# Scientific American.

each State; the total number of the class-

#### The Water of Ohio.

MESSRS. EDITORS—Will you do me the personal kindness to state what form of filter or other agent, mechanical or chemical, is, in your estimation, best adapted either to make the well water of this section of Ohio (which is intensely impregnated with lime,) or the rain water (which is unavoidably impregnated with the smoke and sooty residuum of bituminous coal, which is extensively burnt here) fit for drinking purposes. If my family drink the lime water, their alimentary canal is affected throughout, and digestion consequently greatly impaired .-The running water, whether we drink of it or lave in it, is nearly certain to affect the spleen, and produce chills and fever. What shall we do? Can we filter the tinted rain water and make it palatable, by charcoal, quartz, or other process, or will it be more easily done by decomposing the lime in the wells, or shall we be driven to the ultimatum of distillation? Your world-wide repute for omniscience is sufficient guarantee that you can fully answer my queries, and your equally well-known disposition to dispense your treasured intelligence, will constrain you to reply, which I shall expect to read in your next issue. HENRY S. BABBITT.

Newark Machine Shop, Newark, Ohio.

[The passing of the well water through charcoal and sand in a common filter will not remove the lime and soften the water. It is, however, a very good plan for purifying the rain water. The rain water should be conducted to fall upon a cotton clothsuch as Canton flannel-which can be taken out and washed from time to time. Unless this is done, the charcoal will have to be re-

Hard lime water can be softened with quick lime. The common hard lime water in some wells and streams, contains carbonate and sulphate of lime. These make the water hard, and can be precipitated by quick or fresh slacked lime, which is a hydrated ox yd. Half an ounce of quicklime stirred in a pan containing nine quarts of water, then thrown into a twenty gallon cask of clear hard lime water, will soften it, by taking up the excess of carbonate and falling to the bottom in the form of chalk and gypsum. This way of treating the hard lime water of Ohio will render it more fit for washing, and for feeding steam boilers, but we are not sure whether or not it will be rendered any more palatable or healthy. A little sal soda will also precipitate the carbonate of lime and soften the water.

There are many substances which we know that could be employed to precipitate all the lime in well water, but then it would be too expensive to use them, and besides, they cannot be used with safety either. The only rational economical system which we can think of for purifying the well water of Newark, Ohio, is by filtration, as fellows :-Make a long channel or way of cobble stones sand and clay, and conduct the water through it in its passage to a filtering cistern, where it should be made to percolate through fine charcoal and clean sand, and pass from the bottom through an opening into an adjoining open chamber for use .-The form of the filtering chamber is of no consequence, it may be square or round; but the longer the conducting channel is, so hat the water receives the greatest amount of agitation among the stones sand and clay, so much the better. The channel should be set upon an incline, and the cobble stones clay, and sand renewed from time to time.

# Foul Linen, Buttons, and Coat Tails.

An exchange paper indulges in the following moral and instructive calculations:

"It has been calculated that the cost of washing linen that might just as well be worn two days longer, amounts to enough in this country to more than defray the expenses of the American Board of Foreign Missions! The expense of buttons worn on the back of our coats, where they are of no earthly use, is equal to the support of all or convenience) is actually greater than the wheels, pipes, joints, &c., in endless variety. strength, it is well suited for delicate work by fractured.

cost of our excellent system of common

Statistics of Patents Issued in 1853. Tabular statements of Patents issued during

the year 18									ring		C	ity,	N.	J. :	1011	21610		J 1		•• 0.	., 01	001	. BC J	a
CLASSES.	I. Agriculture,	If. Metallurgy and manafasteres of ractal and instruments therefore	-	process	V. Calorifiers,—lamps, Stoves, &c.	VI. Steam and Gas Engines.	VII. Navigation and Maritime Instruments.	VIII. Mathematical, Philosophinal, &c., Last aments	IX. Civil Engineering and Architecture.	X 1 and Conveyance.	XI. Hydraulies and Pneumatics.	XII. Medianical Fower, applied to pressing, weighing, &c.	X111. Grönding Mills, &c	NIV, Lumber and Mandatanes for Preparing	XV. Stane and Clay Manachetteres.	XVI. Leather and Manhines therefor.	XVII. Househalf farmiturn, &c	X VIII, Fine Arts.	NIX. Fire Arms, &c.	XX, Surgiral and Medical Instruments.	XXI. Westing Appearel, &c	XYI. Miscellaneous	Totals	wo the we all sin que the boan art
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New Hamp.	3	2	0	0	1	0	0	0	1	0	0	1	0	2	0	1	3	0	0	0	0	0	14	2
Vermont,	4	1	1	0	2	0	0	0	2	2	0	9	0	2	0	0	1	0	0	1	0	1	17	2
Mass.,	4	12	27	6	9	4	6	6	1	4	5	0	1	14	2	6	6	12	5	2	1	2	135	2
R. I.,	1	1	4	1	0	0	4	0	1	0	0	0	0	1	0	0	0	1	0	0	0	0	14	2
Connecticut	, 1	8	5	4	0	0	0	1	1	4	0	0	0	5	0	0	4	2	2	2	2	0	41	2
New York,	<b>2</b> 8	31	9	12	16	13	16	6	8	9	10	6	6	14	6	11	10	21	2	4	4	8	250	3
NewJersey		5	1	3	2	0	1	0	1	1	0	0	0	1	0	0	0	1	0	0	0	0	19	3
Penn.,	15	16	3	5	9	15	3	2	6	1	3	0	1	6	2	4	8	9	0	1	3	3	115	3
Delaware,	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	_	3
Maryland,	4		1	1	0	1	0	0	0	0	1	0	0	2	0	0	0	0	1	0	0	2	14	4
Virginia,	10	2	1	0	2	0	0	1	1	0	1	0	1	2	0	0	1	0	0	0	0	0	22	4
N. Carolina,		0	0	0	0	0	0	0	0	1	1	G	0	0	0	0	0	0	0	0	0	0	4	
S. Carolina,		0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	2	fo
Georgia,	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	5	th
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Illinois,	9	0	0	1	0	1	0	1	0	0	1	0	2	4	0	1	0	1	0	1	0	0	22	uf
Michigan,	3	1	0	0	1	1	0	0	0	0	0	0	0	2	0	0	0	0	1	0	0	0	9	se
Wisconsin,	0	0	0	0	0	0	0	0	0	0	0	0	O.	0	0	0	0	0	0	1	0	0	1	no
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Missouri,	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	-				_		-
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Foreign, 0 4 3 9 1 1 3 1 0 0 0 0 0 0 0 0 0 2 0 1 0 25 Totals, 118 93 64 46 48 44 37 19 30 27 25 12 15 65 12 26 46 56 16 15 12 19 845 they will be cleared from all impurities, and Extensions, - - -Additional Improvements, Re-issues, -

number of patents, and more than one quar- 11, 16, 17, twenty-five, and under fifty were ter of the whole, 250; Massachusetts, the issued. next highest, 135; Pennsylvania, 115—these This table will well repay a further investhree States receiving more than one half of tigation, both by the curious, and those seekthe whole number issued. Alabama, Wis- ing information on the resources, genius, &c., consin, California, Texas, received each, 1. of the country. Delaware and Arkansas received none. Foreign Patents issued, 25.

In classes 1, 2, 3, 14, 18, more than fifty better.—[Ed.

India Rubber Combs. tions of iron to the arts in our period, the be wondered at when its extraordinary qualpresent is frequently termed the "Iron ities are considered. It is now, we perceive, called the "Age of Steam," and at others toise-shell and the brittle horn. When india the "Age of Electricity." With equal propriety it may be termed the "India rubber of sulphur, and passes through heated roll-Age" The application of this substance to ers to thoroughly incorporate the sulphur, the arts and manufactures are so numerous it is then called "vulcanized." Now if the that we cannot think of giving a list of them vulcanized rubber be exposed for a few er bags, as formerly. Each box contains table gum, which had the singular quality break. In this state its texture very much of removing pencil marks from paper." Now resembles tortoise-shell, and can be beauti- nation can easily be traced. The lid is fastthis is some thirty summers past; and dur- fully polished. Comb-makers cut and work ened down by a screw, counter-sunk in a our orphan asylums! The value of tails to ing that short period india rubber has been it like shell. It can be carved, and designs brass plate, over which is the Post Office dress coats (of no value in reality for warmth employed for shoes, coats, hats, carriage of any form can be made; and, from its seal, and this can only, therefore, be wilful-

REMARKS—New York received the highest | each were issued. In classes 4, 5, 6, 7, 9, 10,

24

[All our inventors must feel deeply obliged to our correspondent for the labor New York was the only State that receiv- he has bestowed on the above table. The ined patents in each class, and in classes 1 and formation is very useful, and the work is ably form. In two or three minutes, after a few 2, is ahead of all the others. Massachusetts accomplished. We hope he will perform drops of chloroform had been administered, received most in class 3; Pennsylvania, in the same good office for the Report of 1854. We do not know any person who can do it

Every day we find out some new applica-In consequence of the numerous application for some useful purpose. This is not to Age." It is sometimes, too, very properly made into combs, superseding expensive tor-

each class; the number of each class to | in instances where other materials would be liable to fracture. Thus the milky juice of es to each State, &c. Prepared for the a tree (Siphonia and Ficus Elasticus) is Scientific American by T. G. S., of Jersey | made by the art of man into a walking cane, a picture frame, a top coat, a slipper, or a SEPTIMUS PIESSE.

### Singular Statistics of Coffins.

MESSRS. EDITORS .- I have worked journeywork at coffin making at various times during the past four years for James B. Richards, we make them at a certain rate per foot. measuring the length of the bottom. It has always struck me as being something very singular that a great many coffins are required of certain sizes, while but few are required of other sizes. On my mentioning this to my employer he let me have his sale book, from which I find the sizes to run on an average per month as follows:—

Ft. In. Coffins. Ft. In.

e't. In.	Coffins.	F't.	. In.	Coffins.
- 20 (still born)	20	4	8	1
2	20	4	10	1
2 4	20	5		1
2 6	19	5	2	2
2 8	20	5	4	4
2 10	20	5	6	9
3	18	5	8	10
3 6	9	5	10	12
3 8	8	6		12
3 10	7	6	2	4
1	3	6	4	4
4 6	1	6	6	3

The last three are almost always required 2 for the months of December and January: 5 this table of mortality seems to me to run 1 very singularly on sizes, and I suppose it to 2: be worthy of publication in order to provoke 5 inquiry on the subject-some good may result from investigating the thing.

8 N. B.—I may mention that along Rock River, in Ogle Co., Ill., there are many beds of good sand proper for making the finest kind of glass. If any of the New York manufacturers wish to inspect the sand, I will send them a sample if they will address a JARVIS ROYAL.

Oregon City, Ill., April 2, 1855. To Sportsmen.

Wash your gun barrels in spirits of turpentine by dipping a rag or sponge fastened on your gun rod into the liquid, and swabbing them out three or four times, when can be used almost instantly as the turpentine will evaporate and leave the barrels dry; even if they are a little moist it will not prevent their going off like water. After being washed thus, there is no danger of rust as when water is used. I am an old experienced gunner, and have practiced this for years, and found it useful. Spirits of turpentine can be procured at all country stores, and a small quantity sufficeth.

Chloroforming Weevils.

One of the editors of the Washington Union was present at the Patent Office a few days since, while experiments were made to destroy weevil in wheat by the use of chlorothe insects naturally enough began to exhibit unmistakable symptoms of uneasiness, which proved to be the certain precursors of a quiet, respectable death. It was the opinion of the experimenter that these destructive insects might be effectually exterminated through the agency of chloroform, and large quantities of fine wheat saved ev-

# Mail Boxes.

The mails on the Cunard steamers are now carried in pine-wood boxes instead of leathhere; nevertheless, we will mention a few hours in a vessel to the action of high-pres- about 2500 letters, and weighs about 100 lbs. facts relative to this material. When we sure steam, say of 300° centigrade heat, it By means of an inner spring an engraved were at school india rubber was looked up-lacquires new properties. From being soft direction—Liverpool, Boston, New York on only as "a curious specimen of a vege- it becomes hard, though very difficult to shows itself when necessary. The boxes are all numbered, and therefore their desti-