

(No Model.)

S. BUNTING.  
BOTTLING APPARATUS.

No. 385,840.

Patented July 10, 1888.

Fig 3

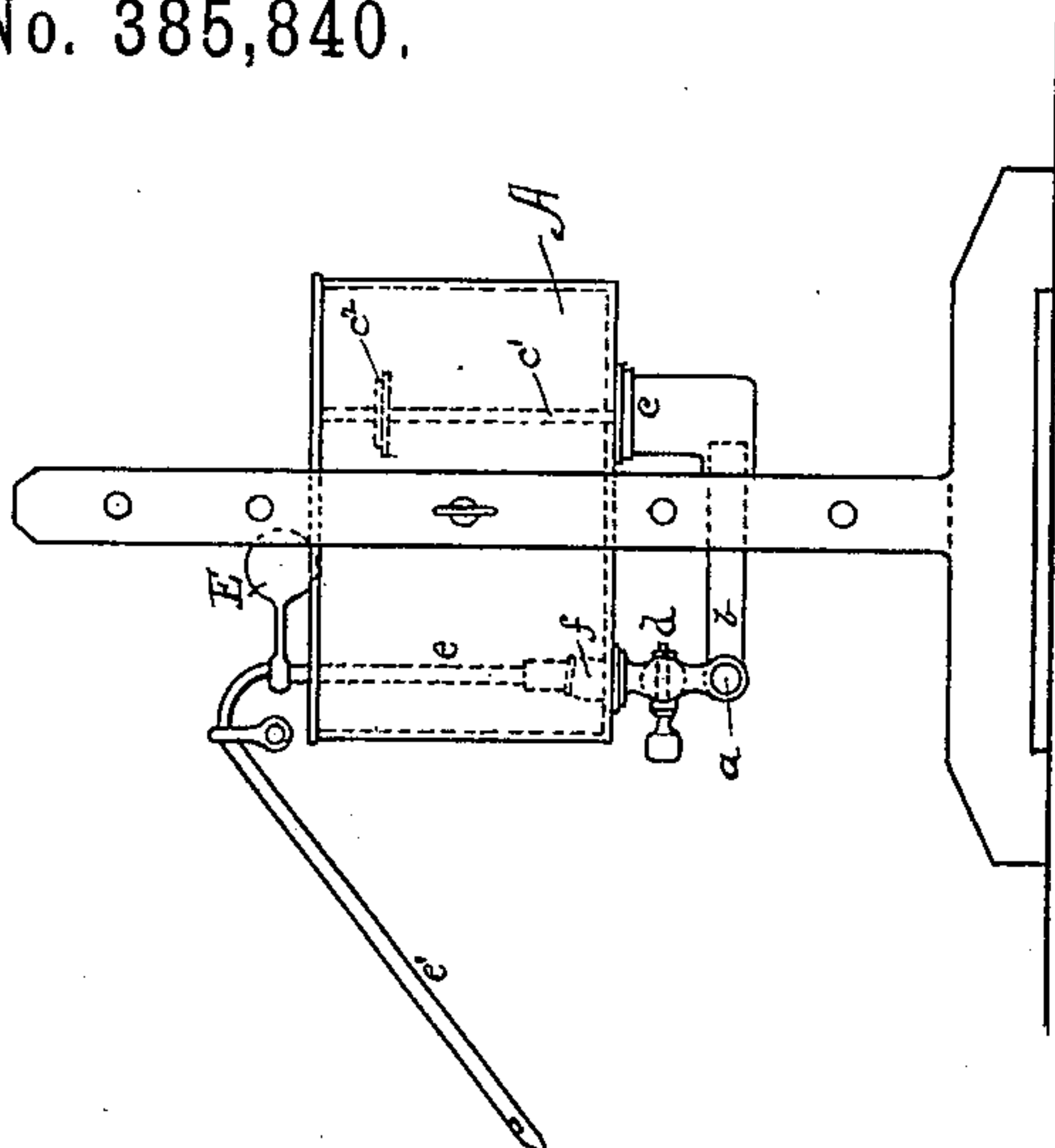
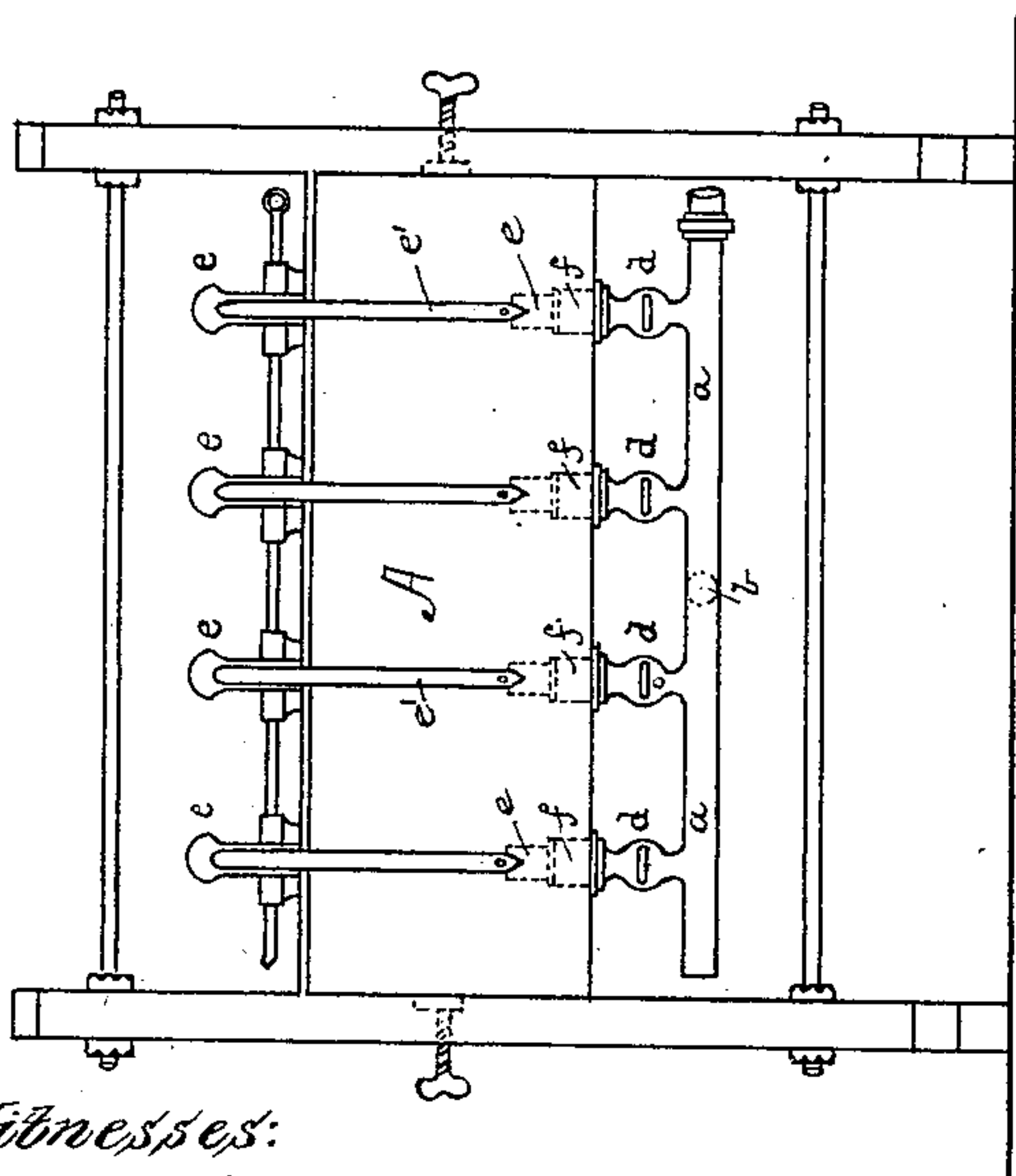
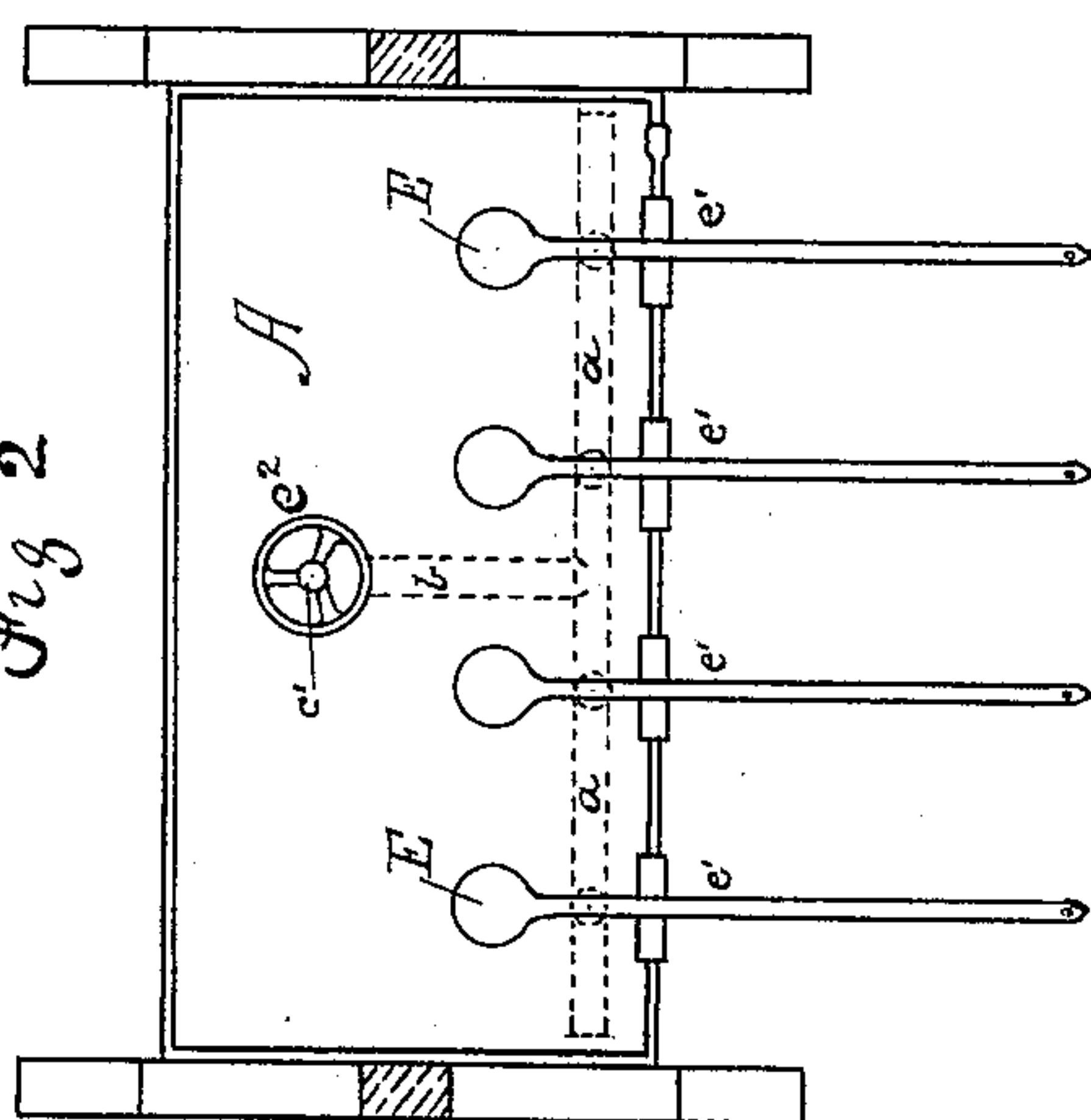


Fig. 1



Witnesses:  
Charles R. Searle,  
H. F. Boyle,

Fig 2



Inventor:  
Stuart Bunting,  
by his attorney  
Thomas D. Jones.

# UNITED STATES PATENT OFFICE.

STUART BUNTING, OF DUBLIN, COUNTY OF DUBLIN, IRELAND.

## BOTTLING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 385,840, dated July 10, 1888.

Application filed December 6, 1887. Serial No. 257,120. (No model.) Patented in England January 7, 1887, No. 87.

*To all whom it may concern:*

Be it known that I, STUART BUNTING, of the city of Dublin, Ireland, a citizen of the United Kingdom of Great Britain and Ireland, have invented a certain new and useful Improvement in Bottling Apparatus, (for which I have obtained Letters Patent in Great Britain dated January 7, 1887, and numbered 87;) and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

I have devised improvements in the details for establishing a direct communication between the vessel containing the liquid to be bottled and the bottles to be filled by means of a tube or tubes and a tap or taps, and means by which the communication can be opened or closed, and which will be readily understood on reference to the accompanying drawings, which form a part of this specification.

Figure 1 is a front elevation; Fig. 2, a plan view, and Fig. 3 an end view illustrating the application of my invention to an ordinary bottling-machine.

Similar letters of reference indicate corresponding parts in each of the several views.

Underneath the cistern A is arranged a horizontal pipe, *a a*, open at one end to communicate with the vessel (not shown) containing the liquid to be bottled, and which is on a higher level. This tube communicates by a branch, *b*, with the ordinary supply-valve, *c*, of the cistern, which valve is fixed on a rod, *c'*, having a float, *c<sup>2</sup>*, within the cistern. This float is arranged at such a point on the rod that when the liquid has reached the desired level therein the float will rise and close the supply-valve *c*, thus preventing the overflowing of the cistern. The tube *a* is provided with upwardly-branching taps *d*, (corresponding in number to the rocking siphons *e e'*,) which penetrate the bottom of the cistern and on which collars *f* are screwed, having rings or washers of leather placed on their beveled ends, against which the short arms *e* of the rocking siphons, which are correspondingly beveled on their lower ends, are adapted to impinge when swung downwardly, thus forming a tight joint between the collars *f* and the

siphons, and closing the latter against the admission of liquid from the cistern, and also against any flow in the opposite direction from the taps into the cistern. In commencing, these taps *d* may be operated by the left hand while the right is engaged in holding a bottle on the external arm, *e'*, of the rocking siphon. Thereafter the siphons are simply tilted at each operation.

The action of my invention may be described thus: Having closed the taps *d* and connected the open end of the pipe *a a* by means of india-rubber tubing, or otherwise, to the supply-vessel at a higher level, (not shown,) the liquid will flow into said tube, and, passing into branch *b*, will rise into the cistern through valve *c*, filling the cistern in the ordinary way, and the float *c<sup>2</sup>* will close the valve *c* at the proper moment, as above described. Bottles are now applied to the external arms, *e'*, of the rocking siphons, and the operator simply raises said external arms, *e'*, by lifting the bottles which are placed over them, and thus makes a tight connection between the collars *f* and internal arms, *e*, of the siphons. He then opens the taps *d*, when immediately the liquid will rise through the collars *f* into the siphons and flow freely through and out of the same. The flow through the siphons being once established, the taps are now closed, when the direct communication between the siphon and the supply-vessel is broken and the process of filling is carried on in the ordinary way from the cistern, the current being now diverted from the taps *d* to the cistern through the branch *b*.

The process of subsequently filling bottles is as follows: A bottle is placed over each external arm, *e'*, and borne down. By this motion the outer end of the siphon is lowered and the inner end is disengaged from the collar *f*, whereby a flow of the liquid is set up therethrough. When the bottle is filled, it is removed, and the weight *E* returns the siphon to its normal position, in which its outer end is raised and its inner end brought into tight contact with the close-fitting collar *f* and the flow interrupted.

In filling large vessels—such as barrels or casks—from my improved apparatus, india-rubber or other suitable tubing may be con-



nected to the external arm, *e'*, so that the flexibility of such tubing would accommodate itself to freely entering such barrels or casks as required.

5 I claim as my invention—

1. In a bottle-filling apparatus, the cistern A, the supply-tube *a*, taps *d*, connected to said tube, and collars *f*, opening within said cistern, in combination with swinging siphons, the inner shorter arms, *e*, of which have ends adapted to form a joint with said collars *f*, and weights E on said siphons, for keeping said joint normally closed, substantially as specified.

2. In a bottle-filling apparatus, the cistern A, having supply-valve *c*, the supply-tube *a*, branch *b*, connecting said tube with said sup-

ply-valve, taps *d*, connected to said tube, and collars *f*, opening within said cistern and having beveled upper ends, in combination with swinging siphons *e e'*, the inner shorter arms 20 of which have beveled lower ends adapted to form a joint with said collars *f*, and weights E on said siphons, for keeping said joint normally closed, substantially as specified.

Dated this 25th day of November, 1887.

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Witnesses:

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