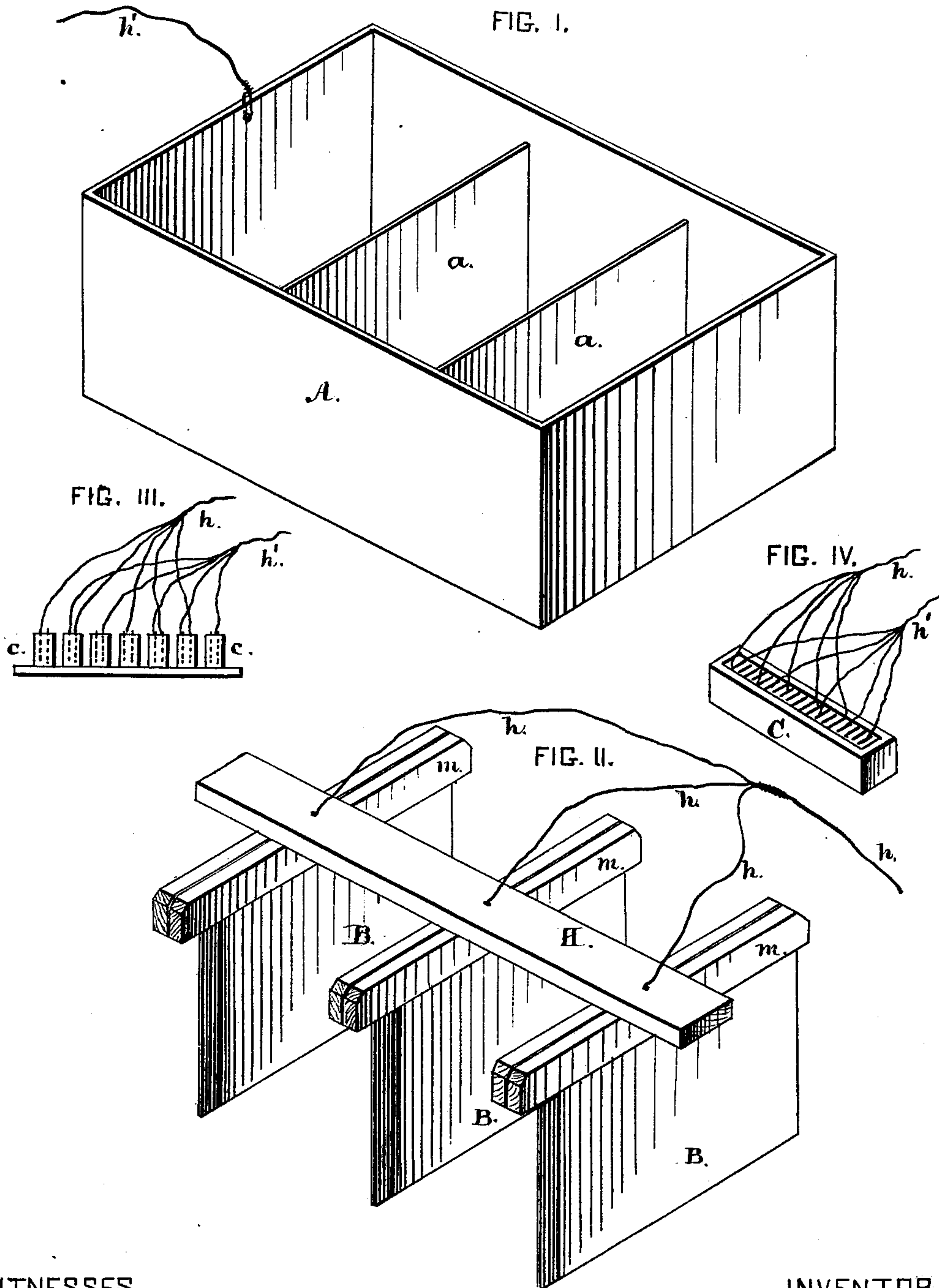


J. L. MARTIN.
Aging Spirits and Alcoholic Liquors.
No. 222,293. Patented Dec. 2, 1879.



WITNESSES
Bartham Fevely
C. J. Hedrick

INVENTOR
Jos. Lloyd Martin

UNITED STATES PATENT OFFICE.

JOSEPH LLOYD MARTIN, OF BALTIMORE, MARYLAND.

IMPROVEMENT IN AGING SPIRITS AND ALCOHOLIC LIQUORS.

Specification forming part of Letters Patent No. **222,293**, dated December 2, 1879; application filed November 6, 1879.

To all whom it may concern:

Be it known that I, JOSEPH LLOYD MARTIN, of the city of Baltimore, in the county of Baltimore and State of Maryland, have invented certain new and useful Improvements in Aging Spirits and Alcoholic Liquors; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification, in which—

Figure I shows a perspective view of the operating-tank used in carrying out my invention; Fig. II, a similar view of a series of platinized plates used in the tank; and Figs. III and IV, detail views of suitable galvanic batteries used, which may be as shown or of any equivalent pattern.

The object of the invention is to age, change, or modify fresh or recently-distilled alcoholic liquors, such as whisky, brandy, gin, rum, and the like, or fermented spirits, such as wine, cider, beer, &c.

This aging or changing has heretofore generally been effected by the gradual influence of the air operating upon the casks or tanks through a long time, sometimes with the aid of agitation and heat. It has been hastened by artificial aeration, by the aid of various chemicals, and in some instances by the aid of a current of electricity.

My present invention consists in effecting the change, alteration, or modification known as "aging" by means of the imponderable agent electricity and the well-known principles and effects of catalysis in combination.

In order that others skilled in the art may be able to apply and use my method or process, I give the following description of the construction of apparatus and the operation of the same.

Figure I is a perspective view of a copper or a copper-lined tank, (marked A,) with copper diaphragms *a* of proper dimensions, between which are to be inserted diaphragms B of platinized carbon, platinum-black, spongy platinum, or other metallic substance holding platinum-black, as shown in Fig. II. The

platinized or catalytic plates B are held by clamps *m*, and connected, so as to form a series corresponding with the cells in the tank A, by a wooden bar, H. Conducting-wires *h* from each plate lead to one of the poles of a galvanic battery or electrical machine, such as shown in Figs. III and IV, the separate galvanic cells being marked *c*, and the battery C. The other pole of the battery is connected by wires *h'* with the metallic walls of tank A.

I have not described in detail the construction of the galvanic battery, as this may be of any ordinary construction, such as used for telegraphing or electroplating, and forms no part of my invention, except as used in combination with the other agencies herein described.

Any electrical apparatus may be used which will cause a sufficient current to flow to effect the object in a reasonable time.

I have not described the platinized or catalytic plates, as they also are well known and are not of my invention.

Into tank A is emptied recently-distilled liquor before establishing the electric circuit. The ends of the copper diaphragms are permanently attached to the long sides of the tank and reach to within an inch or two of the bottom of the tank. The carbon, platinum-black, or platinized diaphragms are raised from the tank or cistern when the battery is not in action, to be lowered into the liquor when the electric current is established in the tank.

The raising or lowering of the diaphragms may be accomplished by any of the known means or arrangements, such as windlass, cog-wheels, &c. The catalytic effect is accomplished by submersion or contact with the liquor of any of the well-known catalysing agents, spongy platinum, platinum-black, or others which are not injurious to liquors under treatment.

The diaphragms here shown in Fig. II represent platinum-black, and serve as an electrode of the battery, as well as developing catalytic action.

I do not claim to be the first inventor of a process for aging or rectifying alcoholic liquors, as I am aware that many inventions for this purpose already exist. Neither do I claim

to be the inventor of a process by which electricity alone is used, as I am also aware that this has been known and used; but I do claim specifically to be the inventor of a process or method by which, with the aid of electricity and catalysing agents, I can change, alter, or modify fresh or recently-distilled whisky, brandy, gin, wine, or any other alcoholic liquors, so as to render them essentially the same as if they had lain in casks for years, and thus become modified by age.

In my newly-invented process there need be no chemicals or deleterious substance added to the liquors undergoing modification, as is the case in other processes. The desired results are obtained in a much more expeditious manner, and the expense attendant upon machinery and in operating is much less than in other processes.

In operating or conducting my process or method, I do not confine myself to the exact form or construction of apparatus, as set forth, or laid down in the drawings, for it is obvious that the same or similar results may be obtained with other forms of apparatus without changing the principles of application or action.

Having thus described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. The process herein described for aging alcoholic spirits and liquors, consisting in subjecting the same to the action of a current of electricity and to the action of a catalytic agent substantially such as described, all as set forth.

2. In the apparatus for treating alcoholic liquids, the combination of the tank A, provided with diaphragms *a*, and one or more catalytic plates, B, arranged to fit between the diaphragms *a*, substantially as described.

3. The combination of the tank A and connecting-wire *h'* with the platinized plates B and wires *h*, connecting the opposite poles of a galvanic battery, respectively, with the walls of the body of the tank and the catalytic plates, all substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 6th day of November, 1879.

JOS. LLOYD MARTIN.

Witnesses:

BARTRAM ZEVELY,
C. J. HEDRICK.