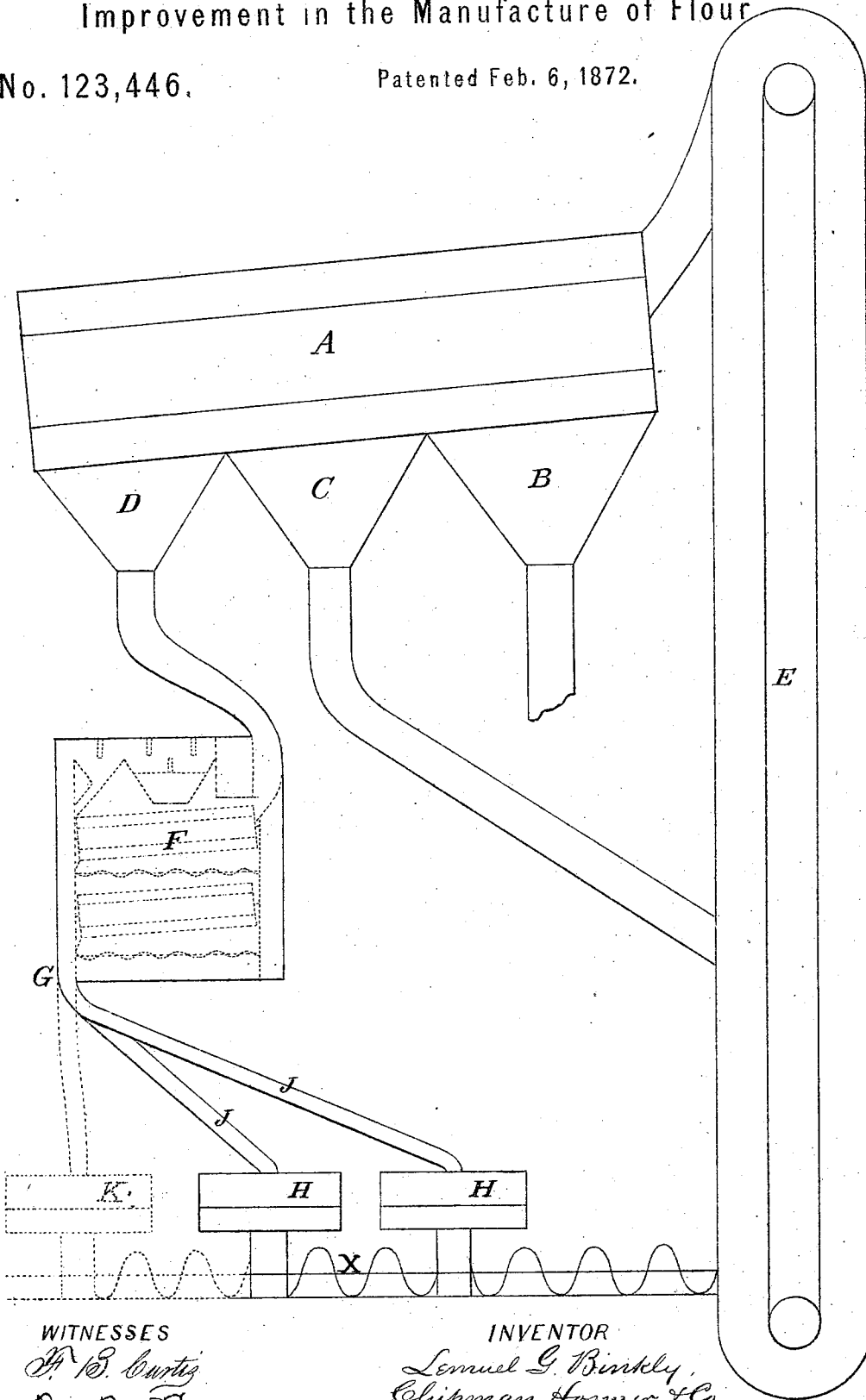


L. G. BINKLY.

Improvement in the Manufacture of Flour

No. 123,446.

Patented Feb. 6, 1872.



WITNESSES

H. B. Curtis
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UNITED STATES PATENT OFFICE.

LEMUEL G. BINKLY, OF BAUGHMAN, OHIO.

IMPROVEMENT IN THE MANUFACTURE OF FLOUR.

Specification forming part of Letters Patent No. 123,446, dated February 6, 1872.

To all whom it may concern:

Be it known that I, LEMUEL G. BINKLY, of Baughman, in the county of Wayne and State of Ohio, have invented a new and valuable Improvement in Manufacturing Flour; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawing making a part of this specification and to the letters and figures of reference marked thereon.

Figure 1 of the drawing is a representation of means employed in my process of manufacturing flour.

This invention has relation to the manufacture of flour; and it consists in a novel method of procedure, whereby a straight run is produced, in which all or nearly all the nutritious portion of the grain is utilized, and the woody or fibrous portion eliminated. It has been often attempted to utilize the middlings by regrounding them in the run; but the operation has heretofore invariably resulted in a deterioration of the quality of the flour, and is consequently seldom used. I have discovered that the middlings can be purified, reground, and worked in with the run, and that the grade will not deteriorate from the quality of the first run in consequence of the admixture. My method is therefore as follows: After the grain has been ground and bolted in the usual manner, the separated middlings are purified by the removal of the woody particles or "feed." This is accomplished in the run by passing the middlings through a purifying-machine before they are fed to the run of burrs to be reground. My purifier, patented December 27, 1870, is thought to afford satisfactory results; but any other which is preferred may be employed. The purified middlings are conducted to the burrs and reground with the grain.

In the accompanying drawing I have illustrated the arrangement of devices employed in my improvement. The letter A designates the bolting-reel, from which fall the flour, re-

turns, and middlings, respectively, into the hoppers B, C, and D, the "feed" passing over the tail of the reel. E represents the elevator, by means of which the ground grain is carried up to the reel. The returns are discharged directly into the elevator from the hopper C. F represents a purifying-machine, into which the middlings pass directly from the hopper D, and from which the nutritious portion is discharged at G and distributed to the run of burrs H H by conductors J J, to be reground with the grain, the resulting ground grain and purified middlings passing onto the elevator in the usual manner.

The method above described is preferred; but sometimes I have found it convenient to grind the purified middlings on a separate burr, K, which is represented in dotted lines on the drawing, the result passing into the conveyer X and to the elevator with the ground grain from the main run. By this method a straight run is produced with the purified middlings, the quality of the flour is kept up to that of the first which passes off, and the quantity thereof is very materially augmented.

What I claim as my invention, and desire to secure by Letters Patent, is—

In the manufacture of flour, the combination and arrangement of a middlings-separator or purifying-machine in direct connection with the bolting-reel and the grinding-burrs, for the purpose of subjecting the middlings, during the run, to the action of said purifier, immediately in their passage from the bolt to the burrs, to be reground with the unground grain, or in auxiliary burrs, and rebolted with the meal, substantially as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

LEMUEL G. BINKLY.

Witnesses:

D. D. KANE,
F. B. CURTIS.