

(No Model.)

2 Sheets—Sheet 1.

A. KLINE.  
CURRY COMB.

No. 433,006.

Patented July 29, 1890.

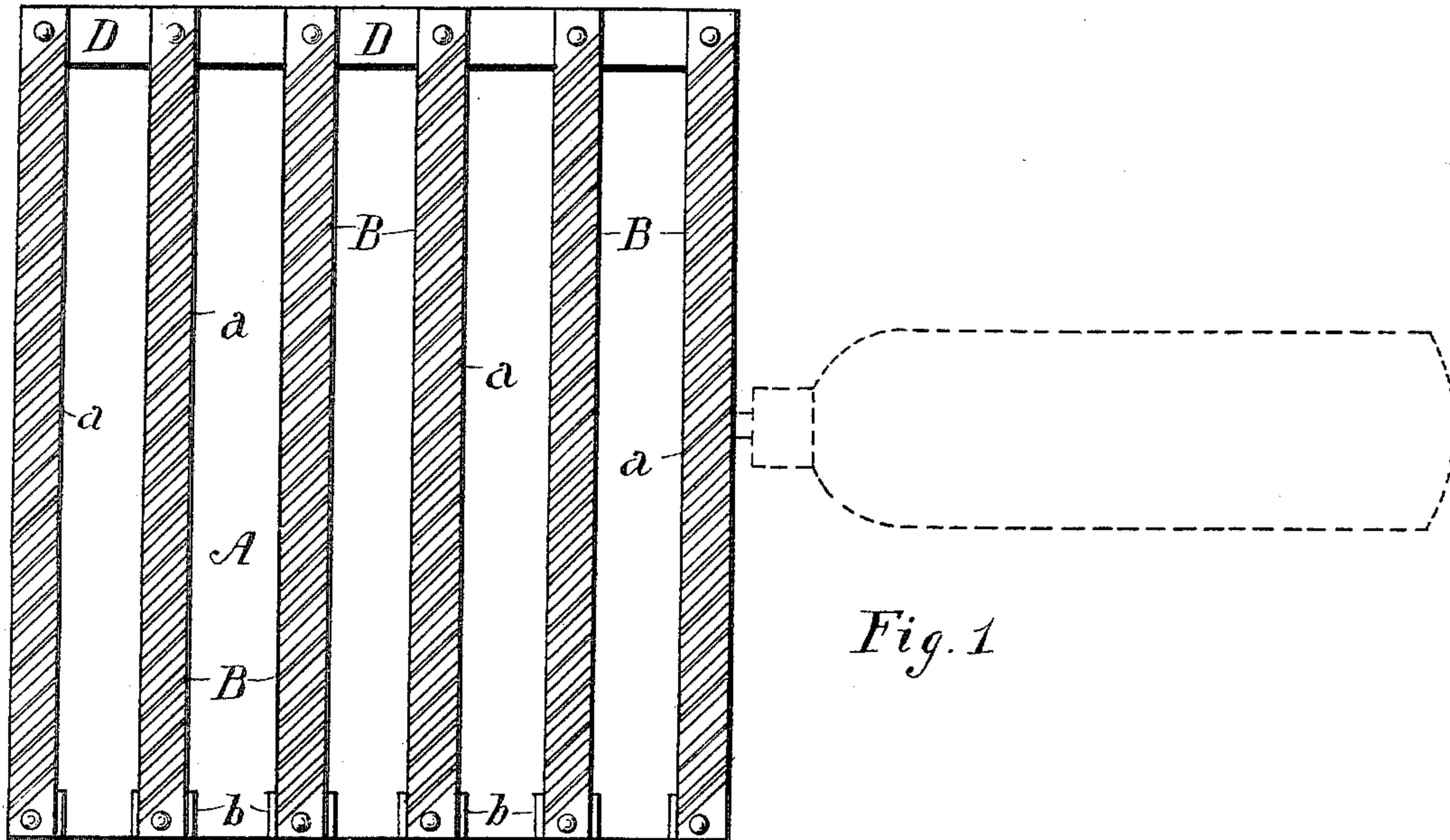


Fig. 1

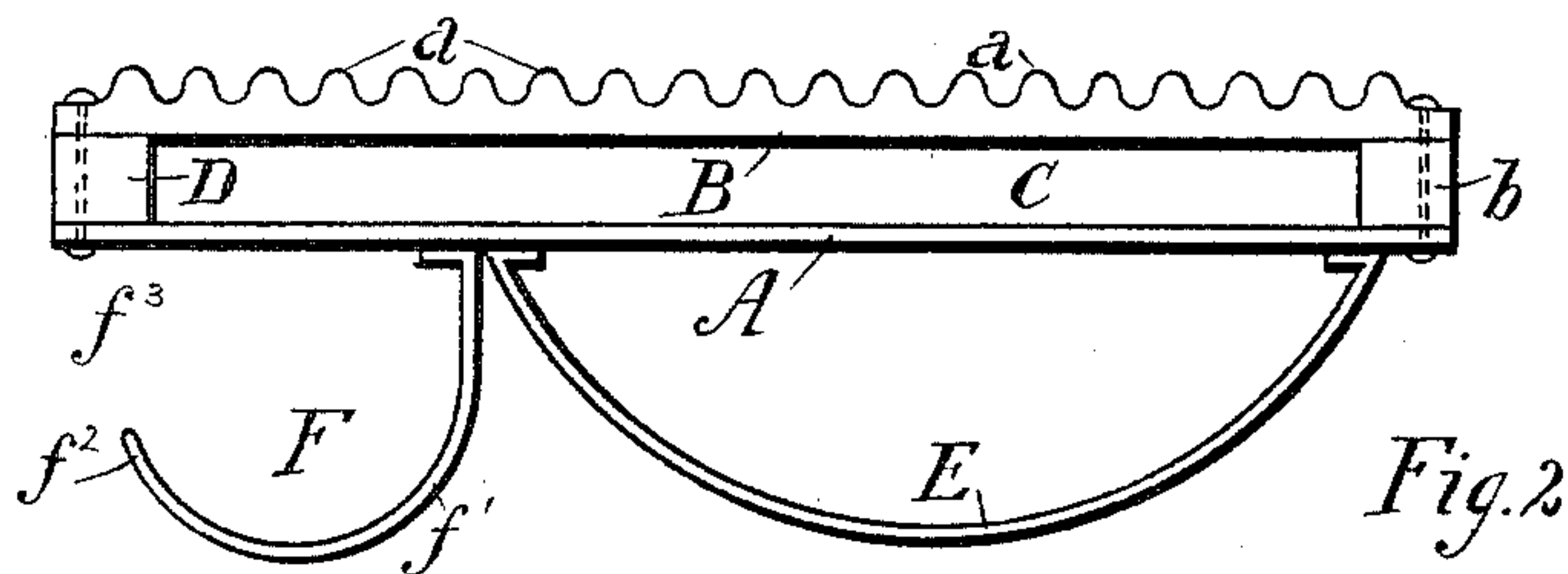


Fig. 2

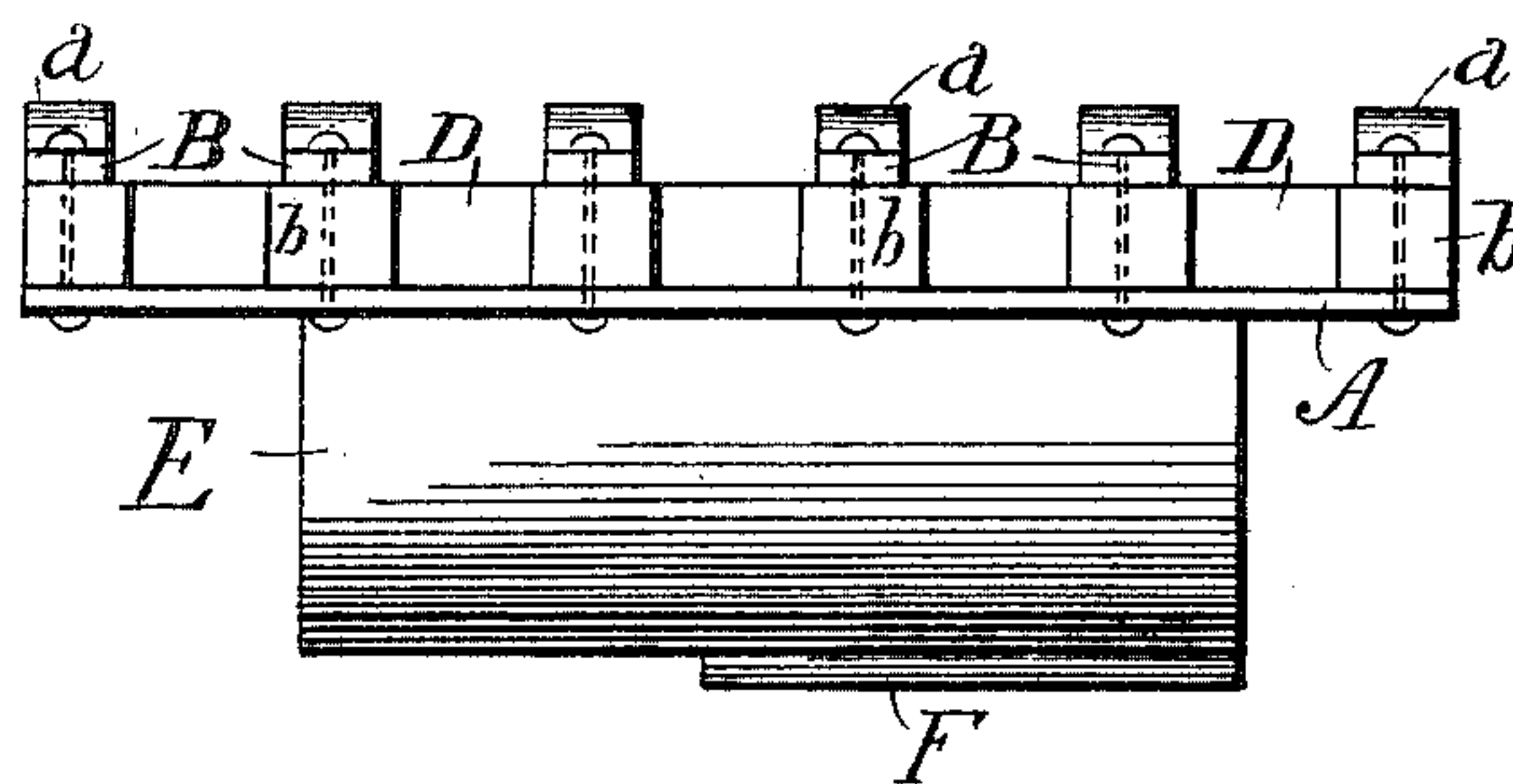


Fig. 3

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(No Model.)

2 Sheets—Sheet 2.

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CURRY COMB.

No. 433,006.

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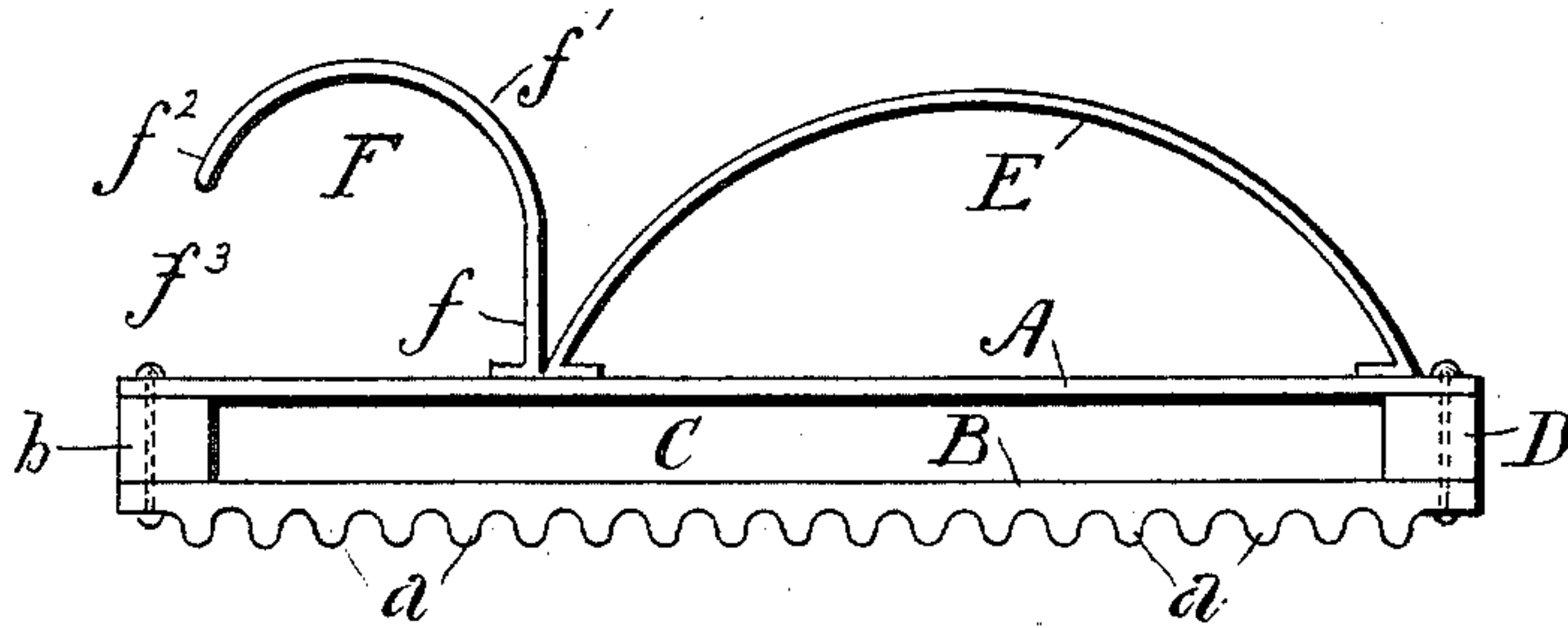


Fig. 4

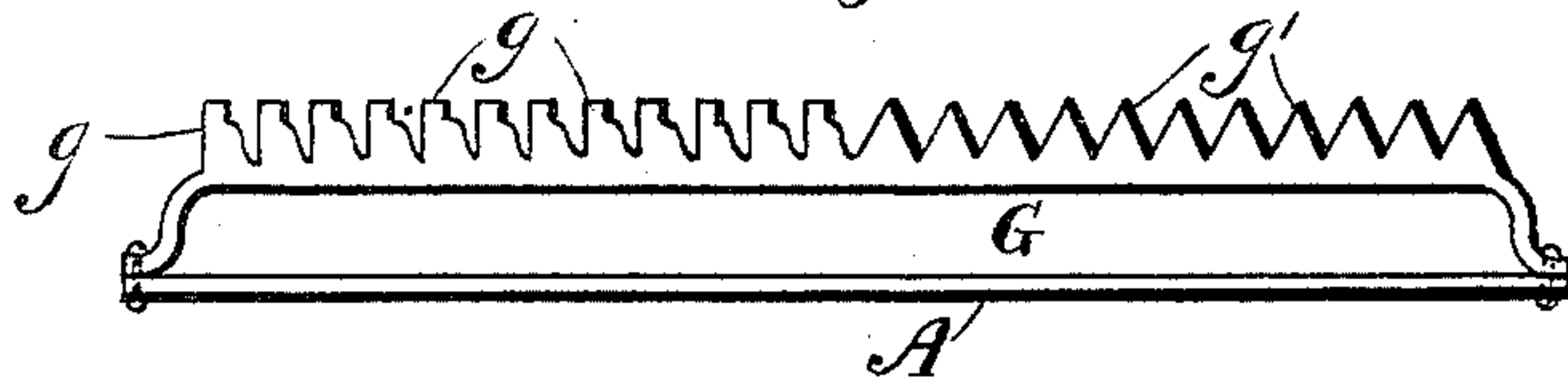


Fig. 5

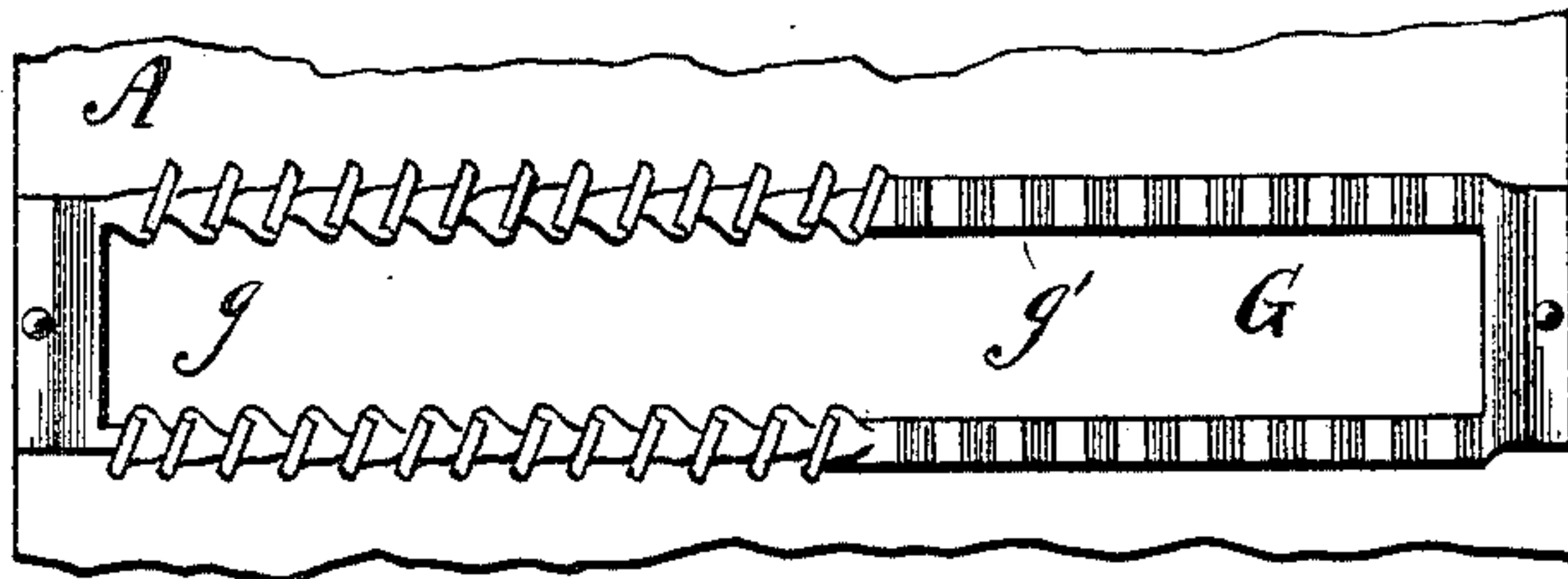


Fig. 6

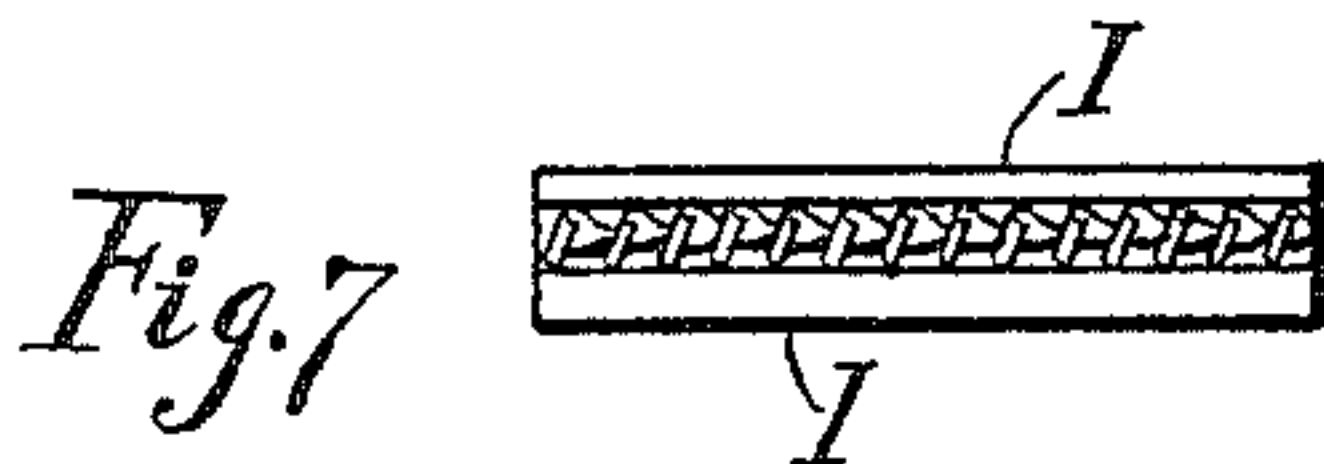


Fig. 7

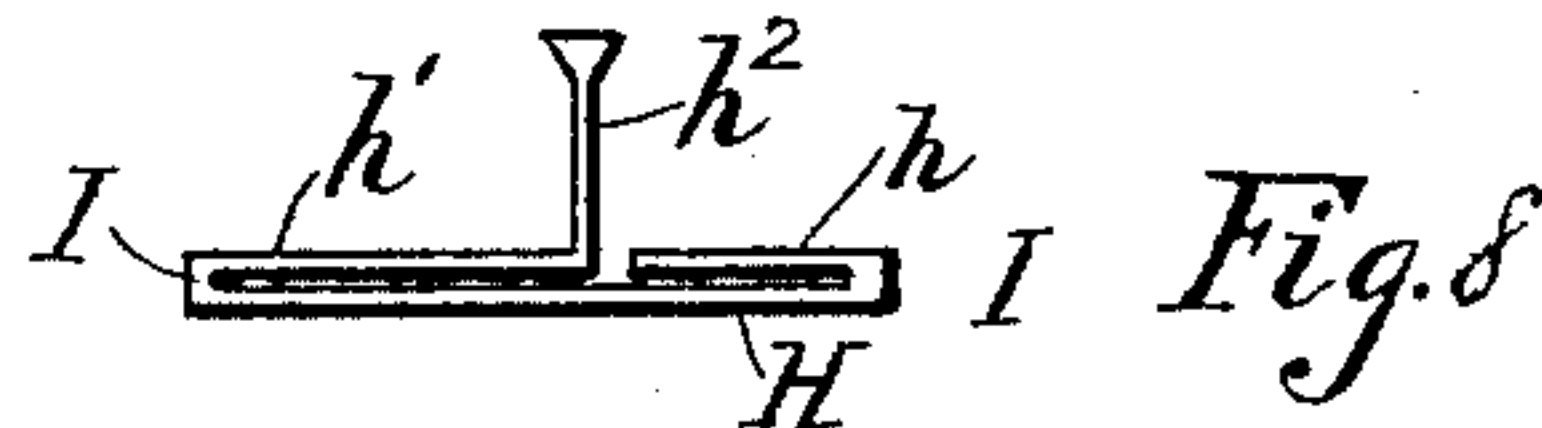


Fig. 8



Fig. 9



Fig. 10

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# UNITED STATES PATENT OFFICE.

ABRAHAM KLINE, OF MANHEIM, PENNSYLVANIA.

## CURRY-COMB.

SPECIFICATION forming part of Letters Patent No. 433,006, dated July 29, 1890.

Application filed December 23, 1889. Serial No. 334,700. (No model.)

### *To all whom it may concern:*

Be it known that I, ABRAHAM KLINE, a citizen of the United States, residing in Manheim, in the county of Lancaster and State of Pennsylvania, have invented certain Improvements in Curry-Combs, of which the following is a specification.

This invention relates to improvements in combs for cleaning horses, cows, and similar short-haired animals; and the novelty consists in the construction and combination of parts, as will be hereinafter described, and specifically pointed out in the claims.

As generally constructed the teeth of curry-combs are made sharp and pointed and project from a thin narrow flange or rib of the same thickness as the teeth. As a consequence, when the comb is pressed heavily against the skin or the animal is struck with the face of the comb, as is frequently done by angry attendants, there is nothing to prevent the sharp teeth from scratching or penetrating and cutting the skin. This I overcome by using teeth having elongated scraping-edges.

In order that the comb may be more easily cleaned, I form the teeth on ribs or plates, which set out from the comb-back, so as to allow a space to intervene between said ribs or plates and the back, the ribs being secured to the back at the ends.

I accomplish my objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a face view of a curry-comb embodying my improvements, the dotted lines showing an ordinary handle attached. Fig. 2 is a front end view of the comb in the position shown in Fig. 1, and Fig. 3 is a side view of the same. Fig. 4 is a rear end view of the same, back uppermost. Figs. 5 and 6 are side and plan views, respectively, of sheet-metal tooth-plates having double rows of elongated or sharp teeth formed on the edges thereof. Figs. 7 and 8 are a top and end view of the manner in which I prefer to form the sheet-metal plates. Figs. 9 and 10 show views of different arrangements of pointed teeth in a comb embodying my invention.

Referring to the details of the drawings as shown in Figs. 1, 2, 3, and 4, A represents the comb-back; B, the teeth-bars, and C the space

between the inner face of said bars and the comb-back. These teeth-bars extend across the comb from side to side, and are connected with the comb-back through filling-blocks *b*, as shown on one side of the comb in Fig. 1, or they may be fastened to a continuous filling-bar D, as shown on the other side of the comb in Fig. 1, the filling-bars being secured to the comb-back. If preferable, the teeth-bars and the filling-bars may be formed integral with each other, the latter being secured to the comb-back, as stated. When desirable, the teeth-bars may be fastened directly to the comb-back without leaving any space between the bars and back. The teeth are formed upon the outer face of the teeth-bars and extend across the bars. The efficiency of the comb is much increased by running the teeth diagonally across the teeth-bars and by staggering those of adjoining bars with relation to each other. By this construction the teeth of the comb engage or rub the skin of the animal sidewise, as the comb is usually worked from side to side or backward and forward. This serves to rub or scrape the dust and scurf off of the skin and out of the hair, and avoids the cutting, scratching, and abrasion of the skin liable to result from working in the direction of the ends or points of the teeth. The teeth are of such depth as to enable them to penetrate well through the hair to the skin of the animal, the elongated surfaces separating the teeth serving as bearings or stops to prevent the edges of the teeth from penetrating and injuring the skin.

The hand-hold consists of the ordinary flexible loop E, attached to the back of the comb for receiving the hand, and a rigid curved plate F, located at the side of the loop and adapted to receive the thumb and form a firm grip between it and the hand. This plate projects from the back of the comb somewhat farther than the loop to give the thumb more purchase in pushing the comb from it. From the point at which the plate is attached to the back it extends outward almost perpendicularly for a short distance, as shown at *f*, and then curves over from the loop, as at *f'*, and then downward toward the back, as at *f''*, leaving a space *f'''* between the lower edge of the curved portion



and the back of the comb, through which the thumb is inserted and withdrawn.

In Figs. 5 and 6 are shown plates of sheet metal having upturned flanges along the sides of the horizontal portion G, in which the teeth are cut or stamped. At one end are shown elongated teeth  $g$ , the metal forming each of which is cut out and given the necessary twist by one operation. At the other end are shown the ordinary pointed teeth  $g'$ , the part G of the plate forming a flange or bearing to limit the depth to which they can penetrate.

Figs. 7 and 8 show a top and end view, respectively, of a comb in which the teeth and the bar supporting the same are formed of a single piece of sheet metal.

In making the bar one of the longitudinal edges  $h$  is turned or bent back partially over and on the body H of the plate to form one of the flanges I of the bar. The opposite edge  $h'$   $h^2$  is then likewise turned or bent back over or on the body H. The bent-over portion  $h$  is of less width than the body H; but the portion  $h' h^2$  is of about that width, so that when it is bent over, as stated, it laps the portion  $h$ . The outer part  $h^2$  of the portion  $h' h^2$  is then bent outward and forms a flange or rib at right angles with the body H, the part  $h^2$  bearing such relation to the part  $h'$  of the portion  $h' h^2$  that when it is turned outward

the bend between  $h'$  and  $h^2$  is at or inside of the edge of the portion  $h$ . After the part  $h^2$  is bent to form a flange or rib vertical cuts are made in the edge thereof at a depth and distance apart equal to the depth and length, respectively, of the teeth to be formed. The sections made by the cuts are then twisted to form teeth having their edges extending diagonally across the length of the part or flange  $h^2$ .

Figs. 9 and 10 show modified forms of pointed teeth arranged on a rib or plate. In Fig. 9 the teeth are set in diagonal lines across the plate, and in Fig. 10 they are set in lines at right angles with the sides thereof.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a curry-comb, the combination of ribs or plates and teeth extending across the same and having elongated scraping-edges, substantially as and for the purpose specified.

2. In a curry-comb, the combination of ribs or plates and teeth having elongated scraping-edges and extending diagonally across said ribs or plates, substantially as and for the purpose specified.

A. KLINE.

Witnesses:

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