(No Model.) 2 Sheets—Sheet 1.

W. H. DUNN.

MACHINE FOR DRESSING AND SWEETENING TOBACCO.

No. 433,456. Patented Aug. 5, 1890.

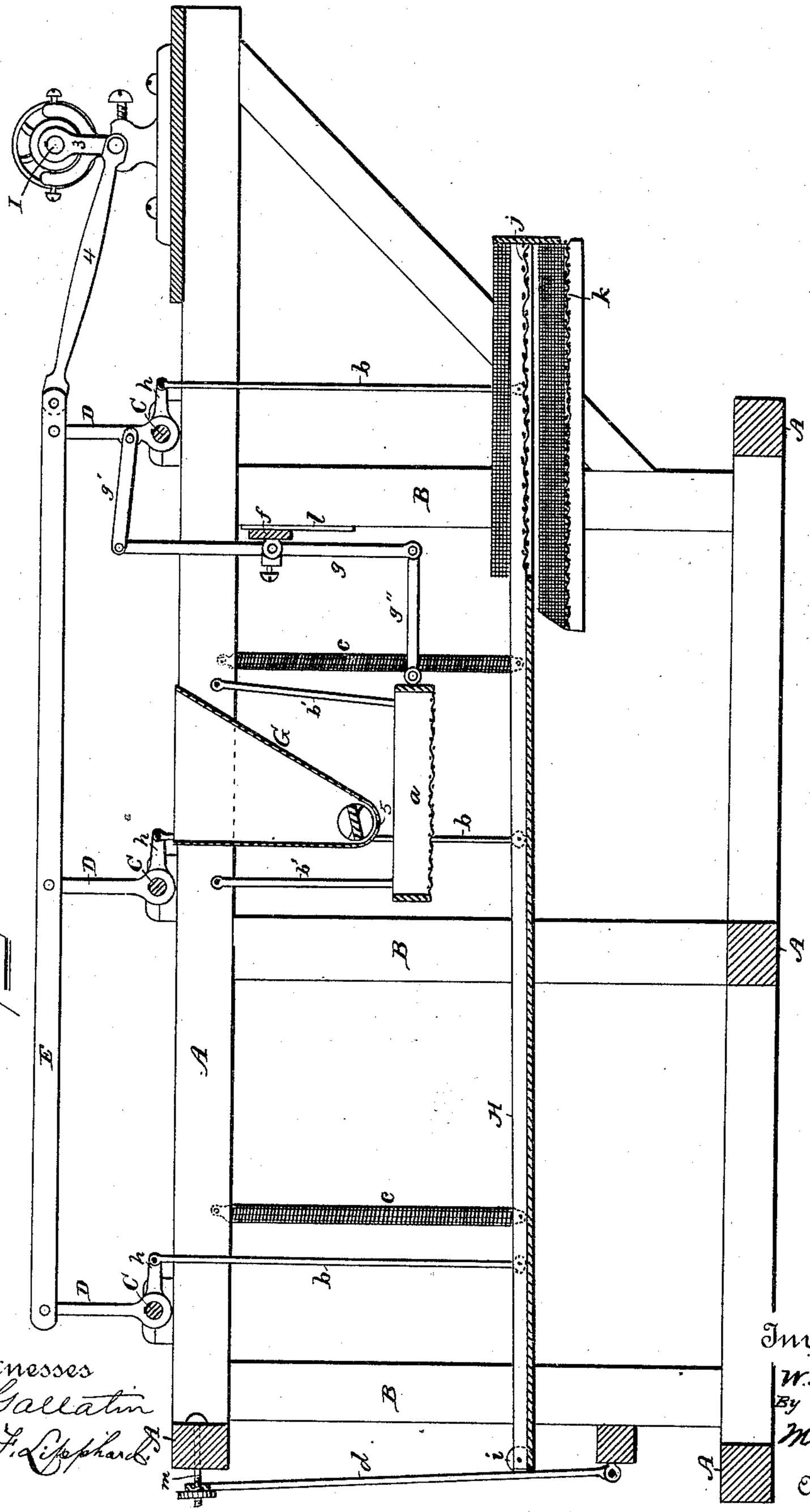

FIG. 1.

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(No Model.) 2 Sheets—Sheet 2.

W. H. DUNN.

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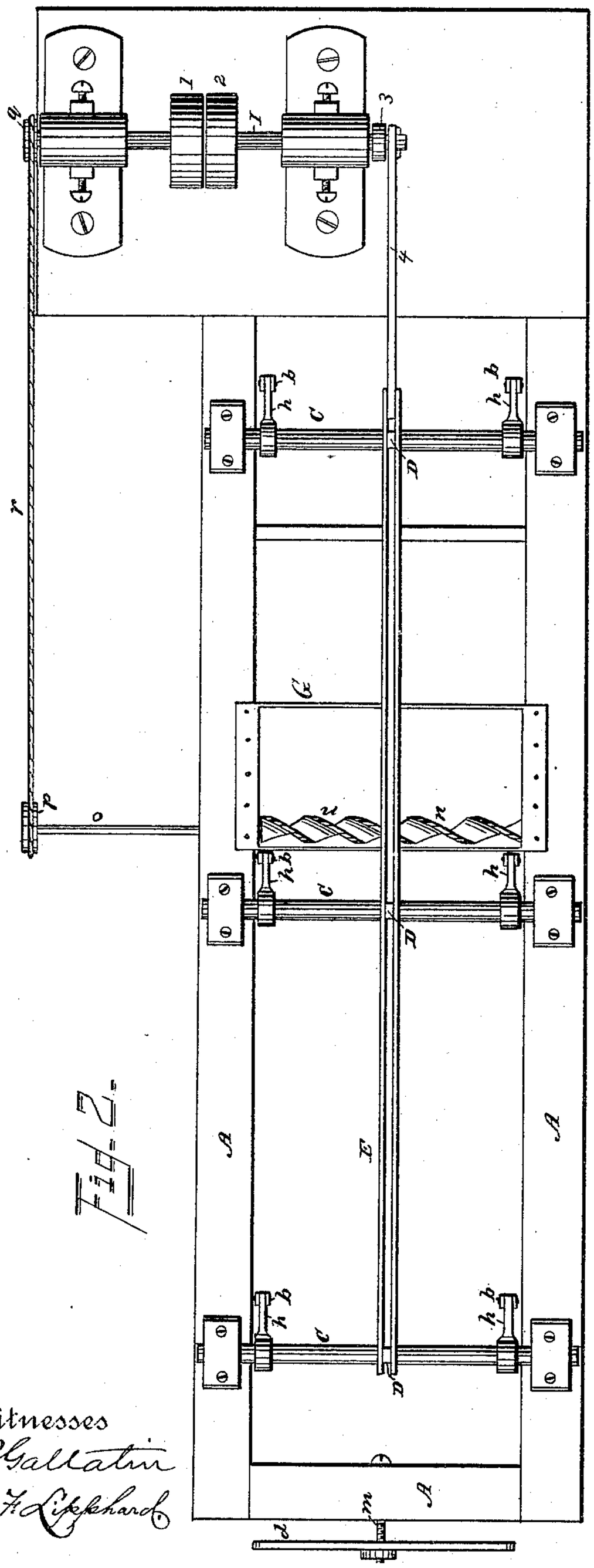

Fig. 2.

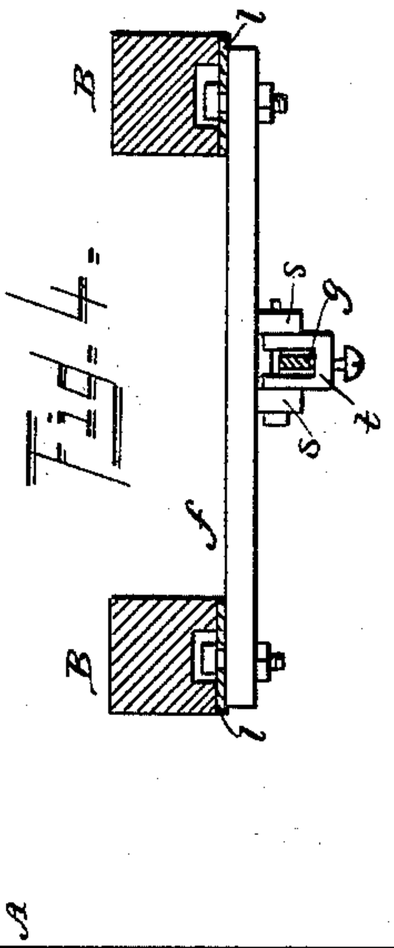

Fig. 4.

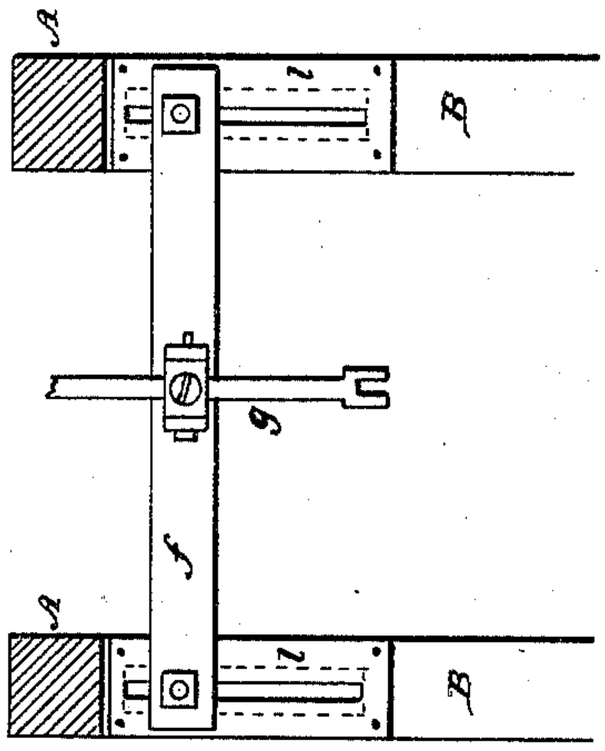

Fig. 3.

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UNITED STATES PATENT OFFICE.

WILLIAM H. DUNN, OF CHICAGO, ILLINOIS.

MACHINE FOR DRESSING AND SWEETENING TOBACCO.

SPECIFICATION forming part of Letters Patent No. 433,456, dated August 5, 1890.

Application filed November 15, 1889. Serial No. 330,500. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. DUNN, 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 Machines for Dressing and Sweetening Tobacco, of which the following is a full and complete description.

The objects of my invention are to facilitate the handling of tobacco in the operations of dressing and sweetening; to accomplish by machinery what has heretofore required skilled hand-labor; to distribute the sweetening substances evenly throughout the mass of tobacco treated, and to reduce the cost of preparing the tobacco for market.

The invention consists in the mechanism hereinafter described, and particularly pointed out in the claims.

In the accompanying drawings, which illustrate my invention and form a part of this specification, Figure 1 is a longitudinal vertical section of the machine. Fig. 2 is a top plan view, and Figs. 3 and 4 are detail views.

A designates the horizontal timbers, and B the uprights of the frame-work, of the machine. Upon the frame, mounted in suitable journal-boxes, are three transverse oscillating-shafts C, one at each end of the machine, and the other at or near the center. Each of these shafts has a rigid vertical arm D, and the three arms are connected by a longitudinal bar E, which when reciprocated imparts oscillating motion to all the shafts C.

I designates the power-shaft, which is mounted transversely upon the frame at one end of the machine. This shaft is provided with fast-and-loose pulleys 1 2, through which power is applied and taken off. At one end is a crank 3, which is connected with one end of a pitman 4, the other end of said pitman being connected with the end of the bar E. The shafts C are also provided at each end, preferably inside of the frame A, with short horizontal arms or cranks *h*, which all stand in the same direction.

H designates a movable table arranged within the frame-work of the machine and supported from the cranks or arms *h* by hangers *b*. The table extends longitudinally through the machine, and a section at one end is composed of a comparatively coarse sieve *j*. Both the table and sieve have side rails or guards to prevent the material placed thereon from falling off at the sides. Below the sieve *j* is a second finer sieve *k*, which is suspended from the frame of the first, and is open at one or both ends to allow the material too coarse to pass through to drop off.

At the front end of the machine is an inverted U-shaped yoke *d*, the legs of which are attached to the frame below the table H. The upper end is held by a screw-bolt *m*, which projects from the top of the frame, and is adjustable toward and from the frame by means of a thumb-nut on said bolt. At the front end of the table are rollers *i i*, which work against the legs of the yoke *d*.

Now when the power-shaft I is driven the bar E will be reciprocated through the crank 3 and pitman 4, the shafts C will be oscillated, and the table will be raised and lowered through the arms *h* and hangers *b*. The yoke *d* inclines outwardly from the bottom, and the table is so hung that the rollers *i i* constantly bear against the same and travel up and down thereon. Consequently the table, in addition to its up-and-down movement, will also have a reciprocating movement longitudinally.

c c designate springs between the table and the frame for the purpose of taking up lost motion in the connections between the crank-arms *h* and the table, and to prevent wear of the parts.

Power being applied to the shaft I, the bar E will be reciprocated through the crank 3 and pitman 4. The shafts C will be oscillated and the table H will be oscillated through the crank-arms *h* and hangers *b*. The yoke *d* being inclined the table will, as before stated, be given a longitudinally-reciprocating movement through its up-and-down movement. The tobacco to be dressed and sweetened is placed upon the sieve *j*, and by the movements of the table is gradually moved over the same. The "lumps" and "shorts" are separated and fall through upon the sieve *k*. This sieve, being finer than the sieve *j*, again separates the lumps and shorts, the latter passing through and the lumps passing off at the forward open end. The dressed tobacco gradually moves forward over the table and falls off into a suitable recep-

tacle. (Not shown.) The tobacco being properly screened and the lumps and shorts separated therefrom, it is next sweetened. For this purpose pulverized sugar is used, which is placed in a hopper G, located above the table H. This hopper has a slot, or a number of fine perforations 5, in its bottom, through which the sugar falls upon the tobacco as the latter passes along over the table. To prevent the sugar from clogging, an agitator is placed in the bottom of the hopper. As illustrated in the drawings, the agitator consists of a screw or auger *n*, which has a projecting shaft *o*, and is driven from the power-shaft I through pulleys *p q* and cord or band *r*. Below the hopper, and between the latter and the table H, is a screen or sieve *a*, which is suspended from the top of the frame A by hangers *b'*. This screen is reciprocated backward and forward by a lever *g*, fulcrumed on an adjustable bar *f* on the uprights B. The upper end of the lever *g* is connected with one of the vertical arms D by a link or coupling *g'*, and its lower end with the screen *a* by a link or coupling *g''*. Thus when the machine is in operation the lever *g* will be vibrated from the arm D, the sieve *a* will be reciprocated, and the sugar will be evenly sifted upon the tobacco as it passes under the sieve.

In order to regulate and adjust the movement of the screen *a*, the fulcrum of the lever *g* is made movable, so that the lengths of the two ends relatively to each other can be varied. This is effected by means of slotted plates *l l*, secured to the uprights B B, to which the bar *f* is bolted. The slots permit the bolts and bar to be moved up and down and the bar to be adjusted as may be desired to give the sieve *a* the necessary or required throw. The lever *g* is held by a yoke *t* pivoted to ears or legs *s s* on the bar *f* and is adjustable in or through said yoke.

Having thus described my invention, I claim—

1. In a machine for dressing and sweetening tobacco, the combination of a revolving power-shaft, a series of oscillating shafts C, provided with rigid vertical arms D and with horizontal crank-arms *h*, said arms D being connected with each other and with a crank on the power-shaft by connections E^4, and a movable table H, suspended from the arms *h*.

2. In a machine for dressing and sweetening tobacco, the combination of a movable table, a hopper G above the same, a screen or sieve *a* between the hopper and table, and means, substantially as shown and described, for imparting both horizontal and vertical reciprocating movements to said table.

3. In a machine for dressing and sweetening tobacco, the combination of the hopper G, the movable table H, provided at one end with a sieve *j*, a power-shaft I, and crank-arms and connections between the power-shaft and table, whereby the latter is reciprocated vertically, and an inclined yoke *d* at one end of the table, whereby the table is given a horizontal reciprocating movement, substantially as shown and described.

WILLIAM H. DUNN.

Witnesses:
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GEO. F. DUNNE.