

Fig. 1.

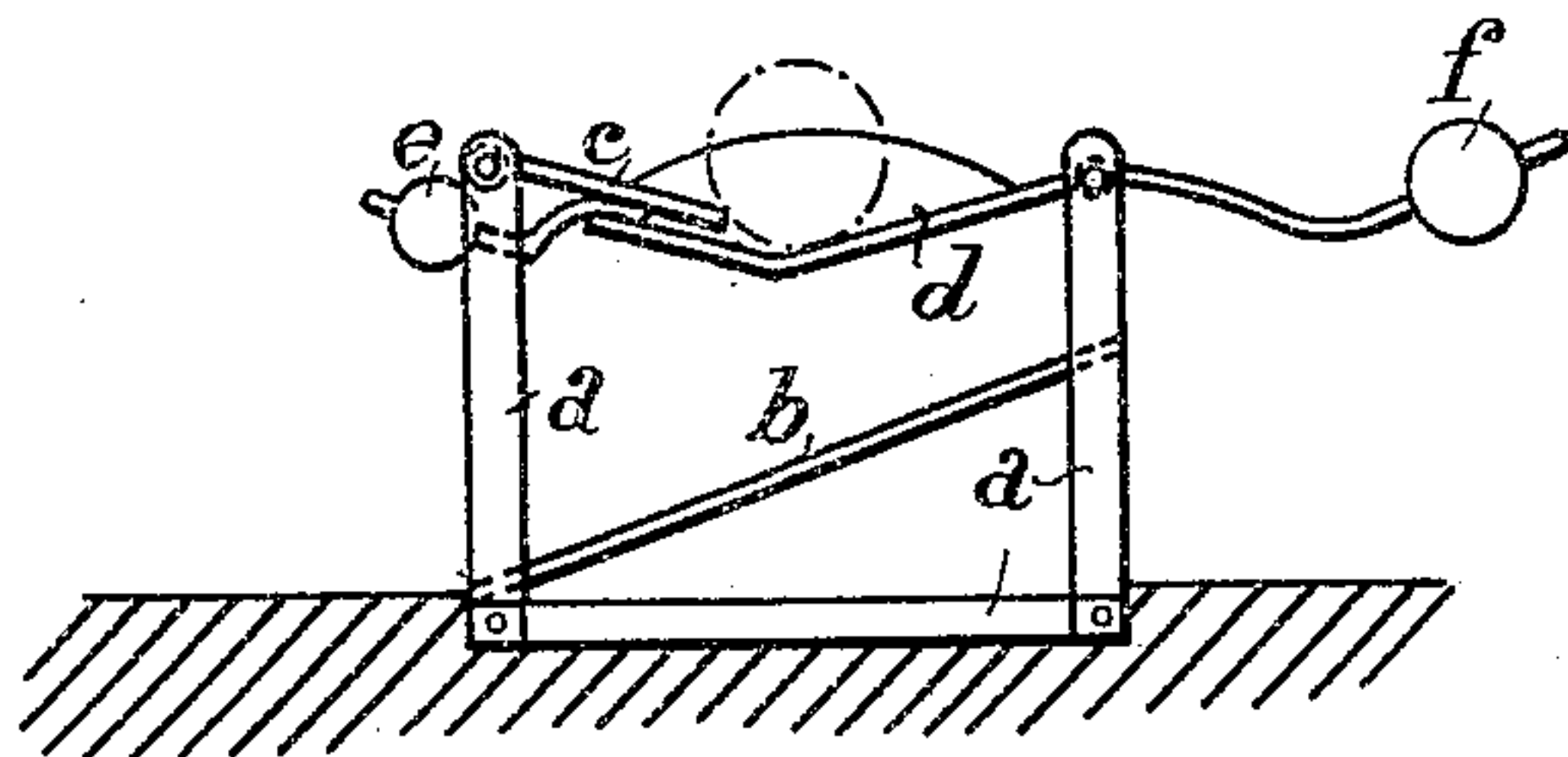


Fig. 2.

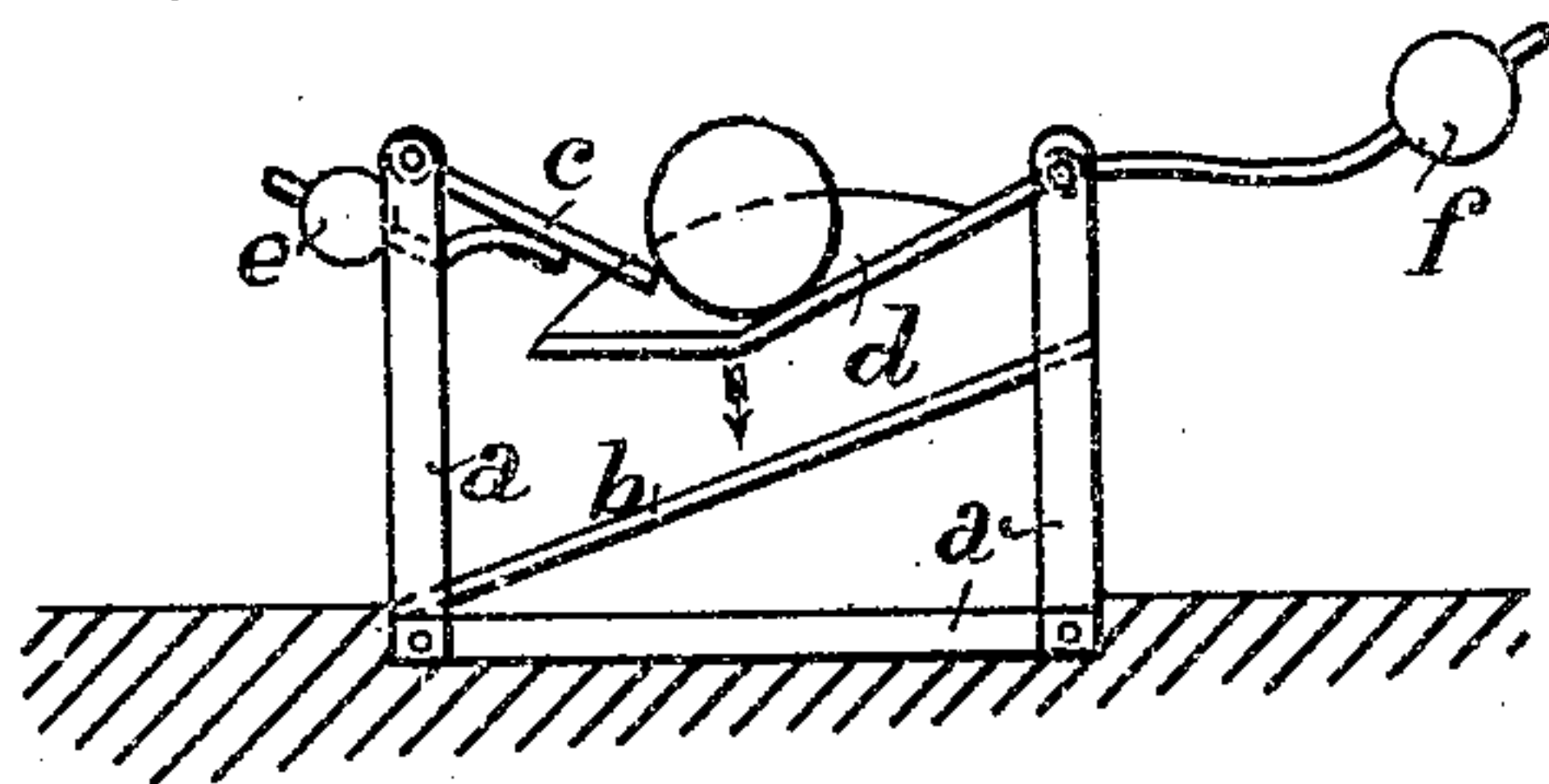
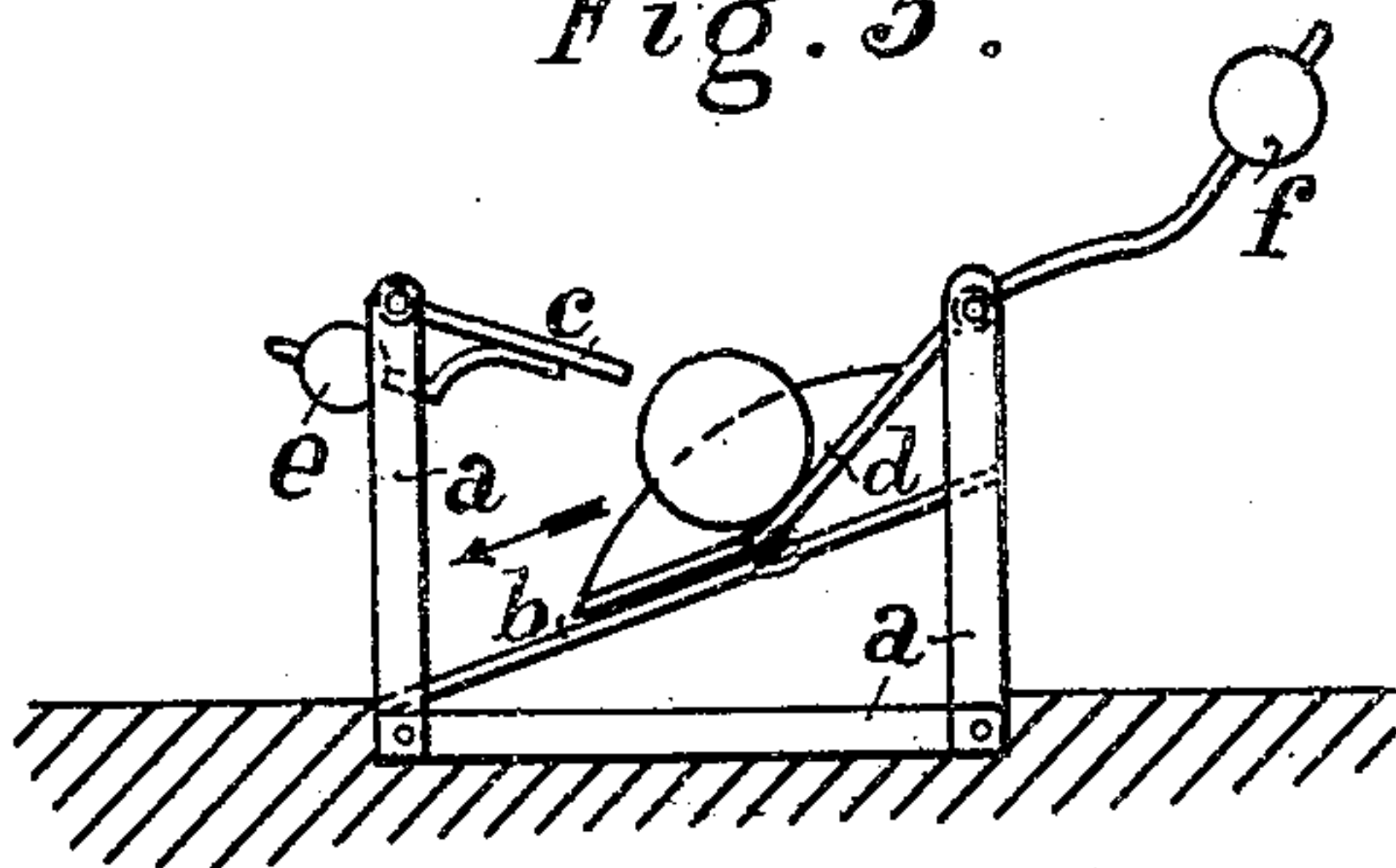


Fig. 3.



Witnesses

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DELIVERY APPARATUS FOR BOTTLE ANNEALING FURNACES.  
APPLICATION FILED MAR. 11, 1909.

962,811.

Patented June 28, 1910.

2 SHEETS—SHEET 2.

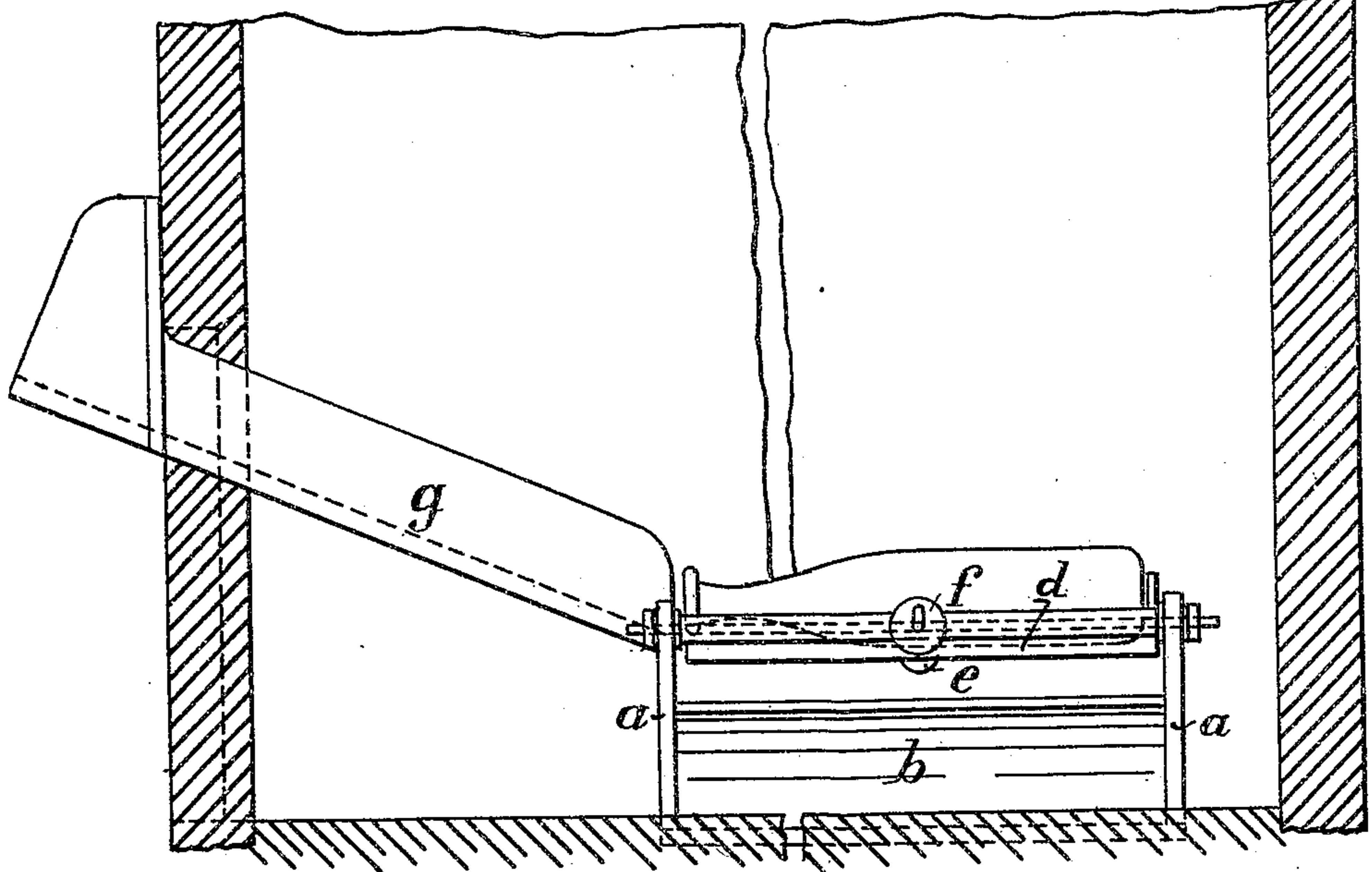


Fig. 4.

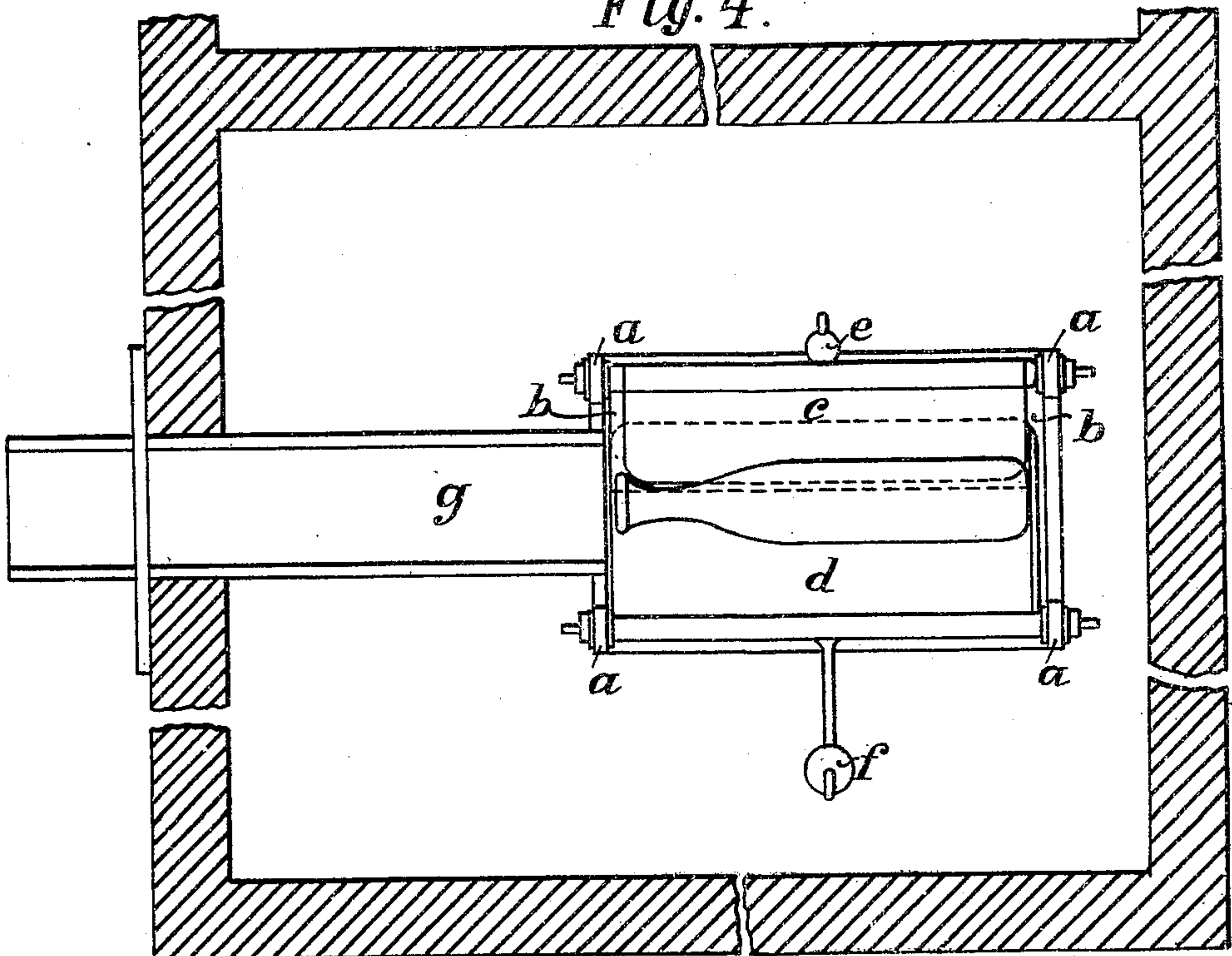


Fig. 5.

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# UNITED STATES PATENT OFFICE.

CARL BRAUER, OF HOSTOMITZ, NEAR TEPLITZ, AUSTRIA-HUNGARY.

DELIVERY APPARATUS FOR BOTTLE-ANNEALING FURNACES.

962,811.

Specification of Letters Patent. Patented June 28, 1910.

Application filed March 11, 1909. Serial No. 482,812.

*To all whom it may concern:*

Be it known that I, CARL BRAUER, working manager, a subject of the Emperor of Germany, and resident of Hostomitz, near Teplitz, Bohemia, Empire of Austria-Hungary, have invented a new and useful Improvement in Delivery Apparatus for Bottle-Annealing Furnaces, of which the following is a specification.

The present invention has for its object an improvement in delivery apparatus for bottle annealing furnaces especially of that kind, in which the bottles or similar articles are automatically fed or transferred into the furnace by a suitable conveying-apparatus and by an inclined slide.

A delivery apparatus constructed according to the present invention preferably comprises a stationary inclined supporting surface on which the bottles to be annealed roll in a downward direction, provided within a frame situated within the annealing-furnace and below its slide, and two movable supporting plates or surfaces arranged above said stationary supporting surface. These two movable supporting plates can be oscillated or swiveled in bearings of the frame in a known manner and are held in their receiving position by suitably adjusted weights in such a way that the bottle or article to be annealed rolling down from the inclined slide onto the movable supporting plates causes an oscillating or swiveling movement of the latter, whereby the bottle is slowly transferred to the stationary inclined supporting surface and thence in a rolling down manner to the hearth of the annealing furnace. The two oscillating or swiveling plates are of different lengths whereby the plate of greater length contacts on its complete downward movement with the stationary inclined supporting surface and the plate of reduced length prevents a premature and rapid rolling down movement of the bottle or the like resting on the plate of greater length. By the arrangement or mounting of the delivery apparatus within the annealing-furnace itself a completely uniform transfer of the bottles into the annealing furnace is obtained and the breaking of the bottles is thoroughly prevented during such transfer.

Referring to the drawing, Figure 1 represents a side elevation of my improved delivery apparatus in its original position. Fig. 2 is a similar view showing the de-

livery apparatus in another position. Fig. 3 is also a view similar to Fig. 1, illustrating the delivery apparatus in the third position. Fig. 4 is a longitudinal section, and 60 Fig. 5 a horizontal section illustrating an annealing furnace provided with my improved delivery apparatus.

A frame *a* is arranged on the bottom of the hearth of an annealing furnace not 65 shown. In such frame a stationary inclined supporting surface *b* is fastened in a suitable manner and two supporting plates *c* and *d* are mounted in the frame in such a manner that they may be oscillated or 70 swiveled. Instead of two oscillating plates several pairs of them may be arranged one above another. On the shanks or arms of these plates *c* and *d* the weights *e* *f* may be adjusted in such a manner that the plates 75 are in their position of rest necessary for receiving a bottle or similar object to be annealed. When a bottle is placed on both plates *c* and *d* as shown in dotted lines in Fig. 1, they are oscillated or swiveled in a 80 downward direction by the weight of the bottle into the position shown in Fig. 2. The supporting plate *c* prevents, during this downward movement, a premature and 85 rapid running down movement of the bottle from the second supporting plate *d*. When this second supporting plate has moved down in such a degree as to contact the stationary supporting surface *b*, as 90 shown in Fig. 3, the bottle to be annealed has released the supporting plate *c* which will at once return automatically to its original position by its adjustable weight *e*. In consequence of the return movement of 95 the oscillating supporting plate *c* the bottle can now roll along down the supporting plate *d* without difficulty and thence down the stationary supporting surface *b* so that it reaches the hearth-bottom without any 100 shock and comes to rest just before the workman is ready to place it in position within the annealing furnace. As soon as the bottle has left the supporting plate *d*, this plate is returned automatically into its 105 original position suitable for receiving another bottle to be annealed, as shown in Fig. 1.

By reference to Figs. 4 and 5, it will be apparent that the bottles to be annealed are caused to move in a downward direction 110 upon a slide *g* extending from the exterior to the required position in the interior of



the annealing furnace, and also that the plates *c*, *d*, receiving the bottles from the slide *g* are oscillated or turned downwardly as indicated in Fig. 2, by the weight of the  
5 bottles, after which the bottles are received by the stationary inclined supporting surface *b* from which they are delivered in succession on to the bottom of the annealing furnace. As hereinbefore stated, as each  
10 bottle leaves the plates *c*, *d*, the same are automatically returned to their normal positions to receive another bottle, and each bottle after being delivered to the bottom of the annealing furnace, is ready to be  
15 placed in position in the furnace by the attending workman.

I claim as my invention:—

1. In a delivery apparatus for bottles or similar articles to be annealed within an-  
20 nealing furnaces, an annealing furnace slide in combination with oscillating or swiveling supporting plates of different lengths for receiving and transferring the bottles from such slide, adjustable weights connected to  
25 such plates for holding them in their normal position and for regulating the oscillating or swiveling movement of such plates

and means for rolling the bottle into the furnace, substantially as and for the purpose specified.

2. In a delivery apparatus for bottles or similar articles to be annealed within annealing furnaces, an annealing furnace slide in combination with oscillating or swiveling supporting plates of different lengths for receiving and transferring the bottles from such slide, means for holding such plates in their normal position and for regulating their oscillating or swiveling movement, and a stationary inclined supporting surface, on which the bottles are rolled down into the furnace with a stopping movement caused by the oscillating or swiveling plate of reduced length, substantially as and for the purpose specified.

In testimony that I claim the foregoing as my invention, I have signed my name in presence of two witnesses, this 25th day of February 1909.

CARL BRAUER.

Witnesses:

ULYSSES J. BYWATER,  
HARRY R. MCBRIDE.