

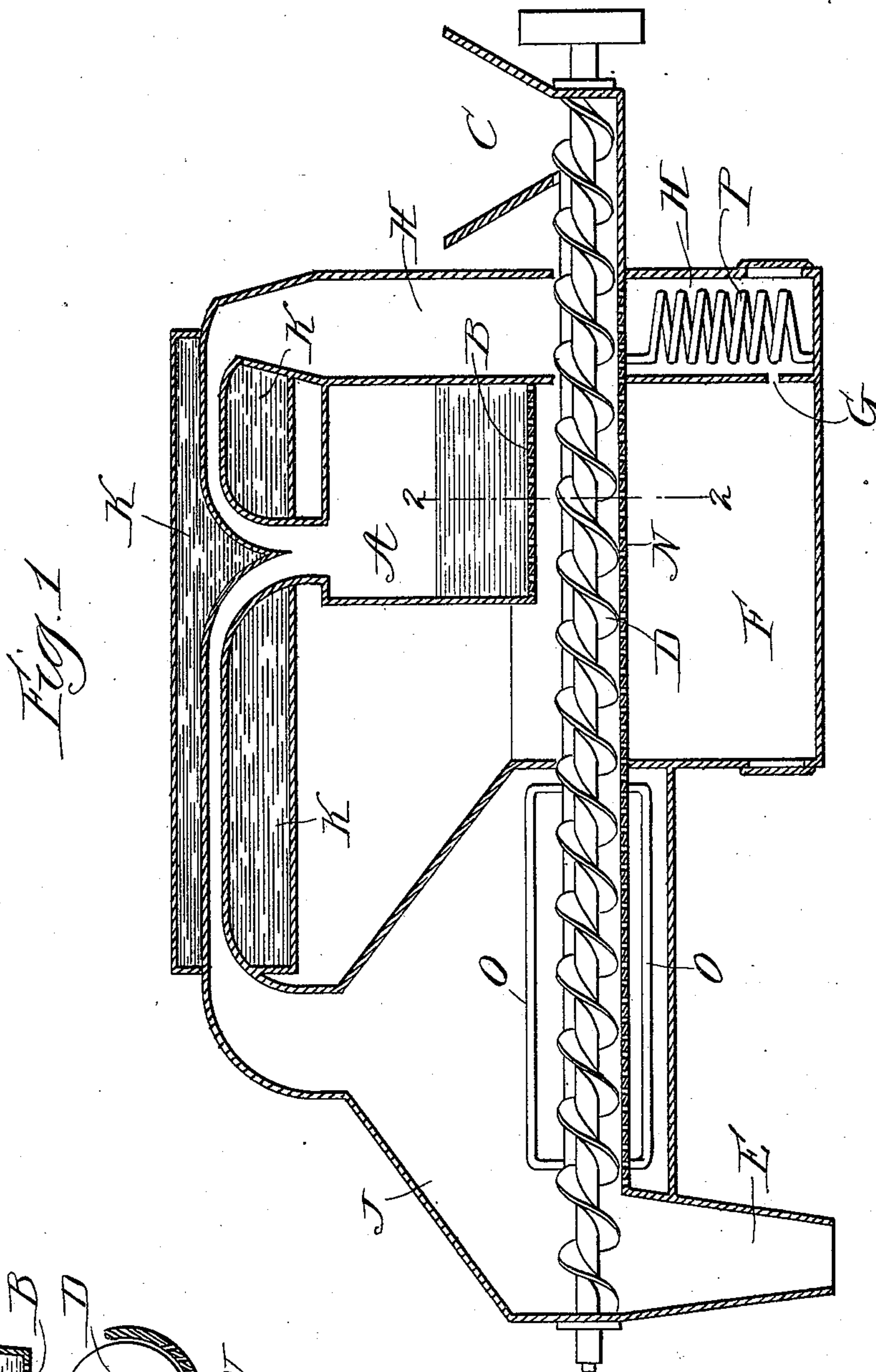
(No Model.)

J. S. TEMPLETON.

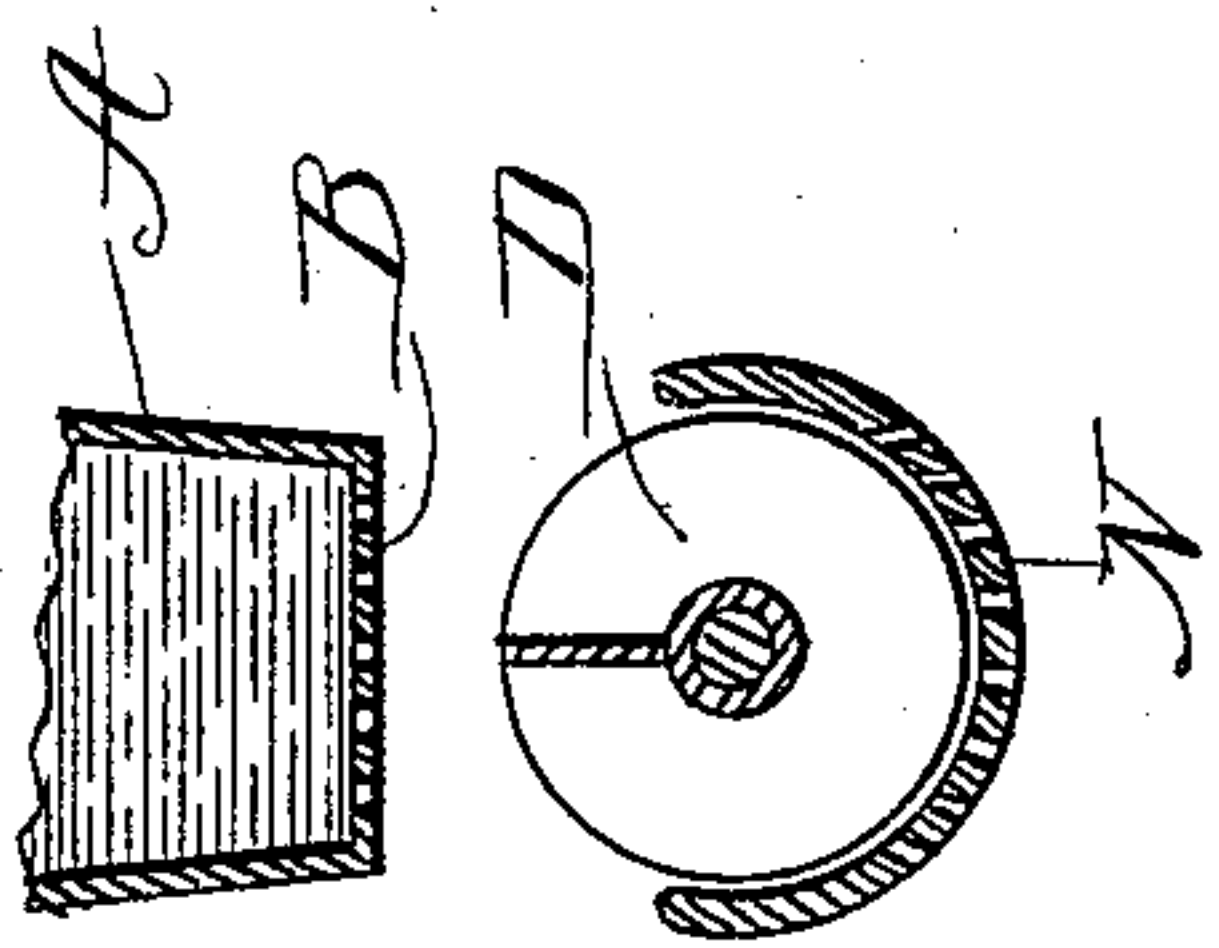
PROCESS OF REMOVING SMUT FROM WHEAT, &c.

No. 564,398.

Patented July 21, 1896.



*Fig. 2.*



Witnesses  
Wm. J. Hanning  
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Inventor  
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by Broderick & Darby Attys.



# UNITED STATES PATENT OFFICE.

JAMES S. TEMPLETON, OF CHICAGO, ILLINOIS.

## PROCESS OF REMOVING SMUT FROM WHEAT, &c.

SPECIFICATION forming part of Letters Patent No. 564,398, dated July 21, 1896.

Application filed September 16, 1895. Serial No. 562,702. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES S. TEMPLETON, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Processes of Removing Smut from Wheat, &c., of which the following is a specification.

This invention relates to a process for removing smut from wheat and similar cereals.

It has been frequently attempted to remove the smut from wheat by giving the wheat a bath with water; but it has been found, as a result of such treatment, that the wheat becomes soggy and absorbs a comparatively large amount of water, and when it dries loses correspondingly in weight and in appearance.

According to the present invention, the wheat or similar cereal containing smut is wet with a spray or bath of gasolene, or equivalent, and afterward is dried by natural or artificial means. A preferable way of drying the wheat after the treatment with gasolene is to evaporate the gasolene and then condense the gas thus formed, which results in the smut being deposited in the bottom of the evaporator, from which it may be readily cleaned. After the gas is condensed, and thus again formed into gasolene, such substance may be used over again, thereby cheapening the process to a very great extent. When the wheat containing the smut is thus dried, it absorbs very little of the gasolene, and, in fact, in fifteen minutes afterward appears to be in merchantable condition, although really it requires a longer period of drying to completely remove the odor and stickiness incident to the treatment. By this treatment there is no appreciable shrinkage or deterioration in the quality of the wheat, and, in fact, it is brightened in color.

In the accompanying drawings I have shown a merely illustrative form of apparatus, wherein the process as above set forth may be carried into practical operation.

Figure 1 is a view in central longitudinal section of such an apparatus. Fig. 2 is a broken detail view in transverse section on the line 2 2, Fig. 1.

In the form of apparatus illustrated reference-sign C designates a hopper; D, a conveyer; A, a gasolene-tank having a perforated bottom B.

F is a settling-chamber, having an overflow-

outlet G communicating with a vaporizing-chamber H, in which is located a steam-coil P, or other suitable heating device.

J designates a drying-chamber, in which is located a suitable heating device, as, for instance, the steam-coils O, arranged to surround the conveyer D.

E is the delivery-outlet of the conveyer.

The conveyer is arranged to operate in a trough N, having a finely-perforated bottom.

K designates a condenser for the vaporized gasolene, and may comprise a suitable water-jacket arranged to surround a portion of the vaporizing and drying chambers H and J, the said chambers being in communication with the tank A, in order to collect the condensed gasolene.

The form of apparatus shown is designed as merely illustrative of an operative form of apparatus, and I desire it to be understood that the process forming the subject of my invention may be carried into practical operation by a vast variety of different forms of apparatus.

What I claim, and desire to secure by Letters Patent of the United States, is—

1. The process of removing the smut from wheat, which consists in subjecting the same to a bath of gasolene; substantially as and for the purpose set forth.

2. The process of removing the smut from wheat, which consists in treating the same with a bath of gasolene and then drying it; substantially as and for the purpose set forth.

3. The process of removing smut from wheat, which consists in subjecting the same to a bath of gasolene, then evaporating the gasolene, and then removing the smut, which has settled in the evaporating step of the process; substantially as and for the purpose set forth.

4. The process of treating wheat which contains smut, by subjecting the same to a bath of gasolene, evaporating the gasolene, removing the smut which settles, and finally, condensing the gas produced by the evaporation; substantially as and for the purpose set forth.

In witness whereof I have hereunto set my hand this 13th day of September, 1895.

JAMES S. TEMPLETON.

Attest:

FRANK T. BROWN,  
M. I. CAVANAGH.