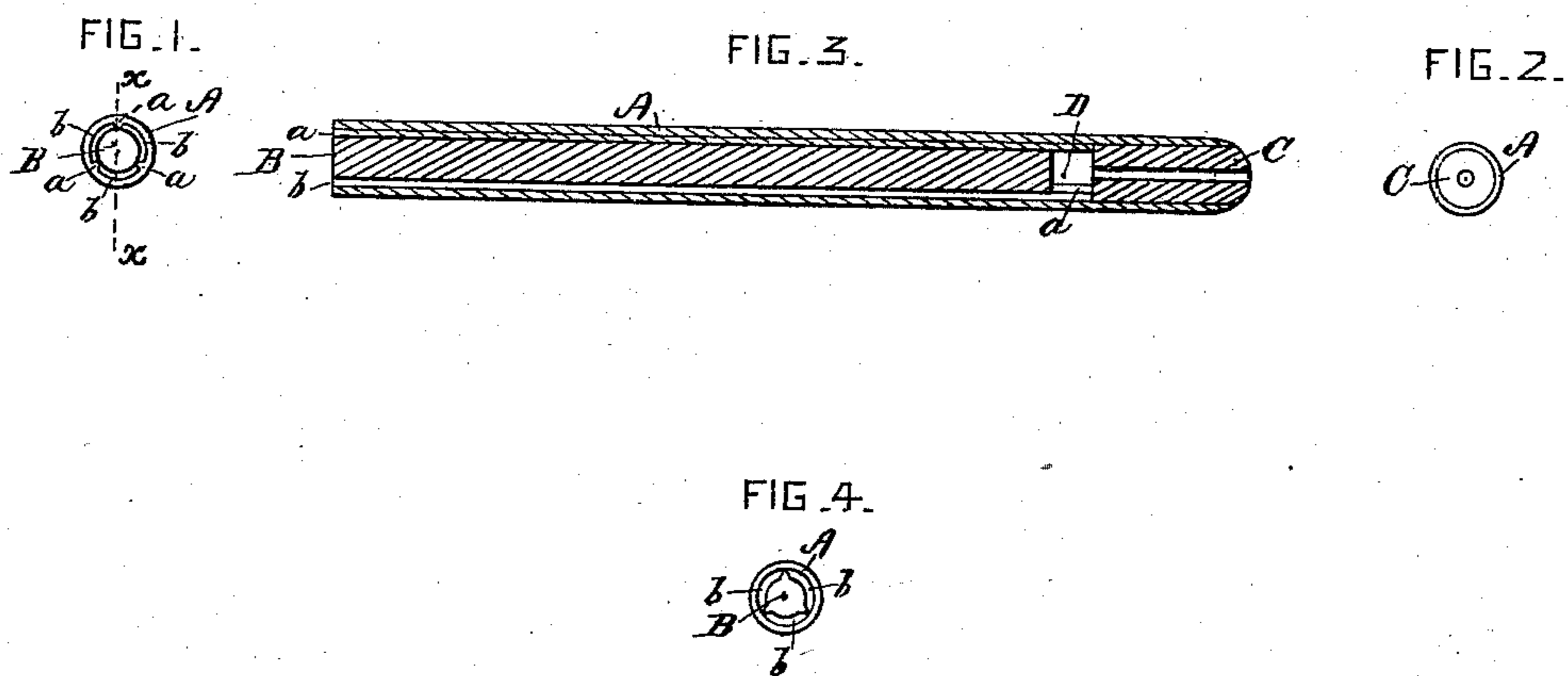


I. LINDSLEY.  
Compressed Tobacco Smoking Tube.

No. 235,885.

Patented Dec. 28, 1880.



WITNESSES.

Alonzo Y. Cross  
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INVENTOR.

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# UNITED STATES PATENT OFFICE.

ISAAC LINDSLEY, OF PAWTUCKET, ASSIGNOR TO HIMSELF AND SOCRATES SCHOLFIELD, OF PROVIDENCE, RHODE ISLAND.

## COMPRESSED-TOBACCO SMOKING-TUBE.

SPECIFICATION forming part of Letters Patent No. 235,885, dated December 28, 1880.

Application filed November 13, 1879.

*To all whom it may concern:*

Be it known that I, ISAAC LINDSLEY, of Pawtucket, in the State of Rhode Island, have invented an Improvement in Compressed-Tobacco Smoking-Tubes, of which the following is a specification.

My invention relates to a new manufacture for smoking purposes, consisting in an exterior tube of compressed tobacco inclosing a compressed-tobacco core, so formed in its cross-section and arranged within the outer tube as to produce continuous passages or ducts between the two for the purpose of draft in smoking.

My invention also consists in a tubular bushing inserted into the rear end of the exterior tube, and serving to prevent said tube from breaking down and crumbling in the mouth when in the process of smoking.

Figure 1 is a forward-end view. Fig. 2 is a rear-end view. Fig. 3 is a longitudinal section taken in the line *x x* of Fig. 1. Fig. 4 is an end view, illustrating a modification.

In the drawings, A represents a tube made of finely-divided tobacco subjected to great pressure in a suitable die, by which means the tobacco may be rendered so coherent that tubes of moderate strength and desirable appearance may be formed from ordinary tobacco without the addition of foreign materials, a very slight moisture only being necessary in order to produce the best results. The tube A (shown in Figs. 1 and 3) is provided in its interior with slight longitudinal ribs *a a a*, which, upon the insertion of the cylindrical core B, will form the draft passages or ducts *b b b*. The ribs *a a a* are cut away for a short distance at the rear end of the tube A, in order to allow it to properly receive the tubular bushing C, made of compressed tobacco, or of any other suitable material, and serving to strengthen and support the end of the tube A, thus preventing it from breaking down and crumbling in the mouth when in the process of smoking.

A chamber, D, may be left between the forward end of the bushing C and the rear end of the core B, to be filled with cotton, sponge, or other loose absorbent material, serving the

purpose of filtration and preventing the outward flow of the damp breath of the smoker.

Tubes of compressed tobacco as heretofore made for smoking purposes have been filled with loose granulated tobacco, similar to the filling of cigarettes; but thus filled they are liable to objection on account of the tendency of the filling to burn out, leaving the outer tobacco-tube unconsumed, whereas in my present invention the tube and filling are both made of similar material, and, being also subjected to like treatment, both parts may be made to burn uniformly, and the compressed-tobacco cores will contain the required amount of tobacco in a much smaller space.

The tube A and core B may both be made of ordinary compressed tobacco; but an improved manufacture may be produced by first finely granulating the tobacco and forcing it to flow, in a compressed condition, from a receiving-chamber through the contracted bore of a die by means of a powerfully-operated plunger, the attenuated compressed tubes being formed around a centrally-arranged core or mandrel either attached to the face of the plunger and moving therewith, or permanently fixed to a suitable outside support and passing longitudinally through a plunger, made hollow, into the chamber and throat of the die, leaving an annular space around the mandrel for the formation of the tube. The tobacco operated upon should be dry or but slightly moistened, in order that the die may produce a desirable highly-polished surface upon the resulting product, and by moderately heating the die the tobacco will be caused to flow with comparative ease through the contracted bore without impairing the polish.

A portion of the face of the plunger should be made tapering or conical for a short distance, in order to cup-form, and thus effectually join the several charges as they are fed to the chamber and forced to flow through the contracted bore of the die, producing a practically homogeneous product free from distinct separable joints at the junction of the charges.

The draft-passages should be each made of considerable area in their transverse section, in order to prevent their becoming closed at

their rear ends from the resultant swelling of the tobacco, caused by the moisture developed in smoking.

The interior ribs of the tube may be readily cut away, in order to suitably provide for the proper insertion of a mouth-tube, by means of a revolving drill or reamer.

I claim as my invention—

1. The combination of an exterior tube made of tobacco rendered coherent by pressure with a separately-made core of compressed tobacco, substantially as described.

2. The combination of a tube made of to-

bacco rendered coherent by pressure with a tubular bushing serving to re-enforce the end of said tube and prevent it from crumbling in the mouth, substantially as described.

3. A tube of compressed tobacco provided interiorly with longitudinal ribs which are cut away for a short distance at one end in order to provide for the insertion of a separately-formed smoke-delivering tube.

ISAAC LINDSLEY.

Witnesses:

JOSEPH J. SCHOLFIELD,  
LEONARD SCHOLFIELD.