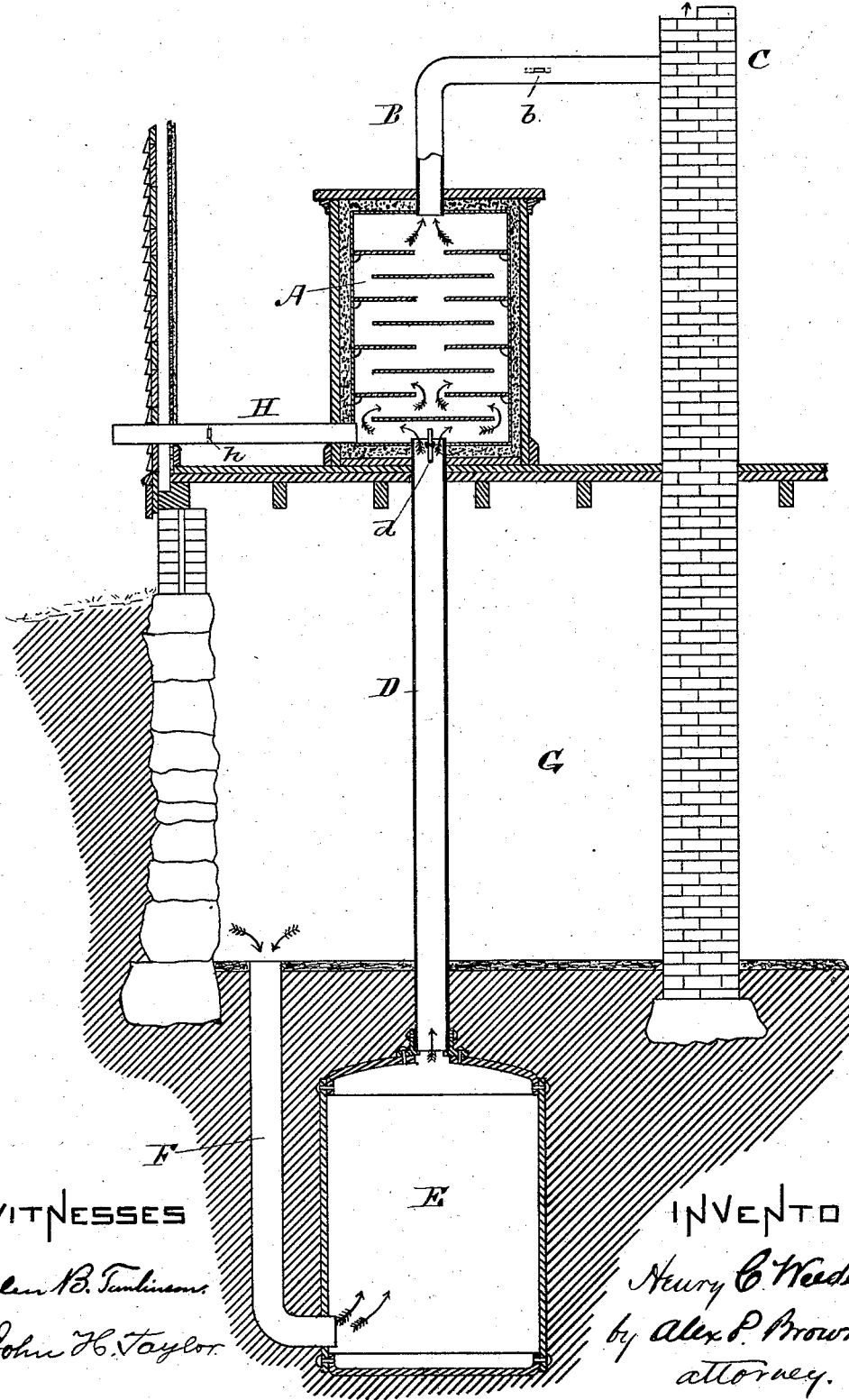


(No Model.)

H. C. WEEDEN.
REFRIGERATING DEVICE.

No. 455,522.

Patented July 7, 1891.



WITNESSES

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UNITED STATES PATENT OFFICE.

HENRY C. WEEDEN, OF QUINCY, MASSACHUSETTS.

REFRIGERATING DEVICE.

SPECIFICATION forming part of Letters Patent No. 455,522, dated July 7, 1891.

Application filed October 21, 1890. Serial No. 368,830. (No model.)

To all whom it may concern:

Be it known that I, HENRY C. WEEDEN, of Quincy, in the county of Norfolk and State of Massachusetts, a citizen of the United States, have invented a certain new and Improved Refrigerating Device, of which the following is a specification.

My invention relates to improvements in that class of devices commonly called "refrigerators," in which food and other perishable articles are kept from decay by being surrounded with a cool atmosphere obtained without the use of ice or other refrigerant medium except the temperature of the earth itself.

It has heretofore been known that the temperature of the earth a short distance below its surface is more constant than that of the atmosphere, being cooler in summer and warmer in winter, and for this reason food-receptacles have heretofore been built at points below the surface of the ground and supplied with air through pipes extending upwardly to the atmosphere. Such a form of cooling-chamber is objectionable, in that when permanently located under the ground it is comparatively inaccessible or at an inconvenient distance from the place where the articles being kept are to be used. It has been attempted to remedy this by providing the refrigerator with a hoist, whereby it can be hoisted up and down, converting it into a sort of dumb-waiter; but such a construction is complicated and involves moving parts liable to get out of order.

The object of my invention is to provide an improved refrigerating device wherein the food-chamber may be placed above the ground and at the height desired—as, for instance, upon the entrance or kitchen floor of a dwelling—and the air for the purpose of providing the preservative temperature within the refrigerator may be drawn from a subterranean reservoir or tank, which is itself supplied from the outside air.

In the drawing I have represented a device embodying these improvements. The food-chamber is represented at A, and may

be a box provided with non-conducting walls and shelves, as shown. This box is located upon the entrance-floor of a dwelling or at that point where the food it contains is to be used. From this food-chamber an exhaust-pipe B is led to some suitable device for producing an outdraft, preferably a chimney-flue C. An air-supply pipe D extends from the box downwardly to a temperature-regulating chamber E, buried in the ground at a point sufficiently below its surface that the box may be surrounded by earth of a relatively constant temperature. The air of the atmosphere is supplied to this chamber E by means of an air-supply pipe F. The function of the chamber E is to provide a storage-reservoir in which the air coming from without may be either lowered or raised to the temperature of the chamber, as determined by that of the surrounding earth. Without such a storage-chamber it is found that merely drawing air from without through an underground pipe fails to give to the air the temperature of the earth. According to my improvement, however, by providing a reservoir below the ground in which the air is received and held full opportunity is given for it to be brought to the desired temperature.

Suitable dampers *b* and *d* may be placed in the pipes B D to regulate the speed at which air flows through the preserving-chamber.

I claim—

In combination, the elevated food-preserving chamber A, provided with an exhaust-pipe B, a subterranean air-tank or storage-chamber, air-pipes connecting the said subterranean chamber with the food-preserving chamber and outer air, respectively, and means, substantially as described, for producing a draft or exhaust of air from the food-chamber, as set forth.

In testimony whereof I have hereunto subscribed my name this 18th day of October, A. D. 1890.

HENRY C. WEEDEN.

Witnesses:

ELLEN B. TOMLINSON,
JOHN H. TAYLOR.