E. R. HEARN.

PLUG-TOBACCO.

No. 193,510. Patented July 24, 1877

Fig: 1.



Fig: 2.

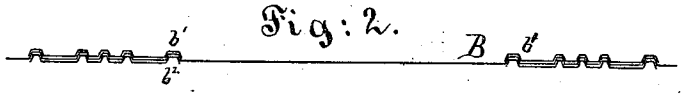


Fig: 3.

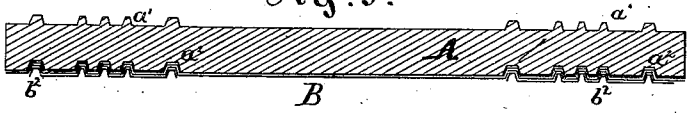


Fig: 4.

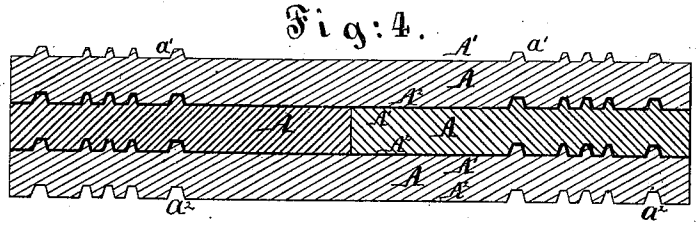


Fig: 5.

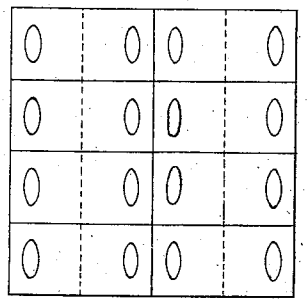


Fig: 6.

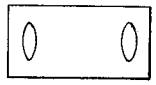
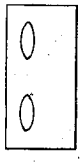


Fig: 7.



Witnesses:

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UNITED STATES PATENT OFFICE.

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IMPROVEMENT IN PLUG-TOBACCO.

Specification forming part of Letters Patent No. **193,510**, dated July 24, 1877; application filed May 17, 1877.

To all whom it may concern:

Be it known that I, E. R. HEARN, of Jersey City, Hudson county, in the State of New Jersey, foreman in the tobacco manufactory of P. Lorillard & Co., have invented certain Improvements relating to Plug-Tobacco; and I do hereby declare that the following is a full and exact description thereof.

Plug-tobacco is, for several reasons, peculiarly difficult to label or mark. It is important to attach some distinguishing-mark not only to the large packages, but to each individual plug, in order that the customer may know whose make of tobacco he is using, and give preference afterward to such as he shall find most worthy.

I have sought to attain the desired end without employing any extraneous addition. The somewhat plastic nature of plug-tobacco, and the severe pressure to which it is found necessary to subject it, tends to erase any mark or stamp which shall be simply impressed. But I have succeeded in devising means whereby marks induced by sufficient impression upon the plugs may be preserved.

I provide devices raised on a plug, and produce in the adjacent face of the next plug a cavity, which shall partially relieve that portion from pressure. Furthermore, and with a view to still further attain the desired end, I make the cavity or recess in the adjacent plug a precise counterpart, so that the surfaces, although not in contact when placed together, shall match each other, when, by subsequent swelling, they are brought in contact.

The following is a description of what I consider the best means of carrying out the invention.

The accompanying drawings form a part of this specification.

Figure 1 is a face view of a mark which it may be desired to impress. Fig. 2 is a cross-section through one of the plates which I employ in producing the required impressions. Fig. 3 is a longitudinal section through one of the plugs of tobacco in the process of being marked according to my invention. Fig. 4 is a cross-section through several such plugs, cross-piled in the proper manner for shipment. The succeeding figures are on a smaller scale. Fig. 5 is a plan view of the tobacco, cross-piled for shipment. Fig. 6 represents one of the plugs detached from the top layer. Fig. 7 represents one of the plugs detached from the second layer.

Similar letters of reference indicate like parts in all the figures.

A^1 A^2 are the opposite faces of the several plugs of tobacco A, and a^1 a^2 are impressions produced therein. The mark or impression a^1 contains the required letters or pictured device, raised or cameo. The other impression, a^2, is a corresponding device, sunk or intaglio.

It is very important that the places of the several impressions, as well as their character, shall be determined with accuracy, as otherwise they may not match together properly, however accurately formed.

I can produce the required impressions cheaply and accurately by means of plates of sheet metal, stamped or otherwise formed with the impressions full on one side and sunk on the other.

Plug-tobacco is ordinarily finished in what are known as "finishing-pots," the several plugs being piled therein to a height of one or two feet, and then strongly compressed, and allowed to remain a considerable time. I employ ordinary pots, and pile the plugs to be finished in the ordinary and long-approved fashion; but I place between each layer and the next, instead of plain sheet metal, a plate of such previously-struck tinned iron or other suitable material, having the device prominently raised on one face and correspondingly sunk on the other, so that the impression is sunk in the tobacco on one face and produced in relief on the tobacco on the other side. The plates should be of the same square form as the interior of the finishing-pot, and only so much smaller as to allow them to be introduced and removed easily. They produce the required impressions in exactly the required places. The positions being rightly determined, it follows that in packing the tobacco-plugs in the boxes for transportation and use the impressions match always with a salient or relief impression, a^1, against a sunk or hollowed impression, a^2.

If the operation be conducted with metal plates of uniform thickness, the surfaces of the tobacco in the several impressions will come

into contact immediately on applying the tobacco together in the packing-boxes. To obtain a still better effect, I make the metal plates of extra thickness over the surfaces where the impression is produced. A convenient mode of effecting this is to make the metal plate of double thickness, or even triple thickness, at the required points. This end can be conveniently attained by soldering or "sweating" upon the main sheet a piece of the same or different metal correspondingly stamped. The sheet metal thus provided will serve as before described, with the addition that the parts of the tobacco carrying the device will be held a little apart when the tobacco is finally compressed together in the packing-box. The tobacco may swell and bring the stamped faces in contact at some later period, but the contact will not be as early nor as forcible as on the other and plain portions of the tobacco-plug.

In the drawings, B represents the sheet-metal, and b^1 b^2 the added pieces, which form, respectively, the working-faces or dies to produce the impressions on the tobacco. The relief-die b^1 produces the sunk impression a^2 in the tobacco. The sunk die b^2 produces the relief impression a^1 in the tobacco.

Many modifications may be made by any good mechanic without departing from the principle of the invention. Thus, for example, I prefer two impressions on each face of each plug, but the number may be increased or diminished. I prefer to cross-pile the tobacco in the packing-boxes, and to pile them plain or uncrossed in the finishing-pots, and to correspondingly arrange the impression dies or devices on the plates B; but the conditions may be reversed, or the tobacco may be cross-piled in both or piled plain in both kinds of boxes.

I propose to use this mode of marking either alone or in combination with any other suitable mode of marking.

My present invention consists in producing a distinctly-marked device on a plug, and matching it against a recess in the adjacent face, which recess may be deeply sunk, so as not to come in contact with the impressed device at all, or not until after a long period, and then very gently. This condition may be attained by soldering or otherwise affixing a thick mass of metal or other suitable material, without regard to shape, in place of the struck-up piece b^1.

The devices in the required conditions presenting a face with a raised device against an adjacent face with a sunken device may be induced by other means than by the sheet metal B b^1 b^2, as by entirely distinct and independent dies; but I esteem such mode of procedure more expensive and troublesome.

I claim as my invention—

A package of plug-tobacco having two or more plugs applied together, with a raised device on one plug lying within a depressed surface of the adjacent plug, substantially as and for the purposes herein set forth.

In testimony whereof I have hereunto set my hand this 11th day of May, 1877, in the presence of two subscribing witnesses.

ED. R. HEARN.

Witnesses:

THOMAS D. STETSON,

CHAS. C. STETSON.