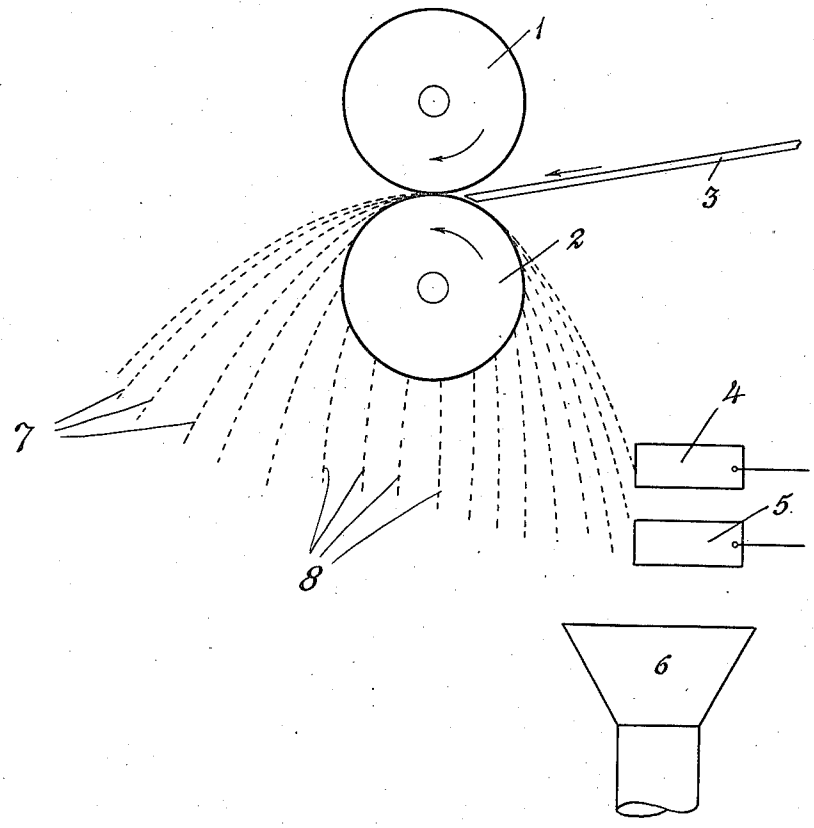
S. BAUMANN.

PROCESS FOR PRODUCING PURE FLOUR.

APPLICATION FILED FEB. 3, 1915.

1,236,658. Patented Aug. 14, 1917.



WITNESSES

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SAMUEL BAUMANN, OF NEW YORK, N. Y., ASSIGNOR TO SIMON, BÜHLER & BAUMANN INC., OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

PROCESS FOR PRODUCING PURE FLOUR.

1,236,658. Specification of Letters Patent. Patented Aug. 14, 1917.

Application filed February 3, 1915. Serial No. 5,835.

To all whom it may concern:

Be it known that I, SAMUEL BAUMANN, a citizen of France, and resident of New York city, county and State of New York, have invented a certain new and useful Improvement in Processes for Producing Pure Flour, of which the following is a specification.

My invention relates to processes for producing flour and has for its object to produce a flour of maximum whiteness and purity. Heretofore those particles which tend to depreciate the quality of the flour have been permitted to become mixed therewith after the grinding of the wheat or other grain and the mixture then subjected to a purifying or cleaning process. With such processes it is impossible to separate all of said particles from the mixture with the result that some of the objectionable material always remains in the flour to the detriment of its color and quality. This is due to the fact that this objectionable material is of substantialy the same size, shape and weight as the flour and for that reason cannot be separated therefrom by known milling processes. The particular purpose of my improved process is to prevent such particles as tend to depreciate the quality of the flour from becoming mixed therewith and to this end consists in separating the same from the flour or millstock immediately after the grinding operation and before a mixture has been formed. My invention will be fully described hereinafter and the features of novelty will be pointed out in the appended claim.

Reference is to be had to the accompanying drawing which diagrammatically illustrates an apparatus for carrying out my improved process.

In this diagrammatic drawing 1 and 2 represent grinding rollers of any well known type to which the wheat or other grain is fed in any suitable manner as by means of a chute 3. The reference characters 4 and 5 indicate two electrodes which are properly located beneath and to one side of said rollers 1 and 2 and are electrified in any convenient way. Beneath said electrodes 4 and 5 a hopper 6 may be arranged for the purpose of receiving the material from the electrodes and conducting the same to a bin or other place of storage.

In carrying out my improved process the wheat or other grain is conducted along the chute 3 to the rollers 1 and 2 between which it passes and by which the kernels are ground, being broken up into relatively heavy and large particles of husks, and relatively light and small particles of husks, and the flour itself which is of course very light. After being ground up and passing between the rollers 1 and 2 which rotate at a relatively high speed the heavier particles are thrown outwardly from the said rollers and drop for instance as indicated by the dotted lines 7. The lighter particles at the same time are not thrown outwardly, at least to any appreciable extent, but are carried along on the surface of the roller 2 from which they drop approximately as indicated by the dotted lines 8. In this manner the heavier particles are separated from the lighter, the lighter particles as before stated comprising flour and light husk fibers. In dropping from the roller 2 the flour and the light husk fibers pass through an electric field formed by the electrodes 4 and 5 which latter in consequence attract or withdraw all of the lighter husk particles from the falling mass, leaving the flour alone to drop into a suitable bin or other collecting receptacle. Almost immediately the lighter husk particles which have been electrically attracted to the electrodes 4 and 5 and have become electrically charged are repelled and drop into the hopper 6 or other device for maintaining them out of contact with the flour.

It will thus be seen that with this process the flour after passing through the grinding operation will not be contaminated by the fiber particles which are temporarily suspended in the air in dropping from the grinding rollers. In this manner fibrous particles such as smaller bran pieces, which it is substantially impossible to remove from the flour if permitted to become mixed therewith, are positively and completely removed and isolated before having an opportunity to become mixed with said flour. The flour particles themselves not being influenced by the electrodes the isolation is absolutely assured and a perfecty pure flour of maximum whiteness and containing nothing tending to depreciate its quality is the result of my improved process.

Various changes in the specific method of

carrying out my process may be made within the scope of the claim without departing from the spirit of my invention.

I claim:

The process of producing flour which consists in grinding grain under relatively high speed and projecting the material by the grinding impetus so as to impose thereon trajectories dependent upon the sizes and weights of the grains of ground material, subjecting the material having the shorter trajectories to electrostatic separation while passing through said trajectories, and separately collecting the components thereby separated.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

SAMUEL BAUMANN.

Witnesses:
JOHN A. KEHLENBECK,
FRITZ ZIEGLER, Jr.