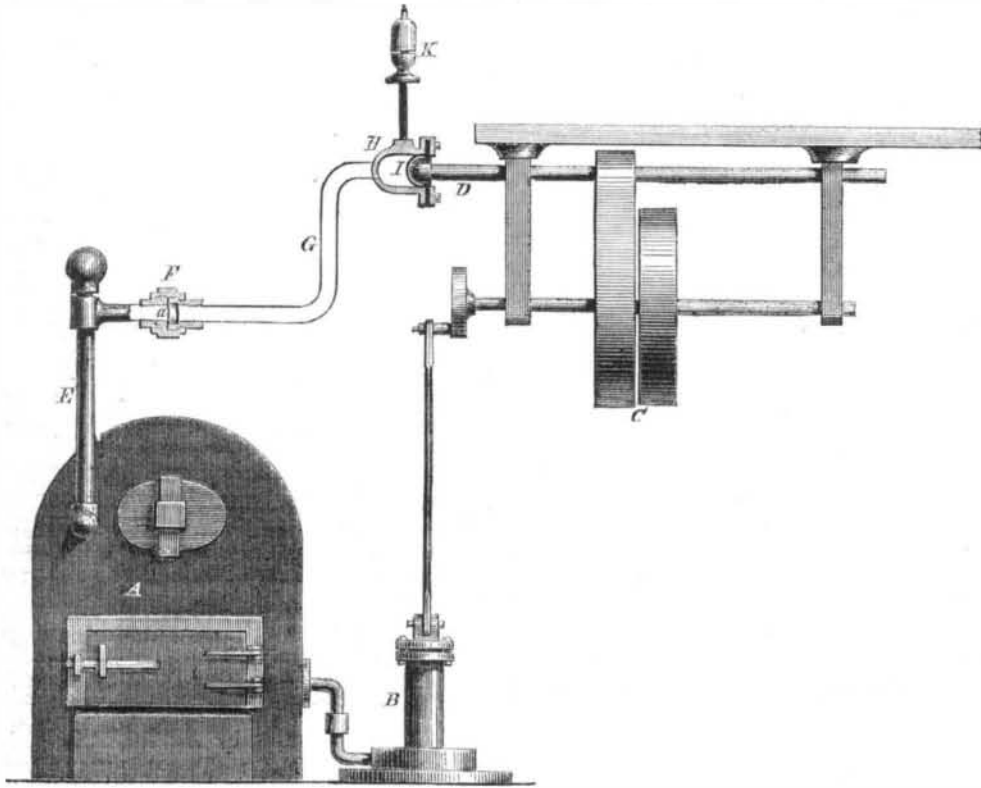


LOW WATER INDICATOR.

When an engineer or stoker is careless, there should be some method of preventing an accident, and of announcing the fact of his negligence to the proper person, that he may be reprimanded or discharged as the occasion may require. Our illustration shows an apparatus by which a deficiency of water in the boiler is prevented, and the moment the water gets to a dangerous point is announced. It is the invention of Messrs. J. W. Hoard & G. B. Wiggins, of Providence, R. I., and they are taking steps to secure a patent. To any of the various forms of boilers, A, a pipe, E, can be attached, so that the water in the boiler can communicate with it and pass into it to the same level as it is in the boiler or higher, but the water in E cannot pass the plug of fusible metal, a, that is placed in the seat or socket, F. B is the pump by which water can be fed to the boiler, and the pump rod is operated by a pin on a wheel that carries fast and

or shake it well. Keep it in a warm place for two days, with the bung open; by this time the fermentation will have subsided sufficiently for bottling. Bottle it, or put it into stone jars well corked, and it will be fit for use in a week. Another—Add eleven gallons of boiling to ten of cold water; to this put thirty pounds of molasses, and one ounce and a half of essence of spruce; work with yeast, and bottle as above. If you wish your spruce beer to be white, use refined sugar instead of molasses.

EXCELLENT PORTABLE LEMONADE.—Rasp, with a quarter of a pound of sugar, the rind of a fine juicy lemon; reduce the sugar to a powder, and pour on it the strained juice of the fruit; press the mixture into a jar, and when wanted for use dissolve a table-spoonful in a glass of water; it will keep a considerable time. If two sweet for the taste of the drinker, a very small portion of citric acid may be added when it is taken.



HOARD & WIGGINS' LOW WATER INDICATOR.

loose pulleys, C, on its shaft, so that the pump can either be operated or not by a bolt that is constantly running.

To render the whole clear, we will at once describe the operation of the apparatus, in case of the liability of an accident. Let us suppose that the stoker or engineer has allowed the water in the boiler to fall below the connection of pipe, E, and the boiler; the steam instantly rushes in the pipe, and from its superior heat to the water, it melts the fusible metal plug, a, and passes up the tube or pipe, G, into the chamber, H, from which it sounds the whistle, K, and pressing against the diaphragm, J, presses that out, and so operates the belt-shipper, D, causing the belt to be moved from the loose to the fast pulley, when it instantly works the pump, B, and the defect is remedied before any dangerous consequences arise.

The inventors will be happy to give any further information upon being communicated with.

PLEASANT DRINKS.

In this hot weather every one wants some cooling pleasant liquid, which they can imbibe to compensate for the perspiration, and to appease the thirst a high temperature induces, we therefore give a number of recipes from which every one, we should think, could find one to suit their palate:—

SPRUCE BEER.—Spruce is a powerful anti-scorbutic, and should be used freely by persons who have a tendency to that affliction. It acts with some as a diuretic. Here is a recipe for making it—Provide sixteen gallons of water, boil half of it, and put the other half of it into a barrel, pour the boiling water to the cold in the barrel; then throw in six tablespoonfuls of essence of spruce, and sixteen pounds of molasses; when sufficiently cold, add half a pint of yeast, and roll the cask about,

LEMON AND KALI, OR SHERBET OF THE SHOPS.—Ground or finely powdered white sugar, half a pound; powdered tartaric acid and carbonate of soda, of each a quarter of a pound; essence of lemon, thirty to fifty drops; all the powders should be well dried; add the essence to the sugar, then add the other powders, and mix well. One teaspoonful in a tumbler of water. This preparation must be kept very dry in tightly-corked bottles.

GINGER BEER, No. 1.—A VERY SUPERIOR KIND.—White sugar, five pounds; lemon juice, one quarter of a pint; honey, one quarter of a pound; ginger bruised, five ounces; water, four gallons and a half. Boil the ginger in three quarts of the water for half an hour; then add the sugar, lemon juice, and honey, with the remainder of the water, and strain through a cloth; when cold, add the quarter of the white of an egg, and a small teaspoonful of essence of lemon; let the whole stand for days, and then bottle. This will keep many months.

GINGER BEER, No. 2.—White sugar, three pounds; bruised ginger, three ounces; cream of tartar, one ounce; four lemons shred; boiling water, four gallons; allow the whole to soak for two hours, then strain; add eight ounces of yeast, and, after a few hours, put into tightly-corked bottles.

GINGER DROPS.—These excellent stomachic drops may be thus prepared:—Cut into little bits an ounce of candied orange peel, and put it with the same quantity of sifted loaf sugar into a mortar. Beat and rub both together until they form a smooth paste, when you must add to them an ounce of pure pounded ginger, and half a pound more sugar. Work the whole together in the mortar, and add sufficient water to dissolve the sugar, rubbing the mixture well up together; then put it into

a saucepan, boil it up to a caramel, and drop it in large drops upon clean writing paper.

COMPARATIVE LONGEVITY.—In the French *Revue Encyclopedique* are some interesting statements on longevity, and the proportion of deaths to the population, in the different countries of Europe. According to the data here presented, the duration and value of human life varies much between one European nation and another. The British islands, and especially Scotland, appear to be very favorable to the life of man; in a million of inhabitants, the annual deaths are somewhat more than eighteen thousand. Sweden and Norway are also salubrious climates; there are only two deaths in that part of Europe for three in the southern countries. In Denmark and the greater part of Germany, the proportion is about the same. Russia and Poland, where the mass of the inhabitants may be said to have scarcely the necessaries of life, are astonishingly favorable to the continuation of existence; the population lives, on an average, half as long again as the Italians, and exactly twice as long as the inhabitants of Vienna. The mean rate of mortality is in Switzerland, in the provinces of the Austrian empire, and in Spain, in which countries the annual deaths are about one in every 40. France, Holland, Belgium and Prussia do not vary much from the same proportion. In other parts of Europe, the deaths are one in 30, and often more in the countries that border on the Mediterranean Sea.

REFUSE OF TANNERIES AS MANURE.—At a late meeting of the Farmers' Club, of Little Falls, N. Y., the subject of using the refuse of tanneries (hair, fleshings, lime, &c.) for agricultural purposes, was discussed, and one member said he had used hair on grain and grass with the most marked effect. He had spread it thinly and harrowed in with spring wheat, and produced the best crop he had ever raised or seen in the neighborhood. Upon grass its effects had been very distinct and lasting. Applied upon the top of an unproductive dry ridge of land, it had produced a very luxuriant growth, and without any other application, the dark green complexion of the sward had scarcely abated in ten years.

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