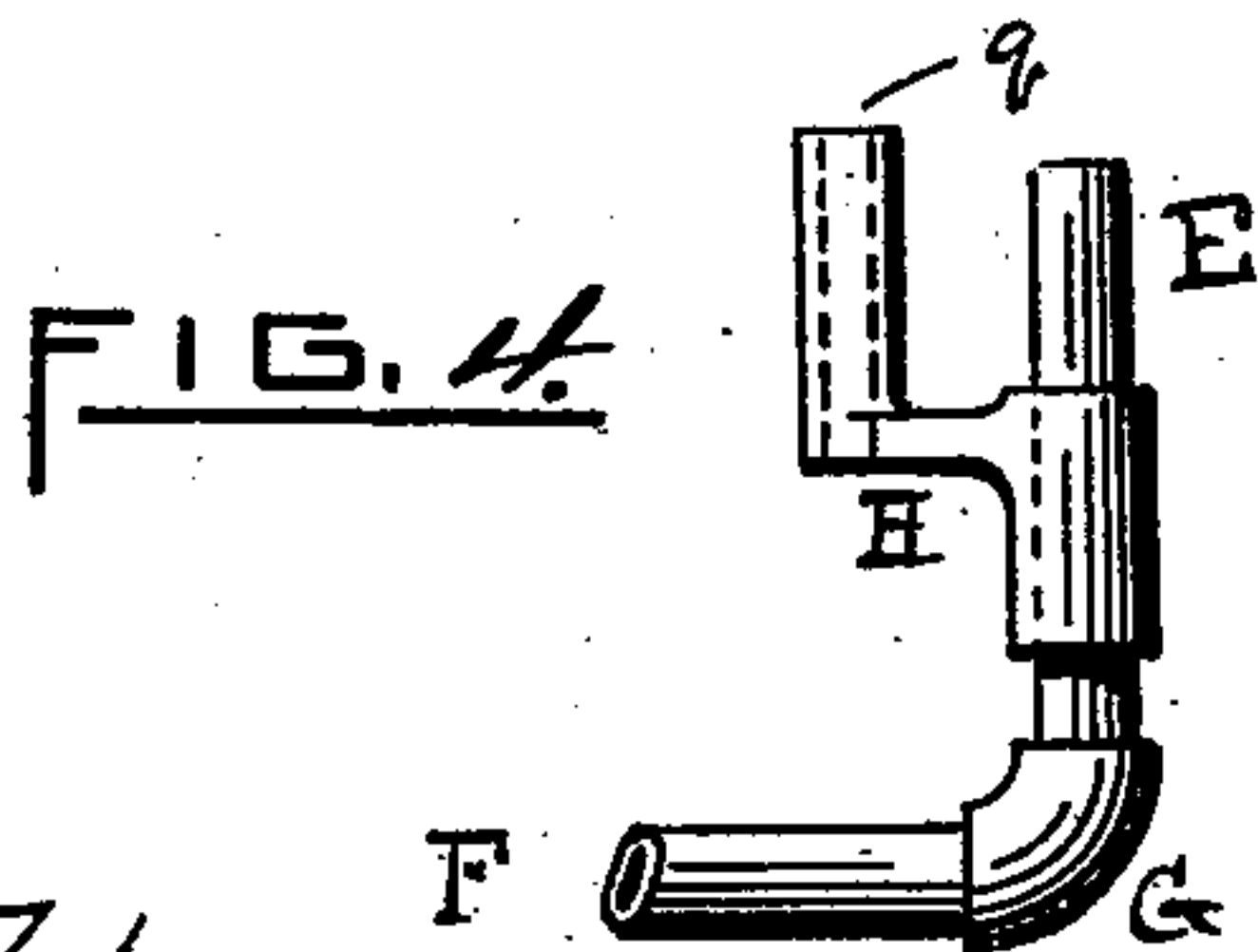
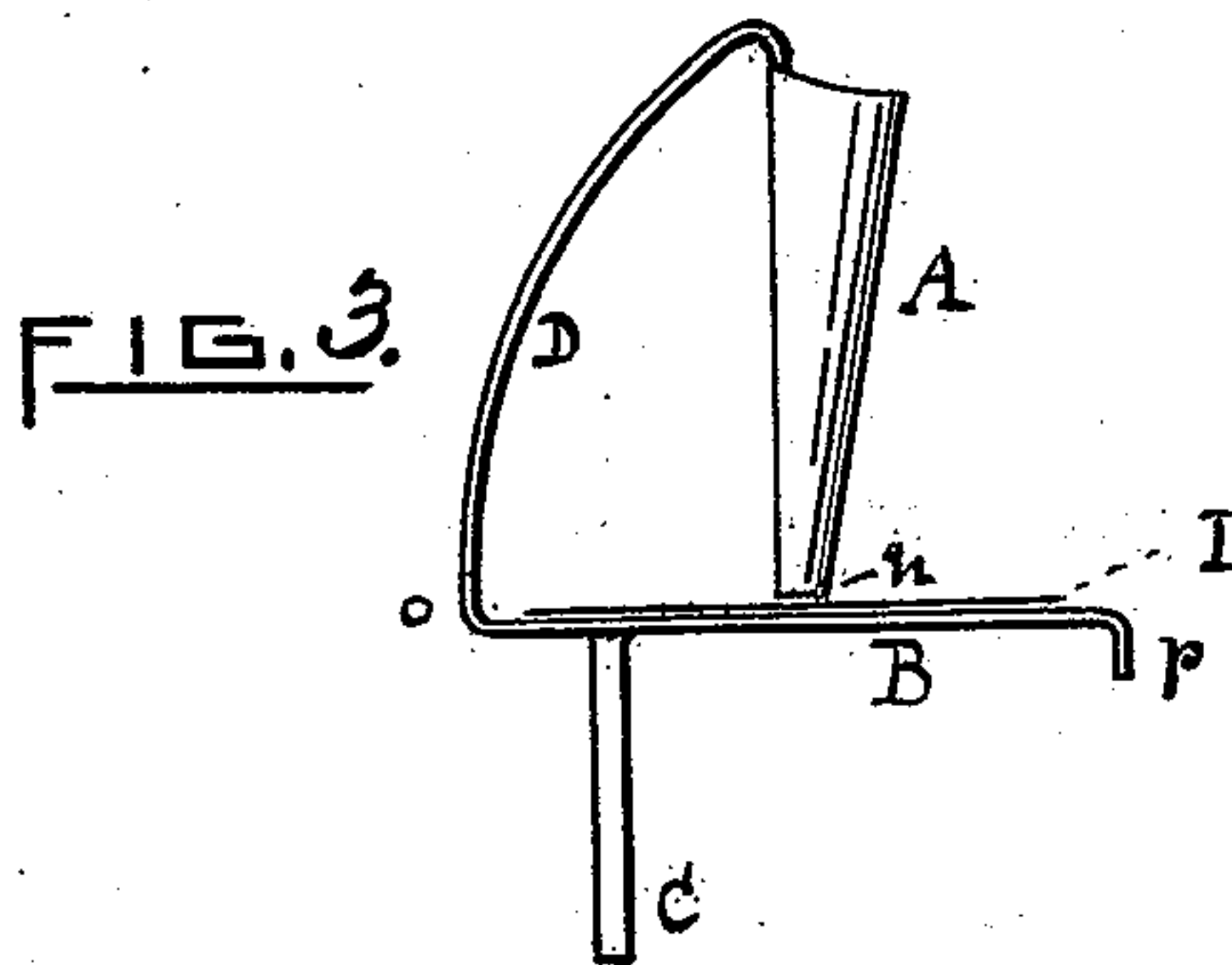
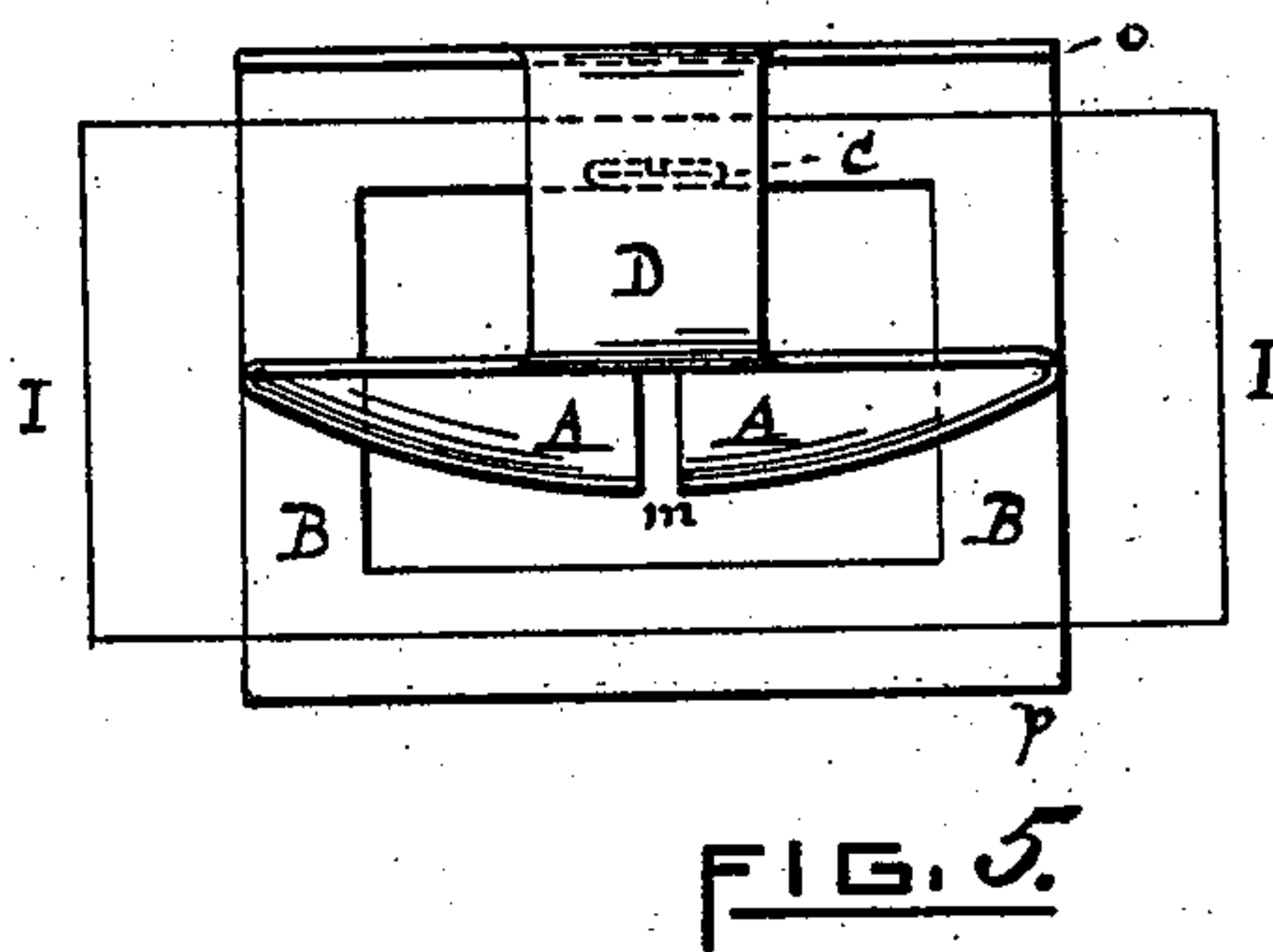
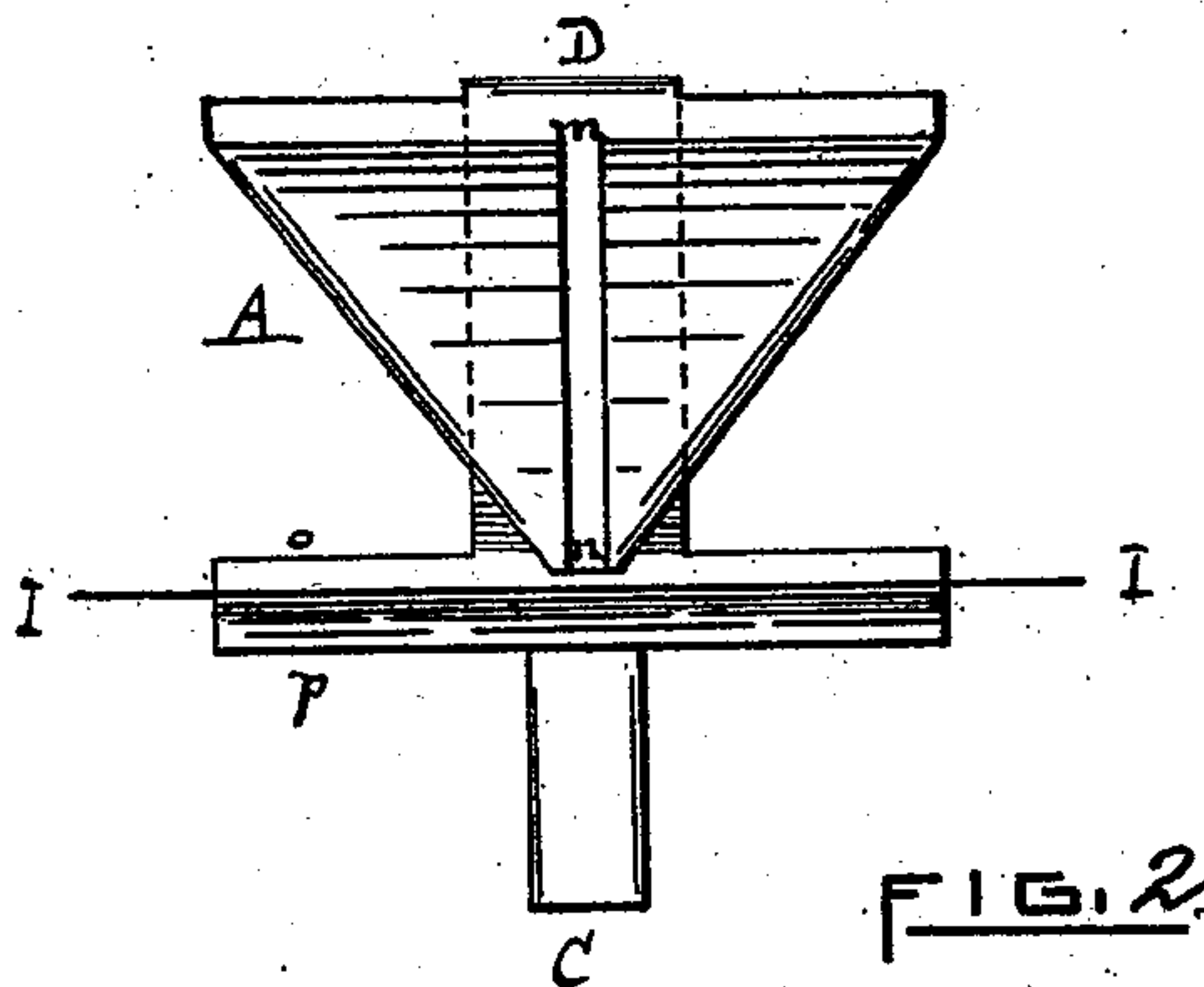
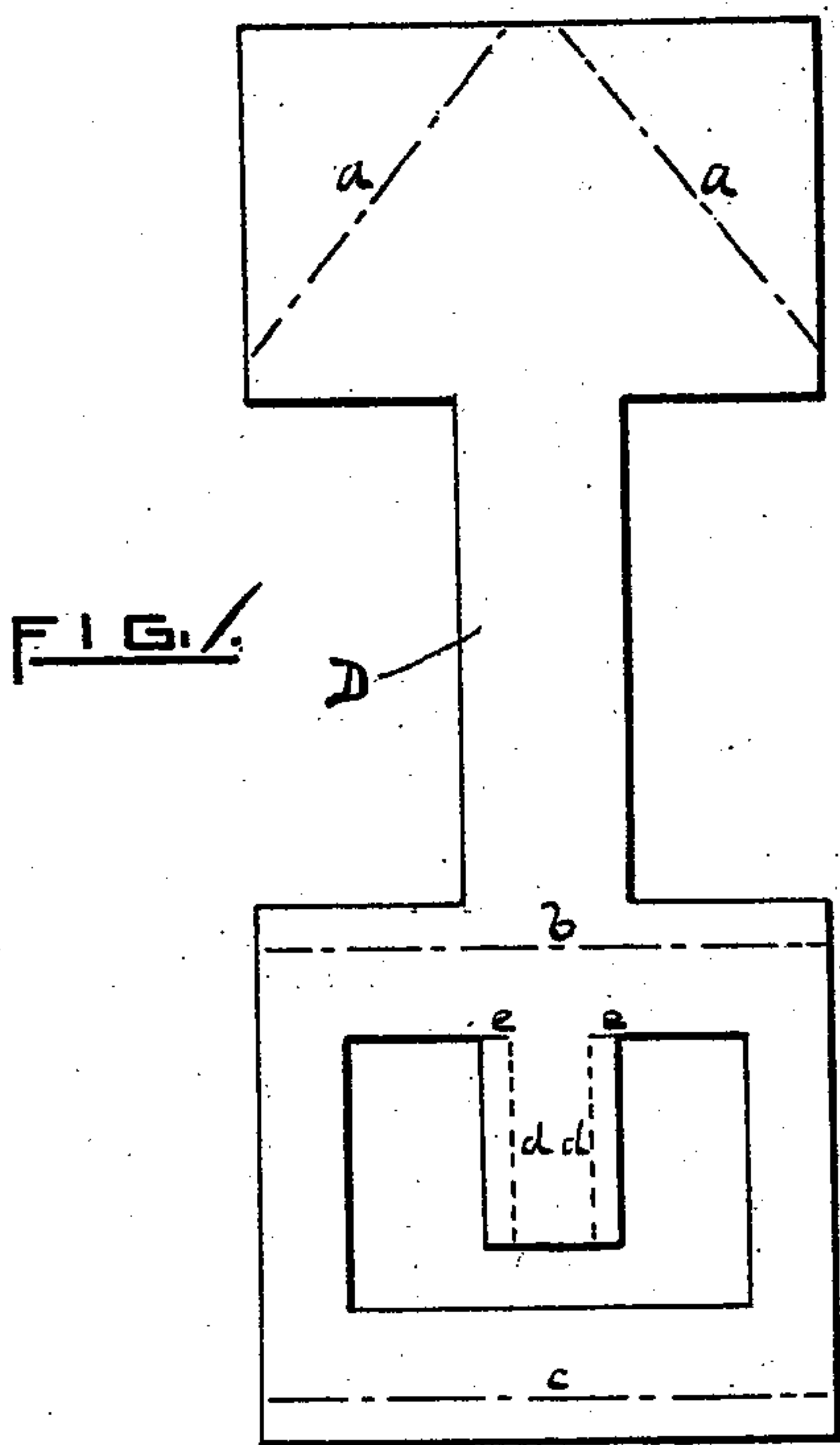


(No Model.)

W. D. PORTER.  
APPARATUS FOR ANNEALING GOLD.

No. 541,501.

Patented June 25, 1895.



WITNESSES:

*Charles Harrigan*  
*James W. Fink*

INVENTOR:

*William D. Porter*  
*By Warren R. Perce*  
*Atty.*

# UNITED STATES PATENT OFFICE.

WILLIAM D. PORTER, OF PROVIDENCE, RHODE ISLAND.

## APPARATUS FOR ANNEALING GOLD.

SPECIFICATION forming part of Letters Patent No. 541,501, dated June 25, 1895.

Application filed October 29, 1894. Serial No. 527,201. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM D. PORTER, of the city and county of Providence, in the State of Rhode Island, have invented a certain new and useful Improvement in Apparatus for Annealing Gold for Dental Purposes; and I declare the following to be a specification thereof, reference being had to the accompanying drawings.

Like letters indicate like parts.

Figure 1 is a view of the metallic blank from which my improved annealing apparatus is made. Fig. 2 is a front elevation of said apparatus. Fig. 3 is a side elevation of the same. Fig. 4 is a side elevation of the bracket to support the apparatus. Fig. 5. is a top view of my device.

My invention is a device adapted for use by dentists in annealing gold for the filling of teeth, and it consists of a hopper, properly supported upon and over a table, which has a central aperture and is itself provided with a suitable support in close proximity to or connection with a source of heat, said parts being constructed and combined substantially as hereinafter specified and set forth in the claims.

I prefer to construct my said apparatus of sheet metal cut in the form and about in the proportions shown in Fig. 1, which illustrates the sheet metal blank after it is cut but before it is bent or folded. It is in the form of two rectangular portions, one of which has a central opening, and a strip connecting the two, all being preferably integral. The dotted lines *a b c* and *d* indicate lines for folding and the lines *e e* represent cuts. In the central aperture of the lower rectangular portion is a projecting part extending into said aperture.

The upper rectangular portion is folded over to the rear on the lines *a*. The lower rectangular portion is folded toward the front on the line *b* and to the rear on the line *c*. The interior extension is folded to the rear on the lines *d*, the cuts *e e* allowing such folding.

As shown in Figs. 2, 3 and 5, the blank so folded forms a triangular hopper A, the bent and curved corners of said blank extending to the front with their edges slightly apart as at *m* and leaving an opening *n* at the bottom of the hopper. The fold on the line *b* forms an upwardly extending ledge *o*. The fold on

the line *c* forms a downwardly extending ledge *p*. The remainder of the lower rectangular portion constitutes the table B. The folds on the lines *d* give stiffness to the projection and when said projection is bent at a right angle with the table B, it forms the stem or support C. The intermediate strip in Fig. 1 is bent in a curve as shown in Fig. 3 and forms the support D of the hopper A.

In Fig. 4 E is a common gas-burner, connected with the gas-pipe F by the elbow G. H is a bracket supported on the gas burner E by a collar and provided with an upright extension having an opening *q* through it. The stem C is inserted in said opening *q* of the bracket H and the table B is thus brought down quite near to the gas-burner E.

A plate or sheet of mica I is laid on the table B in the position shown in solid lines in Fig. 5 and in dotted lines in Figs. 2 and 3, leaving a small space between the opening *n* of the hopper A and said sheet of mica.

The gold used by dentists in filling teeth is usually in the form of pellets and requires annealing in order that it may be properly compacted in the tooth. A number of said pellets are thrown into the hopper A and by reason of the shape of the hopper they are fed one at a time through the opening *n*. One such pellet at said opening rests upon the mica and is subjected there to the heat from the gas-burner E just beneath. As soon as this pellet, so heated and annealed, is taken away by a pair of forceps in the hand of the operator, another falls into the same place by gravity and is heated and annealed in its turn. The opening *m* between the flaps or bent corners, which constitute the front of the hopper A, enables the operator to see that the hopper is sufficiently supplied with gold pellets for his purposes.

While it is evidently an advantage to construct the hopper, table and supports of one piece of sheet metal, as above described, it is obvious that the same results are obtained if these parts are made of separate pieces, constructed, arranged and supported substantially as described. Neither is it essential that these parts should be precisely of the same form as shown in the drawings.

I claim as a novel and useful invention and desire to secure by Letters Patent—

1. The combination of a hopper having an



opening at its bottom adapted to deliver its contents successively, a table having an opening beneath said hopper, supports for said hopper and table, respectively, and an annealing plate beneath the hopper and upon the table and in proximity to a source of heat, substantially as shown.

2. The combination with a hopper having an opening at its bottom, of a table having an opening beneath said hopper, supports for said hopper and table, respectively, an annealing plate upon said table and beneath said hopper, a gas-burner and a bracket therefrom to hold said annealing device in position thereon, substantially as specified.

3. The improved annealing apparatus for dental purposes herein described, made of a

single metallic sheet formed with two rectangular portions connected by a neck or strip, one of which rectangular portions is folded diagonally across the two outer corners into the shape of a triangular hopper and the other of which has a central opening with a projection therein and folded to form a table with a rear upward flange and a front downward flange, said projection being folded on its sides and bent at a right angle with said table and the neck strip being bent and curved to support the hopper centrally over the table, substantially as specified.

WILLIAM D. PORTER.

Witnesses:

WARREN R. PERCE,  
DANIEL W. FINK.