

E. E. GOLD.
ELECTRIC CAR HEATER.
APPLICATION FILED FEB. 26, 1903.

NO MODEL.

2 SHEETS—SHEET 1.

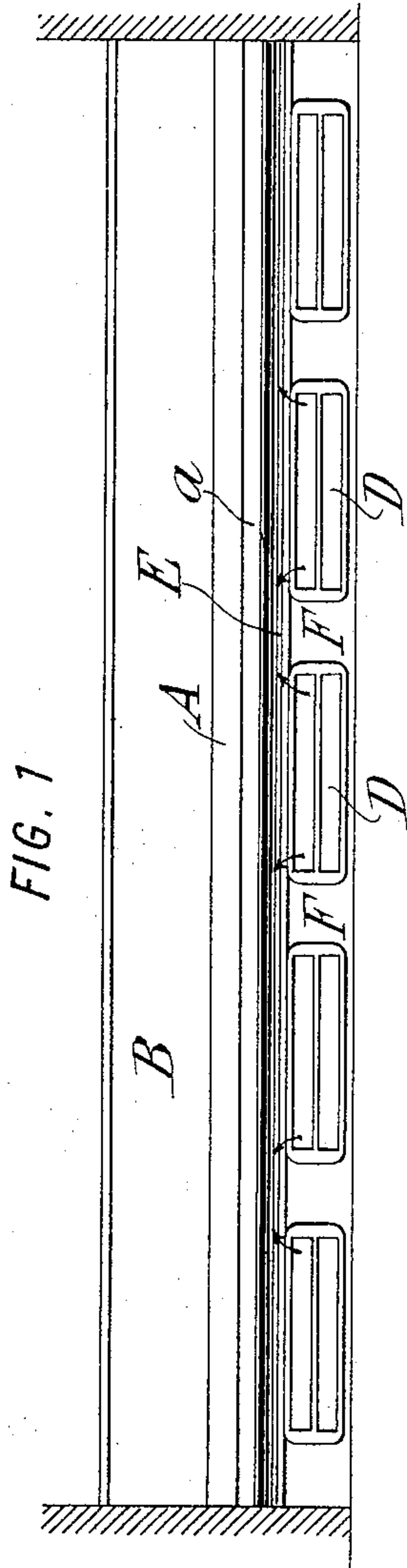


FIG. 3

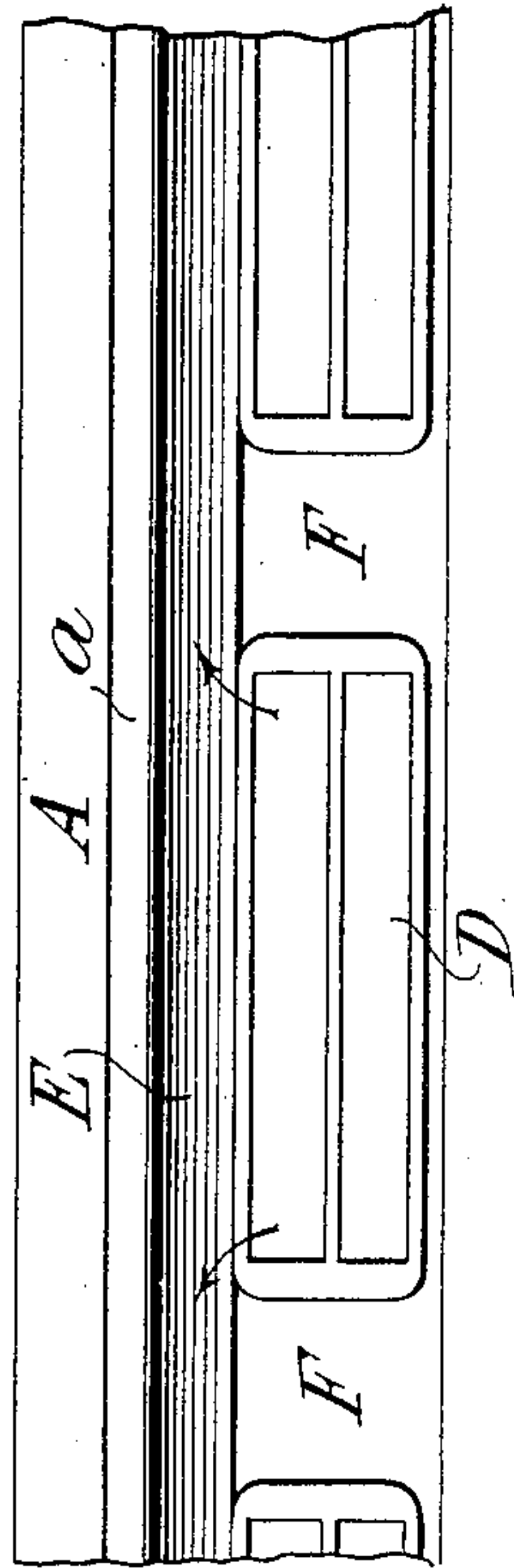


FIG. 4.

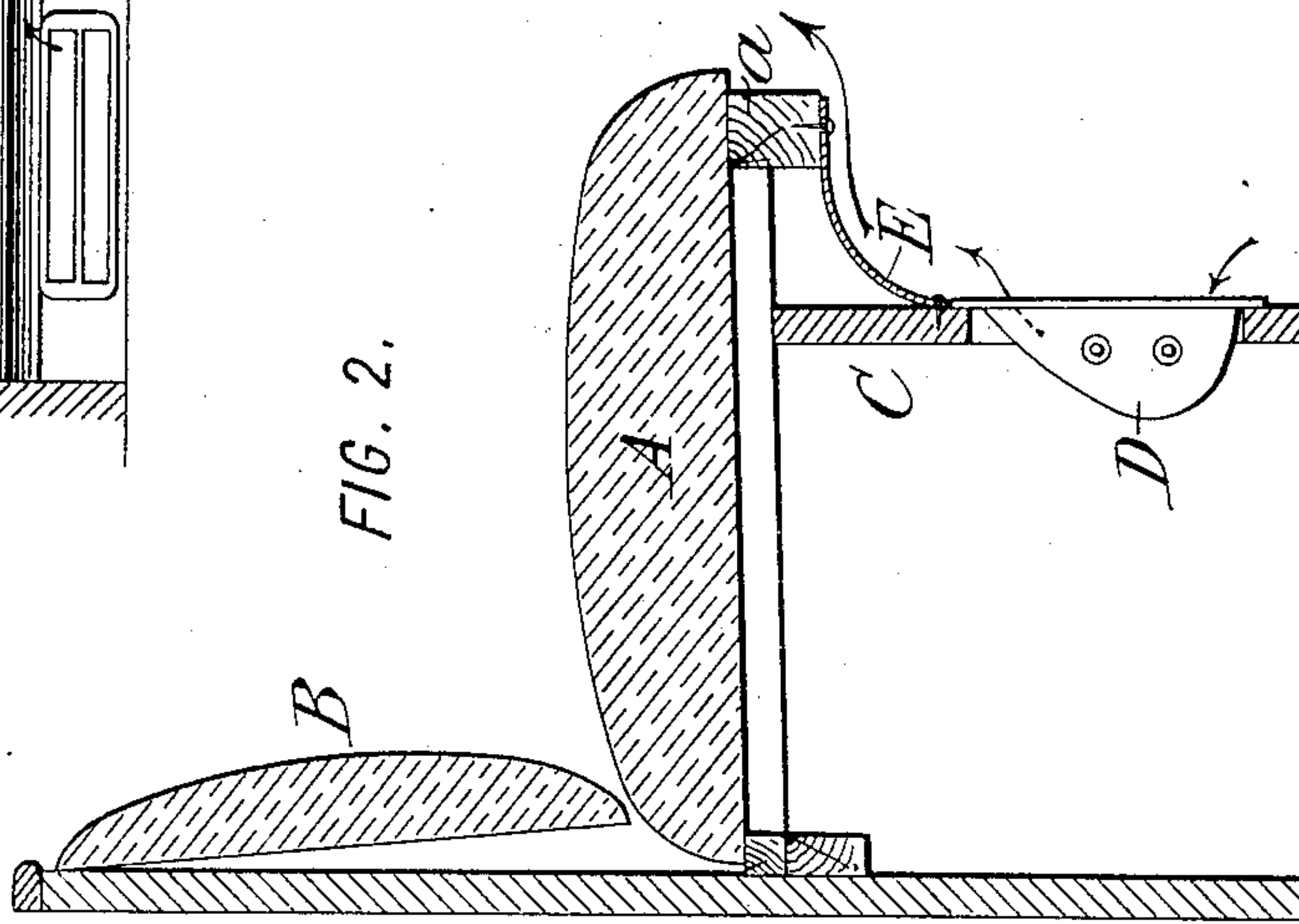
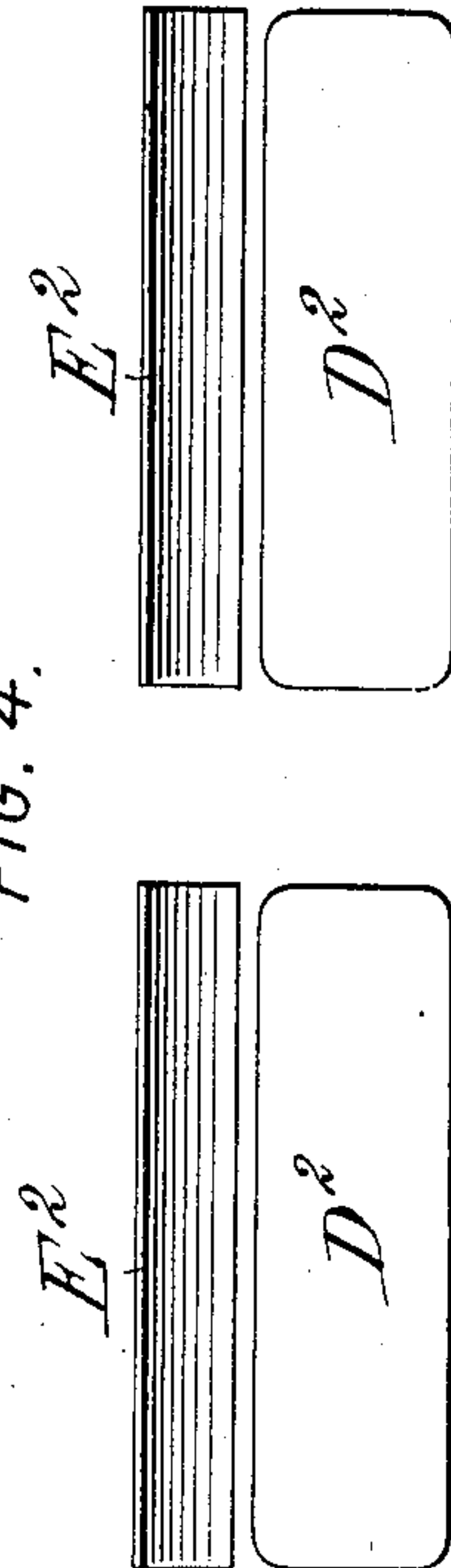


FIG. 2.

WITNESSES:

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INVENTOR:

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2 SHEETS—SHEET 2.

FIG. 6.

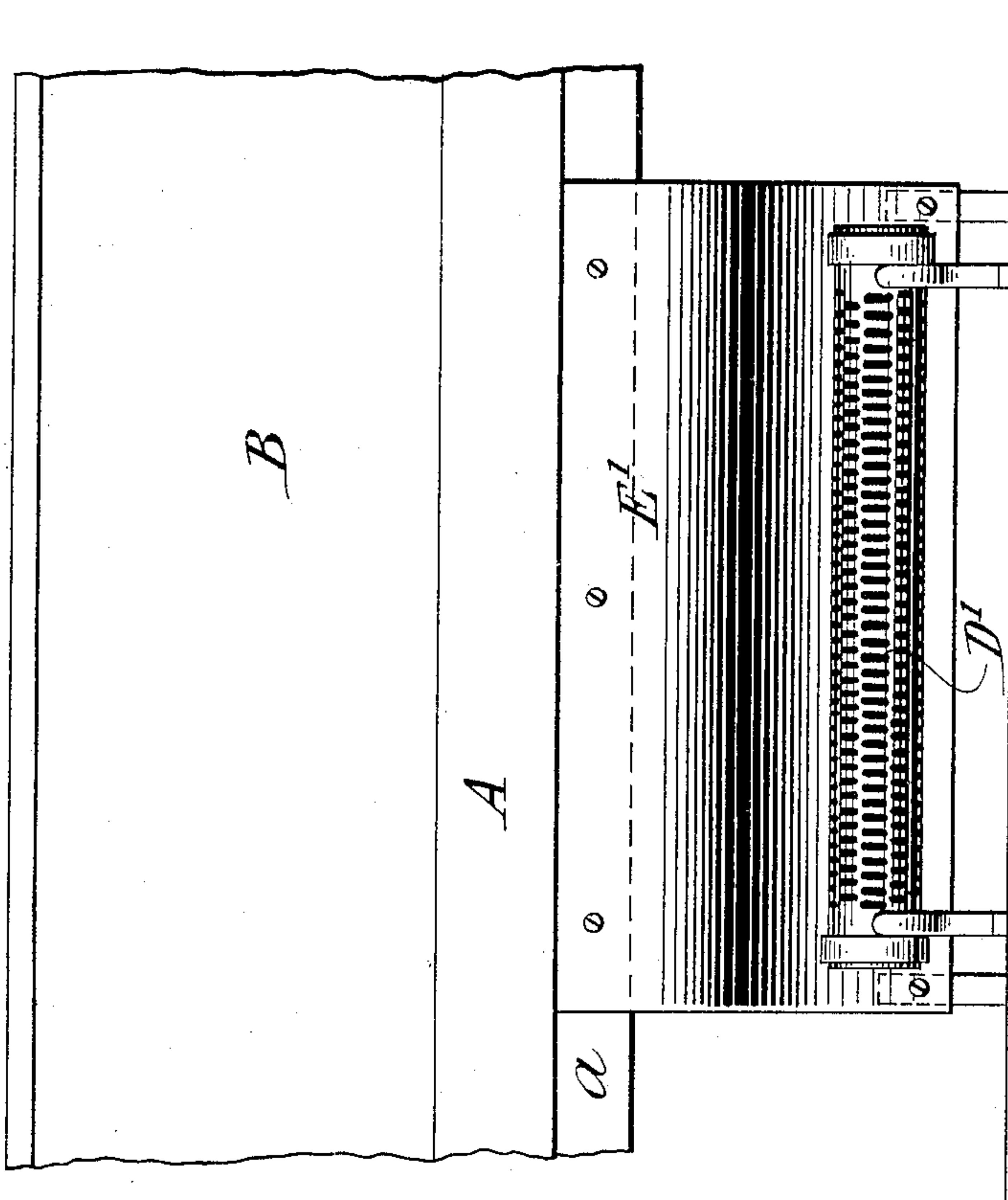
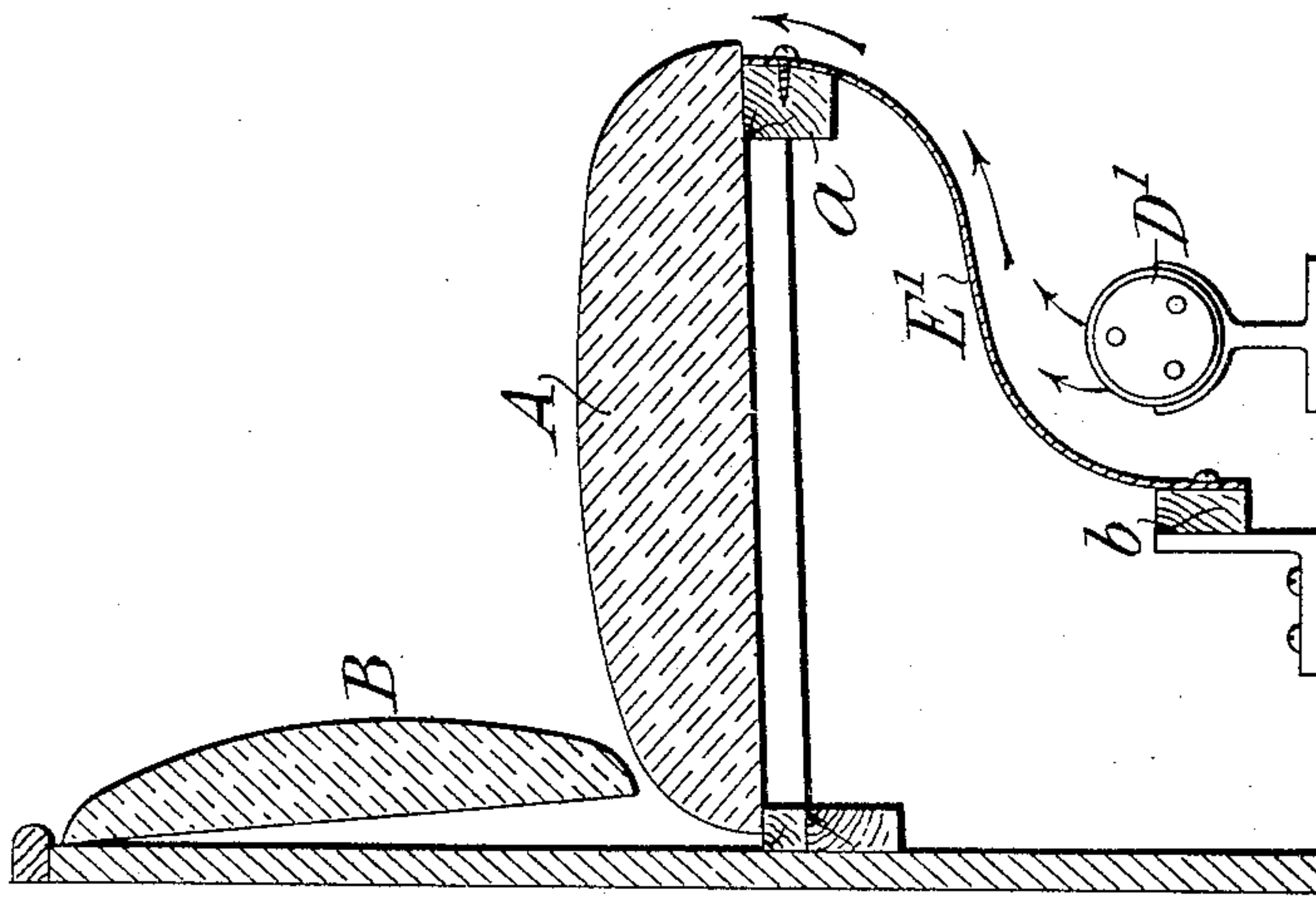


FIG. 5.



WITNESSES:

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UNITED STATES PATENT OFFICE.

EDWARD E. GOLD, OF NEW YORK, N. Y.

ELECTRIC CAR-HEATER.

SPECIFICATION forming part of Letters Patent No. 742,310, dated October 27, 1903.

Application filed February 26, 1903. Serial No. 145,168. (No model.)

To all whom it may concern:

Be it known that I, EDWARD E. GOLD, a citizen of the United States, residing in the borough of Manhattan, city, county, and State of New York, have invented certain new and useful Improvements in Electric Car-Heaters, of which the following is a specification.

This invention relates to electric heaters for use in connection with the seats of cars.

It is common to mount electric heaters under car-seats, the heaters being most commonly inclosed in a hood or casing which sets into an opening in a riser-board or panel-board beneath the seat. Sometimes the heater has an open-work casing and is suspended beneath the seat. In either case the seat extends forward considerably beyond the riser-board or the front of the suspended heater to provide a comfortable space for the feet of passengers partly under the seat. With cars of such constructions the heat on rising from the heater circulates beneath a considerable portion of the seat and heats the latter undesirably instead of circulating properly into the car. My invention aims to overcome this objection, which I attain by combining with the heater and seat a guard or deflector consisting of a plate or sheet of suitable material arranged above the heater to receive the heated air from it and curved or inclined, so as to direct this heated air outwardly beyond the front of the seat. Preferably the deflector is a metal plate which is fastened at its lower edge over the heater and curves upwardly and forwardly, being fastened at its upper and front edge beneath the front of the seat.

It is common in equipping cars with electric heaters to place the latter at intervals with wide intervening spaces. In a seat of the usual length there will be, for example, five or six of these heaters to the length of the seat, the spaces between the heaters being usually from one to three feet wide. It results from this arrangement that the passengers who are seated directly over the heaters are apt to receive too much heat, while those seated over the intervening spaces receive practically none.

One object of my invention is to equalize the heat, so that it shall be distributed with substantial uniformity to all the passengers

seated upon the same seat. To this end I make the guard or deflector continuous, or practically so, over the entire series of heaters of one seat, so that it not only prevents the heated air working up beneath the seat and directs the heated air outwardly, but also causes the air from the respective heaters to flow beyond the ends of the heaters, so as to practically distribute the heated air over the intervening spaces.

In the accompanying drawings, Figure 1 is a front elevation of the seat and heaters on a small scale. Fig. 2 is a transverse section of the seat, showing one of the heaters and deflector. Fig. 3 is a fragmentary front elevation corresponding to a part of Fig. 1 on a larger scale. Fig. 4 is a front elevation similar to Fig. 3, showing a modification. Fig. 5 is a section corresponding to Fig. 2 and showing a further modification. Fig. 6 is a front elevation thereof.

In the drawings, A is the seat; B, the back thereof; C, the riser-board or panel-board beneath the seat. D D are electric heaters of any suitable sort, only the usual casing inclosing the heating elements being shown, and E is the deflector. The seat overhangs the riser-board by a considerable amount, as shown, to provide room under the seat for the feet of sitting passengers, so as to avoid interfering with persons standing or walking in the aisle. As seen in Fig. 1, the heaters are arranged discontinuously, with spaces F F between them. The deflector E is preferably continuous over the entire length of the seat, so as to bridge the several heaters and their intervening spaces. The deflector is a curved plate, of metal or other suitable material, fastened, preferably, at its lower margin to the front of the riser-board C and at its upper edge to the under side of the front piece a of the seat, as clearly shown in Fig. 2. The hot air ascending from the heaters is caught by the deflector and is directed outwardly, as shown by the arrows in Fig. 2, beyond the front of the seat. At the same time this air instead of rising directly upward from each heater, being intercepted by the deflector, is spread horizontally, so that it to a great extent covers over the intervening spaces F F, as shown by the arrows in Fig. 1. This effect is most marked when the car is filled with pas-

sengers whose limbs or garments form an interceptor at the front of the seat, preventing to a great extent the direct outward escape of the air and retarding it long enough to compel it to circulate into the intervening spaces.

In the case of heaters other than panel-heaters, such as are commonly suspended beneath the car-seat, I employ a different form of deflector, the shape of which in cross-section is clearly shown in Fig. 5. Here the objectionable exposure of the seat to direct heat is greater and the overhang beyond the heater substantially the same as in Fig. 2, and the deflector E' is a much wider sheet, which is fastened at its lower edge to a strip *b* or any suitable support and at its upper edge in any suitable manner to the front rail *a*, as clearly shown. D' is the heater.

My invention may be otherwise modified without departing from its essential features. For example, the deflector E may be otherwise shaped or supported. It is not essential that the deflector be made continuous, as a separated deflector may be used for each heater.

In such case the separate deflectors may be of the same length as the heaters, as shown in Fig. 4, where E² represents the deflectors and D² the heaters. In such construction the de-

flectors do not so effectively distribute the heated air between the heaters as in the construction first described; but nevertheless they prevent in great measure the overheating of the seat and materially contribute to the desired distribution of the heated air.

What I claim is—

1. A car-seat having a succession of electric heaters beneath it, combined with a substantially continuous deflector overlying the heaters and adapted to receive the ascending heated air and direct it outwardly and laterally.

2. A car-seat having a riser-board beneath it, a succession of panel-heaters set in said riser-board and spaced apart, and a substantially continuous deflector consisting of a plate attached at its lower edge to the riser-board above said heaters, curving upwardly and forwardly, and attached at its upper and front edge beneath the front of the seat.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

EDWARD E. GOLD.

Witnesses:

THOMAS F. WALLACE,
FRED WHITE.