

I. B. Branch,
Applying Freezing Compounds in Extracting Teeth.
N^o 15,966. *Patented Oct. 28, 1856.*

Fig. 1.

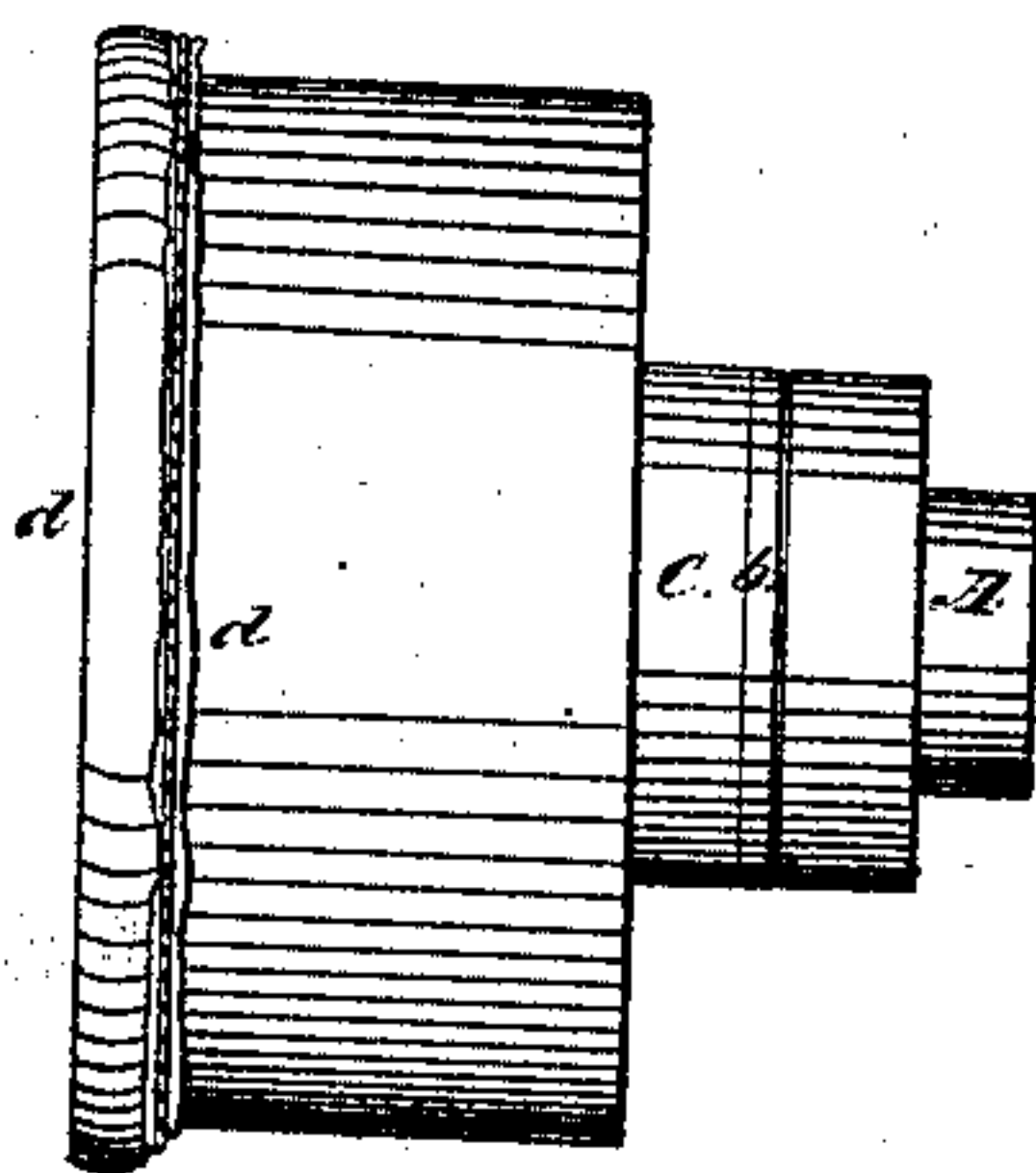


Fig. 2.

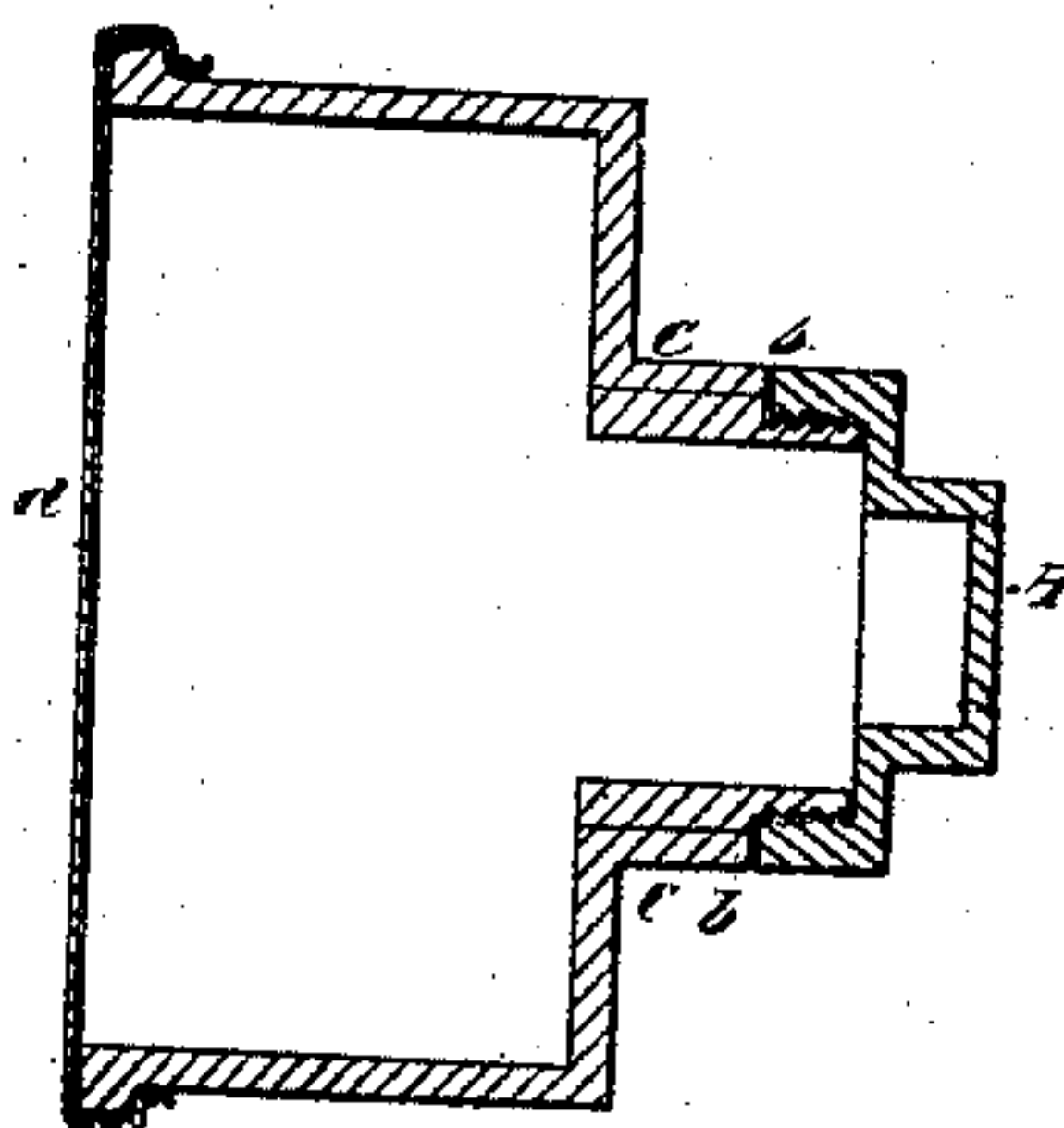


Fig. 3.

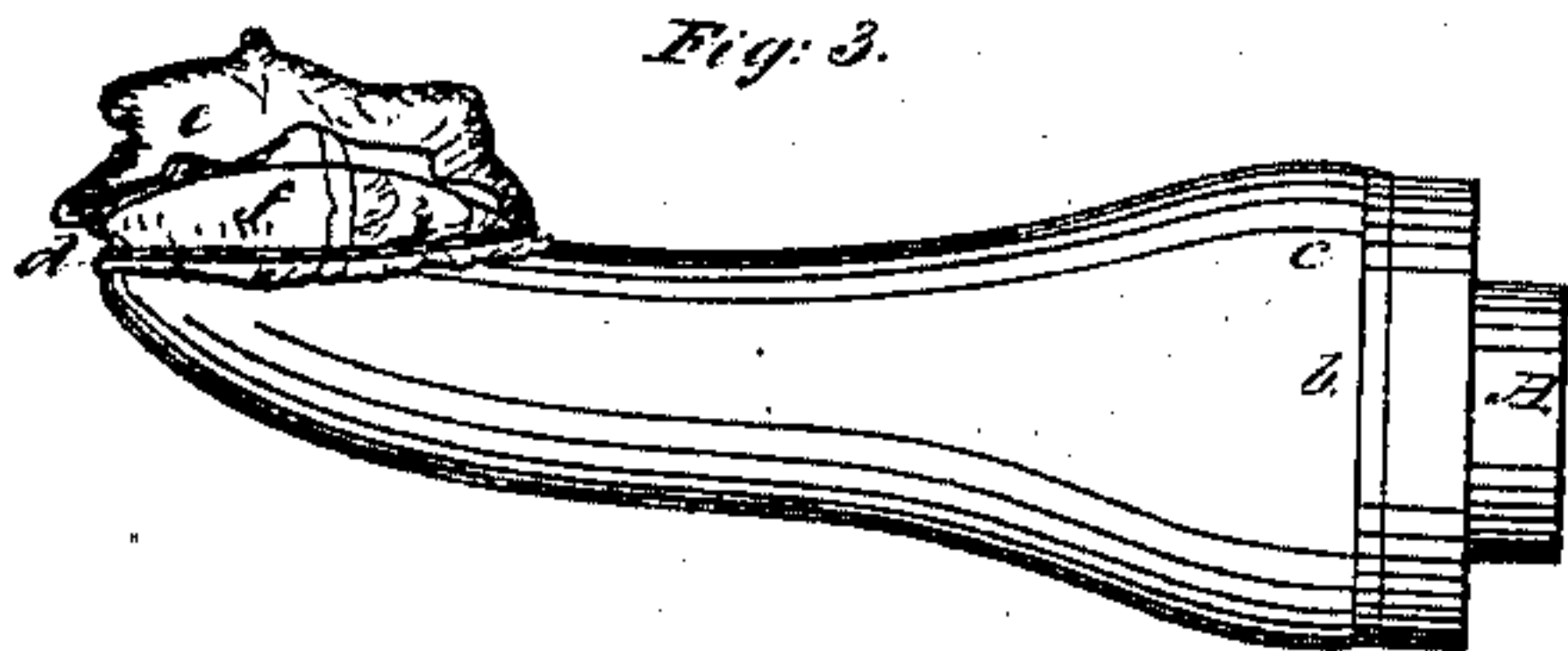


Fig. 4.

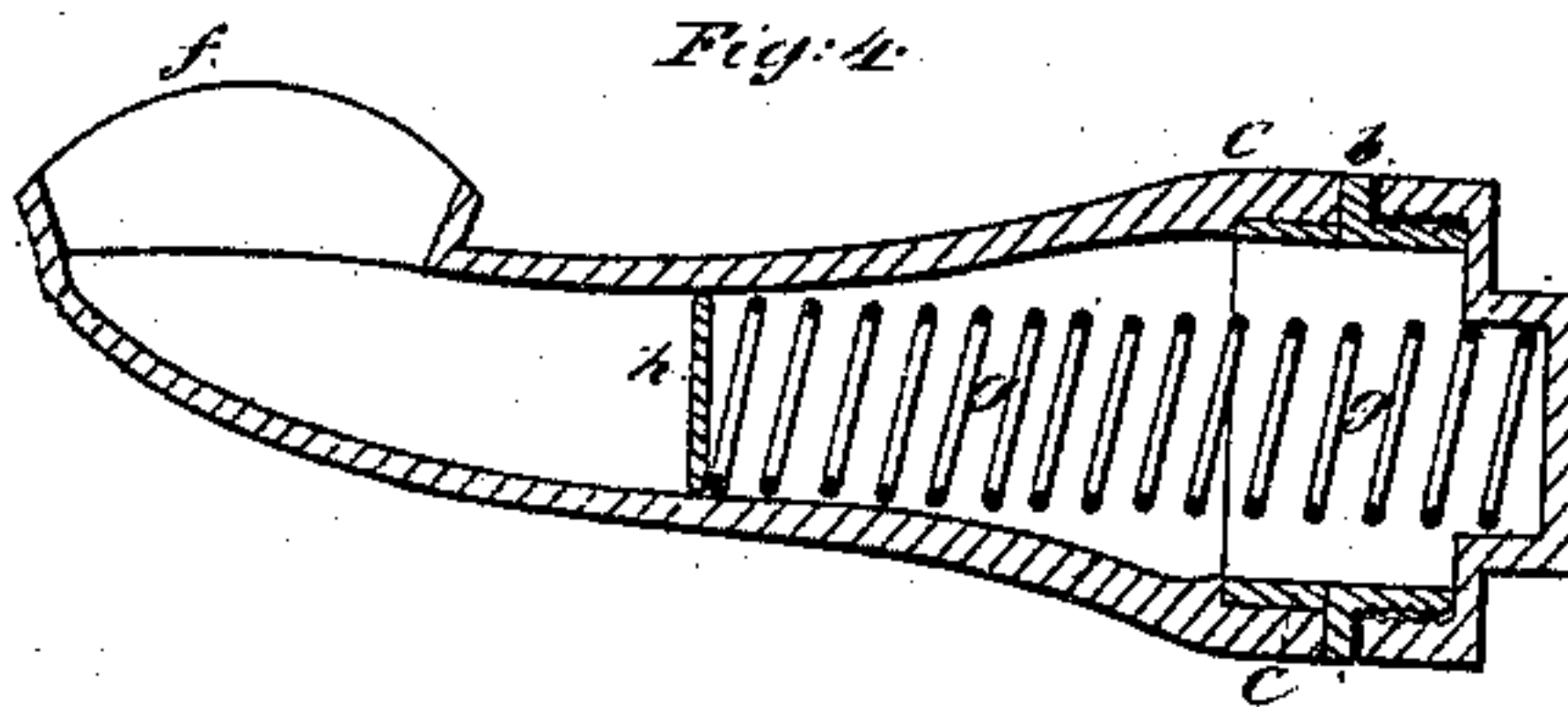


Fig. 5.

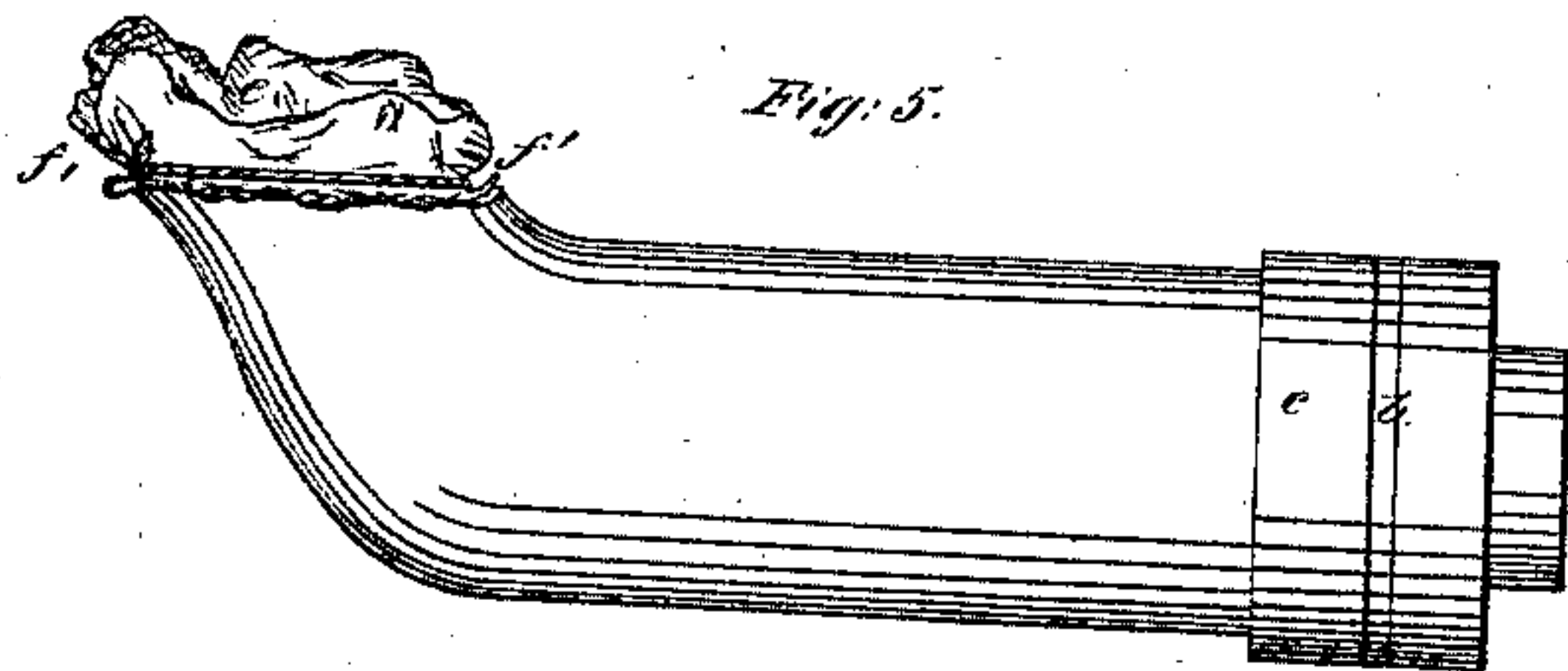
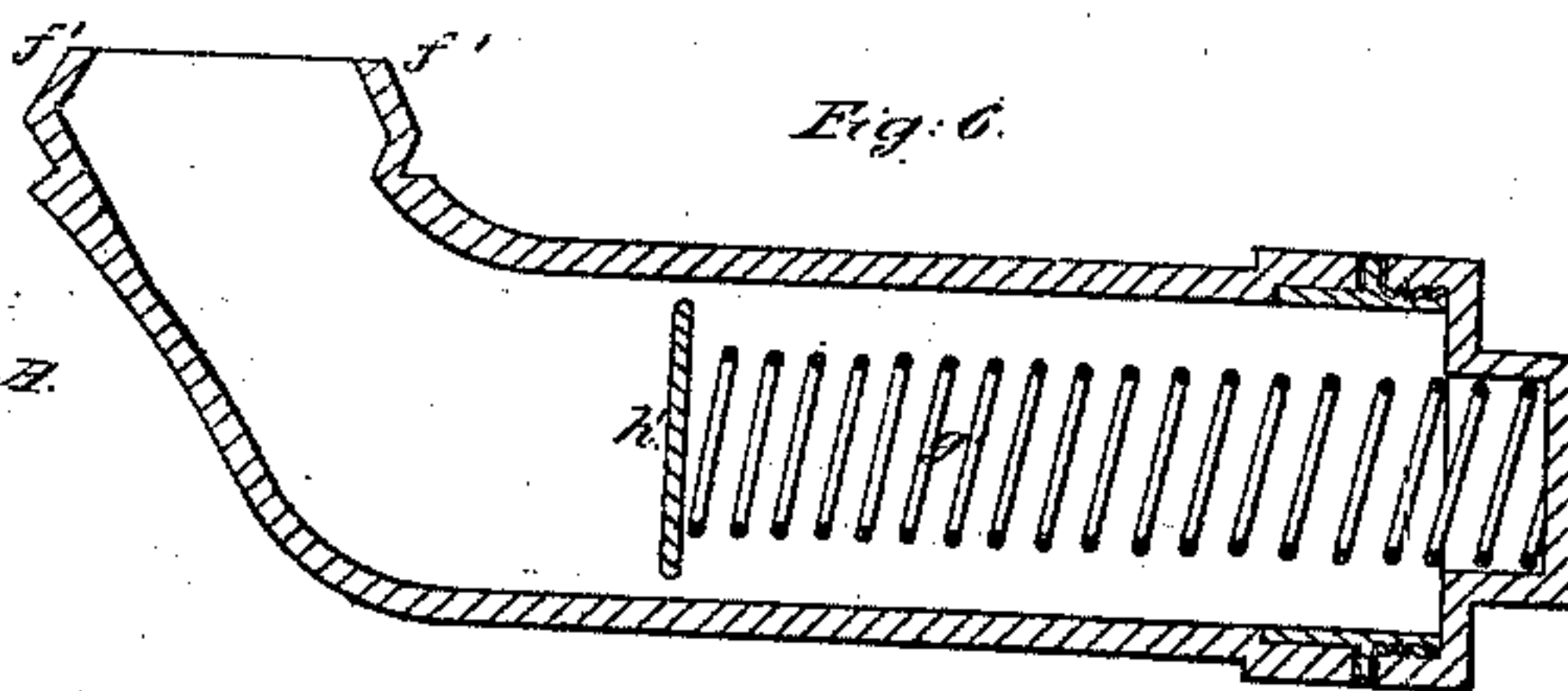


Fig. 6.



UNITED STATES PATENT OFFICE.

ISAAC B. BRANCH, OF GALENA, ILLINOIS.

APPARATUS FOR APPLYING FREEZING MIXTURES TO THE TEETH.

Specification of Letters Patent No. 15,966, dated October 28, 1856.

To all whom it may concern:

Be it known that I, ISAAC B. BRANCH, of the city of Galena, county of Jo Davies, State of Illinois, have invented a new and useful
5 Instrument for the Application of Cold or Freezing Compounds in Producing Local Insensibility to Pain During Dental and other Surgical Operations; and I do hereby declare the following to be a full, clear, and
10 sufficient description thereof, reference being had to the accompanying drawings, making part of the same.

I am aware that local anesthesia has been produced by the application of cold or
15 freezing mixtures to the part or parts desired; and, since my own invention, I have learned that it has been applied to internal parts of the body, as the gums in dental operations, by the use of non-conducting reser-
20 voirs, capped with conducting material. Such an application is described in the *American Journal of Dental Science* for April 1855. But the special object of my invention is the construction of such an in-
25 strument as will enable the operator to make this application with equal thoroughness and efficiency in whatever position the instrument is held, and also completely to envelop and act upon the part to be in-
30 fluenced when it projects or rises from the general surface, as in dental cases.

In the drawings, Figures 1 and 2 represent an elevation and a section of an instrument which I have found sufficiently
35 efficient for operating upon external and flat or nearly flat surfaces. A cap A of gutta percha or other non-conducting material, screws upon a metallic nozzle b which is inserted in and fastened by the adhesive nature
40 of the gum to the cup or cylinder at c. A thin covering d of india rubber or of other elastic and impervious conducting material, is tied or otherwise fastened over the mouth of the cylinder, which at once permits the
45 freezing mixture contained within to overlie

directly and to produce its effect upon, the part to which it is applied.

Figs. 3 and 4 are similar views of the instrument designed for operation upon the molar teeth and Figs. 5 and 6, of that de- 50 signed for the front teeth—being modifications of my invention and the subject of my present specification thereof.

In addition to the parts corresponding to those above described, this instrument with 55 two lips—(in the one instance being formed longitudinally, as at f; in the other laterally or transversely, as at f' f',) which, fitting over the gums on either side, permit the contact of the freezing mixture through the 60 sack or covering e as perfectly upon the sides as upon the edges which rise around the tooth. I have also applied to my instrument an internal spiral spring g and gutta percha follower h, by means of which I am 65 enabled to secure the contact of the solid parts of the mixture with the conducting cover, whatever be the position in which the instrument is held or whatever be the relative proportions of the solid and liquid 70 parts.

Having thus briefly, but with sufficient fullness, described my invention, what I claim to be new and desire to secure by Let- 75 ters Patent, is—

1. The employment, in instruments for applying cold as an anesthetic, of the lip or lips above described, substantially as and for the purpose above set forth.

2. The combination with said instrument 80 or the application thereto, of the spiral spring g and follower h, or of their equivalent, substantially as and for the purpose above set forth.

In testimony whereof, I have hereunto 85 subscribed my name.

ISAAC B. BRANCH.

In presence of—

D. SMITH,

J. F. WANNALL.