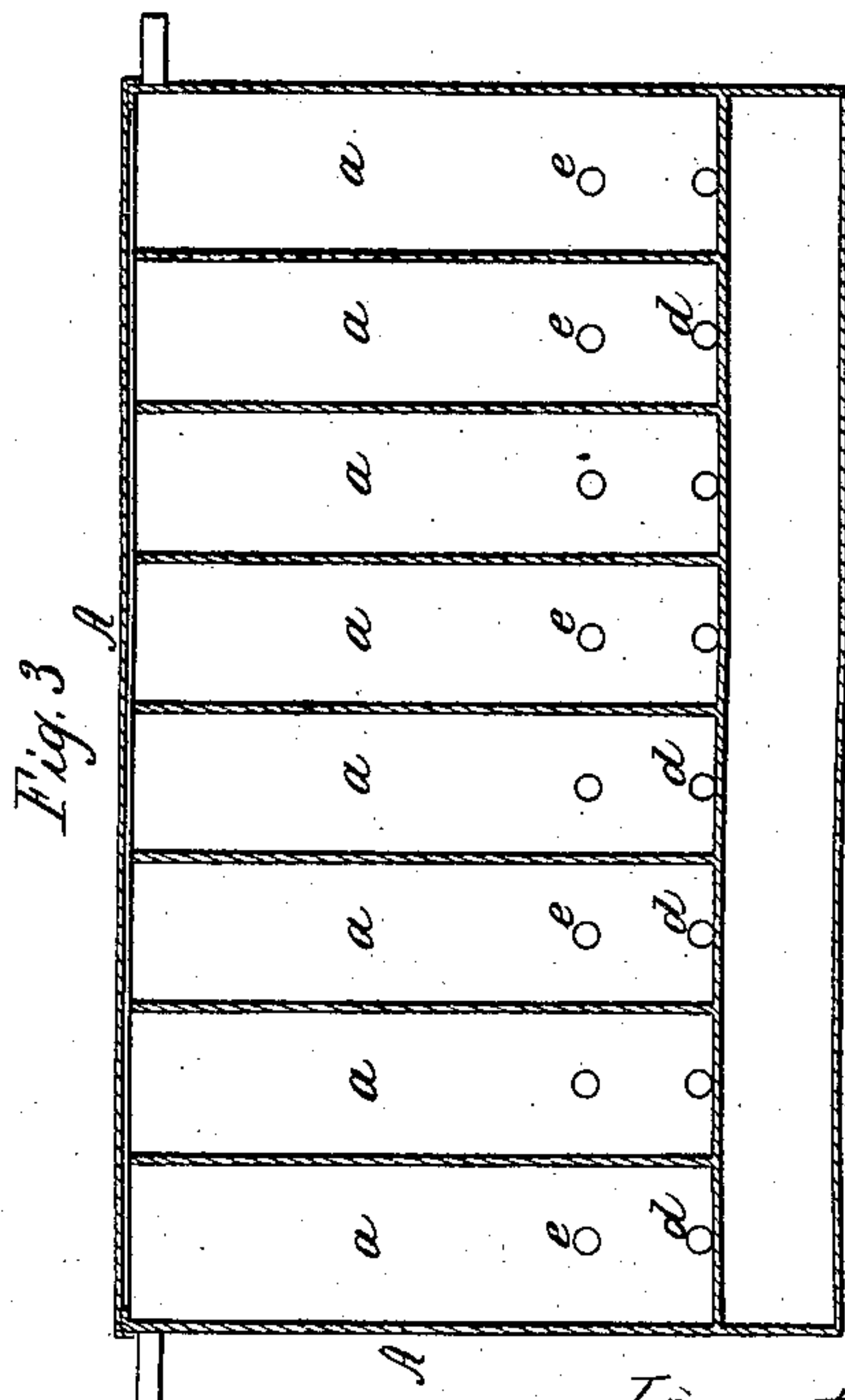
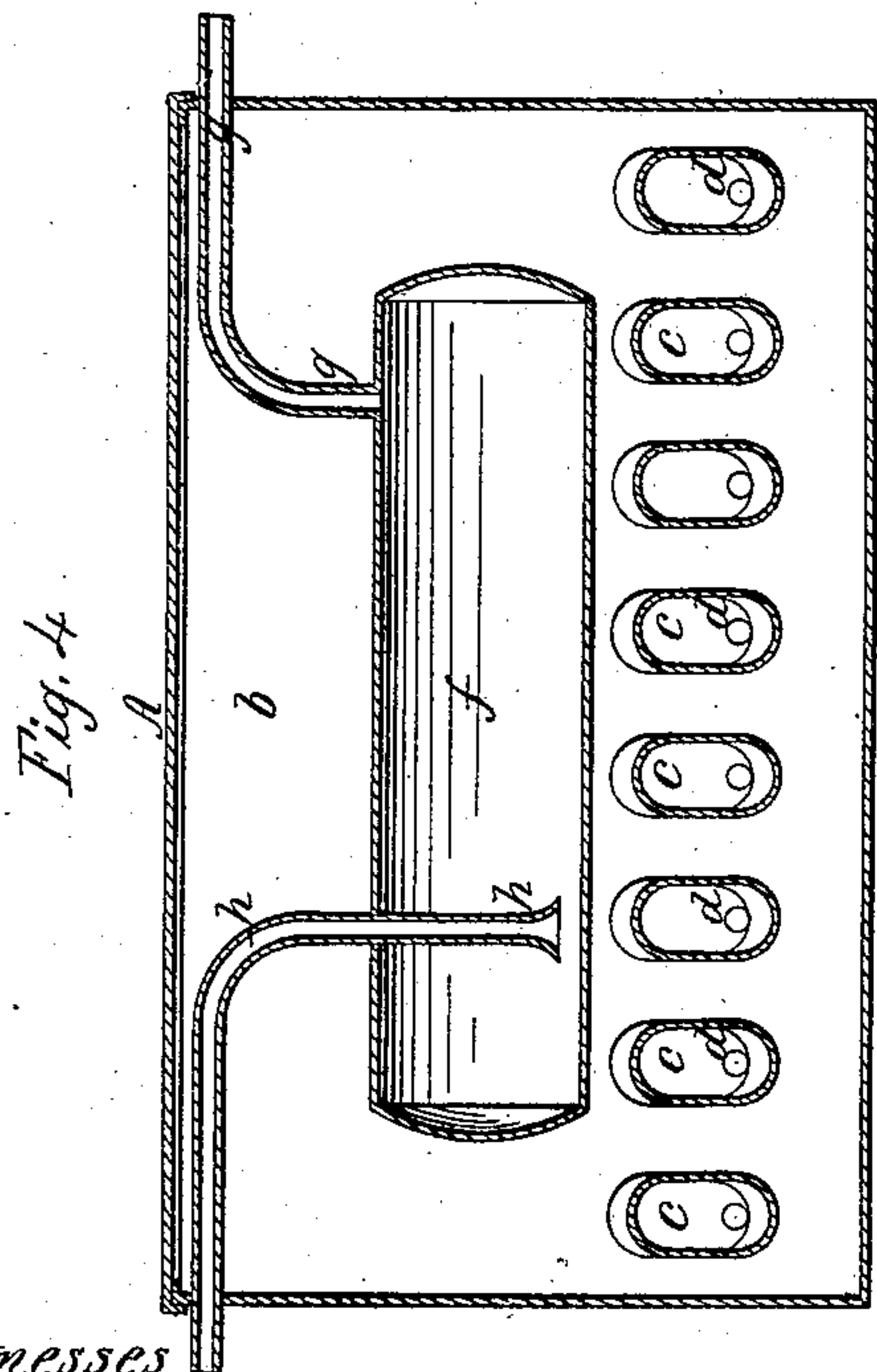
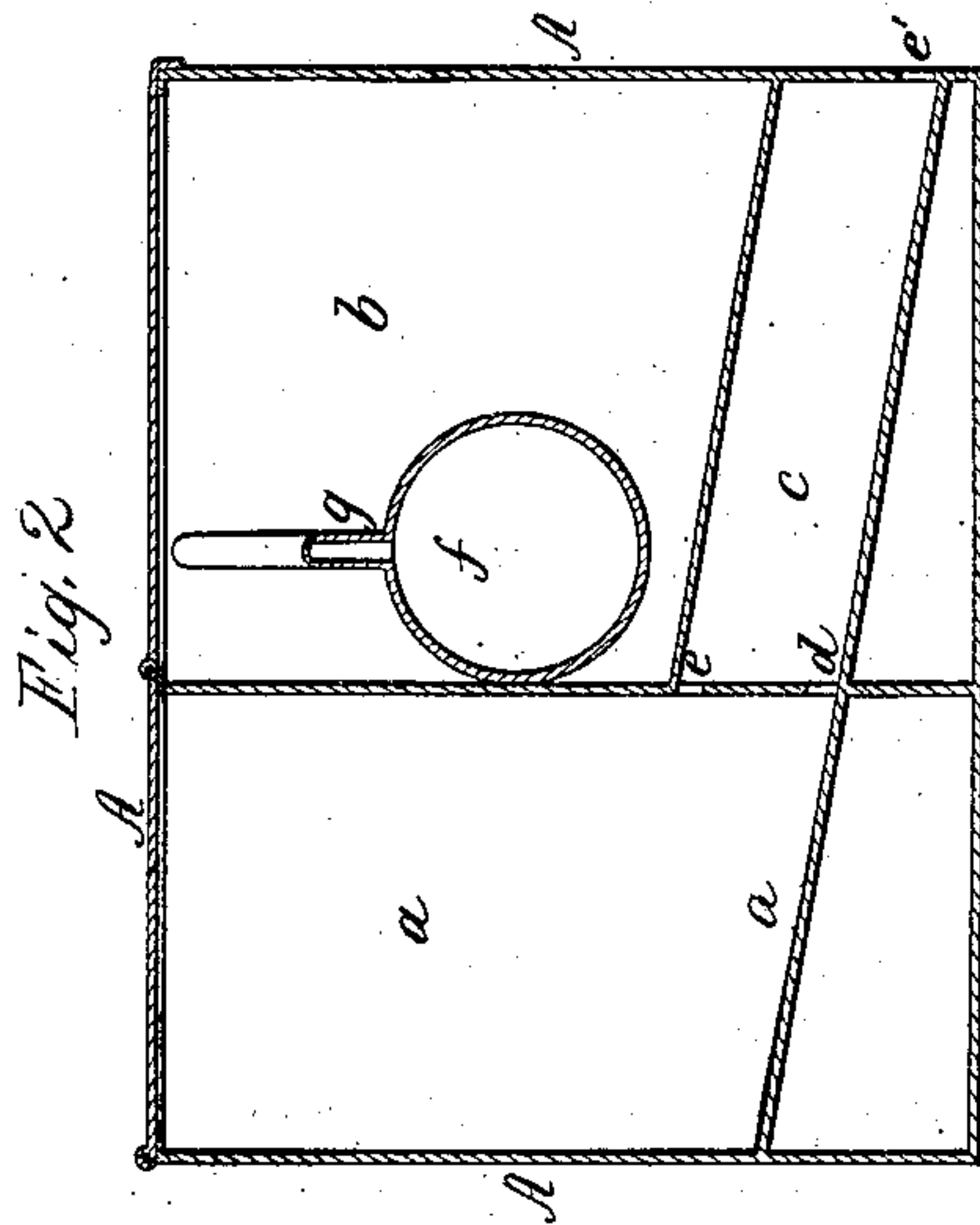
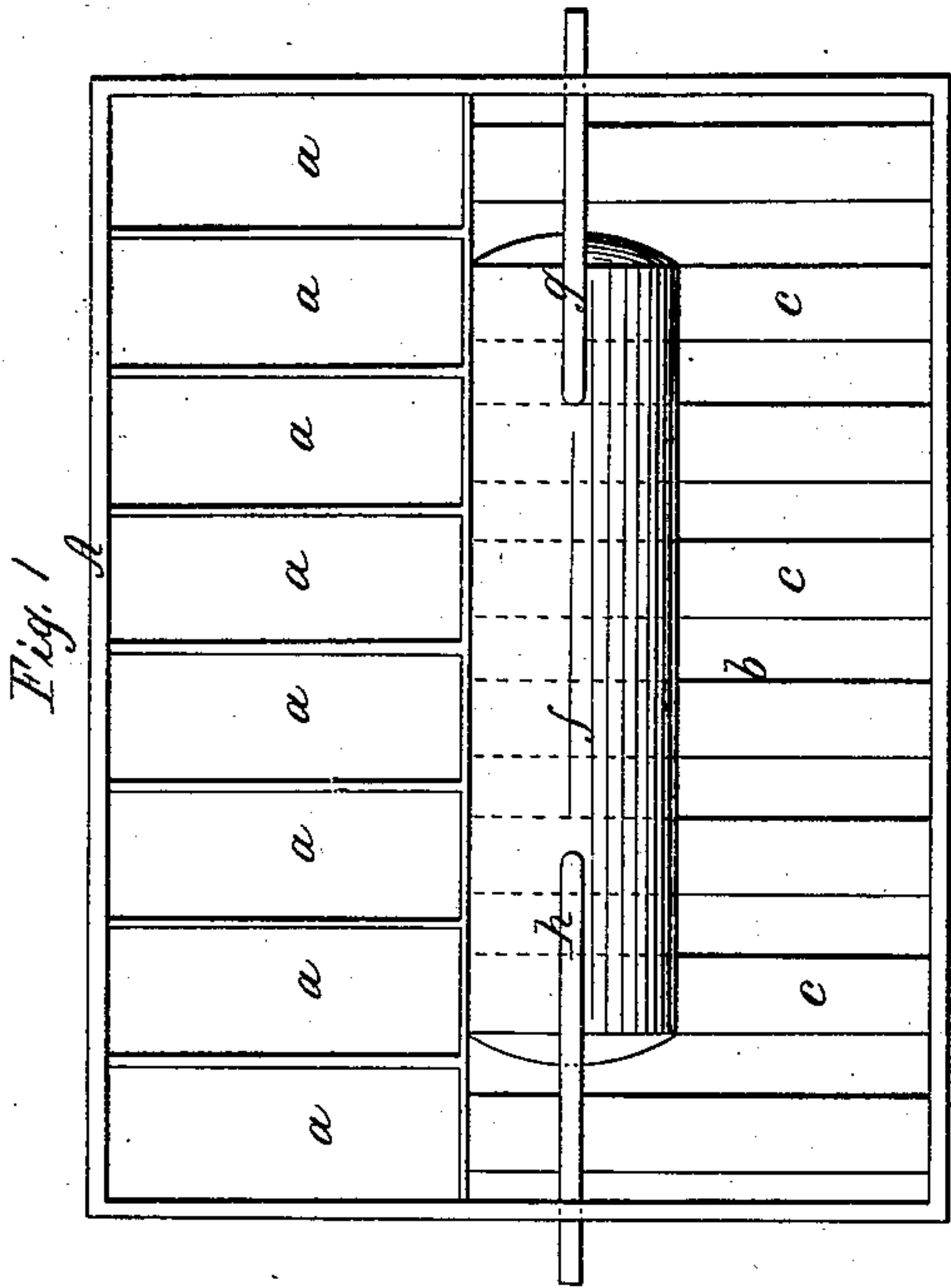


J. W. Tufts,

Soda-Water Apparatus,

N^o 39,082.

Patented June 30, 1863.



Witnesses
R. H. Eddy,
Frederick Curtis,

Inventor
James W. Tufts

UNITED STATES PATENT OFFICE.

JAMES W. TUFTS, OF MEDFORD, MASSACHUSETTS.

IMPROVED REFRIGERATOR FOR SODA-WATER AND SIRUPS.

Specification forming part of Letters Patent No. 39,082, dated June 30, 1863.

To all whom it may concern:

Be it known that I, JAMES W. TUFTS, a resident of Medford, in the county of Middlesex and State of Massachusetts, have invented a new and useful Apparatus for Refrigerating or Cooling Sirups or Sirups and Soda-Water; and I do hereby declare the same to be fully described in the following specification, and represented in the accompanying drawings, of which—

Figure 1 is a top view of the apparatus with its covers raised. Fig. 2 is a transverse section of it. Fig. 3 is a longitudinal section taken through the sirup holders or chambers. Fig. 4 is a longitudinal section taken through the soda vessel or cylinder.

My invention is a sirup refrigerator or cooler, consisting of a series of sirup holders or chambers, an ice-holding chamber, and certain lateral auxiliary chambers leading out of the several sirup-chambers and through the ice-holding chamber, the whole being substantially as hereinafter explained.

My invention further consists in an arrangement of two series of sirup chambers or holders, an ice-holding chamber, and a soda vessel or cylinder provided with pipes of inlet and discharge, the whole being substantially as hereinafter described.

In the drawings, A denotes the external case of the apparatus. Within the same there is a row or series of deep vertical chambers, *a a a*, which are disposed against another chamber, *b*, for containing ice.

Extending from the lower part of each of the chambers *a*, and through and across the ice-holding chamber *b*, is another auxiliary chamber, *c*, which opens into its sirup-chamber *a* by two holes, *d e*, one of which is close to the bottom of the chamber *c*, while the other is close to its top. As each chamber *c* is to decline somewhat in its departure from its chamber *a*, the upper hole, *e*, serves to permit the air, which may accumulate in the chamber *c*, to escape into and through the chamber *a*, during the process of supplying the chamber with sirup or while supplied therewith. In passing from the chamber *a* into the chamber *c* the sirup will flow into the lowermost hole, *d*. Each chamber *c* is to be provided with an orifice, *e'*, of discharge, to which a proper faucet may be applied for drawing from said

chamber any portion or all of its liquid contents.

Generally speaking, I intend that each chamber *a* should be sufficiently large to hold half a gallon or more of sirup, and that each chamber *c* should be large enough to contain about a pint of sirup, or a quantity sufficient for flavoring a dozen glasses of soda-water. Within the ice-chamber *b* there is a closed vessel or hollow cylinder, *f*, which is supported in place by means of two pipes, *g h*, of induction and eduction, or it may be otherwise supported, in which case it is to have such pipes. The induction-pipe *g* leads into and terminates at the top of the vessel *f*, while the eduction-pipe *h* leads out of the said top and extends into the vessel *f* and terminates near its bottom, the same being as shown in Fig. 4. This cylinder is for holding soda-water, which is to pass through it in its passage from a soda-fountain to the faucet, by which it may be drawn into a glass tumbler or other vessel for being drank. In consequence of the discharging-pipe of the soda-vessel being made to extend into it, gas, while the apparatus may be in use, will accumulate in the upper part of the soda-vessel and serve to aid in discharging its contents while the faucet of the said discharge-pipe may be open. If the ice-chamber be supplied with ice or a refrigerating mixture and the several chambers *a a a* contain sirups of different kinds, such as are employed for flavoring soda-water, such sirups will be kept in a cool state, fit for being drank, and will be preserved from fermentation as well as from dust and flies or other insects, the series of chambers *a a a*, as well as the ice-chamber, being provided with one or more covers. So, when the sirups are composed of more or less milk or cream, by my apparatus they will be prevented from becoming acid. As the auxiliary sirup-chambers are at the lower part of the ice-chamber they will there be subjected to the greatest influence of the cold within it, and consequently the sirup in them will more readily become cold than when in the main sirup-chambers or larger vessels. The two holes *d e*, besides performing the functions hereinbefore stated, serve to facilitate the circulation of the sirup in and through the main and auxiliary chambers. A further advantage of the auxiliary

sirup-chamber is that containing a small body of sirup in comparison to that held by its main sirup-chamber, such small body will be expeditiously cooled by the ice, and much more so than the sirup of the main chamber, and consequently, even while the sirup in the main chamber may be nearly at atmospheric temperature, that in the auxiliary chamber will be reduced to a temperature fit for being drank. By having the soda-cylinder and its pipes applied to the ice-chamber of the sirup-cooler we save the necessity of packing the main soda-fountain in ice or keeping the whole body of the soda-water therein in a cool state for being drank. Thus not only are sirups prevented from fermenting, by means of my

apparatus, but a great economy in expenditure of ice may be effected.

I claim—

1. The new or improved sirup refrigerator or cooler, consisting of the series of main sirup holders or chambers *a*, the series of auxiliary lateral chambers *c*, and the ice-chamber *b*, the whole being arranged and so as to operate together, substantially as explained.

2. The arrangement of sirup and soda vessels or holders *a a* and *c c* and the ice or refrigerating vessel or chamber *b*, the whole being substantially as specified.

Witnesses: JAMES W. TUFTS.

R. H. EDDY,

F. P. HALE, Jr.