

P. MACINTYRE.
 METHOD FOR PRESERVING HYDROSULFITE LIQUORS FROM DECOMPOSITION.
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1,333,029.

Patented Mar. 9, 1920.

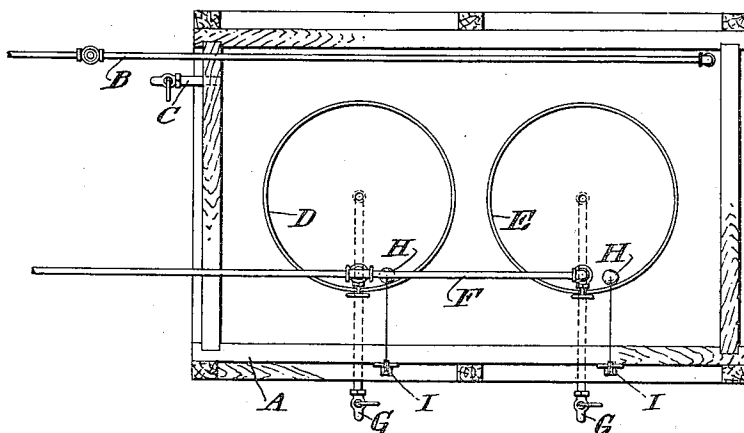


Fig. 2.

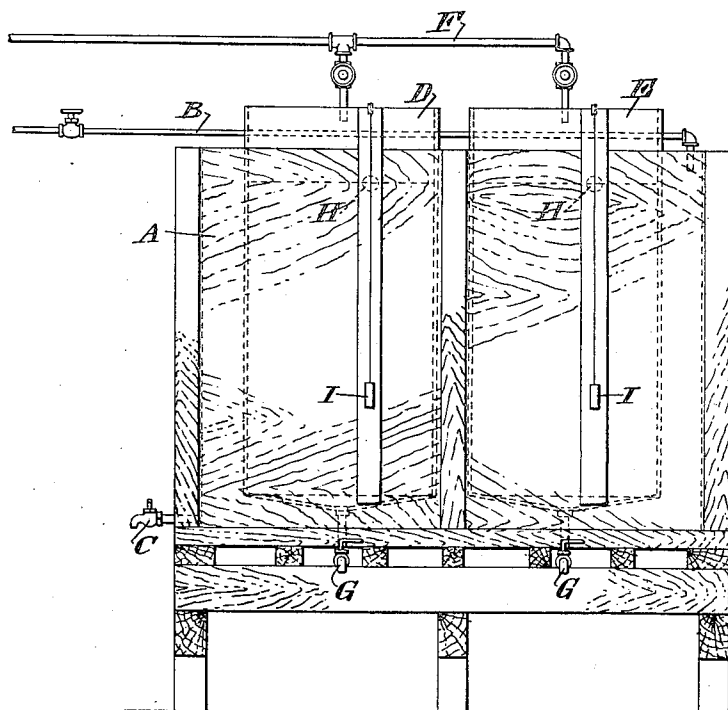


Fig. 1.

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UNITED STATES PATENT OFFICE.

PETER MACINTYRE, OF CLINTON, MASSACHUSETTS.

METHOD FOR PRESERVING HYDROSULFITE LIQUORS FROM DECOMPOSITION.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, PETER MACINTYRE, a citizen of the United States, residing at Clinton, in the county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in Methods for Preserving Hydrosulfite Liquors from Decomposition, of which the following is a specification.

My invention relates to a method for preserving hydrosulfite liquor from decomposition.

Hydrosulfite liquor, as now used in the indigo dyeing industry rapidly decomposes, oxidizing and losing its strength over night, so that it is now the usual practice to make new liquor each day in order to obtain satisfactory results.

I have discovered that hydrosulfite liquor, if kept at a sufficiently low temperature and out of contact with any oxidizing agency, such as air, may be kept for several weeks without losing its strength, thus resulting in economy in the making of the liquor and saving of waste in stocks, time and labor, whenever vat colors are used.

An apparatus for carrying out the method is illustrated in the accompanying drawings in which Figure 1 is a sectional elevation; and

Fig. 2 is a plan view.

Referring to the drawings A is a tank provided with an inlet pipe B and an outlet pipe C. Within the tank A, through which ice-water is passed, are iron tanks D and E for containing hydrosulfite liquor, these tanks being spaced above the bottom of the tank A to permit free circulation of water entirely around the interior tanks.

F is a pipe for supplying hydrosulfite liquor to the tanks, and G, G, are delivery

pipes. The tanks are provided with floats H, H, connected to indicators I, on the outside of the tanks, for showing the level of the liquor within the tanks. In operation, ice-cold water is supplied through pipe B and circulates around the tanks, flowing out through pipe C at the bottom. The hydrosulfite liquor is introduced through pipe F, and when the tanks are filled to the desired depth, sufficient oil to cover the liquor for the depth of about an inch, is poured in on top of the liquor, thus excluding the air and forming an air-tight seal. The indicators enable the operator to ascertain when the tanks are nearly empty, so that drawing off the oil may be avoided. Sufficient oil is added from time to time to compensate for losses by evaporation.

The air-tight seal in conjunction with maintenance of the liquor at a low temperature, prevents decomposition, oxidation and loss of strength of the hydrosulfite liquor.

I claim:

1. The method of preventing decomposition of hydrosulfite liquor which consists in maintaining the liquor at a temperature low enough to prevent decomposition and at the same time excluding oxidizing influences.

2. The method of preventing decomposition of hydrosulfite liquor which consists in maintaining the liquor at a temperature low enough to prevent decomposition and at the same time keep it covered with an air-tight seal of oil.

3. The method of preventing decomposition of hydrosulfite liquor which consists in maintaining it at about the temperature of ice-water while covered with an air-tight seal of oil.

In testimony whereof, I affix my signature.
PETER MACINTYRE.