

where he graduated in 1796. He studied law, but was induced to abandon his profession and accept the new chair of chemistry at Yale in 1804. In 1818 he founded the *American Journal of Science and Arts*, and was its sole editor for twenty years.

The subject which most warmly enlisted Professor Silliman's sympathies, and to the elucidation of which he most zealously devoted his faculties, was the harmony of science and religion. In a course of lectures which the writer of this heard him deliver in 1834, he argued with almost passionate zeal that the word "day," as used in the beginning of Genesis, does not mean twenty-four hours, but an indefinite period of time; contending that this is conclusively shown in the sentence at the close of the account, "These are the generations of the heavens and of the earth when they were created, in the day that the Lord God made the earth and the heavens." Many years afterward, at the meeting of the American Association for the advancement of Science, at Providence, he argued with the same enthusiasm on his favorite topic. He said, "All the scientific men ask is *time*, and time the religious men are ready to grant." From his learning, his ability, his position, and his zeal, he was enabled, by showing the eternal harmony of the two, to render a service to both science and religion which will never be fully appreciated.

Professor Silliman was remarkable for his warm and genial nature; his life was an exemplification of the Christian virtues; and after doing more perhaps than any other man of his generation for the advancement and diffusion of knowledge, his long and useful career has been brought to a close amid the sorrow not only of his countrymen, but of all lovers of science throughout the civilized world.

OIL CUPS.

A most objectionable and wasteful practice of using oil cans, instead of oil cups, for lubricating machines, prevails extensively. It is objectionable because uncleanly, for one reason, and extravagant because too much oil is put on at once. A journal will carry only a certain quantity of oil, and all that is poured in after the surfaces are well covered, runs off at the nearest aperture. When oil cups are applied, and properly used, the bearing takes up all the oil admitted, and uses it economically; that which is now lost might be saved. By an oil cup we do not mean a simple brass funnel to guide the nose of the can to the proper place, but a cup with a wick and a tube, or the equivalent of this device, for feeding the oil at regular and proper times. The wick and tube is the one generally used, and it can be made to feed fast or slow according to the amount of oil needed.

The filthy drip pans placed under the hangers of shafting are entirely unnecessary, and should be dispensed with by using cups. Many a suit of clothes has been spoiled, and not a little profanity caused by the upsetting of these drip pans, and the descent of their contents on workmen when belts run off. Where oil cups are not used fully one-half the oil poured on the bearing runs out again; and, as a matter of economy, every manufacturer, of whatever class, should see that his engines, his lathes, shafting and similar machines and fixtures are furnished with oil cups that feed the lubricator to the journals, as fast or as slow as it is required.

Good Inventions in Demand.

There never was a time when really good inventions were in so great demand as now. Almost every day we are called upon to prepare assignments for parties who have recently obtained patents, and we have been surprised at the large prices which rights on some small, useful articles have commanded. In another column may be found an advertisement of two brothers who wish to invest \$10,000 in some new and useful improvement in the hardware trade. The advertisers are known to us to be men of integrity, and to mean what they say, so that parties having any patented article for sale which meets the requirements set forth in the advertisement may correspond with them in full confidence of honorable treatment.

A Boston firm has just put into operation, at Fisherville, N. H., a factory which transforms poplar wood into "excelsior," for filling mattresses, at the rate of two tons per day.

MARKETS FOR THE MONTH.

The leading feature in the market for the past month has been the great fluctuation in the price of gold, which has ranged from 260 to 209 $\frac{1}{2}$. As long as our currency is so inflated it will doubtless be subject to these disturbing fluctuations. The following table shows the prices of the leading staples, reckoned in our paper currency, at the end of October and November:—

	Price Oct. 26.	Price Nov. 30.
Coal (Anth.) $\frac{3}{4}$ 2,000 lb.	\$9 50 @ 11 00	\$9 00 @ 10 50
Coffee (Java) $\frac{3}{4}$ lb.	45	50
Copper (Am. Ingot) $\frac{3}{4}$ lb.	47 @ 48	48 @ 49
Cotton (middling) $\frac{3}{4}$ lb.	1 22	1 29 @ 1 30
Flour (State) $\frac{3}{4}$ bbl.	\$8 90 @ 9 25	\$9 65 @ 10 25
Wheat $\frac{3}{4}$ bush.	\$2 25 @ 2 60	\$2 50 @ 2 80
Hay $\frac{3}{4}$ 100 lb.	1 30 @ 1 35	1 45
Hemp (Am. drs'd) $\frac{3}{4}$ tun. 320 00	@ 350 00	\$320 00 @ 350 00
Hides (city slaughter) $\frac{3}{4}$ lb.	11 @ 11	13 $\frac{1}{2}$ @ 14
India rubber $\frac{3}{4}$ lb.	\$1 10 @ 1 15	70 @ 1 15
Lead (Am.) $\frac{3}{4}$ 100 lb.	\$13 87 @ 14 00	\$15 50 @ 16 00
Nails $\frac{3}{4}$ 100 lb.	\$9 50 @ 10 00	9 00 @ 10 00
Petroleum (crude) $\frac{3}{4}$ gal.	46 $\frac{1}{2}$ @ 47	48
Beef (mess) $\frac{3}{4}$ bbl.	\$8 00 @ 13 00	7 00 @ 12 00
Saltpeter $\frac{3}{4}$ lb.	24 @ 30	30
Steel (Am. cast) $\frac{3}{4}$ lb.	18 @ 33	30 @ 34
Sugar (brown) $\frac{3}{4}$ lb.	18 @ 21	16 $\frac{1}{2}$ @ 22 $\frac{1}{2}$
Wool (American Saxony fleece)		
$\frac{3}{4}$ lb.	90 @ 1 00	90 @ 1 10
Zinc $\frac{3}{4}$ lb.	20 @ 21	19 @ 20
Gold	2 16	2 30

FARMERS' CLUB.

The Farmers' Club of the American Institute held its regular weekly meeting at its Room at the Cooper Institute, on Tuesday afternoon, Nov. 29, the President, N. C. Ely, Esq., in the chair.

EMIGRATION TO MARYLAND.

The President read a letter from W. Bayard, Esq., of Maryland, in reply to an invitation from the Club, saying that he would be present at the next meeting, on Tuesday, December 6th, and would explain the advantages and disadvantages of Maryland as a place for immigration and settlement by Northern farmers.

OSAGE ORANGE HEDGES.

Solon Robinson read a letter from S. W. Noble, of Leroy, Ill., saying that though the tops of the Osage orange are occasionally killed by extreme cold in the winter, the roots are not injured, and the freezing does not impair in the least the effectiveness of the hedges. **The roots throw up fresh sprouts, and the old stalks stand as a perfect fence till the new sprouts are grown.**

THE BEST EARLY POTATO.

Mr. Carpenter gave it as his opinion, from extensive experience, that the Early Cottage is far the best and most profitable early potato.

CEDAR BIRDS.

Dr. Trimble, being called up, stated that the bird which eats such large quantities of canker-worms is the cedar bird, and that is what he called it before—not the reed bird. Besides the name of cedar bird, it is also called the cherry bird, the canker bird and the wax wing.

Dr. Trimble continued, "Mr. Chairman, I also said that the Baltimore oriole eats the curculio, and that I had found the head of one of these insects in the crop of a reed bird. I have here an agricultural paper in which the editor says that he does not believe that I know what a curculio is. I have wintered and summered with the curculio for the last 25 years. I have studied its habits, examined its structure, written upon it; I have probably killed more of the insects than all of the rest of the inhabitants of the United States. The curculio has a very large eye, containing, as nearly as I have been able to count under the microscope, 147 lenses. There is no other species of this class of wevils the eye of which has very nearly the same number of lenses. Some have very few, and some a great many more. Now, I found in the crop of a bobolink the proboscis and eyes of an insect that resembles the proboscis and eyes of the curculio. On bringing the eye into the focus of the microscope, I found that it contained 147 hexagonal lenses, and I think I am justified in stating that, at all events, one reed bird has eaten one curculio."

Many other subjects were discussed, but we select only the above.

The *Country Gentleman* says that scraping the horns of oxen on the inside will make them curve outward, or *vice versa*.



ISSUED FROM THE UNITED STATES PATENT-OFFICE

FOR THE WEEK ENDING NOVEMBER 29, 1864.

Reported Officially for the Scientific American.

Pamphlets containing the Patent Laws and full particulars of the mode of applying for Letters Patent, specifying size of model required and much other information useful to inventors, may be had gratis by addressing MUNN & CO., Publishers of the SCIENTIFIC AMERICAN, New York.

45,214.—Apparatus for amalgamating Gold and Silver. Henry N. Adams, New York City:

I claim, first, Amalgamating gold and silver contained in pulverized ores, tailings, or other metallic material, by means of quicksilver brought in contact therewith in the condition of vapor, under a mode of operation, substantially such as above set forth.

Second, The discharge of the distilled vapor of quicksilver from a still, and auriferous or argentiferous quantity or substances containing gold or silver in a pulverized state from a hopper into a rotary or oscillating and inclined cylinder or chamber, which is fed in a continuous stream with the said quartz or material from the said hopper, by means of the rotating or oscillating motion of the said cylinder or chamber, substantially in the manner and for the purpose set forth.

Third, The combination of the apparatus for supplying the retort with quicksilver with the retort, substantially in the manner and for the purpose specified.

Fourth, The combination and connection of the retort and the revolving or oscillating cylinder and chamber, by means of the worm, R, through which the distilled vapor of mercury is discharged from the retort with the said revolving cylinder or chamber, in the manner and for the purpose herein named.

Fifth, The stationary hopper, O, in combination with the rotating or oscillating cylinder or chamber, L, substantially in the manner and for the purpose mentioned.

Sixth, The partition of said hopper, O, with its aperture and plug, Q, in combination with said hopper, in the manner and for the purpose described.

Seventh, The stuffing-box, N, in combination with the feeding end of the rotating or oscillating cylinder or chamber through which it passes, and in which it works, substantially in the manner and for the purposes set forth.

Eighth, The surrounding jacket pipe, a, in combination with that part of the worm which passes through the hopper, in the method and for the object designated.

Ninth, The mode of sealing the upper or feeding end of the rotating or oscillating cylinder or chamber by plunging it directly into the pulverized quartz or gold or silver bearing substance contained in the hopper and allowing it to revolve out matter, substantially in the manner and for the object specified.

Tenth, The revolving or oscillating motion of the cylinder or chamber, the feeding end of which moves in the pulverized matter to be amalgamated, for the purpose of drawing the said pulverized substance into and through the said cylinder or chamber, in a continuous and equable stream, in the manner and for the purpose mentioned.

Eleventh, The widening and projecting outwardly of the feeding end of the rotating or oscillating chamber by means of arms or the like, so as to describe a larger circle than the said cylinder or chamber in its revolution or oscillation in the pulverized ore contained in the hopper to stir up and throw into the said cylinder or chamber the said pulverized auriferous or argentiferous substance, substantially in the manner described.

Twelfth, The combination of the receiving elutriating pan with the revolving cylinder or chamber or its equivalent, whether moving or stationary, when the said cylinder or chamber, either revolving or stationary, is discharging into said pan gold or silver bearing quartz or ore in a pulverized state, which has been treated or amalgamated with the distilled vapor of quicksilver, and when at the same time the pan is supplied with the grinding and mashing drags, K, or an equivalent crushing device, by which apparatus the said pan becomes substantially an arastra, and shown substantially in Fig. 1, in combination with any auriferous or argentiferous pulverized ore discharged from an amalgamator, in which it has been amalgamated with the distilled vapor of quicksilver to grind and mash and work over the said mass and separate from it the fine dewy particles of quicksilver condensed through it, and collect them into a liquid state to be used over again, all substantially in the manner and for the purposes hereinbefore set forth.

Thirteenth, The use of the drags, K, to grind the amalgamated mass and work out of it the fine particles of quicksilver, disseminated through it when the said fine particles result from the condensation of the distilled vapor of that metal.

Fourteenth, The use of the shaft and cog wheels, or any equivalent device, by which the rotating shaft when attached by a belt or its equivalent to the driving power, shall move both the rotating cylinder or chamber and the drags, K, or their equivalent, substantially in the manner and for the purposes specified.

Fifteenth, The use of a rotating or oscillating conveyor for turning the over and exposing the ore to the vaporized quicksilver during its passage through it, substantially as above set forth.

Sixteenth, Connecting the discharging end of the conveyor, L, at or near the bottom of the arastra so that the water may reach up therein and around it in the jacket pipe, J, and act on the descending vapor of the quicksilver as a condenser in the revolving or oscillating conveyor, substantially as and for the purpose above described.

Seventeenth, Making the joint which connects the conveyor with the arastra, and sustaining the lower end of the conveyor by means of a pipe, J, extending from the arastra, which permits the rotation of the conveyor in water and prevents the escape of the vapor of quicksilver from its lower end, substantially as described.

45,215.—Cigar-holder.—Louis Auguste, New York City: I claim the application to a smoking tube, A, of a tubular socket, r, with perforated partition, g, and cap, h, and applied to the mouth piece, e, the whole constructed and arranged substantially as herein set forth.

[This invention consists in the employment of a removable sponge holder arranged in the interior of the cigar-holder and provided with a perforated partition and cup, in such a manner that said sponge holder will not obstruct the draught, and that it can be readily detached from the cigar-holder, and the sponge can be removed and cleaned without disturbing the other parts of the cigar-holder, and by these means a sponge saturated with camphor or other suitable material can be kept in contact with the smoke and any desired flavor can be given to the same.]

45,216.—Grubbing Machine.—Cortland Ball, Augusta, Mich.:

I claim the combination of the axle, A, wheels, B B, nuts, a a b b, toothed ends, c, lever, D, suspended pawl, E, side braces, G G, the eye bolts, F F (on the peripheries of the wheels, B B), and the chain, H, all constructed, arranged and connected as herein shown and described.

[This is one of the most powerful and quickly operated machines for the purpose that we have seen. If any body wants a first rate grubbing or root-raising machine, we advise them to address the inventor of the above.]