C. G. SHEPARD & P. ADAMS, Jr.
Fluting-Machine.

No. 209,930. Patented Nov. 12, 1878.

Fig. 1.

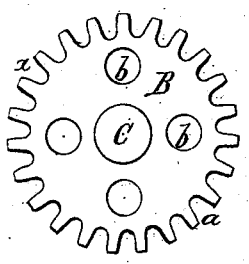


Fig. 2.

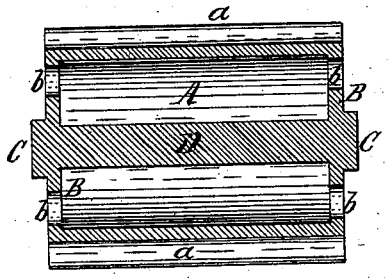


Fig. 3.

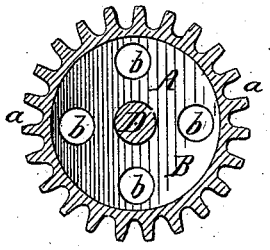
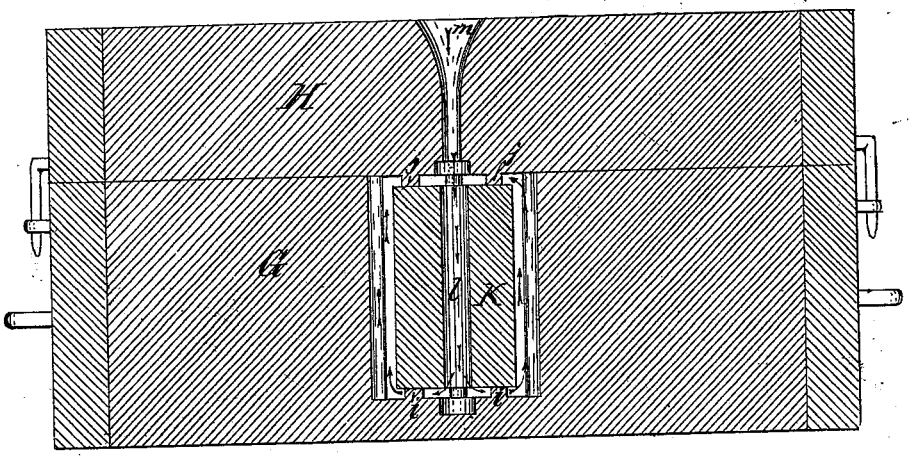


Fig. 4.



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UNITED STATES PATENT OFFICE.

CHARLES G. SHEPARD AND PETER ADAMS, JR., OF BUFFALO, N. Y., ASSIGNORS TO SAID SHEPARD AND WALTER J. SHEPARD, OF SAME PLACE.

IMPROVEMENT IN FLUTING-MACHINES.

Specification forming part of Letters Patent No. **209,930,** dated November 12, 1878; application filed October 24, 1878.

To all whom it may concern:

Be it known that we, CHARLES G. SHEPARD and PETER ADAMS, Jr., of the city of Buffalo, in the county of Erie and State of New York, have invented new and useful Improvements in Fluting-Machines, of which the following is a specification, reference being had to the accompanying drawing.

Our invention relates to a roller adapted for use in fluting-machines in which a corrugated bed-plate is employed, the roller being provided with a suitable handle for operating it. In this class of fluting-rollers it is desirable that the roller should be as large in diameter as possible without being so heavy as to prevent its being easily handled. This necessitates the roller to be made hollow; and the object of our invention is to produce a hollow fluting-roller which can be readily and cheaply cast of suitable metal.

The nature of our invention will be fully understood from the following description.

In the accompanying drawing, Figure 1 is an end elevation of our improved roller. Fig. 2 is a longitudinal section thereof. Fig. 3 is a cross-section thereof. Fig. 4 is a sectional view of the mold in which our improved roller is cast.

Like letters of reference refer to like parts in each of the figures.

A is the hollow cylindrical body of the roller, provided with exterior teeth, ribs, or corrugations *a*, of the usual form. B B are the end plates of the roller, cast in one piece with the body A, and provided with openings *b*. C C are the journals, arranged centrally on the end plates, B, and D is a central shaft connecting the end plates, B.

As shown in Fig. 4, our improved roller is cast in a two-part flask, G being the lower and H the upper part of the flask. The roller is molded in the lower part, G, of the flask in a vertical position, the bottom of the mold being formed with upwardly-projecting cylindrical supports *i*, which form the openings *b* in one of the side plates, B. The upper part, H, of the flask contains only the mold of the journal C on the other side plate B, and downwardly-projecting cylindrical pieces *j*, forming the openings *b* in that side plate B.

K is a core resting on the lower supports, *i*, and provided with a central bore, *l*, forming a communication between the molds of the two side plates, B B. The metal is preferably poured through a central opening, *m*, in the upper flask, and passes downward through the bore *l* of the core K to the bottom of the mold, thence outward through the space between the bottom of the mold and the bottom of the core, thence upward through the space between the sides of the core and the sides of the mold, and finally inward to the opening *m*, as indicated by arrows in Fig. 4.

This mode of casting the roller—viz., causing the metal to fill the fluted part of the mold from the bottom upward—prevents the metal from breaking or washing off the corners and edges of the corrugations in the mold, thereby producing rollers with true ends and clean sharp flutings, which are very desirable in a fluting-roller. The core is removed from the roller after cooling through the openings *b*.

We do not here claim the method of casting our improved roller; but

What we claim as our invention is—

A fluting-roller composed of a hollow body, A, perforated end plates, B B, journals C C, and central shaft, D, all cast in one piece, substantially as shown and described.

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