

J. E. SAUGI.

Cider-Mills.

No. 135,370.

Patented Jan. 28, 1873.

FIG. 1.

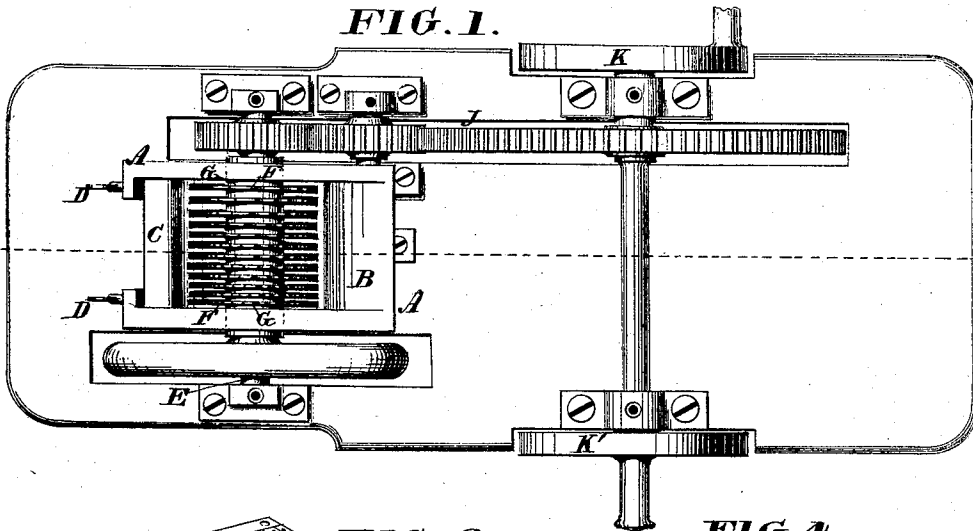


FIG. 3.

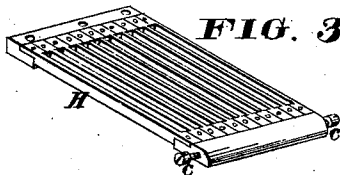


FIG. 4.

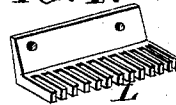
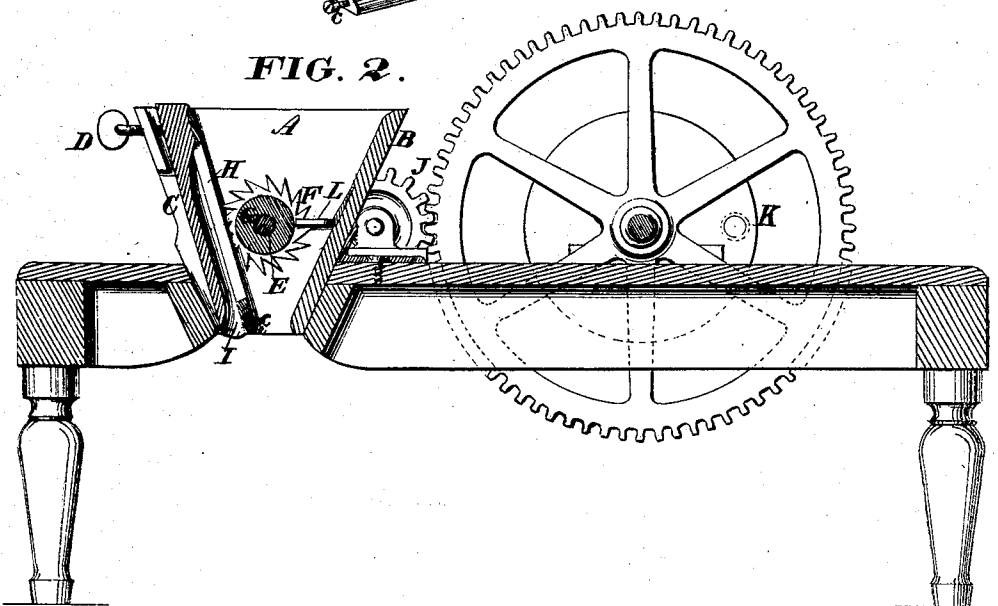


FIG. 2.



Witnesses

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UNITED STATES PATENT OFFICE.

JULES EDOUARD SAUGI, OF WASHINGTON, DISTRICT OF COLUMBIA.

IMPROVEMENT IN CIDER-MILLS.

Specification forming part of Letters Patent No. 135,370, dated January 28, 1873.

To all whom it may concern:

Be it known that I, JULES EDOUARD SAUGI, of Washington, in the District of Columbia, have invented a new and useful Improvement in Cider-Mills, of which the following is a specification:

Nature and Objects of the Invention.

The mill is constructed with a revolving cylinder formed of a number of circular saws arranged spirally, and with washers or annular disks between them upon a suitable driving arbor or shaft, the teeth of the cylinder passing between and cutting shearwise with a cluster of knives, which are adjustable toward the cylinder. The cylinder is driven at a high velocity by a belt or by suitable gearing, and its teeth work between stationary clearing-teeth at back. The pomace is in part driven between the knives and in part carried down in front of them by the teeth of the cylinders, both parts being finely divided, and passing into a common receptacle beneath, for which purpose a throat is provided at front and one at back of the lower end of the knife-plate, as hereinafter described.

General Description.

Figure 1 is a top view, and Fig. 2 a vertical section, of a machine embodying my improvements. Figs. 3 and 4 are detached views of my gang of throat-knives and of my clearer.

A is a hopper, two of whose opposing sides converge downward, one of said sides, B, being stationary, and the other one, C, being hinged, near its lower edge, to the hopper by means of screw-threaded pivots *c*, which also serve to attach a gang of knives, to be presently described, and said side is adjustable inward or outward by the nut-screws D. Journaled athwart the hopper, in the vertical sides thereof, is a shaft, E, armed with a gang of circular saws, F, whose blades are separated at equal distances by means of washers G. These saws are preferably so disposed upon the shaft as to give a spiral arrangement to the teeth. Attached to the inner face of the adjustable hopper side C is a series or gang of knives, H, which are parallel to and equidistant from each other, and which are interposed so as for

each one to occupy the space between two consecutive saw-blades in the manner represented. That part of the inner face of the side C immediately behind the knives H is excavated so as to form a channel or passage, I, for the descent of whatever matters pass through between the knives. Attached to the inner face of the side B, and extending inward in the horizontal plane of the shaft F, is a comb or clearer, L, consisting of a series of fingers, of which one projects between every two consecutive saws on their rear or ascending side. These fingers prevent the descent in rear of the saws of small apples, which would otherwise escape unground into the pomace. They also operate to scrape from the saws all adhering pomace, and to prevent its return into the upper part of the hopper. The gang of saws is driven at a high velocity by the represented geared connection J or other suitable connection with a winch, K, which may be duplicated, K', so as to enable two persons to operate the machine. The saws and knives are preferably so attached, as shown, as to be easily removable for regrinding or substitution.

Operation.

The knives having been set to their desired proximity to the gang of saws, the latter is rotated, and apples being fed into the hopper are crushed by the rapidly-descending saw-teeth, and the fragments driven down and at the same time still further comminuted by the joint action of the saws and the knives, and escape in the form of pomace, a portion of them in front of and the remainder at the rear of the knives.

It will be seen that the rotary gang F operates to agitate and break up the apples in the hopper, and, by acting shearwise with the interposed knives, operates to effectually slice the fragments thus presented and to feed them downward, in the manner already indicated.

Claims.

I claim as new and of my invention—

1. The combination of a series of circular saws arranged spirally upon the rotating crusher and feeder F and bladed adjustable

hopper side H C, substantially as and for the purpose set forth.

2. The described combination of hopper A having the inclined adjustable and channeled side C e I, armed with knives H, and stationary side B, armed with clearers L, which knives and clearers intervene between the consecu-

tive circular saws F separated by washers G, the whole being arranged and operating substantially as and for the purpose set forth.

JULES EDOUARD SAUGI.

Witnesses:

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