

patent, and busy needle-music is heard in the palace each day at the appointed hour for such recreation."

**ARSENIC AS A PREVENTIVE OF DISEASE.**—M. Montigny, French Consul in China, in reference to the use of arsenic by the Northern Chinese, says they mingle it with their smoking tobacco. According to missionaries who have lived a long time there, tobacco free from arsenic is not sold. The same witnesses assured the consul that the arsenic smokers were stout fellows, with "lungs like a blacksmith's bellows, and as rosy as cherubs." The publication of M. Montigny's statement has called out a letter from Dr. Londe, who announces that some years ago, in the course of a discussion at the Academy of Medicine, on the agents to be employed to cure tubercular consumption, he told the assembled doctors that he had found but one successful means of combating this dreadful disease, and that means was the smoking of arsenic. The doctor re-affirms his commendation of this remedy.

**SHODDY.**—Many persons have heard of shoddy who do not know its nature and use. It is made from woolen rags, which are torn and cut up by machinery for the purpose of mixing the product with new wool, to be made into cloth and other woolen fabrics. Cloth made with a mixture of shoddy is inferior in strength to that made from fresh wool, because much of the old rags from which the shoddy is made is rotten, and has lost its original strength of fiber. Shoddy is employed very extensively in the manufacture of cheap woolen goods, which do not wear half so long as those which are somewhat higher in price, made of clean new wool.

**SUCCESS OF DABOLL'S FOG SIGNAL ABROAD.**—Daboll's fog trumpet, about which so much has been said, has at last, after persistent efforts by the inventor, been adopted by the English Government. Recent experiments made in England prove that this fog trumpet can be heard further than any others in that country. Steps are being taken to make an immense machine of this description, to be placed on Cape Race, where so many accidents have repeatedly occurred. We are pleased to hear of Mr. Daboll's success; he has shown the right spirit on this subject and pushed his claims with great energy for many years.

**PORT-HOLES IN THE MONITOR TURRETS.**—The holes for the guns in the monitor turrets are by some shops cut out of the solid metal; when the turret is completed, a boring head, provided with cutters like lathe tools is set on a shaft in a frame made for it, and brought into contact with the turret wall: when power is communicated to the boring head by a small engine the cutters soon make a large hole 15 inches in diameter. The plates are cut out; the iron is not removed bodily but in disks. Other shops punch the hole in each sheet before the turret is set up and then dress the aperture out neatly after all the plates are erected.

**GEMS OF COLORADO.**—Among the rocks in that territory are found beautiful translucent quartz crystals, tinged with crimson and purple, and often classed as amethysts, amazon stones, beryls, opals in varieties, garnets and turquoise. On the plains are found the most beautiful and curious of agates, birdseye, cats-eye, moss and fortification. Sardonyx, jasper and malachite also abound. Here, too, are obtained fossils in great abundance. We understand that these precious stones are beginning to be kept for sale at all the jewelers' shops in the territory, and we wonder they have not yet found their way to New York.

A LARGE fly-wheel weighing 60 tons was recently constructed in England and put together in several parts; the rim was in four sections and the light arms and center were also cast separately; when finally adjusted it ran only one-fourth of an inch out of truth.

SOME of the English peasantry took the recent earthquake for a sign that the world was coming to an end, and packed up to emigrate to America, to avoid the calamity.

A BALE of cotton recently received by Wm. Pollock, of South Adams, contained a stick of yellow pine weighing 186 pounds, which at 90 cents per pound cost \$168 40.

THE steamer *Daniel Drew* has been cut in two, and will have fifty feet added to its length: this is one of the fastest boats that ever ran on the North river.

**POWDER OF MILK.**—The powder of milk, added to water, forms an agreeable drink, and an excellent substitute for milk:—Milk, two pints; water, one ounce; sugar, one pound. This mixture is then to be gently heated and constantly stirred. When it is three-fourths evaporated, the sugar is to be gradually added and the whole briskly stirred. After it is perfectly incorporated, the mixture is to be removed from the fire, poured into plates, and dried in an oven. When perfectly dry it is to be finely powdered and kept in well-stopped bottles. One or two teaspoonfuls is sufficient for a cup of tea or coffee.

**INDIAN MUSLIN.**—It appears that the manufactures in Bengal were formerly incomparably finer than they are at present; there was a sort of muslin called Abrooan, which was manufactured solely for the use of the emperor's seraglio, a piece of which costing 400 rupees or \$250, if spread upon wet grass, would have been scarcely visible. In the Nabob Alaverdy Khawn's time, a weaver was chastised and turned out of the city of Dacca, for his neglect, in not preventing his cow from eating up a piece of the same sort of muslin, which he had spread, and carelessly left on the grass.

**BORING LARGE CRANKS.**—In our large machine shops the shaft holes in heavy cranks are cut out of the solid metal by long-legged cutters set in a cast-iron head. These tools remove a central core from ten to fifteen inches in diameter. One side is run down first, the crank is then reversed, and the second cut started from the opposite side; when both cuts meet the core drops out, and the hole only needs a little trimming to be completed.

It is interesting to note that the school books lately published by the Austrian Government are printed on paper made of "corn shucks," or the leaves which protect the ear of maize. This material gives the page a yellowish color, which medical men hold to be less fatiguing to the eye than our snowy pages.

An explosion of detonating powder took place recently at the American Cap and Flask Company's factory, Waterbury, Conn., by which the lower part of the building was shattered. A returned volunteer named Edward Rush seized a bucket full of the explosive mixture and carried it out at the risk of his life.

WE hope our readers will not omit to notice the proposals for a steam car issued by a Cincinnati railroad company; the advertisement can be found on page 15 of the present number of this paper: the adoption of steam on city railroads is a thing urgently needed, and we are glad to see sufficient enterprise manifested to give it a fair trial.

EXPERIMENTS are being made in France with a new kind of rocket, which is to prevent the enemy from working at night. Besides giving a most brilliant light, illuminating a distance of 200 meters when let off, it offers the additional advantage of finally bursting like a howitzer, and carrying wholesale destruction into the hostile camp.

A PATENT has just been taken out in England for perforating the leaves of books and pamphlets after the manner of postage-stamp sheets. If the invention can be applied, all those who read will rise up and call the inventor blessed, as the necessity of using paper cutters will be removed.

A SCIENTIFIC expedition, led by the eminent north-country naturalist, the Rev. H. B. Tristram, of Great-ham, is on its way to Syria. The members will employ themselves several months in exploring the zoology, botany and geology of that interesting land.

WE are indebted to Hon. P. H. Watson, Assistant Secretary of War, for a copy of the Report of the Secretary of War and also of the Commander-in-Chief Gen. Halleck.

#### Shelter for Sheep.

There is no season of the year when sheep are more liable to lose nearly all they have gained than during the fall and early winter; and if they do, there is an end to the hopes of a crop of wool. For the want of food has the effect of stopping the growth of the wool, and the moment the growth is stopped, the end of the fiber is completed; a change takes place, it becomes dead, in a manner analogous to the stem of ripe fruit, and a renewal of good feed after these months, and after the growth of the wool has been

once stopped, only prepares the skin to send forth a new growth that pushes off the old fleece, and causes it to be lost before shearing time. Nothing is more evident from this than that the economy of the wool-grower consists in keeping his sheep well fed during the early part of winter, and also well protected from storms; for it is plain from the fact that wool begins to grow, even on poorly kept sheep, as soon as the temperature of spring permits the animal economy to divert some of the supplies from being consumed in keeping up the vital organization, to the increase of the fleece, that heat has as much to do with the growth of wool as with the growth of plants. Hence we say give sheep protection at an early date.

#### NEW BOOKS AND PUBLICATIONS

**THE NATIONAL BANNER.** Published by Delphine H. Baker, 37 Park Row, New York.

This is a weekly journal, issued, as its prospectus says, for the purpose of creating a patriotic fund for the benefit of the sick, wounded and disabled soldiers and their families, by giving 50 per cent of all the subscriptions received for said paper to the maintenance and support of such fund. The enterprise is favorably looked upon by several members of Congress and other gentlemen, and the lady publisher has the support and good wishes of the most respectable portion of the community. The character of the paper is elevated, and the contents a miscellaneous compilation of the current items and topics of the day, interspersed with literature, religious matter, poetry, &c. The subscription price is \$1 50 per annum, half of which goes to the "Soldiers' Fund," and the other half to the maintenance of the *Banner*. It is also in contemplation to sustain a course of lectures in connection with the same object—the collection of a fund—and several eminent clergymen and others are named as lecturers, one-half the proceeds of which are to be devoted to the fund. This is a good opportunity for our readers to show their patriotism. The first lecture was given on Saturday, Dec. 12, at the Cooper Institute.

**THE ILLUSTRATED ANNUAL REGISTER OF RURAL AFFAIRS FOR 1864.**

We always receive this interesting annual with great pleasure. Nothing is better adapted to entertain and instruct farmers and all who take interest in matters about the farm-yard. The "Register" has been issued for ten years from the office of the *Country Gentleman*, at Albany, N. Y., by the publishers, Luther Tucker & Son, price 25 cents. The number before us contains a calendar adapted to the Northern States, also 130 excellent engravings, relating to the management of swine, road making, the dairy, fruit culture, the poultry yard, cheese making, and other subjects valuable to the farmer, gardener, and householder.

**THE PHRENOLOGICAL JOURNAL.**—This instructive periodical commences new volume with the new year. Those who desire to provide themselves with a most interesting and at the same time most intellectual fund of reading matter, should subscribe to this excellent periodical. The amount of engraved portraiture which appears in its columns is quite large, and of itself treble worth the cost of subscription. Fowler & Wells, 308 Broadway, New York.

#### Forests a Necessity of Fertility.

The value of forests to a country in retaining moisture is well illustrated by the late severe freshets of the Connecticut valley. The snow melts quicker in an open country, and is retained longer among groves. Formerly the Connecticut River and its tributaries were clothed with forests; now they are largely denuded, and we have reason to expect greater freshets than formerly. The present barrenness of Greece and Palestine, as contrasted with their former fertility, is similarly accounted for. Dr. Unger, a celebrated naturalist of Vienna, claims that the climate lacks its original moisture. He says that the hordes of warriors that have followed each other for centuries on that soil have burned up the forests, and every effort of nature to make restoration is subdued by a superabundance of goats. The population live on the products of the goats, and the goats crop every twig, thus bringing barrenness. If the forests should ever again grow, Dr. Unger thinks that fertility would be restored.