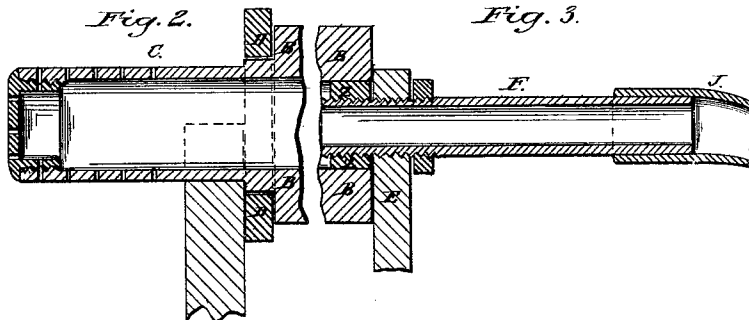
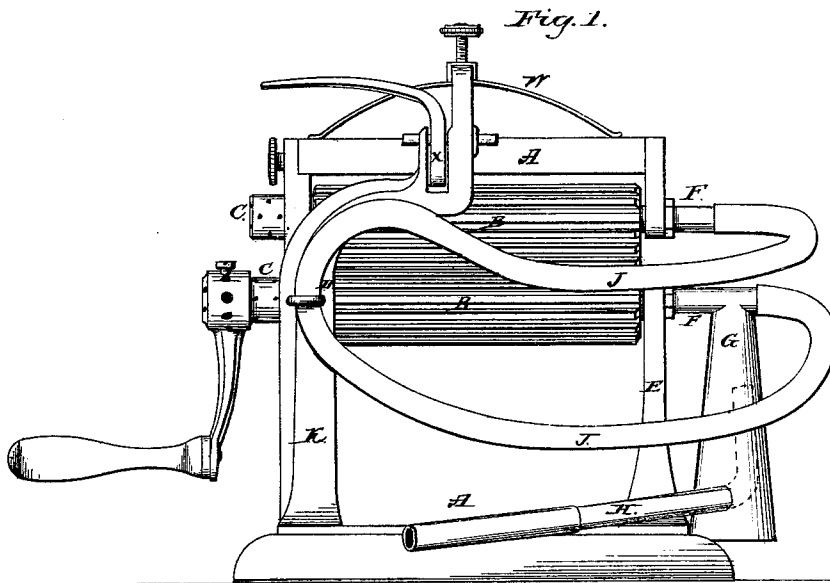


T. M. TUCKER.
FLUTING-MACHINE.

No. 185,876.

Patented Jan. 2, 1877.



Attest:

W. M. Gooding }
J. H. Crawford }

Inventor:

Thomas M. Tucker

UNITED STATES PATENT OFFICE.

THEODORE M. TUCKER, OF NEWARK, NEW JERSEY.

IMPROVEMENT IN FLUTING-MACHINES.

Specification forming part of Letters Patent No. **185,876**, dated January 2, 1877; application filed March 28, 1876.

To all whom it may concern:

Be it known that I, THEODORE M. TUCKER, of the city of Newark, in the county of Essex and State of New Jersey, have invented a new and useful Improvement in Fluting-Machines, which improvement is fully set forth in the following specification, reference being had to the accompanying drawings.

The object of my invention is to adapt fluting or crimping machines to the employment of gas for heating the rollers thereof, which object is attained by devices in connection with and upon the journals and bearings of the said rollers. At one end of the machine the journals are an integral part of the rollers, extending beyond the bearings, the lower roller projecting farther than the upper to receive the crank. These projecting ends are adapted to operate as burners by means of minute perforations through the shell into the interior of the journal, which cavity extends through the body of the roll. The socket of the crank is provided with apertures for the free egress of the gas. The interiors of the rolls at the other end have pipes projecting into them. These pipes have a thread upon them and two nuts—one inside and the other outside the post of the frame, the inside nut forming the bearing for the interior pipe in the end of the roll. These pipes project into the interior of the roll as far as needed, and project outward to receive on their ends a flexible or yielding pipe to convey gas from the lower to the upper roll. As there must be a clear passage for the fabric into and between and through the rolls, the flexible pipe is of sufficient length to form a loop. Securing the loop back to the other end of the machine leaves a clear passage between the pipes, the same as through the rollers.

To supply air necessary for combustion, a hollow cone, open at the lower end, is inserted

in the lower pipe-stud. The pipe through which the gas is conducted into the rolls enters the lower part of the cone, stopping short of the stud-pipe. With the gas the requisite amount of air enters the stud-pipe, and, passing through the flexible loop, is conveyed to the upper roll. A collar is placed on the journal of the lower roll, closing the aperture between the rolls, keeping the fabric from contact with the burning gas. A hand-guard is put on the handle of the machine.

The above-named are the principal features in the machine.

In the drawings, Figure 1 is the machine in perspective. Fig. 2 is the burner end of the rolls; Fig. 3, the pipe-stud end, both being sectional views.

A is the frame; B, the rolls; C, the perforated journals; D, the collar; E, the post, to which the lower pipe-stud F is fastened; Z, the interior nut forming the bearing; Y, the exterior nut. G is the hollow cone; H, the metallic ingress-pipe, and I the service-pipe from the gas-main. J is the rubber or flexible loop-pipe attached to the stud-pipes.

I do not, broadly, claim fluted rollers heated by the introduction of gas, as such, I am aware, is not new.

What I claim as my improvement, and desire to secure, is—

1. The hollow rollers B, with hollow journals having perforations C, substantially as and for the purpose set forth.

2. The flexible or yielding loop or pipe J, in combination with the rollers B and hollow cone G, as and for the purpose specified and shown.

THEODORE M. TUCKER.

Witnesses:

W. M. GOODING,
D. H. CRAWFORD.