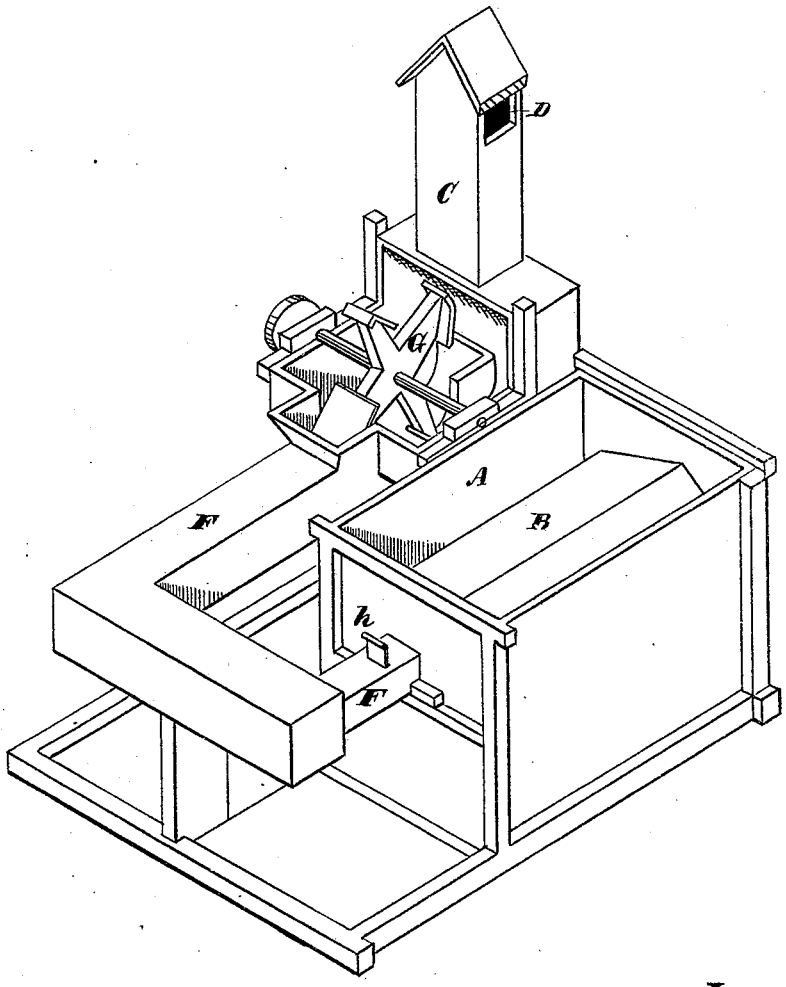
H. H. HURD & G. SIMPSON.

FLOUR-BOLT

No. 184,470. Patented Nov. 21, 1876.



Witnesses

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UNITED STATES PATENT OFFICE.

HENRY H. HURD AND GEORGE SIMPSON, OF REDWOOD CITY, CALIFORNIA.

IMPROVEMENT IN FLOUR-BOLTS.

Specification forming part of Letters Patent No. **184,470**, dated November 21, 1876; application filed September 21, 1876.

To all whom it may concern:

Be it known that we, HENRY H. HURD and GEORGE SIMPSON, of Redwood City, San Mateo county, State of California, have invented an Improved Flour-Cooler; and we do hereby declare the following description and accompanying drawings are sufficient to enable any person skilled in the art or science to which it most nearly appertains to make and use our said invention or improvement without further invention or experiment.

Our improvement relates to an improved flour-cooling attachment to grist-mills.

Our improvement consists in a combination of devices for forcing one or more currents of fresh air into the flour-bolt or bolt-chest in which the flour is bolted, thus not only cooling the bolt-chest and flour, but serving also to prevent the interstices of the bolt-cloth from becoming clogged, and the bolt-chest from sweating.

In order to more fully illustrate and explain our invention, reference is had to the accompanying drawing, in which the figure shown is a perspective view of our invention.

Let A represent the bolt-chest, and B the bolt, of a grist-mill. In order to cool the flour we direct a current of air either into the bolt itself or into the bolt-chest. In the present instance we have represented a stack or flue, C, which will project upward through the roof of the mill, and in which suitable openings, D, are made to admit air. This flue could, however, pass through the side of the mill, if desired, the object being to secure a supply of fresh cool air from the outside atmosphere. This flue or stack we then connect with the bolt or bolt-chest by a pipe or tube, F, as shown. At some suitable point in the length of the pipe or tube F we place a blower, G, which will draw air in through the openings in the flue or stack, and force it in a current through the tube or pipe into the bolt or bolt-chest.

We prefer, as represented in the drawings, to force the air into the bolt, so that the flour, as it is agitated by the rotation of the bolt, will be subjected to the cooling effects of the current of air. This arrangement also gives a better result in keeping the bolt-chest and bolt-cloth cool, at the same time thoroughly agitating the flour and forcing it through the meshes of the cloth, so that it cannot pack or collect on the cloth. It also prevents the flour from sweating and clogging the interstices of the bolt-cloth or sweating on the bolt-chest, thus enabling us to produce greater results with less bolting-surface.

We have represented a fan-blower; but it is evident that any suitable blowing apparatus can be used. The blower is driven by a belt-connection with the running-gear of the mill.

One or more dampers, H, can be used in the length of the pipe or tube F, for the purpose of regulating the quantity of air to be forced into the bolt or bolt-chest. Branch pipes could also be applied for leading a portion of the air to other bolts or bolt-chests; but these devices will readily suggest themselves to the experienced mill-man.

We cool the flour by our process without any additional machinery except the blower and air pipe or tube, which become a stationary part of the mill.

Having thus described our invention, what we claim, and desire to secure by Letters Patent, is—

The stack or flue C, with its openings D, the air pipe or tube E, with its damper H, and the blower F, in combination with the bolt B or bolt-chest A of a grist-mill, substantially as and for the purpose described.

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