

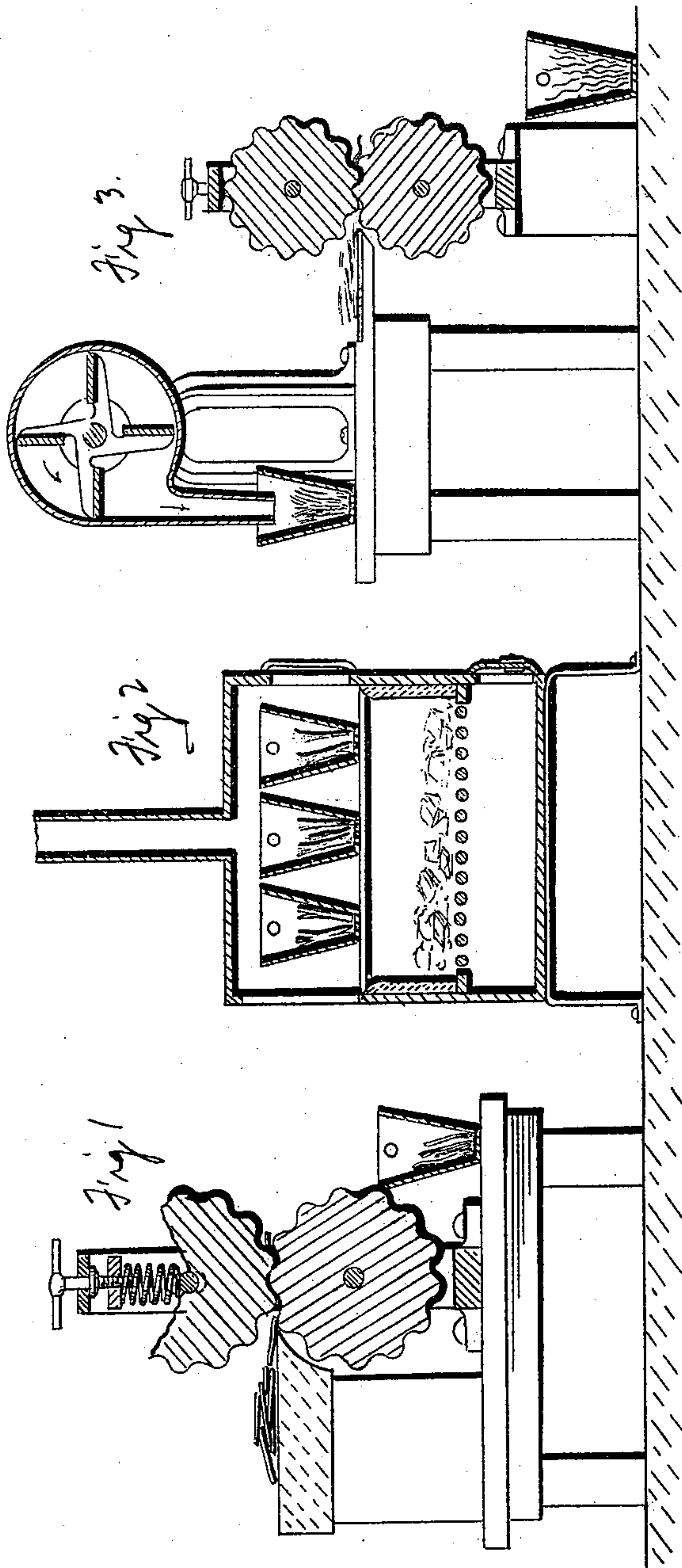
(No Model.)

H. C. MICHELL.

MANUFACTURE OF FLAKE MICA FOR BOILER COVERINGS, &c.

No. 545,605.

Patented Sept. 3, 1895.



Witnesses.
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UNITED STATES PATENT OFFICE.

HENRY COLBECK MICHELL, OF TORONTO, CANADA.

MANUFACTURE OF FLAKE-MICA FOR BOILER-COVERINGS, &c.

SPECIFICATION forming part of Letters Patent No. 545,605, dated September 3, 1895.

Application filed March 29, 1895. Serial No. 543,749. (No specimens.)

To all whom it may concern:

Be it known that I, HENRY COLBECK MICHELL, manufacturer, of the city of Toronto, in the county of York, in the Province of Ontario, Canada, have invented certain new and useful Improvements in the Manufacture of Flake-Mica for Boiler-Coverings and other Uses, of which the following is a specification.

My invention relates to improvements in the manufacture of flake-mica for boiler-coverings and other uses; and the object of the invention is to design an improved process which will effectually separate the laminæ of refuse thick sheet-mica blocks or crystals into flakes and it consists essentially in the various steps of the process hereinafter described, and particularly pointed out in the claims.

In carrying out my process I first introduce or feed the refuse of the heavy sheet-mica between one or more pairs of rollers, preferably corrugated and spring-held together, the idea being to exert a great pressure upon the pieces, so as to cause their edges to open. The mica in the refuse form is in small pieces or broken sheets of all shapes, and the effect of passing such broken pieces through the pairs of corrugated rollers is to corrugate them and thereby separate the laminæ, so that the edges are quite open. After passing through the corrugated rollers they are preferably carried by suitable means into heating-trays, which has the effect of opening the edges of the laminæ of the pieces of mica still more. They are then fed by hand or automatically on edge by suitable carriers to beneath the spout of a blast suitably created, and the effect of such blast, which is very strong upon the edges of the pieces, is to entirely separate the laminæ into flakes. The refuse mica that is fed underneath the spout of the blast is confined in a suitable chamber, so as to prevent it being blown around, and when sufficient of the flakes are produced they are fed, either by hand or automatically, between pairs of corrugated rollers very much finer than the preceding ones, which has the effect of producing corrugations in the flakes.

In the drawings, Figure 1 shows corrugated rollers for the preliminary operation. Fig. 2 represents the means for heating the mica. Fig. 3 shows the blast and final set of rolls. The construction shown in these figures needs no detailed description.

It will be seen the flakes, when placed to-

gether as described in my Canadian patent for boiler-coverings, granted on the 7th day of September, 1894, under No. 47,059, and corrugated, will increase the number of air-spaces in the covering and reduce the amount of mica required, thus adding in a great measure to the non-conductive properties of the covering. By the process such as I describe the pieces of refuse mica are very quickly separated into flake form and may be utilized not only for coverings, but numerous other purposes.

Although I describe the mica as being heated before being carried from the first pairs of corrugated rollers to the blast, this might be dispensed with. The producing of the corrugations by the final sets of rollers might also be dispensed with.

What I claim as my invention is—

1. The herein described method of reducing block mica, crystals or refuse sheets or pieces of mica in which the laminæ are united together in their natural form, as found, into flake mica, consisting in first opening the edges of the laminæ of the pieces and then holding such pieces, so that the edges of the laminæ are presented and subjected edgewise to the direct draft from a blast as and for the purpose specified.

2. The herein described process of reducing refuse sheets or pieces of mica into flake mica consisting in first corrugating the refuse sheet mica and then subjecting edgewise to the action of a blast as and for the purpose specified.

3. The herein described process of reducing refuse sheets or pieces of mica into flake mica consisting in first corrugating the refuse sheet mica, next in applying heat to such refuse sheets or pieces of mica and then subjecting edgewise to the action of a blast as and for the purpose specified.

4. The herein described process consisting in first corrugating the refuse sheet mica then passing it edgewise beneath a blast and finally corrugating the flakes as and for the purpose specified.

5. As a new article of manufacture flake mica reduced into corrugated form as and for the purpose specified.

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