(12) **United States Patent**
Ott

(10) **Patent No.: X6037**
(45) **Date of Patent: Jun. 18, 1830**

(54) **IMPROVEMENT IN THE APPARATUS AND PROCESS FOR MANUFACTURING OR PREPARING SODA WATER**

(76) Inventor: **George Ott**

The United States of America

TO ALL TO WHOM THESE Letters Patent SHALL COME:

Whereas George Ott of Potters of the United States hath alleged that he has invented a new and useful improvement in the apparatus & process for manufacturing or preparing Soda Water which improvement he states has not been known or used before his application, hath sworn to his belief that he does verily believe that he is the true inventor or discoverer of the said improvement; hath paid into the treasury of the United States the sum of thirty dollars, delivered a receipt for the same, and presented a petition to the Secretary of State, signifying a desire of obtaining an exclusive property in the said improvement, and praying that a patent may be granted for that purpose. These are therefore to grant, according to law, to the said Geo: Ott his heirs, administrators or assigns, for the term of fourteen years, from the eighteenth day of June one thousand eight hundred and thirty the full and exclusive right and liberty of making, constructing, using and vending to others to be used, the said improvement, a description whereof is given in the words of the said Geo: Ott himself in the schedule hereto annexed, and is made a part of these presents.

In Testimony whereof, I have caused these Letters to be made Patent, and the Seal of the United States to be hereunto affixed.

GIVEN under my hand, at the City of Washington, this eighteenth day of June in the year of our Lord one thousand eight hundred and thirty and of the independence of the United States of America the fifty fourth.

Andrew Jackson

BY THE PRESIDENT.

M. Van Buren Secretary of State.

City of Washington, To Wit:

I DO HEREBY CERTIFY, That the foregoing Letters Patent were delivered to me on the eighteenth day of June in the year of our Lord one thousand eight hundred and thirty to be examined; that I have examined the same, and find them conformable to law, and do hereby return the same to the Secretary of State, within fifteen days from the date aforesaid, to wit: on this eighteenth day of June in the year aforesaid.

W. Wirt Attorney General of the United States.



The United States of America

TO ALL TO WHOM THESE Letters Patent SHALL COME:

Whereas George Ott A Citizen of

the United States hath alleged that he has invented a new and useful improvement

in the apparatus & process for manufacturing

& preparing Soda Water

which improvement he states has not been known or used before his application, hath

that he does verily believe that he is the true inventor or discoverer of the said improvement: hath

paid into the treasury of the United States the sum of thirty dollars, delivered a receipt for

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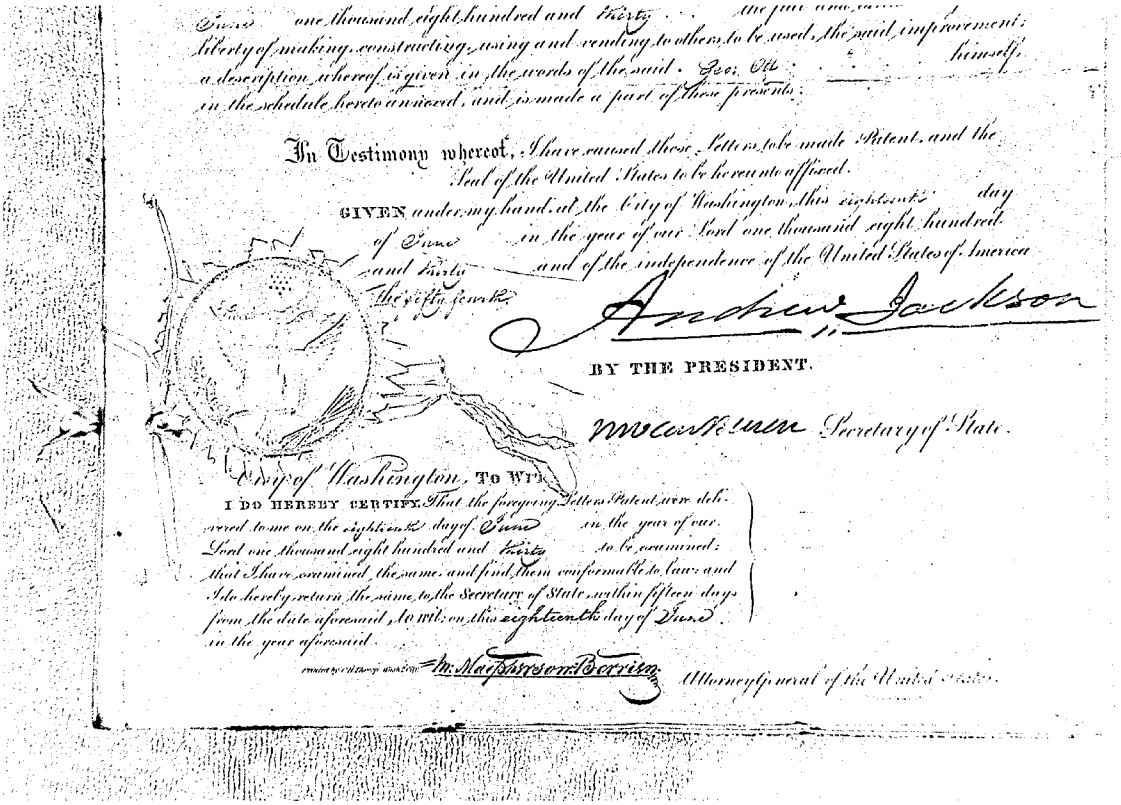
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liberty of making, constructing, using and vending to others to be used, the said improvement,

a description whereof is given in the words of the said Geo. Ott and

in the schedule hereto annexed, and is made a part of these presents.

In Testimony whereof, I have caused these Letters to be made Patent



June one thousand eight hundred and thirty ... the said improvement; liberty of making, constructing, using and vending to others to be used, the said improvement; a description whereof is given in the words of the said Geo. Ott himself in the schedule hereto annexed, and is made a part of these presents:

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GIVEN under my hand, at the City of Washington, this eighteenth day of June in the year of our Lord one thousand eight hundred and thirty and of the independence of the United States of America the fifty fourth.

Andrew Jackson

BY THE PRESIDENT.

Wm Carroll Secretary of State.

District of Washington, To Wit:

I DO HEREBY CERTIFY, That the foregoing Letters Patent were delivered to me on the eighteenth day of June in the year of our Lord one thousand eight hundred and thirty to be examined: that I have examined the same, and find them conformable to law: and I do hereby return the same to the Secretary of State within fifteen days from the date aforesaid, to wit: on this eighteenth day of June in the year aforesaid.

Wm Wirt Attorney General of the United States.

The Schedule referred to in these Letters Patent, and making part of the same, containing a description in the words of the said George Ott himself, of his Improvement in the apparatus & process for manufacturing or preparing Soda Water.

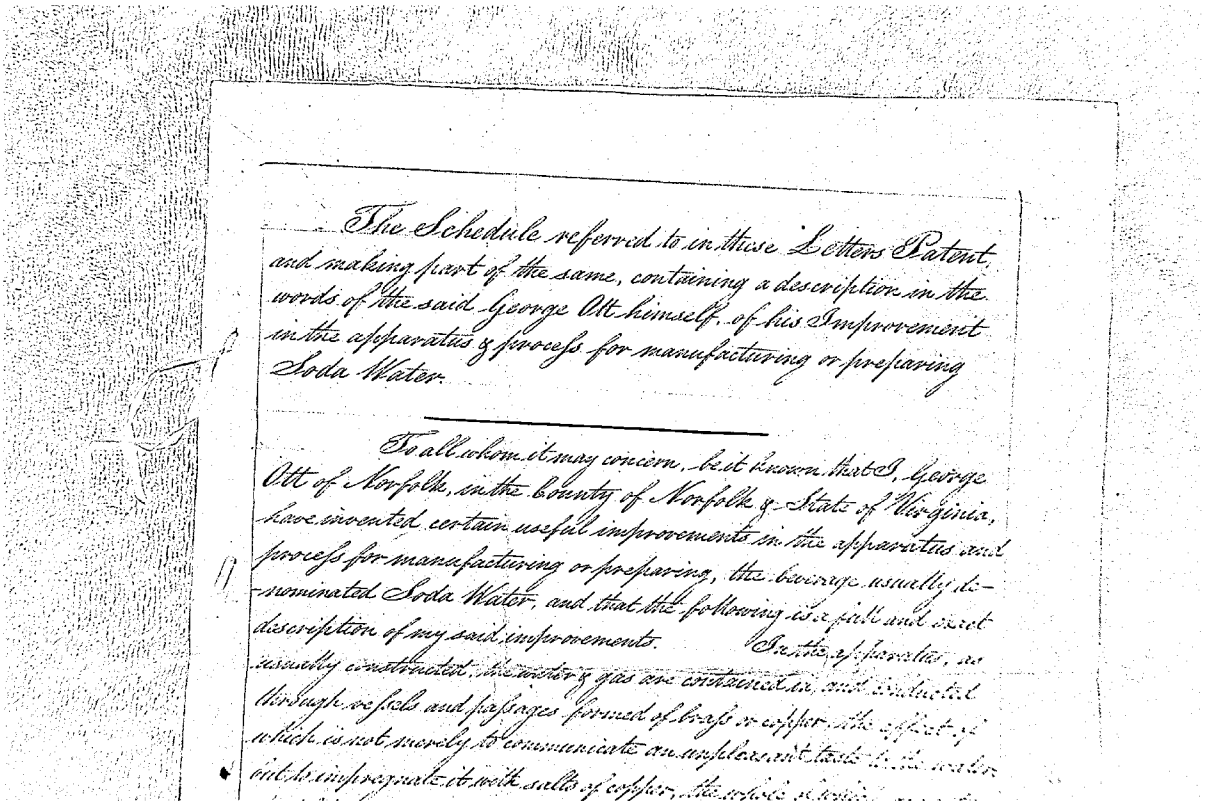
To all whom it may concern, be it known that I, George Ott of Norfolk, in the County of Norfolk & State of Virginia, have invented certain useful improvements in the apparatus and process for manufacturing or preparing, the beverage usually denominated Soda Water, and that the following is a full and exact description of my said improvements. In the apparatus, as usually constructed, the water & gas are contained in, and conducted through vessels and passages formed of brass or copper, the effect of which is not merely to communicate an unpleasant taste to the water, but to impregnate it with salts of copper, the whole of which are extremely deleterious. To obviate these objections and to render the apparatus more economical and efficient, are the objects which I claim to have accomplished. Instead of using brass or copper, I employ block tin, or an alloy thereof, in every case, excepting for the forcing pump. All the other parts, such as the conductors, pipes, coolers, browsing pipes, cocks & valves, which are usually made of the former metals, I make of the latter, excepting in certain cases. I also use altogether with a metallic cistern, and form one of wood, so constructing and coating it as to give it sufficient strength, and to render it completely impervious to air and water, under the immense pressure to which it is to be subjected.

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The Schedule referred to in these Letters Patent, and making part of the same, containing a description in the words of the said George Ott himself, of his Improvement in the apparatus & process for manufacturing or preparing Soda Water.

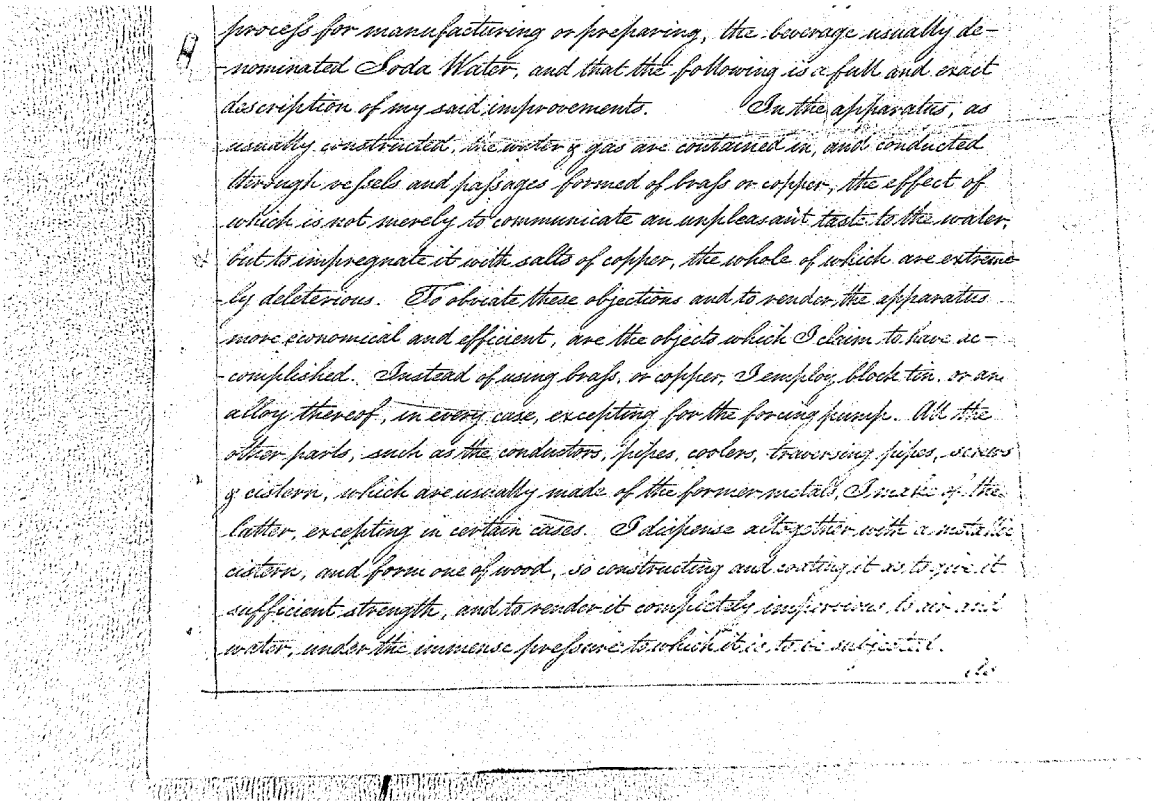
To all whom it may concern, be it known that I, George Ott of Norfolk, in the County of Norfolk & State of Virginia, have invented certain useful improvements in the apparatus and process for manufacturing or preparing, the beverage usually denominated Soda Water, and that the following is a full and exact description of my said improvements. In the apparatus, as usually constructed, the water & gas are contained in, and conducted through vessels and passages formed of brass or copper, the effect of which is not merely to communicate an unpleasant taste to the water, but to impregnate it with salts of copper, the whole of which are extremely deleterious. To obviate these objections and to render the apparatus more economical and efficient, are the objects which I claim to have accomplished. Instead of using brass or copper I employ block tin, or an alloy thereof, in every case, excepting for the forcer pump. All the other parts, such as the conductors, pipes, coolers, traversing pipes, screws & cistern, which are usually made of the former metals I make of the latter, excepting in certain cases. I dispense altogether with a metallic cistern, and form one of wood, so constructing and coating it as to give it sufficient strength, and to render it completely impervious to air and water, under the immense pressure to which it is subjected.

do



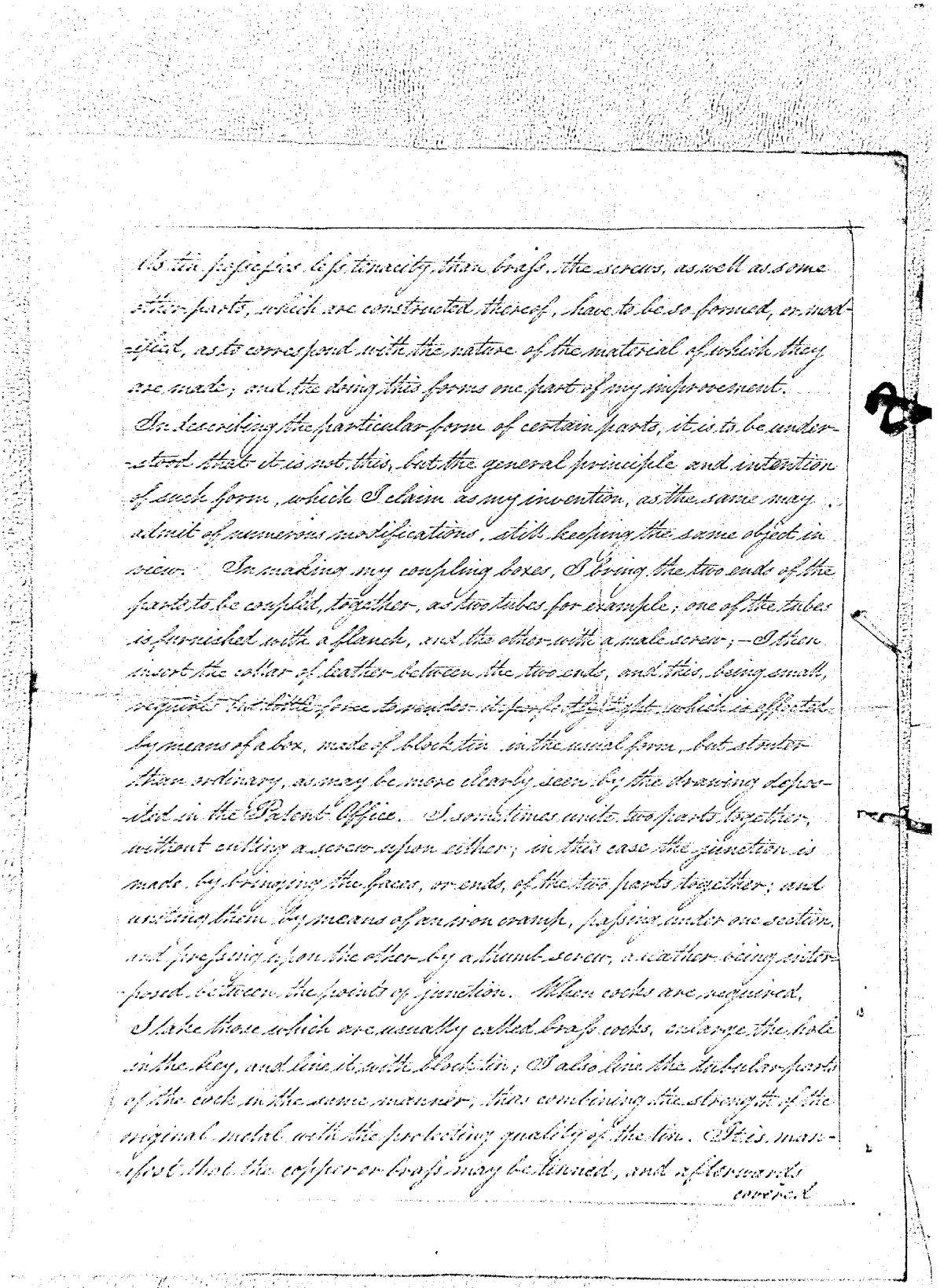
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To all whom it may concern, be it known that I, George Ott of Norfolk, in the County of Norfolk & State of Virginia, have invented certain useful improvements in the apparatus and process for manufacturing or preparing, the beverage usually denominated Soda Water, and that the following is a full and exact description of my said improvements. Being a specification, or assembly constructed, the vapor & gas are commenced in, and conducted through vessels and passages formed of brass or copper the effect of which is not merely to communicate an agreeable taste to the water but to impregnate it with salts of copper, the acids of which



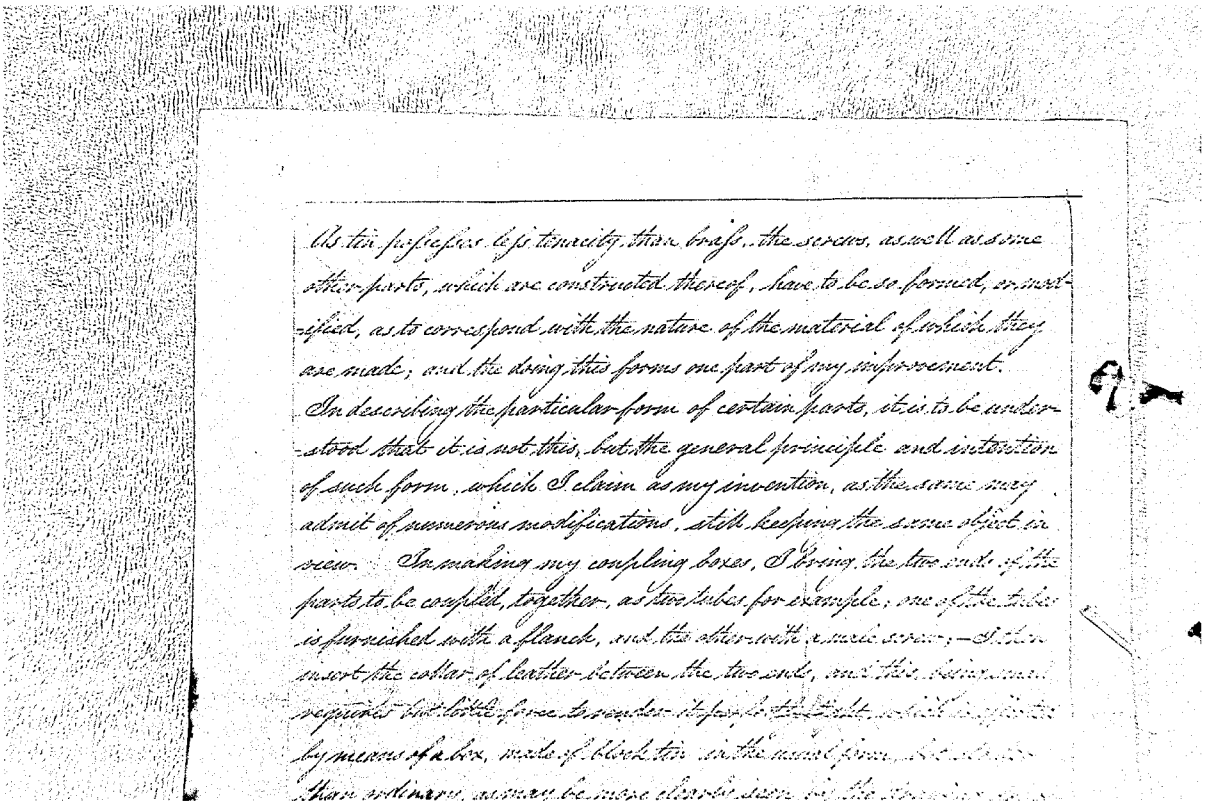
process for manufacturing or preparing, the beverage usually denominated Soda Water, and that the following is a full and exact description of my said improvements. In the apparatus, as usually constructed, the water & gas are contained in, and conducted through vessels and passages formed of brass or copper, the effect of which is not merely to communicate an unpleasant taste to the water, but to impregnate it with salts of copper, the whole of which are extremely deleterious. To obviate these objections and to render the apparatus more economical and efficient, are the objects which I claim to have accomplished. Instead of using brass, or copper, I employ, block tin, or an alloy thereof, in every case, excepting for the forcing pump. All the other parts, such as the conductors, pipes, coolers, traversing pipes, screws & cistern, which are usually made of the former metals, I make of the latter, excepting in certain cases. I dispense altogether with a metallic cistern, and form one of wood, so constructing and coating it as to give it sufficient strength, and to render it completely impervious to air and water, under the immense pressure to which it is to be subjected.

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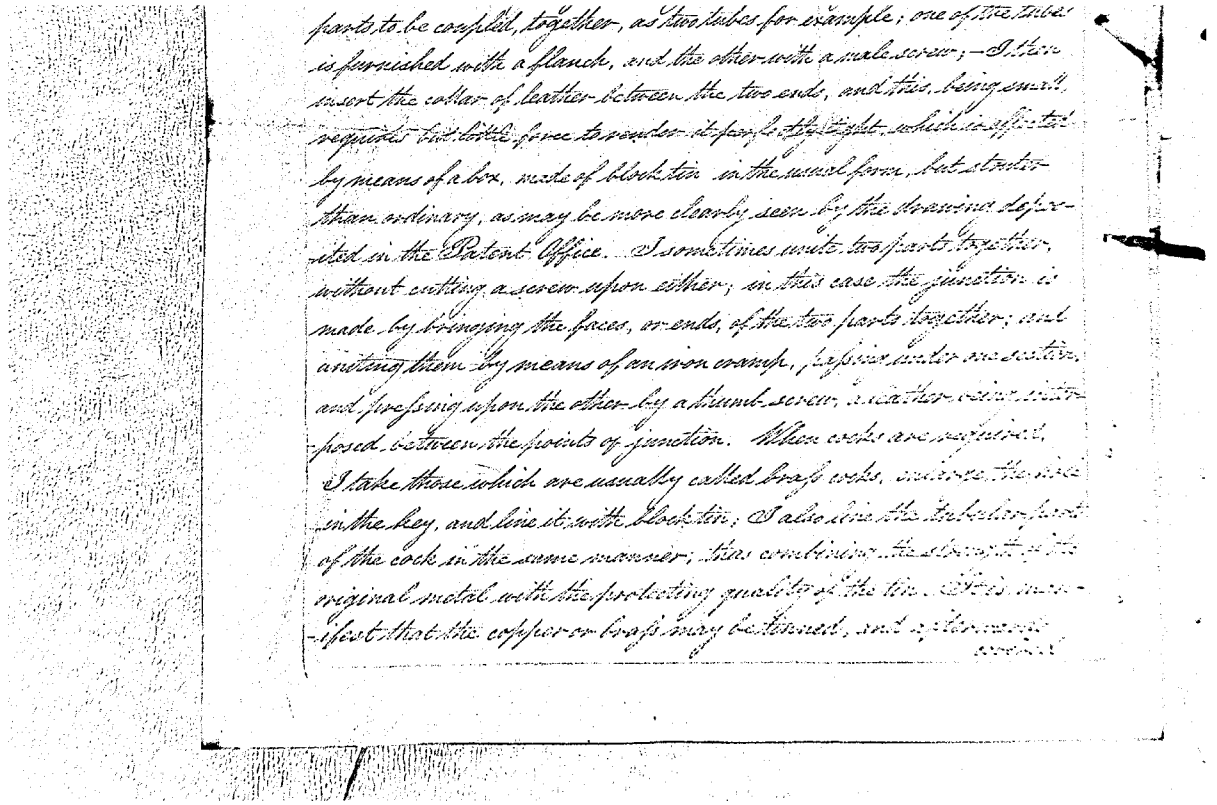
to the purpose of greater elasticity, than brass. The screws, as well as some other parts, which are constructed thereof, have to be so formed, or modified, as to correspond with the nature of the material of which they are made; and the doing this forms one part of my improvement.

In describing the particular form of certain parts, it is to be understood that it is not this, but the general principle and intention of such form, which I claim as my invention, as the same may admit of numerous modifications, still keeping the same object in view. In making my coupling boxes, I bring the two ends of the pipes to be coupled, together, as two tubes for example; one of the tubes is furnished with a flanch, and the other with a male screw; — I then insert the collar of leather between the two ends, and this, being small, requires but little force to render it perfectly tight, which is effected by means of a box, made of block tin in the usual form, but stouter than ordinary, as may be more clearly seen by the drawing deposited in the Patent Office. I sometimes unite two pipes together, without cutting a screw upon either; in this case the junction is made by bringing the ends, or ends, of the two pipes together; and uniting them by means of an iron collar, fastening under one section, and fastening upon the other by a thumb screw, a leather being interposed between the joints of junction. When cocks are required, I make those which are usually called brass cocks, enlarge the hole in the key, and line it with block tin; I also line the barrel or part of the cock in the same manner, thus combining the strength of the original metal with the preventing quality of the tin. This, must first that the copper or brass may be tinned, and afterwards corrected



to the perfection & less timidity than brass. the screws, as well as some other parts, which are constructed thereof, have to be so formed, or modified, as to correspond with the nature of the material of which they are made, and the doing this forms one part of my improvement.

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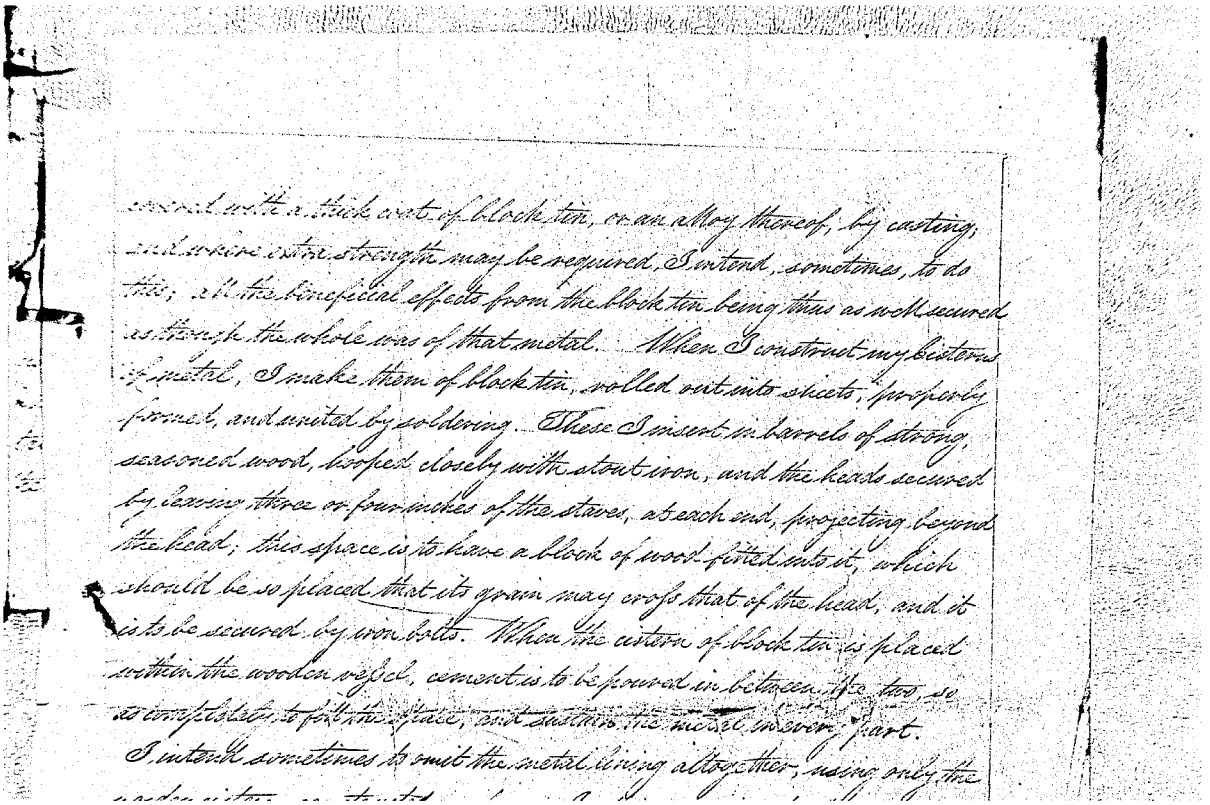


parts to be coupled, together, as two tubes for example; one of the tubes is furnished with a flanch, and the other with a male screw; — I then insert the collar of leather between the two ends, and this, being screwed requires that little force to render it perfectly tight, which is effected by means of a box, made of block tin in the usual form, but stouter than ordinary, as may be more clearly seen by the drawings deposited in the Patent Office. I sometimes unite two parts together, without cutting a screw upon either; in this case the junction is made by bringing the faces, or ends, of the two parts together; and uniting them by means of an iron clamp, [illegible] and pressing upon the other by a thumb screw, a leather collar interposed between the points of junction. When cocks are required, I take those which are usually called brass cocks, and screw the nut in the key, and line it with block tin. I also line the inside part of the cock in the same manner; thus combining the advantages of the original metal with the forbearing quality of the tin. It is necessary that the copper or brass may be tinned, and it is necessary

covered with a thick coat of block tin, or an alloy thereof, by casting, and where extra strength may be required, I intend, sometimes, to do this; all the beneficial effects from the block tin being thus as well secured as through the whole was of that metal. When I construct my cisterns of metal, I make them of block tin, rolled out into sheets, properly formed, and united by soldering. These I insert in barrels of strong, seasoned wood, hooped closely with stout iron, and the heads secured by leaving three or four inches of the staves, at each end, projecting beyond the head; this space is to have a block of wood fitted into it, which should be so placed that its grain may cross that of the head, and it is to be secured by iron bolts. When the cistern of block tin is placed within the wooden vessel, cement is to be poured in between the two, so as completely to fill the space, and sustain the metal in every part.

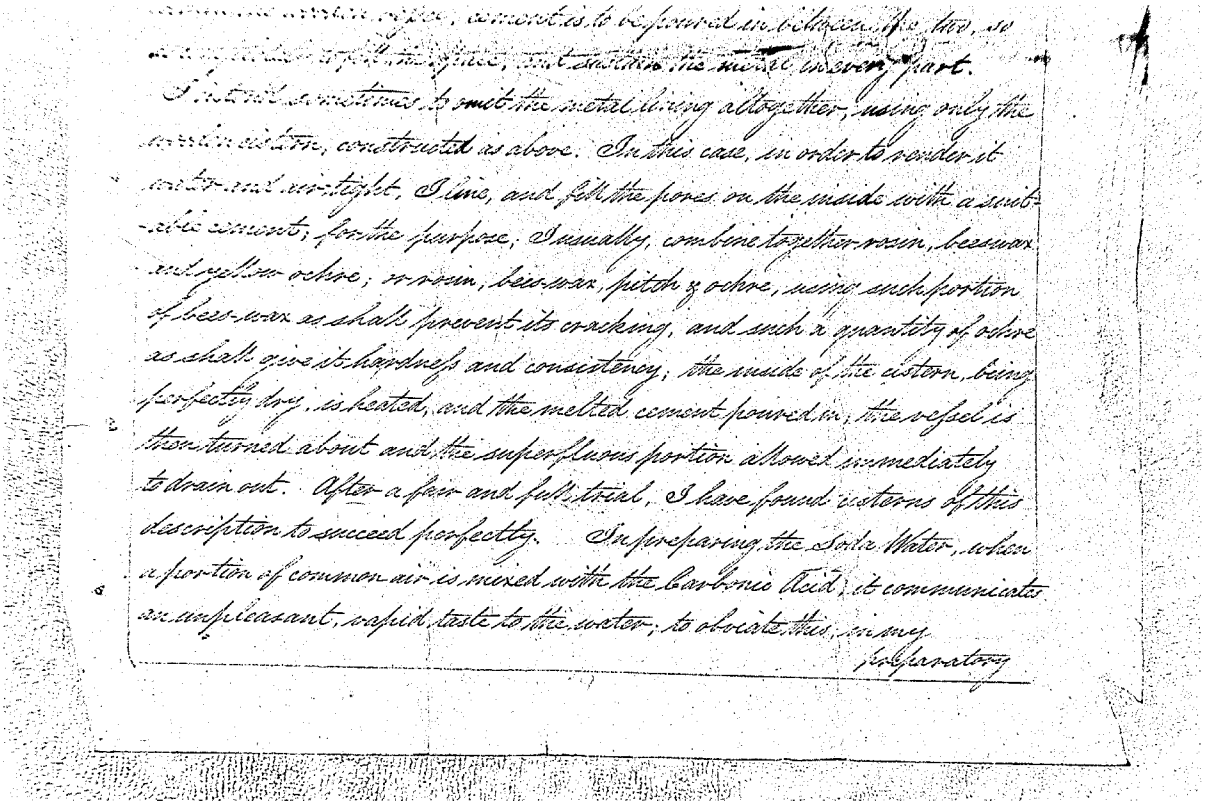
I intend, sometimes to omit the metal lining altogether, using only the wooden cistern, constructed as above. In this case, in order to render it water and air-tight, I line, and fill the pores on the inside with a suitable cement; for the purpose, I usually, combine together resin, beeswax and yellow ochre; or resin, bees-wax, pitch & ochre, using such portion of bees-wax as shall prevent its cracking, and such a quantity of ochre as shall give it hardness and consistency; the inside of the cistern, being perfectly dry, is heated, and the melted cement poured in; the vessel is then turned about and the superfluous portion allowed immediately to drain out. After a fair and full trial, I have found cisterns of this description to succeed perfectly. In preparing the Soda Water, when a portion of common air is mixed with the Carbonic Acid, it communicates an unpleasant, insipid taste to the water, to obviate this, in my

[illegible]



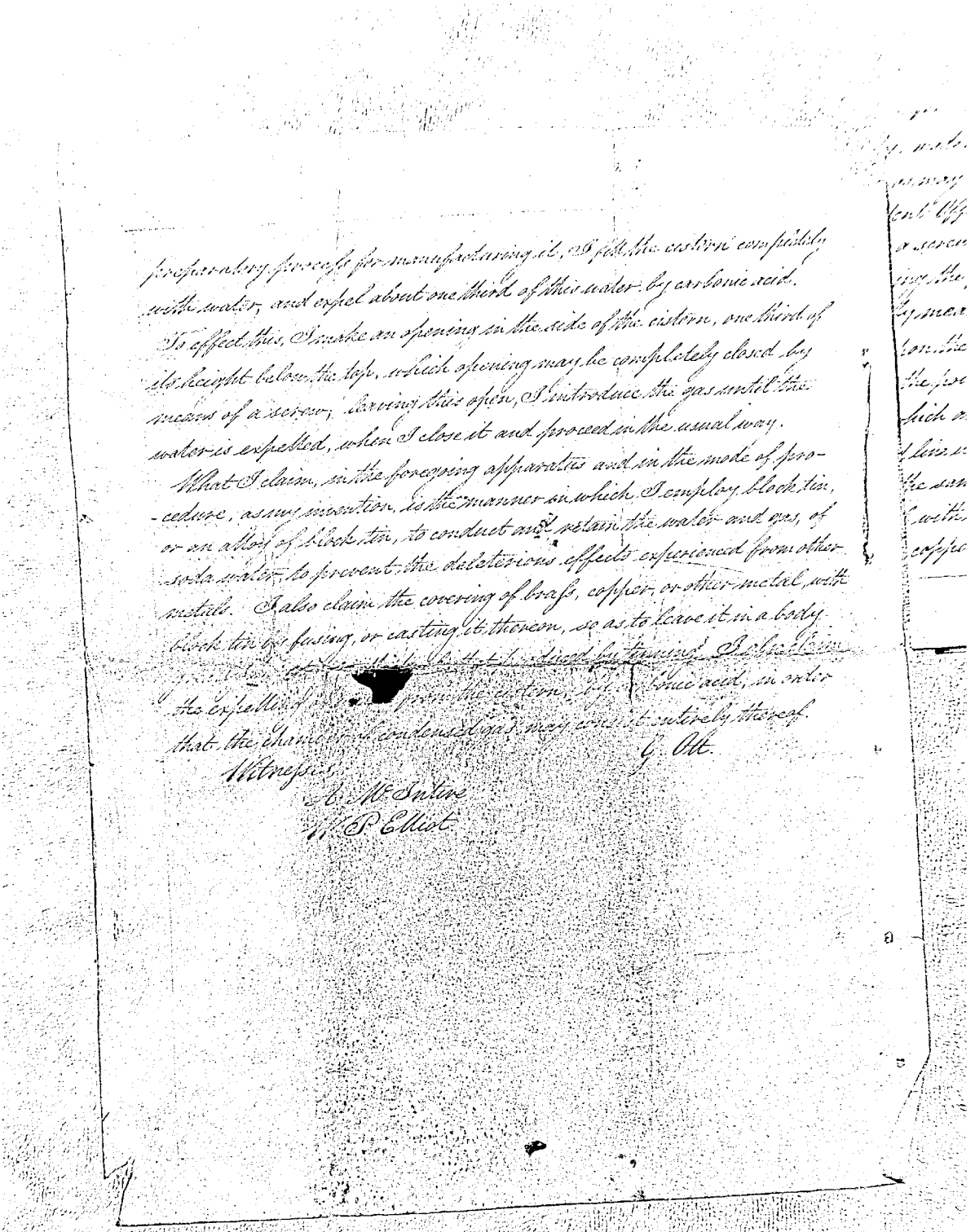
covered with a thick coat of block tin, or an alloy thereof, by casting, and where extra strength may be required, I intend, sometimes, to do this; all the beneficial effects from the block tin being thus as well secured as through the whole use of that metal. When I construct my cisterns of metal, I make them of block tin, rolled out into sheets, properly formed, and united by soldering. These I insert in barrels of strong, seasoned wood, hooped closely with stout iron, and the heads secured by leaving three or four inches of the staves, at each end, projecting beyond the head; this space is to have a block of wood fitted into it, which should be so placed that its grain may cross that of the head, and it is to be secured by iron bolts. When the cistern of block tin is placed within the wooden vessel, cement is to be poured in between the two, so as completely to fill the place, and sustain the metal in every part.

I intend sometimes to omit the metal lining altogether, using only the



...cement is to be spread in between the two, so
...and to unite the inner part.

I intend sometimes to omit the metal lining altogether, using only the cement or mastic, constructed as above. In this case, in order to render it entirely air-tight, I line, and fill the pores on the inside with a suitable cement; for the purpose, I usually combine together resin, beeswax and yellow ochre; or resin, beeswax, pitch & ochre, using such portion of beeswax as shall prevent its cracking, and such a quantity of ochre as shall give it hardness and consistency; the inside of the cistern, being perfectly dry, is heated, and the melted cement poured in; the vessel is then turned about and the superfluous portion allowed immediately to drain out. After a fair and full trial, I have found cisterns of this description to succeed perfectly. In preparing the Soda Water, when a portion of common air is mixed with the Carbonic Acid, it communicates an unpleasant, vapid taste to the water; to obviate this, in my



for generating, & receiving & manufacturing it, & filling the cistern completely with water, and expel about one third of this water by carbonic acid.

To effect this, I make an opening in the side of the cistern, one third of the height below the top, which opening may be completely closed by means of a screw. Having this open, I introduce the gas until the water is expelled, when I close it and proceed in the usual way.

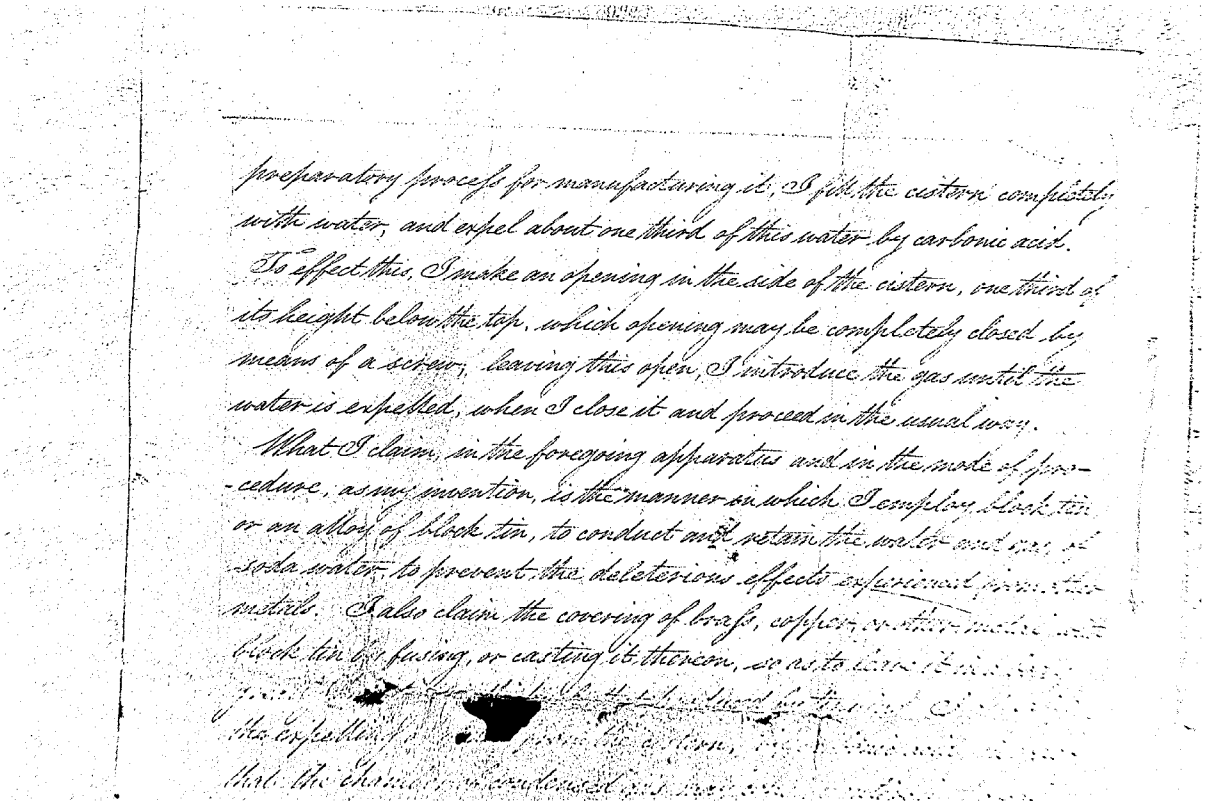
What I claim, in the foregoing apparatus and in the mode of procedure, as my invention, is the manner in which I employ block tin, or an alloy of block tin, to conduct and retain the water and gas, of soda water, to prevent the deleterious effects experienced from other metals. I also claim the covering of brass, copper, or other metal, with block tin by fusing, or casting it thereon, so as to leave it in a body

[redacted]

the expelling of [redacted] from the cistern, by carbonic acid, in order that the chamber may be condensed by [redacted] exclusively thereof.

G. Att.

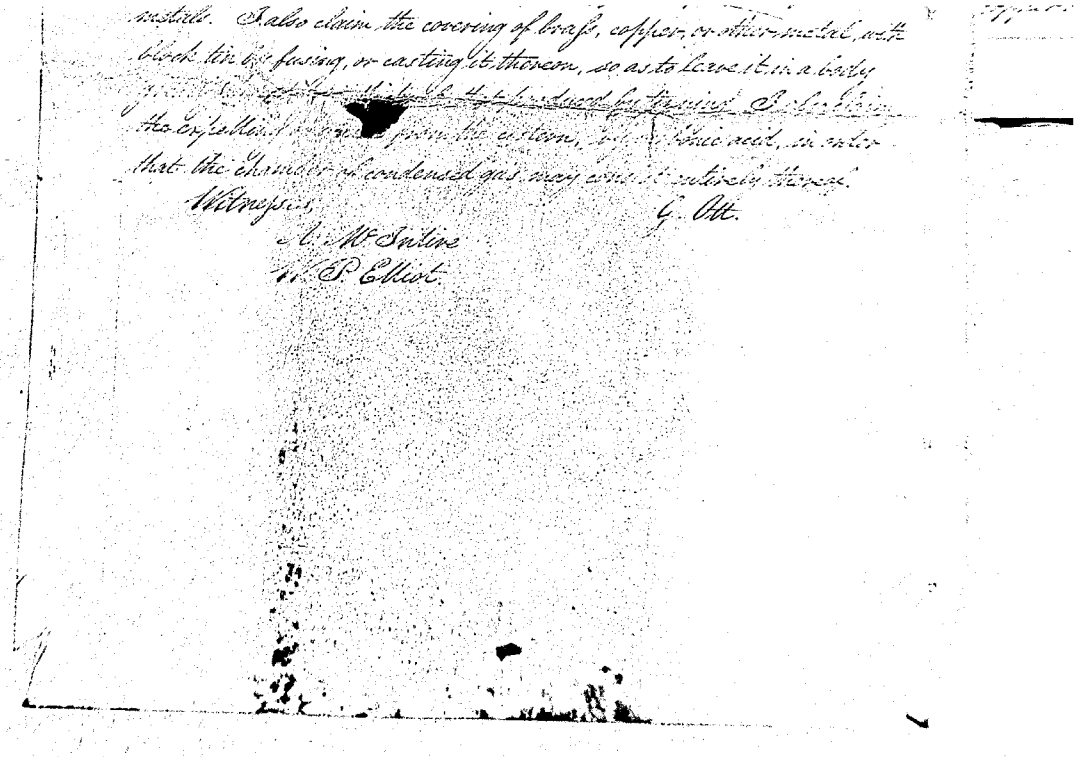
Witnesses:
S. McSorley
W. P. Elliot



preparatory process for manufacturing it, I fill the cistern completely with water, and expel about one third of this water by carbonic acid.

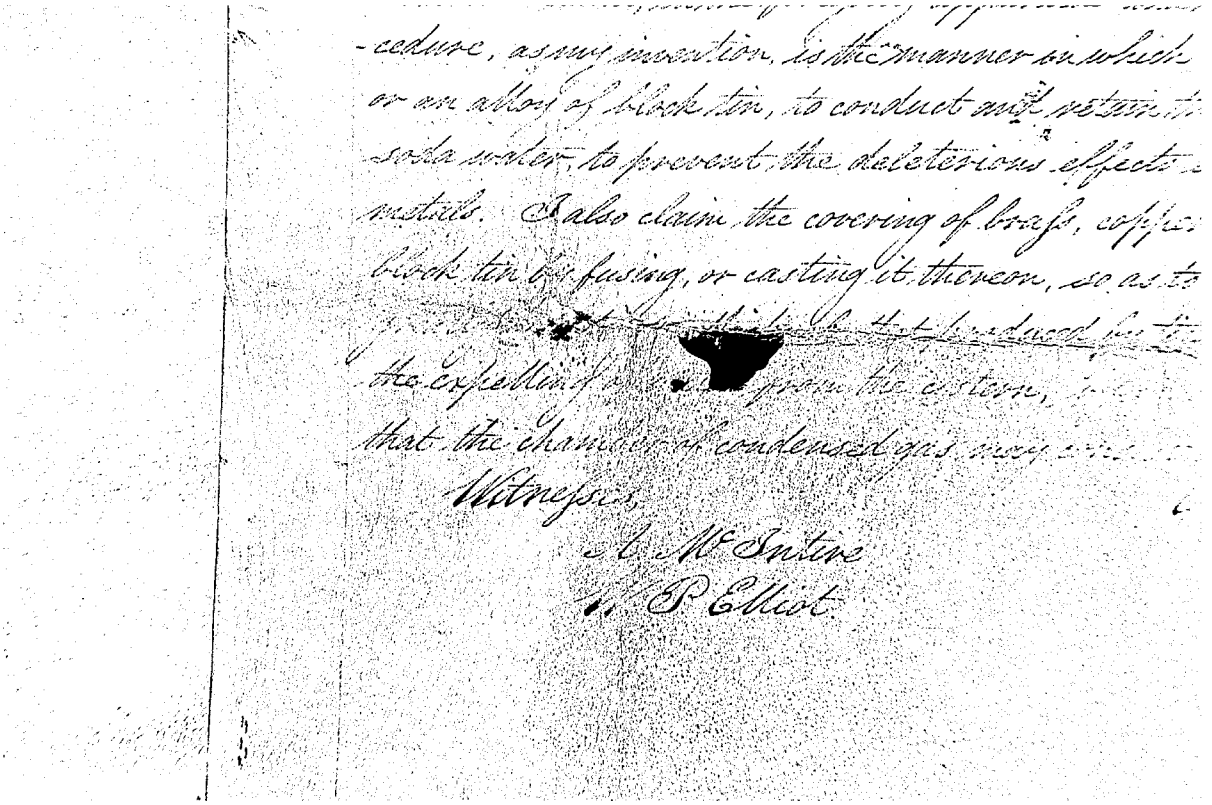
To effect this, I make an opening in the side of the cistern, one third of its height below the tap, which opening may be completely closed by means of a screw; leaving this open, I introduce the gas until the water is expelled, when I close it and proceed in the usual way.

What I claim, in the foregoing apparatus and in the mode of procedure, as my invention, is the manner in which I employ block tin or an alloy of block tin, to conduct and retain the water and gas of soda water, to prevent the deleterious effects experienced from other materials. I also claim the covering of brass, copper or other metal with block tin for fusing, or casting it thereon, so as to [illegible]

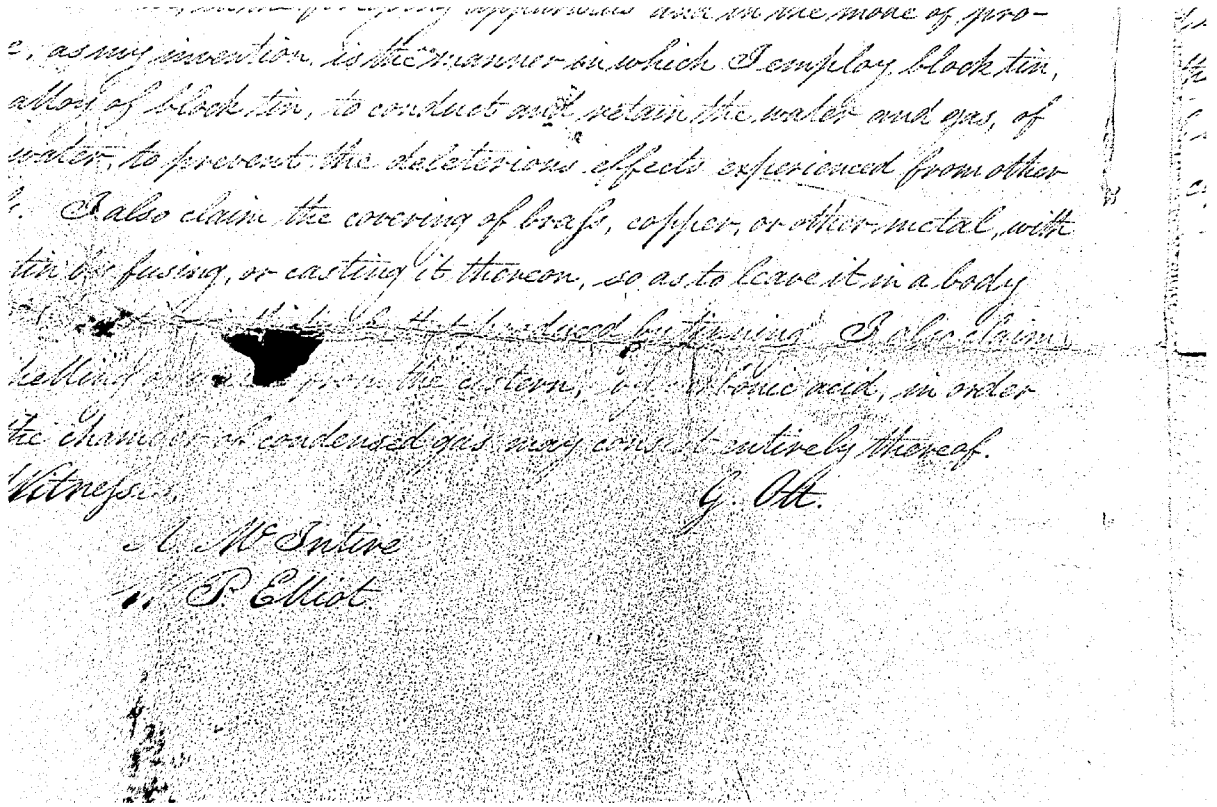


materials. I also claim the covering of brass, copper, or other metal, with block tin by fusing, or casting it thereon, so as to leave it in a body [illegible] the exhibited [illegible] prevent the action, [illegible] acid, in order that the character of condensed gas may [illegible] retained thereby.

Witnesses, G. Ott.
A. McIntire
W. P. Elliot



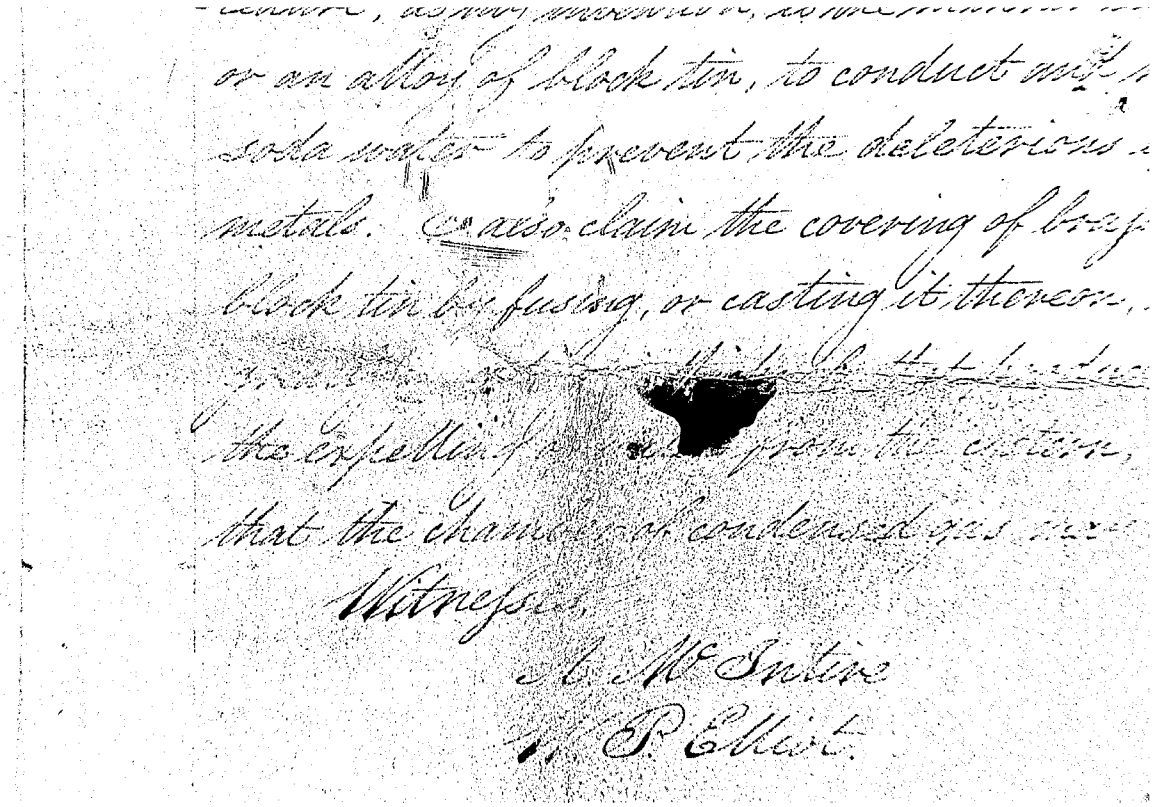
-cedure, as my invention, is the manner in which
or an alloy of block tin, to conduct and retain
soda water, to prevent the deleterious effects
metals. I also claim the covering of brass, copper
block tin by fusing, or casting it thereon, so as to
the expulsion
that the chamber of condensed gas
Witnesses,
C. L. McIntire
W. P. Elliot



...e, as my invention is the manner in which I employ block tin, alloy of block tin, to conduct and retain the water and gas, of water, to prevent the deleterious effects experienced from other ... Also claim the covering of brass, copper, or other metal, with tin by passing, or casting it thereon, so as to leave it in a body ... claim ... from the cistern, by muriatic acid, in order the character of condensed gas may correct entirely thereof.

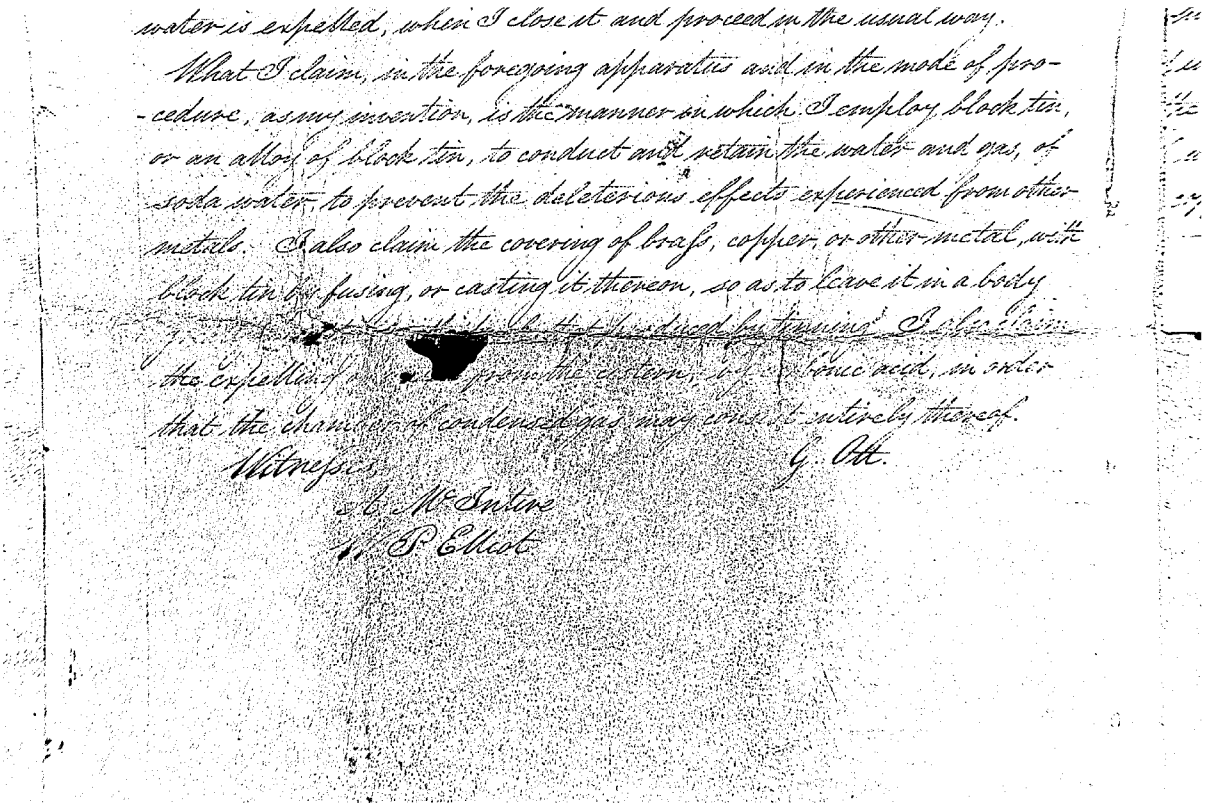
Witnesses,
C. M. McIntire
W. P. Elliot

G. Att.



or an alloy of block tin, to conduct my [illegible]
soda water to prevent the deleterious [illegible]
metals. Claim the covering of brass
block tin by fusing, or casting it thereon, [illegible]
the expedient [illegible] prevent the action,
that the chamber so condensed [illegible]

Witnesses.
S. McIntire
W. P. Elliot



water is expelled, when I close it and proceed in the usual way.

What I claim, in the foregoing apparatus and in the mode of procedure, as my invention, is the manner in which I employ block tin, or an alloy of block tin, to conduct and retain the water and gas, of soda water, to prevent the deleterious effects experienced from other metals. I also claim the covering of brass, copper, or other metal, with block tin by fusing, or casting it thereon, so as to leave it in a body

[redacted]

the expelling [redacted] from the system, of [redacted] acid, in order that the charge of condensed gas, may enter entirely thereof.

Witnesses,
E. McIntire
W. P. Elliot

G. Ott.