(No Model.)

A. THALHEIMER.

PORTABLE DRIER.

No. 263,738. Patented Sept. 5, 1882.

Fig. 1.

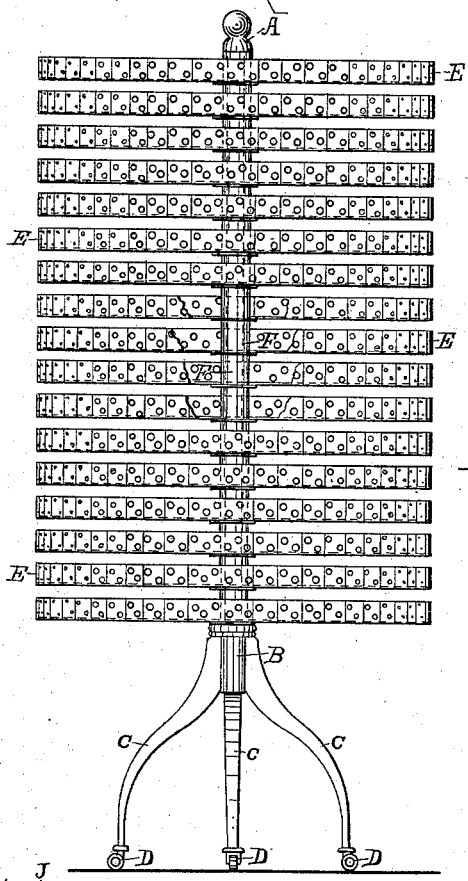


Fig. 2.

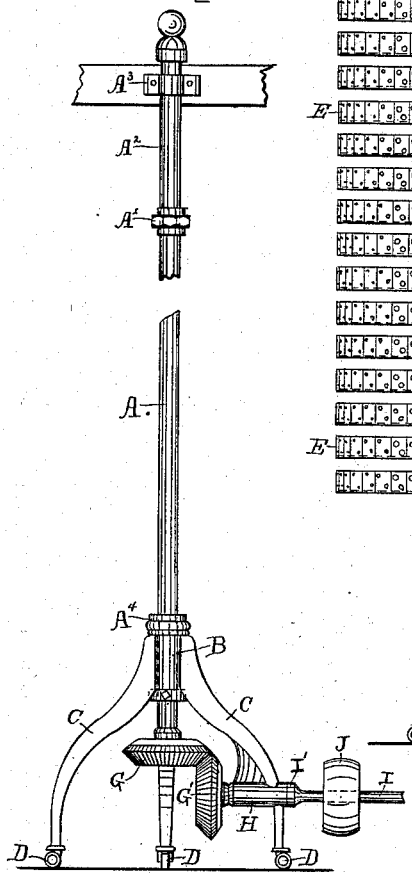


Fig. 4.

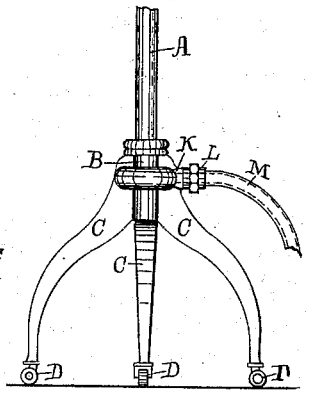


Fig. 5.

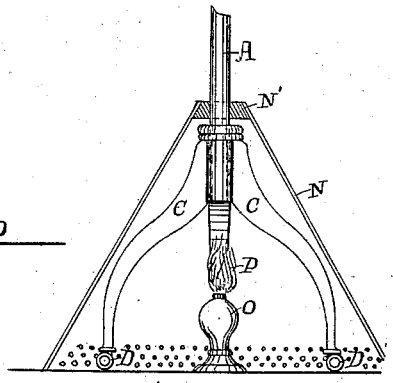
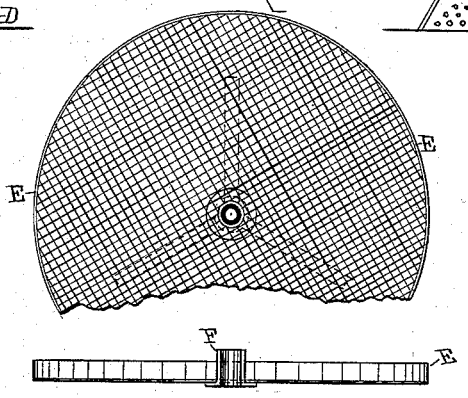


Fig. 3.



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UNITED STATES PATENT OFFICE.

ALBERT THALHEIMER, OF READING, PENNSYLVANIA.

PORTABLE DRIER.

SPECIFICATION forming part of Letters Patent No. 263,738, dated September 5, 1882.

Application filed March 16, 1882. (No model.)

To all whom it may concern:

Be it known that I, ALBERT THALHEIMER, of the city of Reading, county of Berks, State of Pennsylvania, have invented a new and useful Improvement in Portable Driers for Tobacco, Fruits, &c., of which the following is a specification.

This improvement relates to that class of driers where trays are used that may be removed from the apparatus for filling and emptying of the same, and is adapted to be used as a plain air-current drier or to have the drying facilitated by centrifugal force or by the introduction of steam or the combination of both.

Referring to the drawings herewith forming part of this specification, Figure 1 represents a vertical elevation of the portable drier, partly in section. Fig. 2 represents the standard as arranged to be revolved, the trays being removed. Fig. 3 is a plan and elevation (the latter in section) of the portable drying-trays. Fig. 4 is a view of the standard as adapted to receive steam from a boiler through the tube M. Fig. 5 shows a lamp arrangement for heating the standard.

Corresponding parts in the several figures are indicated by like letters of reference.

A represents a hollow gas or water pipe standard, secured to a tripod-stand, B, having legs C C C.

A′ represents a coupling or union; A^2, an extension-piece; and A^3, a clamp-box bored to suit the diameter of the extension-piece, and is used for the purpose of steadying the top of the standard when power is applied thereto for the purpose of revolving the same.

B is the tripod-head, bored and screw-threaded to receive the standard. C C C are the tripod-legs. D are casters on the same.

E represents the trays, which may be of wood, metal, or wire, or a combination of the same, and are provided with center collars, F, which slide freely upon the hollow standard A.

G and G′ are bevel or miter gear wheels; H, a bearing for a shaft; I, the shaft; and J, the pulley, showing the construction and arrangement of parts when the drier is to have its operation accelerated by the rotation of the standard and the trays thereon.

K is a nozzle; L, a union-coupling; and M a flexible pipe, secured to the coupling for the purpose of passing steam into the hollow standard A, and thus aiding the air in drying the article upon the trays.

N represents a tin or sheet-iron cone, open at the base, provided with a collar or opening, N′, at the apex, which will slide freely over the standard A. A lamp, O, is placed beneath the tripod, the base of the cone being raised slightly above the floor; or it is perforated to admit the air. With this arrangement of drier the standard is left open at the bottom and closed with a perforated cap at the top. The lamp O being lighted, the flame P heats the air above, creating an ascending current of hot air through the standard, which assists in drying the articles upon the trays.

Cigar-making is usually carried on in small rooms, and the strippings are scattered loosely around to dry, and from the circumstances surrounding the manufacture become fouled and obnoxious to the smoker. With my invention the strippings are placed in the trays, and then each tray successively placed upon the standard, the collars F being so arranged that the length of the hub shall either separate the rims from each other, leaving a space for air between, or shall permit the base of the tray to rest upon the upper edge of the tray preceding it upon the standard. In the former case, to keep flies and insects away from the articles being dried, a taffeta or illusion bag or case is drawn down over the trays after they are in place, and, being tied below, preserves the articles drying from insect depredation or fouling. In the latter case a cover for the top tray closes the drier to insects, as before. The rims of the trays, if of wood or metal, are perforated to permit the free circulation of air all around the articles upon the trays which are being dried.

A portable drier, as shown and described, of thirty-six inches diameter, stands six feet high, will carry seventeen trays with rims two inches high, and an air-space of one inch between the successive trays, and, while occupying but three feet by three feet of floor space, will give a drying-surface upon the trays of one hundred and twenty square feet superficial, equal to the floor of a room twelve feet by ten feet in size.

This apparatus is peculiarly adapted to the drying of small fruits, cherries, plums, &c., and for apple, pear, and pumpkin cutting.

Where a boiler is conveniently located near the position of the stands a hose-connection may be made between the boiler and the tripod-head by the nozzle K and union L, when steam can be let into the standard A and the drying capacity of the apparatus be increased; or, if deemed advisable so to do, the tripod may be arranged as in Fig. 2, the standard provided with a collar, A^4, and, projecting through the head B, has a bevel or miter gear wheel keyed upon its end, and is fitted to run free in the head. A bearing, H, is cast upon one of the legs of the tripod, which is bored to receive a horizontal shaft, I. Said shaft has a collar, I′, and projecting through the bearing has keyed upon its end a wheel, G′, corresponding in pitch and mated with the wheel G. It has also a pulley, J, which, by a belt from any convenient source, rotates the shaft I and standard A, and by the centrifugal force thus generated the moisture is more rapidly carried away from the trays and the drying more speedily executed. The standard, beside receiving a rotary motion, may have steam admission, as in Fig. 4, in connection therewith, which will still further increase its drying capacity.

When the apparatus is not in use the trays may be piled upon each other in a corner and the standards laid away upon bracket-arms projecting from the walls.

Having described my invention, its application, and mode of construction, I desire to secure by Letters Patent the following claims thereon:

1. As a new article of manufacture, a portable tobacco or fruit drier arranged as shown, and consisting of the following elements: a tripod-stand, B C C C, standard A, trays E E, provided with center collars, F, the whole mounted upon casters D and adapted to be used as an air-current drier, substantially as shown, and for the purpose set forth.

2. In a portable tobacco or fruit drier, as described, the extension-shaft or standard A^2, provided with coupling A′ and clamp-box A^3, in combination with the standard A, said standard being by collar A^4, bevel or miter gear wheels G G′, shaft I, collar I′, pulley J, and bearing H adapted to be rotated in the tripod-stand B C C C and clamp-box A^3, substantially as shown, and for the purpose specified.

3. In a portable drier, as described, the hollow standard A, in combination with the hollow head B of the tripod, it being provided with a nozzle, K, union-coupling L, and flexible pipe M, whereby steam may be introduced into the standard A, and the trays E, with their contents, in combination therewith, be thus more efficiently operated upon, substantially as and for the purpose set forth.

4. In a portable drier for tobacco or fruits, the combination of tripod B C C C, standard A, trays E, with collars F, gear-wheels G G′, shaft I, pulley J, steam-nozzle K, union L, and pipe M, bearing H, extension A^2, coupling A′, and bearing A^3, whereby centrifugal motion and heat radiation are combined in the manner described, and substantially as and for the purpose specified.

5. The trays E of a portable drier, constructed, as described, of wood, metal, or wire, and provided with a central collar, F, whereby they are adapted to be slid upon a standard, A, and come in combination therewith, substantially as shown, and for the purpose hereinbefore set forth.

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