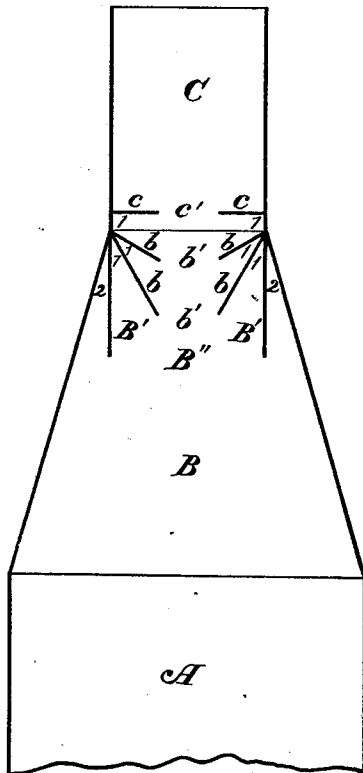


W. GLUE.
REFUSE BURNER.

No. 191,744.

Patented June 5, 1877.



Attest:
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Inventor:
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UNITED STATES PATENT OFFICE.

WILLIAM GLUE, OF MUSKEGON, MICHIGAN.

IMPROVEMENT IN REFUSE-BURNERS.

Specification forming part of Letters Patent No. **191,744**, dated June 5, 1877; application filed April 30, 1877.

To all whom it may concern :

Be it known that I, WILLIAM GLUE, of Muskegon, in the county of Muskegon, in the State of Michigan, have made certain Improvements in Refuse-Burners or Furnaces for completely burning the refuse of saw and other mills and tanneries, and is intended as an improvement upon patent 145,861, granted to me December 23, 1873; and the invention consists in inserting within the throat, at or near the upper conical section of the burner, certain interrupting rings or cylinders to catch any particles of unconsumed sawdust, bark, shavings, or other matter being consumed, from passing out of the burner while on fire, as will be fully described hereinafter.

In the drawings, A represents the body of the burner, B the conical section above the body A, and C represents the exit-opening and pipe on the top of section B. *c* is an annular ring, having opening *c'* centrally therein, and is placed at or near the junction of section B with part C. The opening *c'* is proportioned to the size of the burner and the amount of refuse to be consumed therein, so as to give proper space for the draft. *b b* are reversed conical rings or sections of cones projecting downward and within the conical section B of the burner, and attached to or near the top of section B. There may be one, two, or more of these conical rings, as desired, projecting inward and downward from the top section B, but the openings *b'* in the center must not in any case be less in diameter than the opening *c'* in ring *c*, but as they project inward and downward within the conical section B, I prefer that the lower openings be greater between the conicals *b* than the openings *c'* in the annular ring *c*.

B' is a section of a cylinder of the same or about the same diameter as the exit-pipe or section C, or it may be a continuation of exit-pipe C projecting down within the conical section B, leaving an opening, *B''*, the same diameter as the exit-pipe.

It will be observed that all these projections tend to arrest the particles of refuse

not completely consumed in the combustion-chamber below—particles that are on fire, and might, if allowed to pass freely out, set combustible matter outside, with which they might be brought in contact, on fire. The projections *b* and *c* form annular chambers, 1, between themselves and the downward projection of *B'*, another chamber, 2, between it and the conical section B, and any unconsumed particles caught by them will be prevented from passing out of the burner with the draft, and after being so caught will fall back of their own weight into the combustion-chamber below and be fully consumed.

The insertion of these inwardly-projecting rings *c* and *b*, or *B'*, can easily be made in any of the refuse-burners having a conical top section.

Having thus described my invention, what I claim is—

1. In a refuse-burner or furnace, the combination of the ring-plate *c*, having opening *c'*, the exit-pipe C and conical section B, as and for the purposes described.

2. In a refuse-burner or furnace, the combination of the inverted conical ring *b*, having opening *b'*, with the conical section B, as and for the purposes described.

3. The downward-projecting cylinder *B'*, in combination with the conical section B, as and for the purposes described.

4. In a refuse-burner or furnace such as above described, the combination of an annular ring, *c*, having opening *c'*, and inverted conical ring or rings *b*, having opening or openings *b'*, as and for the purpose described.

5. In a refuse-burner or furnace such as above described, the combination of an annular ring, *c*, having opening *c'*, inverted conical ring or rings, *b*, having opening or openings, *b'*, and downwardly-projecting cylinder, *B'*, as and for the purposes described.

WILLIAM GLUE.

Witnesses:

EDWIN POTTER,
O. P. PILSBURY.