

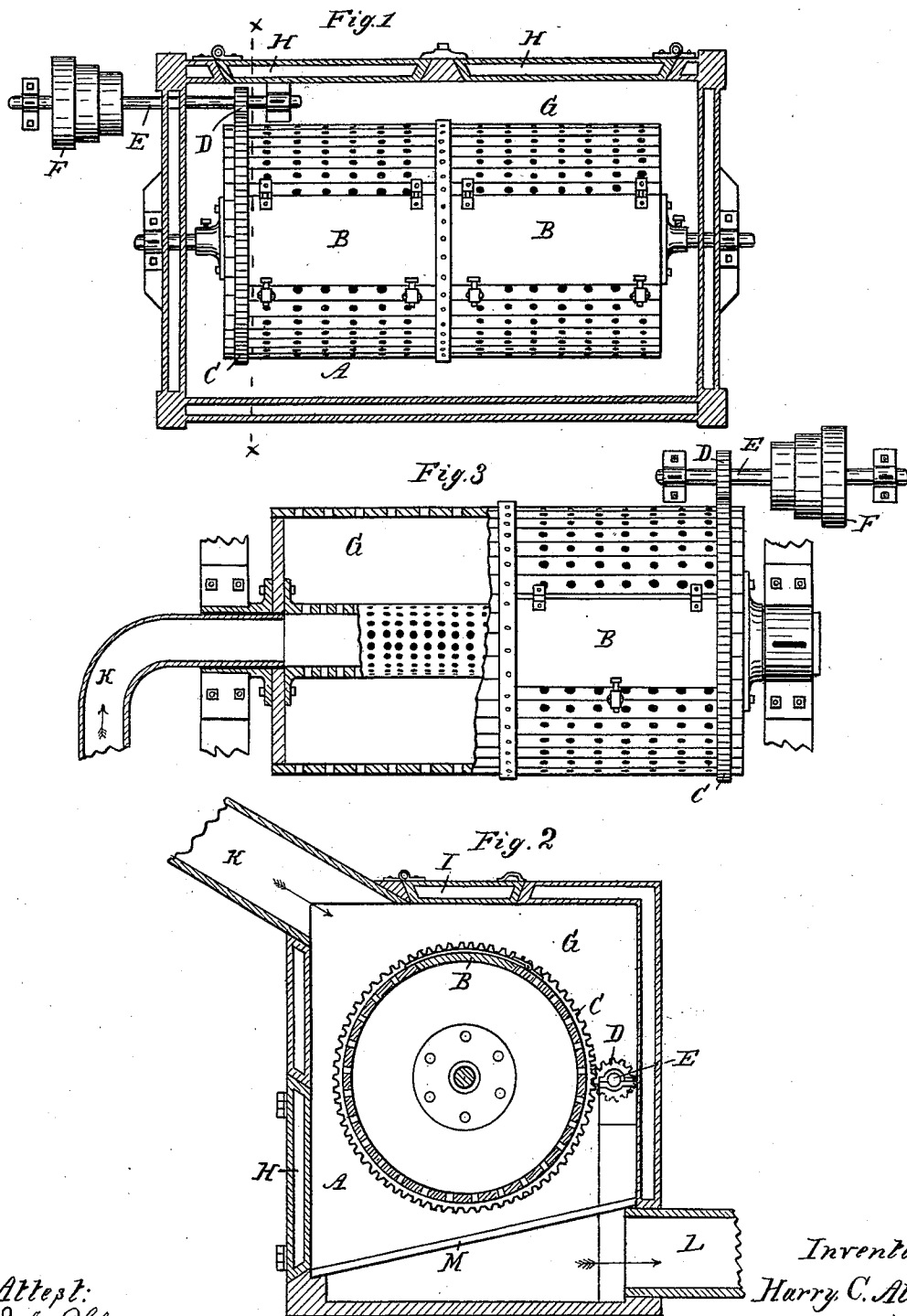
(No Model.)

H. C. ALBEE.

MANUFACTURE OF BROOM HANDLES.

No. 347,981.

Patented Aug. 24, 1886.



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# UNITED STATES PATENT OFFICE.

HARRY C. ALBEE, OF DETROIT, MICHIGAN.

## MANUFACTURE OF BROOM-HANDLES.

SPECIFICATION forming part of Letters Patent No. 347,981, dated August 24, 1886.

Application filed April 12, 1886. Serial No. 198,008. (No model.)

*To all whom it may concern:*

Be it known that I, HARRY C. ALBEE, of Detroit, in the county of Wayne and State of Michigan, have invented new and useful Improvements in the Manufacture of Broom-Handles; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to an improvement in the manufacture of broom-handles; and the invention consists in effecting the polishing and drying of the broom-handles in one single operation by causing a current of hot air to pass through the stock while being operated upon in a tumbling-barrel.

At the present state of the art polishing and drying of broom-handles forms two different steps in the manufacture thereof, and each requires its own quota of time. With my improvement both operations are carried on simultaneously, and the advantages I derive therefrom is a great saving of time and a better result.

In the drawings, which accompany this specification, Figure 1 is a vertical longitudinal section of the air-chamber surrounding the tumbling-mill, said tumbling mill being shown in side elevation. Fig. 2 is a vertical central cross-section taken on the line *xx* of Fig. 1. Fig. 3 shows in plan a different arrangement for carrying out my improvement, with parts in section, and others broken away.

A is a tumbling-mill consisting of a cylindrical barrel mounted on a shaft and supported in suitable bearings. The staves of this barrel are perforated, and a door or doors, B, permit of the introduction and removal of the broom-handles, the barrel being preferably of a length to admit of forming two compartments.

C is a cog-gear placed circumferentially near one end of the barrel, and D is a pinion meshing with this cog-gear. The shaft E, upon which this pinion is secured, is provided with a cone-pulley, F, so as to impart different rates of speed to the tumbling-barrel.

G is an air-chamber inclosing the tumbling-barrel upon all sides, top, and bottom. It is preferably formed with a hollow wall, and has doors H and I on top and sides, respectively, and an inclined grating, M, underneath, all

so arranged that the broom-handles may be easily introduced in the tumbler at the top, and removed at the bottom after operation is finished.

K and L are air-flues opening into the chamber upon opposite sides and near the top and bottom thereof, respectively. In operation the flue K is connected with a suitable source of hot air, which, by means of an artificial or natural draft, is caused to send a current of hot air through the chamber.

In practice, after a suitable quantity of stock is introduced in the tumbling-barrel, and all the doors are closed, motion is given to the barrel by means of the connection described, said motion causing the gradual polishing of the handles by mutual attrition; and while this process is going on a steady current of hot air is caused to flow through the chamber. This air, owing to the agitation produced by the tumbling inside the barrel, takes its course readily through the barrel, and produces simultaneously with the polishing a drying of the stock. It can readily be understood that in thus combining the two operations, not only much time is saved, but also a superior result is produced, the polishing action being increased by the quick removal of fine dust resulting from the attrition, and the drying being hastened and made more perfect by the constant tumbling, which counteracts all tendency of the stock to warp.

By means of the cone-pulley the motion of the tumbler is gradually increased as the operation progresses.

In the arrangement shown in Fig. 3, the tumbling-barrel is provided with an enlarged hollow and perforated shaft, through which the hot air is forced into the barrel. No air-chamber is needed with this arrangement.

What I claim as my invention is—

The herein-described improvement in the manufacture of broom-handles, consisting in simultaneously polishing and drying the broom-handles by causing a current of hot air to pass through the tumbling-mill in which the handles are polished, substantially as described.

HARRY C. ALBEE.

Witnesses:

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CULVELL MARTIN.