

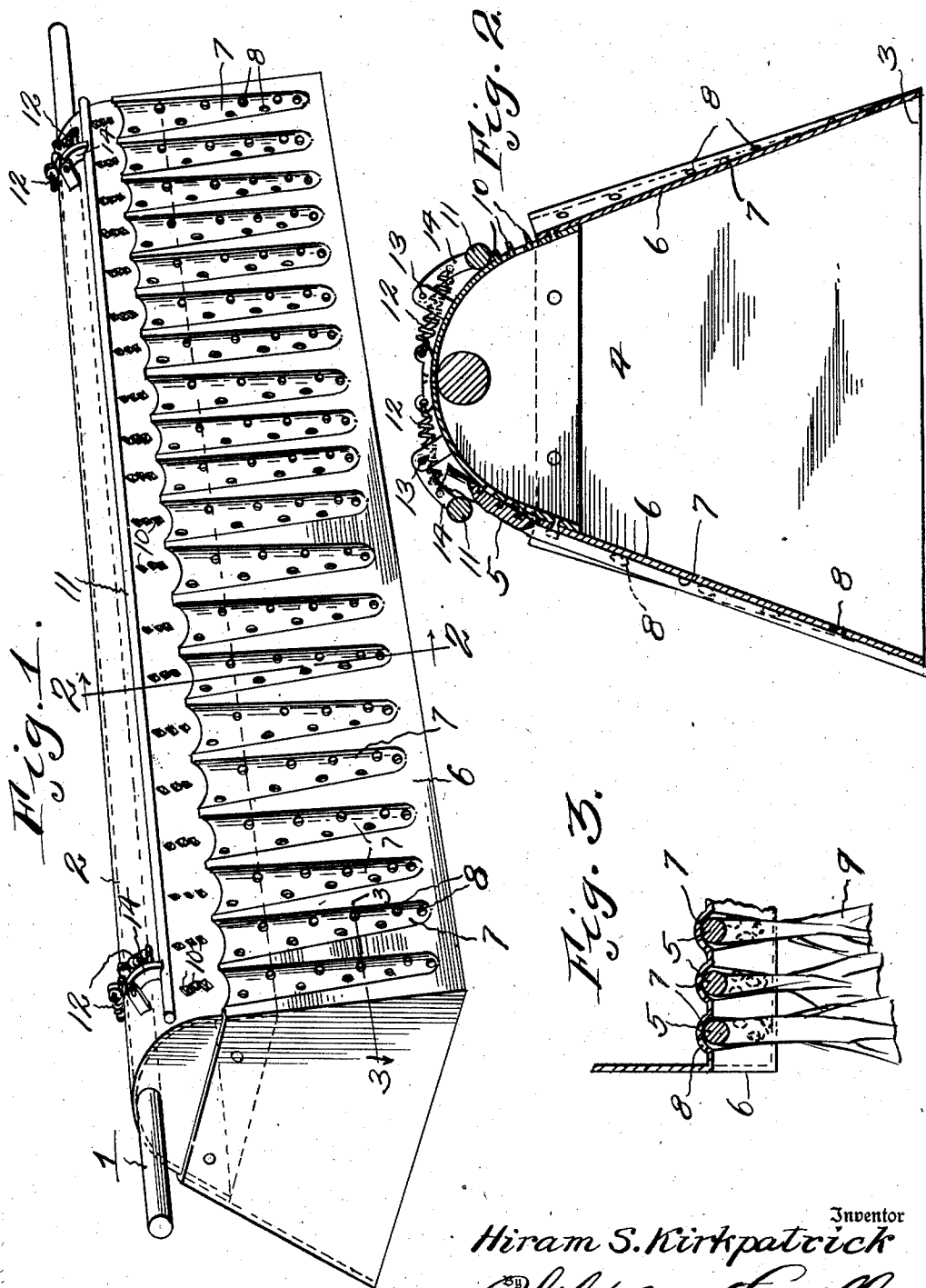
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TOBACCO LEAF SUPPORT AND DRIER

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TOBACCO LEAF SUPPORT AND DRIER

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The invention relates to tobacco leaf supports or poles, and driers and has for its object to provide means for intensifying and directing heat against the slow drying stems of the tobacco, thereby raising the quality of the tobacco, and preventing over-curing of the leaves in the attempt to properly cure the stems.

A further object is to provide a tobacco stick, or support, with an open bottom heat gathering and collecting chamber, and means for attaching tobacco leaves to opposite sides of the device in a manner whereby the intensified heat from within the chambered member will be directed outwardly through the walls of the chambered member into contact with the stems of the tobacco leaves supported on the outer side of the chambered member.

A further object is to provide the opposite sides of the chambered member with vertical grooves, having perforations therein, and in which grooves the tobacco stems are disposed for exposure to the intensified heat.

A further object is to provide prongs above the grooves, adapted to pierce the leaf stems, and support the leaves on the device during the assembling operation, and spring actuated clamp members for engaging the upper ends of the tobacco stems and holding the stems on the prongs and against displacement during a handling operation.

With the above and other objects in view the invention resides in the combination and arrangement of parts as hereinafter set forth, shown in the drawing, described and claimed, it being understood that changes in the precise embodiment of the invention may be made within the scope of what is claimed without departing from the spirit of the invention.

In the drawing:

Figure 1 is a perspective view of the device.

Figure 2 is a vertical transverse sectional view through the device, taken on line 2—2 of Figure 1.

Figure 3 is a horizontal sectional view taken on line 3—3 of Figure 1.

Referring to the drawing, the numeral 1 designates the elongated pole, the ends of which are adapted to rest on horizontal bars in a barn for the curing operation.

The pole 1 extends through a downwardly flared heat collecting and tobacco leaf supporting member 2, having its lower end open, as at 3, and provided with a heat collecting chamber 4. It has been found, by providing a heat collecting chamber, that the heat within the chamber is

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intensified, for instance, it is usual to cure tobacco leaves in a barn or warehouse at a temperature of 100 degrees, so the bodies of the leaves will be cured to a yellow color. However, the stems 5 will not thoroughly cure under normal conditions under four to six days. Where a collecting chamber 4 is used, the temperature within the chamber will be increased or intensified to about 160 degrees, or slightly above, where a 100 degree temperature is used in the barn, and the present invention contemplates the utilization of this intensified heat for drying the stems 5, which can usually be dried in about four hours. To accomplish this result, the opposite sides or walls 6 of the chambered member 2 are provided with downwardly extending channels 7, having perforations 8. The stems of the leaves 9 are placed in the channels, and it will be seen that the hot or intensified air within the chamber 4 will pass through the perforations 8 into direct contact with the stems 5, hence the intensified or higher degree of heat will dry the stems rapidly consequently the high quality of the tobacco is maintained, and the drying operation reduced to a few hours in comparison with the present practice, requiring several days.

In operation, the operator places the stems 5, of the leaves, in the channels 7, and secures the stems in place by an inward push thereon, against the struck-out prongs 10. After the leaves are assembled on one side the spring actuated clamping bar 11, for that particular side, is lowered and maintained in clamped position by the coiled spring 12. Following this operation, the other side of the chambered member is filled with leaves in the same manner, and the clamping bar 11 is moved downwardly to a clamping position, as shown in Figure 2. It will be noted that the pivotal points 13 of the arms 14 of the clamping bars will bisect the springs 12 during the clamping and unclamping operation, hence it will be seen that the leaves may be easily and quickly clamped or released when desired. After the device is filled with leaves it is placed in a barn on the supports, using the ends of the pole.

The chambered body member is preferably formed in two sections, however it is to be understood it may be constructed from a single piece of metal stamped to form.

The stem receiving channels, preferably, taper downwardly to conform, as near as possible, to the downward taper of the leaf stems, to get a better concentration of heat on the tapering stems.

From the above it will be seen that supporting means is provided for tobacco leaves, which incorporates therein means for trapping, collecting and raising the temperature therein, and for directing said intensified drying air directly on the stems of leaves supported on the opposite walls of the device. It will also be seen, by providing a downward flare to the opposite sides of the device that the leaf stems will remain in the channels, and the discharged air through the perforations will directly impinge the surfaces of the stems. Also the flared arrangement will spread the lower ends of the leaves apart so the heated air may easily pass into the heat collecting chamber 4.

A further advantage of the device is, that as the stems shrink, the clamping rods 14 will be moved inwardly by their springs for maintaining the clamping operation, thereby preventing any of the leaves, which are supported on the device, from dropping on the barn floor around the heating element and causing fire. It will also be seen that the leaves are individually supported in the device; hence, after the drying operation, the clamping bars can be raised and the leaves assorted in various piles according to grade.

The invention having been set forth what is claimed as new and useful is:

1. A tobacco leaf drying rack comprising an inverted hood having its under side open so heated air can be trapped therein, means for supporting tobacco leaves on said hood with their stems upwardly disposed, means whereby trapped heated air will pass through said hood sides into engagement with the stems of the leaves, vertical stem receiving channels in the outer faces of

the sides of the hood and heat passages from the interior of the hood in the bottoms of the channels.

2. A device as set forth in claim 1 wherein opposite sides of the heat trapping hood are provided with vertical channels having perforations in the bottoms thereof.

3. A device as set forth in claim 1 wherein the vertical stem receiving channels taper downwardly.

4. A device as set forth in claim 1 wherein the means for holding the leaves on the hood comprises prongs for piercing the stems and spring actuated clamping members for engaging the stems after the piercing operation.

5. A device as set forth in claim 1 including stem piercing members carried by the hood above the channels and spring actuated clamping members for engaging the stems after the piercing operation.

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REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
448,595	Snow	Mar. 17, 1891
938,023	Sigler	Oct. 26, 1909
1,228,556	Hesse	June 5, 1917
1,255,915	Mueller	Feb. 12, 1918
1,547,958	Ring	July 28, 1925
1,982,990	Harris	Dec. 4, 1934
1,992,857	Breedlove	Feb. 26, 1935