

Scientific and Useful

POSTCARDS AS BAROMETERS.

A formula was recently published for making postcards which would by a certain change of colour forecast the weather of the immediate future. In fine weather they appear of a slight blue tint, in changeable weather lilac, and in rainy weather pink. An ordinary developed card should be hardened by immersion for ten minutes in a 5 per cent. formalin solution, washed and dried. Thirty grains of ordinary cooking gelatine should be soaked in water for half an hour, then melted by the aid of heat, and 10 grains of cobalt chloride and 100 drops of glycerine added. The card is flowed or painted over with this solution while warm, excess is drained off, and the card dried.

STREET PHOTOGRAPHY AT NIGHT.

If one can but withstand the chaff of passers-by and the embarrassment of a gaping circle of onlookers, photographing in city streets at night is a wonderfully fascinating pursuit. It should be remembered that people walking about in front of the lens will not show in the picture as long as they keep moving. Should one of these pedestrians come to a halt in a well-lighted portion of the view it is well to hold the slide or drop the focussing cloth over the lens until he passes on. A street car or carriage carrying lights should be given the same treatment until it passes out of view, or each light will form a dark streak on the negative and a corresponding light streak on the print. This is all the more noticeable if isochromatic plates are being used.

WOMAN'S WORK IN GERMANY.

By a recent census it appeared that of some twenty-six million women in Germany, twenty-five per cent. were wage-earners, as against seventeen and five-tenths per cent in the United States. One-third of the entire number of German working women were engaged in agricultural pursuits. Recently it was true that there were only nine women physicians in Germany, as compared with seven hundred in Russia, and five thousand in the United States.

The admission of women to the German universities will effect a great change in the ratio of the number of women engaged in professional pursuits to that of the women engaged in agriculture.

FLOATING DOCKS.

Considerable development has occurred in recent years in the provision of floating docks. Docks of this character are actually in existence, or are under construction, which are adapted for dealing with the largest ships of war and the most capacious liners. Our own navy has a floating dock at Bermuda capable of lifting warships up to 10,500 tons dead weight, and the navy of the United States possesses docks of even greater lifting power. On the commercial side a floating dock is being constructed capable of lifting ships up to 30,000 tons dead weight, thereby possessing sufficient power and dimensions to deal with vessels of about the size of the new Cunarders. It is claimed for floating docks, and of course, rightly so, that they are distinctly cheaper than graving docks, and can be built much more rapidly. It has also been stated by Mr. Lionel Clark, who has done so much for this system of construction, that there are docks of this character at present in existence which have been working for over forty years. Those which are self-docking, or can be docked, and which have been carefully looked after, are, he says, still in good condition. Others, which have never

been docked, but allowed to slowly deteriorate, are now practically worn out. To compare such docks with graving docks the conditions of the site and the nature of the accommodation to be provided will, on careful investigation, generally indicate in which direction the balance of advantage lies. The two types are not rivals, and there is no question of one supplanting the other: they are both efficient, each possessing its own special features, and it is for the engineer to examine carefully these points as circumstances arise, and to decide which of the two is the more suitable for his purpose. —"Engineering."

INFECTIOUS MEDICINE BOTTLES.

There is good reason to believe that infection is sometimes spread by medicine bottles, which, after having served their purpose in the room of a person suffering from a contagious disease, are put to other uses. A short time ago the National Glass Bottle Workers Trade Union sent a deputation to the President of the Local Government Board to draw his attention to this danger to the public health. Mr Burns promised to consider the suggestion of some restriction on the sale of secondhand bottles collected from rubbish heaps and elsewhere, with a view to enforcing perfect sterilisation. The German Pharmaceutical Association, at its recent annual meeting, discussed this question of secondhand bottles, and it was resolved to petition the Government to prohibit the return to chemists' shops of bottles previously supplied to customers suffering from contagious diseases. The resolution was the outcome of two cases in which employees of chemists had contracted diseases as a result of washing infected bottles. In Austria, physicians already insist on the use of new bottles for their prescriptions, and in America a chemist's assistant recently claimed damages in respect of an attack of scarlet fever, said to have resulted from handling medicine bottles returned from scarlet-fever patients.

THE SMALLEST SCREWS.

The smallest screws in the world are those made in watch factories. They are cut from steel wire by a machine, but as the chips fall from the knife it looks as if the operator was simply cutting up wire for his own diversion. One thing is certain: no screws can be seen, and yet a screw is made by every third operation.

The fourth jewel wheel screw is next to invisible, to the naked eye resembling a speck of dust. With a glass, however, it can be made out quite distinctly. It has two hundred and sixty threads to an inch. These little screws are four one-thousandths of an inch in diameter, and the heads are double in size. It has been estimated that an ordinary thimble would hold one hundred thousand of them.

About one million of them are manufactured in the course of a month; but no attempt is ever made to count them. In determining the number, one hundred of them are placed on a very delicate balance, and the number of the whole quantity calculated from the weight of these. All the small parts of the watch are counted in this way, probably fifty out of the hundred and twenty.

When they have been cut, the screws are hardened and put into frames, about one hundred to the frame, heads up. This is done very rapidly, but entirely by the sense of touch instead of by sight, so that a blind man with a little experience could perform the task.

The next step in the process is to polish the heads in an automatic machine, ten thousand at a time. The plate on which this is done is covered with oil and a grinding compound, and on this the machine moves them very rapidly, by a reversing motion, until they are in perfect condition.

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SMART AND ATTRACTIVE.

Ask for them all

"Zealandia" Dressing Gowns
STYLISH AND COMFORTABLE.

"Zealandia" Dust Cloaks
IN THE LATEST STYLES AND MOST FASHIONABLE MATERIALS.

"Zealandia" Pinafores
FOR PRETTY CHILDREN.

All "Zealandia" Garments
ARE CUT TO FIT AND MADE TO WEAR.

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WINCHESTER

GREASELESS BULLET CARTRIDGES

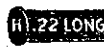
SMOKELESS POWDER



.22 BB CONICAL BALL



.22 SHORT



.22 LONG RIFLE



.22 WINCHESTER AUTOMATIC

By doing away with the lubrication on the bullet, one of the prime causes of the deterioration of the powder is removed, and the accuracy, reliability and keeping qualities of the cartridges greatly increased. It also prevents fouling of the barrel and working parts; and the cartridges are much cleaner to handle. Winchester Greaseless Bullets are made of a special alloy, which gives exceedingly satisfactory results. A trial of Winchester .22 Short, .22 Long, .22 Long Rifle, .22 Winchester, .22 Winchester Automatic Rimfire or B. B. Caps, Conical Smokeless Powder Cartridges will convince you of the value of Winchester Greaseless Bullets.

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For CONSTIPATION.

Professor D. LAMBE, of Warsaw, Professor of Clinical Medicine at the University, writes—
"Hunyadi János Bitter Water, besides being an excellent general aperient, has proved specially efficacious in the treatment of chronic constipation, venous obstruction and congestion, hæmorrhoids and obesity."

AVERAGE DOSE:—A wineglassful before breakfast, either pure, or diluted with a similar quantity of hot or cold water.

CAUTION.—Note the name "Hunyadi János," the signature of the Proprietor, ANDREAS SAXLEHNER, and the Medallion, on the Red Centre Part of the Label.

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