

# UNITED STATES PATENT OFFICE.

LOUIS GATHMANN, OF CHICAGO, ILLINOIS.

## METHOD OF CLEANING AND HULLING GRAIN.

SPECIFICATION forming part of Letters Patent No. 250,436, dated December 6, 1881.

Application filed April 11, 1881. (No model.)

*To all whom it may concern:*

Be it known that I, LOUIS GATHMANN, of Chicago, in the State of Illinois, have invented certain new and useful Improvements in Methods of Cleaning and Hulling Grain; and I do hereby declare that the following is a full, clear, and exact description thereof.

This invention relates to processes in reducing wheat or other creased or lobated grain.

10 It is now common in the reduction of wheat to first clean or scour the unbroken grain, then to split it to release the germ and foreign substances lodged in the crease, then to bolt, and thereafter to reduce it by operations not  
15 here necessary to mention. While the splitting of the grain successfully exposes the germ and crease impurities, and to some extent detaches them from the berry, the latter effect upon the impurities is not always perfectly  
20 produced in the act of splitting. Of course nothing is accomplished in such operation toward the removal of the hull or any portion thereof that was originally embraced within the crease.

25 The object of my invention is to employ a method whereby the hull or any portion thereof, as desired, may be more equally removed over the entire surface of said hull, including that originally extending into the crease; and  
30 also whereby, if no more is required, the impurities only upon the surface originally confined within the crease may be more perfectly detached preparatory to further reduction.

To this end my invention consists, broadly,  
35 in brushing or scouring the grain after it is split, for the purpose either of removing the superficial impurities exposed by splitting or removing the hull to a less or greater extent, as may be desired, over the entire surface  
40 thereof as it is exposed after splitting. If the grain is properly split, the fracture will be through the crease, and the portions of the bran-surface originally hidden within the crease will be fully and equally with other  
45 portions exposed upon the fragments; also, if properly split, the fracture through the crease will expose but a relatively small surface of the food substance, and but little of such surface will be loosened in the act of splitting, so  
50 as to be readily detached. I have found that grain so split may be scoured sufficiently to

remove the hull, or less severely to remove a portion of the hull, or still less to remove only the superficial impurities without detaching any considerable portion of the food substance. 55 It is, of course, obvious that such scouring will take effect in a practical sense equally upon all portions of the bran-surface, and that, therefore, by this method the parts of such surface originally protected or hidden in the  
60 crease will be cleaned or removed equally with the rest.

In ordinary milling it will be advisable to clean the wheat before splitting it, and my method will in such milling be usually employed, mainly, for the purpose of simply cleaning the surfaces not exposed on the whole or unbroken wheat. This, however, is immaterial to my invention. I do not limit myself by reference to any steps that may precede splitting, or that  
70 may follow the cleaning or hulling of the half-kernels or fragments produced by splitting, but only to the brushing, scouring, or equivalent operation as a step succeeding the splitting of the grain and preceding further reduction; nor is it material to my invention whether  
75 the grain is bolted after splitting and before scouring, as will sometimes be advisable, such bolting or separation not being understood as a part of the reduction of the grain; nor do I  
80 limit myself to any particular mode or means for acting upon the split grain for the removal of the hull or of a portion thereof, or of the superficial impurities. I, however, prefer to use a brush grain-cleaner, particularly for the  
85 lighter actions desired, and to accompany the brushing with an air-draft to immediately separate the parts detached.

I am aware that it has been customary to split the lobated grain through the crease, and  
90 thereafter to submit the split kernels to an air-blast or to a bolting action. This obviously is not the equivalent of the method herein claimed, which involves the subjection of the split grain to a positive scouring action, since such mere  
95 bolting or blowing is only adapted to take out particles or impurities already detached from the grain, and not to detach them or to in any degree decorticate the grain.

The splitting of the grain may be effected  
100 by any of the well-known and approved machines for the purpose, but preferably by the

smooth-surfaced corrugated disks or rollers now extensively used in splitting and reducing grain.

I claim as my invention—

- 5 In the reduction of creased or lobated grain, the method described, which consists in splitting the grain through the crease and thereafter subjecting the fragments or half-kernels to a brushing or scouring action preparatory to  
o further reduction, substantially as described.

In testimony that I claim the foregoing as my invention I affix my signature in presence of two witnesses.

LOUIS GATHMANN.

Witnesses:

M. E. DAYTON,  
F. W. KASEHAGEN.