

H. PURDY.

ART OF ODORATING PURE SPIRITS.

No. 173,494.

Patented Feb. 15, 1876.

Fig. 1

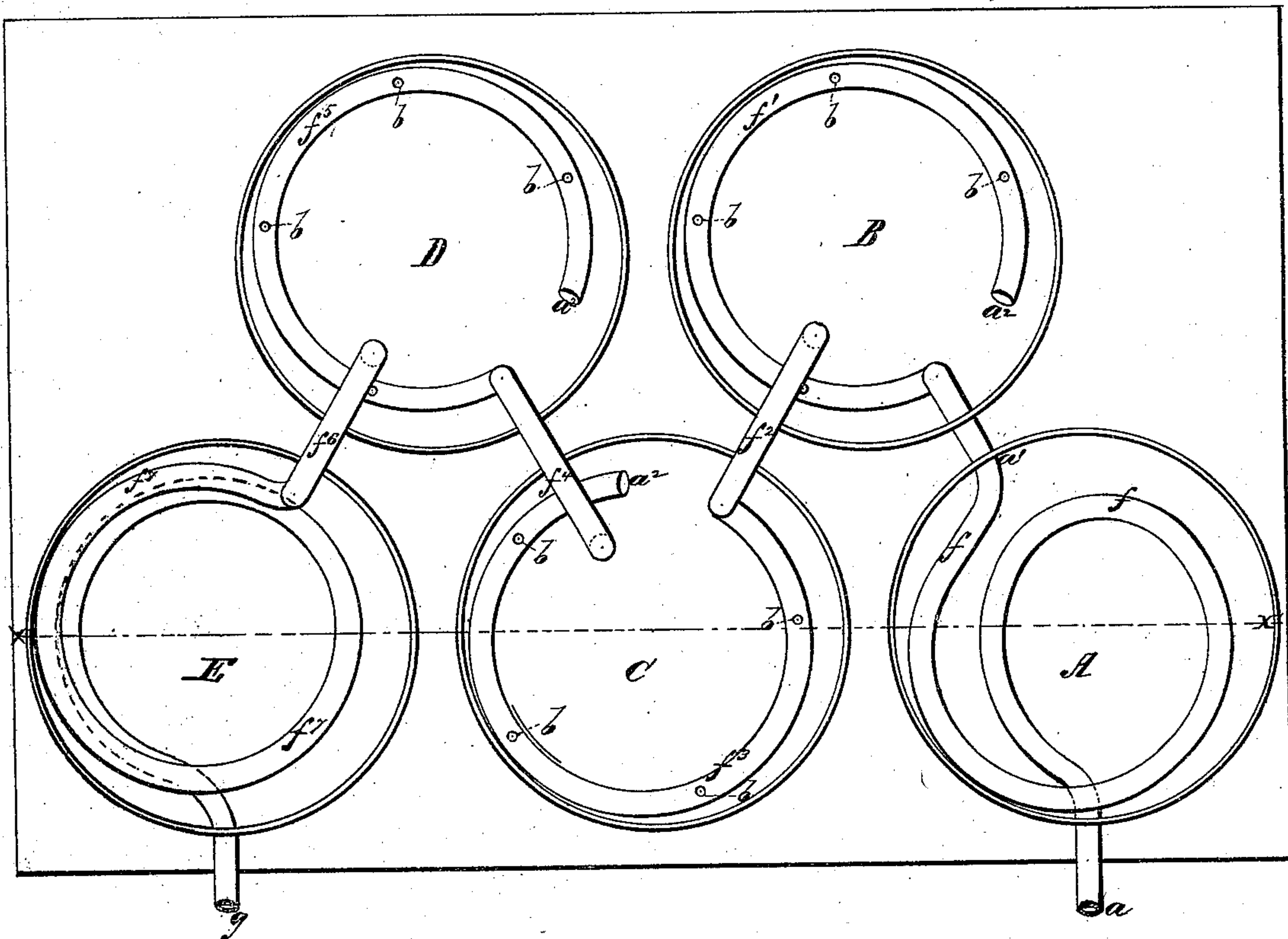
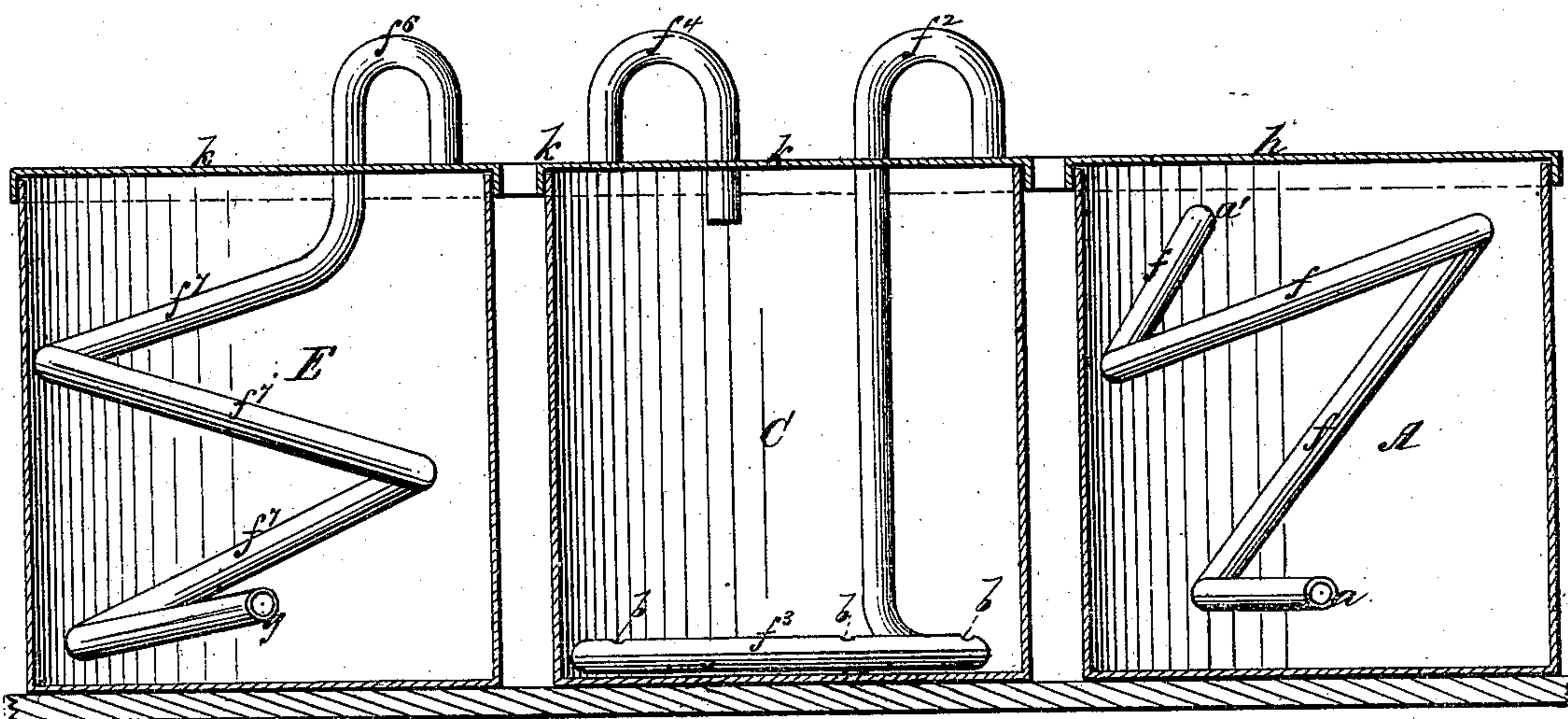


Fig. 2



Witnesses:
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UNITED STATES PATENT OFFICE.

HIRAM PURDY, OF BURLINGTON, IOWA.

IMPROVEMENT IN THE ART OF ODORATING PURE SPIRITS.

Specification forming part of Letters Patent No. **173,494**, dated February 15, 1876; application filed April 14, 1875.

To all whom it may concern:

Be it known that I, HIRAM PURDY, of Burlington, county of Des Moines and State of Iowa, have invented a new and useful Improvement in the Art of Odorating a Pure Spirit and other substances; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings making a part of this specification, in which—

Figure 1 is a plan view of the apparatus employed by me for odorating liquids or other substances; and Fig. 2 a vertical cross-section in the line *xx* of Fig. 1. The covers of the apparatus shown by Fig. 1 are removed in this view.

The object of my invention is to odorate pure spirits, or other substances not liquid, by passing air, at a suitable temperature, and having a proper degree of moisture, first through any desired odorating substance, and thereafter through the substance to be odorated, as will be hereinafter described.

In the drawings, A represents a tub of proper dimensions, having a close-fitting cover, and is provided with a coil of pipe, *f*, the outer end *a* of which coil extends into the tub near its bottom, from which point the coil rises to nearly the top of the tub as at *a'*, at which point it passes through the tub A and enters an adjacent tub, B, at the same height, and thence passes down to the bottom of the tub B and around the interior thereof in the form of a coil, *f*¹. An adjacent tub, C, is provided with a pipe having a coil, *f*³, around its interior, as shown, and which, rising to the height of the tub, passes through the cover *k*, and so bent, as at *f*², that the outer end of such bent portion may pass through a close-fitting perforation in the cover of the tub B, and thus communicate therewith. A like pipe, as shown at *f*⁴ and *f*⁵, is provided for the tub D, and in like manner is made to communicate with the tub C. And in a similar manner a coil of pipe, as at *f*⁶ and *f*⁷, in the interior of the tub E, is made to communicate with the tub D, which coil has its lower outer end, as at *g*, extend through the lower portion of the tub E, as shown. The lower ends *a*² of the several coils are closed, but apertures, as at *b*, are made in the coils on

the bottom of the tubs B, C, and D, for the escape of heated air into and through the contents of such tub.

In the operation of the apparatus, I fill the tub A with water, heated to a temperature sufficient to heat air, which by any proper means may be forced through the coil *f* at its outer end *a*. This coil should be of sufficient length within the tub A to readily and effectually transmit the heat of the water to the air passing through the coil. B is the tub for saturating the heated air with moisture, after the air has been forced through the coil *f* in the tub A, and for this purpose the tub B, or water bath, is filled more or less with water, so that the heated air escaping from the coil-pipe *f*¹ will be compelled to pass through the water, and thus absorb or become saturated with moisture. The odorating substance is placed in the tub C, the tub being more or less filled therewith, according to the degree of strength of odor which it is desirable to impart to the substance to be odorated. The air having become saturated by being forced through the water in tub B, escapes therefrom through the pipe *f*² *f*³ into the bottom of the tub C through the perforations *b*, and so mingles with and passes through the odorating-substance placed in said tub, and thence escapes through the pipe *f*⁴ *f*⁵ and perforations *b* into the tub D, which tub is filled more or less with the liquid or substance to be odorated. The heated and moistened air being forced through the odorating substance in tub C, readily becomes charged with the odor of the odorating substance placed therein, and in passing through the pure spirits or other substance placed in tub D, imparts thereto the odor with which it has become charged in its passage through tub C. After the air has passed up through the pure spirits or other substance contained in the tub D, it finally passes off through a condensing-coil of pipe *f*⁶ *f*⁷, which is made to communicate with the tub D, as shown, and discharge in a condensed condition at *g* through the tub E, which is filled with cold water to effect the condensation. In brief, the air enters the bottom end *a* of the heating-coil *f* in tub A, and is then forced through the series of tubs and coils to the outlet-coil in tub E.

What I claim is—

1. The process described for odorating liquors and other substances, consisting in saturating heated air with aqueous vapor, and passing such air through an odorating substance and into or through a liquid, or other substance to be odorated, substantially as described.

2. I claim the combination of a heater, a

water-bath, an odorating tank, and a containing tank for holding the substance to be odorated, and connecting-pipes, substantially as and for the purpose described.

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Witnesses:

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