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## elevated city railways cause eye trodbles.

The introduction of the elevated railways in this city has alsobrought in a peculiar class of optical troubles, due to the lodgment of iron dust in the eyes of pedestrians and other who have occasion to travel or pass under the railway struc tures. Hundreds of such cases are now treated at the hos pitals, and most of them are successfully cured, the parti cles being removed by a gouge-sbaped instrument about the size of a sewing needle. The pieces are too firmly beld to be removed by magnets.
The trains bave a high speed between stations, and are quickly brought to a stop. This requires strong braking which grinds off the iron from the shoes in fine showers, and the iron particles fly in all directions.
A magnet applied by us to the tops of the crossties at tracted a large quantity of very fine iron dust. Each pass ing train deposits its quota of iron, not only on the cross ties, but upon the street below. We passed a magnet along th gutter of the street near the stations, where dust usually ac cumulates, with the result that large quantities of iron par ticles were secured upon the magnet. The same experiment was also tried in Broadway, through which no elevated rail road runs, and while iron particles were attracted, the quan tity was far less than at the railways. By passing the magnet along a distance of only six feet near a railway station, more iron was attracted than by passing it along an entire block on Broadway.
'These particles varied in size from one-sixteenth of an inch to dust so fine as bardly to be distinguished by the naked eye, and were frequently entirely invisible, requiring the aid of the microscope to reveal them. Viewed under the microscope, their dangerous character becomes apparent. The greater part were bordered by a jagged fringe with very fine points, compared with which the point of a cambric needle appeared dull. Not infrequently the projection were book-shaped and barbed similar to a fish book, which will account for the difficulty experienced in removing them from the eye, into which they have been driven-the clos ing of the eyelid and the rubbing which thoughtlessly followed, assisting to more firmly embed them in the cornea. In order to determine whether iron particles could be at tracted while floating in the air, a magnet exposing about one square foot of surface was suspended in mid air under one of the railroad tracks, and although the maguet was by no means a strong one, it attracted to itself iron particles in spite of a strong wind which blew at the time.
Further, the awnings of sbop keepers along the lines of the elevated railroad are discolored by iron rust in a very short time, and require frequent renewals, since washing fails to remove the stains which the rust produces.
The evil above described being manifest, the question of its prevention naturally suggests itself. The subject is worthy the attention of inventors.

## THE LITTLE SHOP.

It is time that notice should be taken of the work done as well as of the place taken by our small shops. The " big concerns" do not monopolize all the skill and mechanica capability in the country. They may profess to do the bes work and produce the best results, because they are fur nished with the best tools. But they do not monopolize all the mechanical skill, nor collect all the best workmen Many of the best manipulators, and a very large proportion of the most exact meshanics, are in the little shops; content, may be, to be the foremen, when in a big shop they would be only first class workmen. The small shop men are valuable in any shop where mechanics, rather than ope ratives, are required, because they are generally " men at pinch," "expediency men," and generally excellent work men.
The proprietor of a large manufacturing establishment, building fine tools of a particular cbaracter, claims that bis best men come from small shops where makeshifts and contrivances are the rule. "Such men," he says, "can make the shop hum " by their methods.
It is very convenient to bave a shop full of adapted tools, but it is also convenient to have in the shop graduates from "the little shop" who can contrive as well as tend a ma chine.

## The Blanchard Lathe.

The "last lathe" of Tbomas Blancbard is an invention that proves itself worthy the name in perpetuity instead of being confined to the turning of wooden lasts. This invention was made public more than sixty-three years ago-January, 1820-and was afterward adapted to wheel spokes, bat blocks, wig blocks, and a large number of other irregular forms. Although Mr. Blancbard made many improvementa
on his original device, the main design is retained in the latest adaptations-that of guiding a rapidly revolving and longitudinally feeding cutter head by a model. Except for exact corners, there is hardly any simple form that cannot be reproduced by the Blanchard method; of course, a production with a body and members, as a statuette, or a vase, or many other articles, could not be turned as a whole in the lathe.
A few changes have been made in the Blanchard lathe within the last twenty years, but these were mainly adaptations of well known mechanical movements for the special work to which the particular lathe was assigned. The writer well remembers Mr. Blanchard, thirty years ago, and in conversation he then stated that of all his inventions that
of his "last lathe," as he called it, was oue that required no
radical change. Yet he would be surprised to see one of bis machines turning out from 600 to 700 carriage wheel spokes every ten bours, made from the toughest bickory, and not only that, but changing its feed automatically to suit the work. This change is quite ingenious. There aret wo feeds to the longitudinal progress of the cutter bead along the machine, and where the sawed spokes are small and the amount of material to be removed is little, the feed is very rapid; but as the cutter head approaches the hub end of the spoke the curve makes the material to be removed more, because the spokes as sawed present only straight lines from end to end. The feeds are by pulleys and belts, and when he time comes for changing the movement of the cutter head, it releases a lever and holds another, each carrying idler pulleys, so that the fast or swift feed pulley is released and the slower pulley takes its place. The work is so nearly automatic that the attendant has only to take out the turned spoke and put in a sawed blank; but at the rate of over one a minute bis place is no sinecure.

## Disinfection of Egyptian Rags.

In relation to the proper disinfection of rags imported nto the United States from Egypt, the State Depart ment has, upon careful and mature consideration of the subject commensurate with the interests involved, decided upon the following metbods of disinfection, either of which will be satisfactory to the health authorities of New York city, New Haven, and Boston, who bave been consulted in espect to the matter, viz. :

1. Boiling in water for two hours under a pressure of 50 pounds per square inch;
2. Boiling in water for four bours witbout pressure; and 3. Subjection to the action of confined sulphurous acid gas for six hours, burning $11 / 2$ to 2 pounds of roll brimstone in each 1,000 cubic feet of space, with the rags well scat tered upon racks.
Full and explicit instructions bave accordingly been given to Mr. George P. Pomeroy, Agent and Consul General at Cairo, and Mr. Francis McNally, a citizen of the United States, has been designated as the Inspector. He will bave immediate supervision, under the Consul-General, of the process of disinfection, will be required to give the subjec bis earnest personal attention, and furnisb a proper certifi cate. Mr. McNally's certificate will sbow the foilowing facts: The name of the consignee in the United States, the place where the rags were disinfected, and the process of disinfection, which must be one of the processes bereinbefore described.
After that the Consul-General is to authenticate the certi ficate given by the Inspector. This process is to be observed in the case of every bale of rags, which is to be also marked "Thoroughly inspected," with the name of the inspector.

## The Parasites of Money.

The Frankfurter Zeitung states that Dr. Reinsch bas ound, as the result of a long series of minute investigations, that the surfaces of 50-pfennig pieces (sixpences) which have been long in circulation are the bome and feeding ground of a minute kind of bacteria and vegetable fungus. An extended series of observations showed that this is the case with the small coins of all nations, the thin incrustation of organic matter deposited upon their surfaces in the course of long circulation rendering them very suitable for this parasitical settlement. Dr. Reinsch scraped off some of these incrustations, and with a small scalpel divided them into fragments, which were subsequently dissolved in distilled water. The employment of lenses of very bigh power showed the bacteria and fungi distinctly. This is a matter of no little importance from a bygienic point of view. It has now been conclusively established that bacteria form the chief agency in the propagation of epidemic disease. The revelation that they bave a chosen domicile in the most widely circulating medium which probably exists in the world presents us with a new factor in the spread of infectious disease. There is, bowever, a remedy. Where coins bave been in circulation for a number of years, if they are washed in a boiling weak solution of caustic potash they wil be cleansed from their organic incrustation, and so freed from the unwelcome guests which they harbored.

## A Cough Remedy.

One of our English contemporaries, in reply 10 an inquirer, recommends a sirup made of the following ingredients for colds and coughs: Take 18 ounces of perfectly sound onions, and after removing rind make several incisions, but not too deep. Boil together with $131 / 2$ ounces of moist sugar and $23 / 4$ ounces of boney in 35 ounces of water, for three-quarters of an hour; strain, and fill into bottles for use. Give one tablespoonful of this mixture (slightly warmed) immediately on attack, and then, according to requirement, five to eight balf tablespoonfuls daily. It is said that this recipe was hat used by the Zulu Caffres when visiting Europe some wo years since, and who suffered much from the climate, but invariably recovered upon its use.

Orange J dd, who bas ably managed and edited the American Agriculturist for thirty years, has retired from the latter paper and removed to Cbicago, where be is employed as editor of the Prairie Farmer. We wish Mr. Judd great success in his new field of labor, and we congratulate the Prairis Farmer on its good fortune in procuring the services of so valuable a coworker.

