

C. Du BRUL.
Tobacco Granulating Machine.

No. 209,802.

Patented Nov. 12, 1878.

Fig. 1.

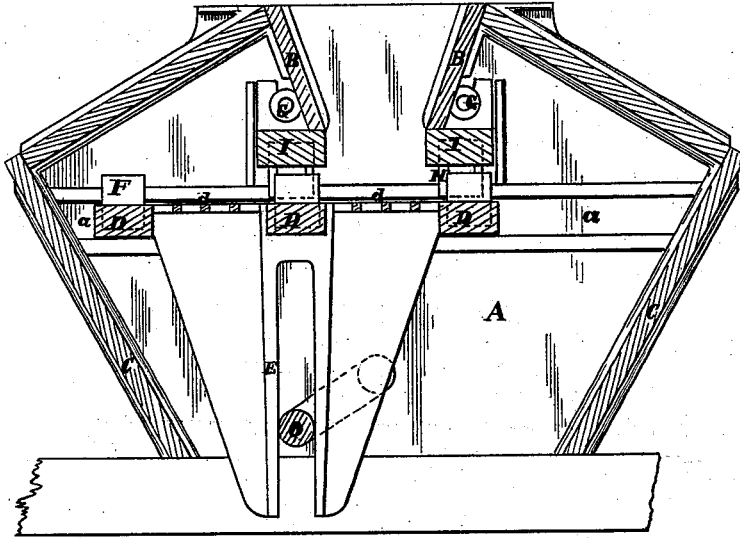


Fig. 2.

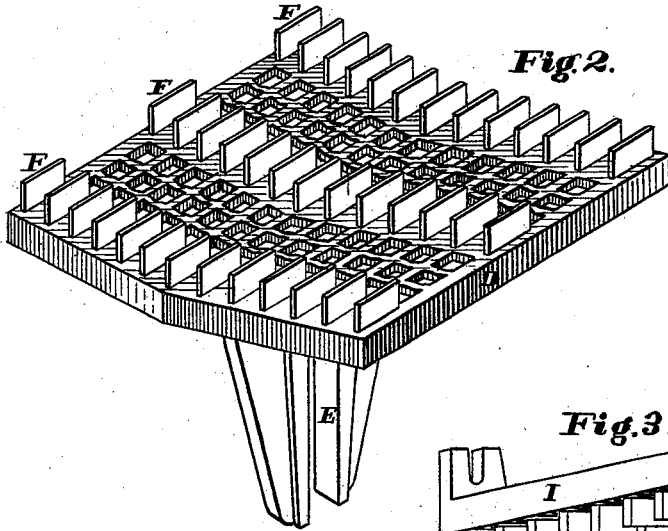
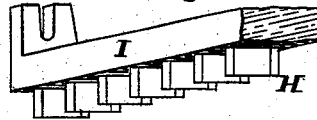


Fig. 3.



Attest
Walter Knight
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Inventor:
Cyrus DuBrul
By Knight & Wood
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UNITED STATES PATENT OFFICE.

CYRIAC DU BRUL, OF CINCINNATI, OHIO.

IMPROVEMENT IN TOBACCO-GRANULATING MACHINES.

Specification forming part of Letters Patent No. **209,802**, dated November 12, 1878; application filed January 8, 1878.

To all whom it may concern:

Be it known that I, CYRIAC DU BRUL, of Cincinnati, Hamilton county, Ohio, have invented new and useful Improvements in Tobacco-Granulating Machines, of which the following is a specification:

My invention relates to improvements in machines for reducing leaf-tobacco to fine shreds or scraps, suitable for cigar-filling and other purposes in tobacco manufacture.

The subject of my invention is a machine constructed with two sets of knives projecting downward from opposite sides of a hopper, which feeds the tobacco between them, and with a reciprocating grating carrying three ranges of upwardly-projecting teeth, which act successively on the stationary knives until the tobacco is reduced to fragments sufficiently small to pass through the apertures of the grating, as hereinafter described.

In the accompanying drawings, Figure 1 is a vertical section of a machine embodying my invention. Fig. 2 shows my reciprocating bladed grating. Fig. 3 represents a portion of one of my blocked series of blades.

A is one of two vertical end plates, having suitable lugs, grooves, and apertures for the support and attachment of hopper-boards B, that conduct material into the machine, casing-boards C, that conduct the scrap down to the sieve or other receptacle, and for two blocks or bars holding as many rows of stationary blades, hereinafter specifically described. The plates A have grooves *a* to support and guide in a horizontal path my reciprocating grating and bladed bed D.

Projecting perpendicularly downward from the bed D is a yoke, E, which receives the wrist O of a crank, whose rotation (by means of a suitable winch on the outside of the machine) imparts the desired horizontal reciprocation to the said bed.

Cast solidly within the substance of the bed D, and projecting upward therefrom, so as to stand parallel with the plane of its recip-

rocation, are three series of blades or knives, F, of sheet-steel. In each series the said blades have the represented stepped or *en echelon* arrangement in order that the adjacent blades may strike the material successively. The portions of the bed between the series of blades consist of gratings *d*.

Attached transversely to the frame or end plates A, by means of screw-bolts G, are two series of stationary blades, H, the blades constituting each series being blocked by having their backs I cast solidly about their rear portions. This mode of blocking proves to be a cheap and effective mode of securing the knives or blades in their proper relative positions.

In the machines actually made and used by me the material of bed D and backs I is cast-iron; but they may be of other suitable cast metal.

All or a part of the effective edges of my stationary and of my reciprocating blades may be sharpened, as desired.

I am aware that a toothed sieve and sliding cutters, arranged to project upward and downward, have heretofore been used in machines for granulating tobacco or cutting vegetables, and such I do not claim *per se*; but

What I do claim as new and of my invention is—

The two rows of stationary knives H H and hopper B for feeding the tobacco between them, in combination with reciprocating grating D, provided with three rows of knives, F F F, and with ranges of apertures *d d* between said rows of knives, the several rows of knives F F F acting successively on the stationary knives H H, through the interstices of which they pass, in the manner and for the purposes set forth.

In testimony of which invention I hereunto set my hand.

CYRIAC DU BRUL.

Attest:

GEO. H. KNIGHT,
L. H. BOND.