

whole, I take the liberty of thinking, has been undoubtedly beneficial, as the building used to-day is a substantial one, made of brick, whereas the earlier edifice was built of wood.

I will now endeavor to give you a word picture of what happened to the steamship "Hutchinson" and her passengers upon reaching the upper quarantine. The passengers and their luggage were disembarked. They walked the pier to the building referred to. One room was allotted to the women and another to the men. Their trunks were opened and the contents taken out and placed upon movable frames that ran into a steam-tight chest of huge proportions. All of the effects were arranged on supporting bars inside what I take the liberty of calling a steam chest, the various sections of which had checks fastened on them externally, and a check corresponding with that number was given to the individual whose effects were on a given series of shelves or supporters constituting a vertical section within the steam chest. Such, briefly told, was the way in which our effects were taken and placed within that steam chest.

Now, to deal with what followed. Within the chest were steam coils without number, for dry heat or moist steam. The temperature ran up immediately to 230, a point at which, as all students of bacteriology are aware, germs and spores are killed. Later the compartment was filled with moist steam; thus the effects were first baked at a temperature of 230; then they were saturated with live steam at a temperature of 230, and were allowed to remain within the chamber upwards of half an hour. At the end of that time the long, sliding vertical sections were drawn out, and the individuals received their effects, piping hot, but wholly undamaged. It will be well to add, at this point, that the finest silks have been treated in this way without the slightest damage. While this process of killing germs, or any other morbid particles, that might have become entrangled in our effects while in Cuba was going on, many of the coarser things which could not be placed within the huge steam chamber, such as boots,

shoes and rubbers goods, etc., were thoroughly drenched with a solution of mercuric bichloride.

It will be just to state that this excellent application of mercuric bichloride was first thought out and applied by Dr. Joseph Holt.

So much for the effects of the passengers and their luggage. Next let us get back to the steamer. While we had been absent a steam tug had been fastened to her starboard quarter, and a huge asbestos pipe had been adjusted to an opening in the stern hatch. This pipe connected with a large furnace, in which sixteen pans were filled with burning brimstone. A current of air from without inwards was passing through the furnace, and the sulphurous acid gas thus generated was driven by a powerful steam pump through the asbestos pipe into the lower holds and all parts of the vessel. I may briefly cover this important section of the work by stating that it is most thorough and effective—so effective that all mice, rats, and cockroaches are killed. Time and again unfortunate cats that have been left on board have been killed. Thousands of feet of sulphurous acid gas are thus forced into all parts of the vessel under high pressure. The hatches are on, and the gas is confined for upwards of two hours. All who are familiar with this most admirable of disinfectants and germicides know what a penetrating and all powerful agent it is.

I may state that vessels reaching the Mississippi, coffee-laden from Brazilian ports, have special shafts placed from the combing of the upper hatchway and extending to the floor of the lower hold, when such vessels reach the quarantine station. I saw one (the "Maranham") with a cargo of twenty thousand sacks, treated at the old quarantine station in the fall of 1886. Six hours was ample—a mere minimum of detention.

The decks and all parts of the ship are thoroughly washed with a solution of the mercuric chloride, which the assistants spray over everything.

I have omitted to state that all the dirty linen from the ship, and everything of that nature, was taken on shore and thor-