrace and cover the spur-roots thereof. The inner cylinder B fits accurately within the cylinder A, and is adjustable up and down therein, as will be readily understood. The cylinder B has a flat top, C, and a smoke-discharge flue, D.

The operation of the invention is as follows: The cylinder A is placed over the stump to be removed, its flaring bottom embracing the roots. Sticks and other combustible material are then thrown into the top of the cylinder until the space surrounding the stump is filled. The inner cylinder B is next slipped into the outer one and allowed to settle until its flat top C rests upon the top of the stump. Fire is then applied to the combustibles and the earth cleared away from the base of the cylinder A, to afford proper draft, unless the roots project high enough for this purpose.

As the stump consumes the inner cylinder gradually settles, its top C always resting on the top of the stump, thereby concentrating the heat at this point and drawing the sap and water from the stump, and facilitating its destruction. The smoke and products of combustion escape from the pipe D.

If one charge of combustibles proves insufficient, the inner cylinder may be removed and another charge added, and so on until the stump is entirely destroyed.

I do not, of course, desire to limit myself to the cylindrical form of the sections composing the burner, as square or other forms might be employed, though I have found the cylindrical form best adapted for the purpose.

I claim as my invention—

1. A stump-burner constructed in two or more sections, adjustable within each other, for the purpose of accommodating stumps of different heights, substantially as described.

2. In a stump-burner, the outer cylinder A, having the flaring bottom *a*, adapted to embrace the spur-roots of a stump, substantially as described.

3. The inner adjustable cylinder B, constructed with a flat top, C, and a smoke-discharge pipe, D, in combination with a stationary outer cylinder, substantially as described, for the purpose specified.

4. The combination of the outer cylinder A, provided with the flaring bottom, with the inner adjustable cylinder B, having the flat top C and pipe D, substantially as herein shown and described.

DAVID BATES.

Witnesses:
A. L. LEWIS,
J. LEHMAN.