

**A NEW DIFFICULTY.**—The *U. S. Gazette* says:—"Nickel cents at the Mint are growing very scarce. When the Government first commenced the use of nickel as a material for coin, it made a profit on the coinage. The old-fashioned copper cent was too cumbersome, and the nickel penny was an agreeable change. Since the Government adopted the use of nickel the article has risen largely in value. All metals have risen in price. Nickel is found in Germany, but the supply to the Mint is mainly derived from Litchfield, Conn. The prospect is that after awhile the Government will find difficulty in procuring sufficient for its requirements, and some substitute will be rendered necessary. Meanwhile the demand for cents, at the United States Mint, is most pressing, and not half of it can be satisfied. The fear is that the Government will not be able to obtain nickel at such a rate that it can furnish a hundred cents or a dollar as it now does."

**PRESERVATION OF GUM AND STARCH PASTE.**—The paste made by gum tragacanth and gum arabic, which is so extensively used by the apothecaries in this country, acquires, particularly during the warm season, a very unpleasant and even offensive odor in consequence of fermentation, which soon commences on exposure to the air. Oil of cloves, alum and other essential oils and salts are frequently added to counteract this tendency, with but partial success, the volatile oils merely hiding to a certain degree the effusive odor developed, and retarding the fermentation incompletely. For some time past I have availed myself of the antiseptic property of creosote, which may be added to these pastes recently made, until its odor is faintly apparent. The result is their perfect preservation, no offensive odor being disengaged, and their adhesiveness is not impaired by keeping them for months.—*John M. Maisch, in American Journal of Pharmacy.*

**SUGAR-MAKING FROM SORGHUM OR IMPHEE.**—Messrs. C. O. West & Co., of Martinsville, Ohio, say:—"There have been several samples of sugar produced by different individuals in this vicinity, on a very cheap and simple plan, viz:—Take the most thorough granulated sirup on hand, and place on a strong linen cloth, suspended by the corners at a slight swag; prepare a vessel underneath to catch the drips, then introduce pure cold water in falling drops on the grained sirup in the cloth, stirring at the same time thoroughly, so as to cause the water to come in contact with every particle of grain; continue the process of washing in this way until the waxy or gummy tendency is destroyed considerably; then apply a press to hasten the expulsion of the liquid part, leaving the grain in the cloth, which may be put into a vessel, and will soon dry and crumble ready for market by stirring."

**IMPORTANT TO CIVIL ENGINEERS.**—At a meeting held on the 22d ult., in this city, by a number of civil engineers, it was resolved to organize an American Institute of Civil Engineers, the object of which shall be to facilitate the acquisition and diffusion of a knowledge of engineering science; to create and maintain a proper professional spirit among its members; to elevate their standard of acquirements and advance their interests. It was further resolved that an adjourned meeting be held on the 16th day of March, 1864, in the Engineer's office of the Pittsburgh and Steubenville Railroad, corner of Hand and Liberty streets, Pittsburgh, where it is expected that every civil engineer will be present to join a permanent organization.—*Pittsburgh Chronicle.*

**AIR IN SIPHONS.**—A correspondent writes us saying that in the event of air collecting in siphons it can be removed by putting an air chamber on the pipe at the highest point; the air will then collect in the chamber instead of the pipe, or else to attach a cock to the siphon and pump the air out through it and a pipe with a lifting pump. These methods are obvious to every one, and have been advised by us before, but we have been assured that they do not remedy the evil.

**A BURGLAR-PROOF vault** has been invented, in which a space between two of the plates is filled with iron balls about one inch in diameter, perfectly loose. The plates cannot be drilled through, as a drill must strike one of those balls, which would rotate with the tool, instead of submitting to the perforating process. One of these vaults has been put up in the Chicago Custom-house.

**A NEW GRAFTING WAX.**—One pound of rosin, five ounces of 95 per cent. alcohol, one ounce of beef-tallow, one table-spoon of spirits of turpentine. Melt the rosin over a slow fire, add the beef-tallow, and stir with a perfectly dry stick or piece of wire. When somewhat cooled, add the turpentine, and last, the alcohol in small quantities, stirring the mass constantly. Should the alcohol cause it to lump, warm again until it melts. Keep in a bottle. Lay it on in a very thin coat with a brush. In a room of moderate temperature, the wax should be of the consistence of molasses. Should it prove thicker, thin it down with alcohol. It is always ready for use, is never affected by heat or cold, and heals up wounds hermetically.

The notes of all the "National Banks" bear on their faces the same gilt ring which is on the new postal currency; this ring is a sure protection against photographing, as the yellow mordant will always "take black."

The new building of Sharpe's rifle factory at Hartford is completed externally, and will be ready for occupation in April. It will cost, with the new engine of two-hundred-and-fifty-horse power, \$100,000, and when filled with machinery the whole will cost \$250,000. Instead of the 475 workmen now employed, room will be given for 1,000. In the third story of the new building is a hall 208 by 40 feet, the finest audience-room in Connecticut.

The *Chicago Tribune* says that a bed of cannel coal has been found in the Minnesota Valley, on the Cottonwood river, a little more than one hundred miles from St. Paul. The bed is eighty-eight feet below the surface where the shaft was sunk, and is six feet in thickness. All indications are that immense coal beds exist in that locality. A company has been organized in St. Paul to work the mines.

#### RECENT SOUTHERN INTELLIGENCE.

The following items are collated from a file of Southern papers recently received at this office:—

The *Daily Progress* (published at Raleigh, N. C.,) pays the following compliment to the members of the Confederate Congress:—

Congress has adjourned, and we suppose the members will soon be coming home, provided the faro dealers of Richmond, to whom some of them have been such good patrons, have left them enough or will lend them enough "promises to pay" to square their wash-bills and get out of town. The Congress is dead and may we never see its like again!

The *Richmond Examiner* (of February 22nd) contains the following market quotations:—

Flour is now held at \$225 to \$230 per barrel for superfine, and \$240 to \$250 for extra. Corn meal, \$27 to \$28 per bushel. Corn, \$25 per bushel.

Bacon is very scarce, and only selling in small lots at \$5 50 to \$6; lard, \$5 to \$5 50; butter, \$6 50 to \$7; beef, \$2 75 to \$3; poultry, \$3 per lb.—supplies very light.

Apples, \$90 to \$100 per barrel; onions, \$35 per bushel; potatoes, \$9 to \$14; peas, \$30 to \$35; beans, \$38 to \$40 per bushel.

Hay, \$20 per hundred—scarce. All groceries are higher. For sugar, holders are asking the extraordinary rates of \$10 to \$12 per lb.; sorghum molasses, \$33 to \$35; coffee, \$12 per lb.; rice, 60c. to 70c.; tallow candles, \$6 per lb.; vinegar, \$6 per gallon; cider, \$8. Even salt has advanced, and is now going off freely at 30c. per lb. The stock has been diminished.

Whiskey is quoted at \$80 to \$100 per gallon; apple brandy, \$65 to \$80.

The tobacco market is active, and prices tend upward.

Leather is very scarce, and since the conscription of tanners, under the new military bill, a further advance in prices is anticipated.

The prices of fuel are unchanged. Messrs. Lancaster & Co., sold to-day, gold coin at \$22 for one; silver coin, \$20; foreign coin, \$21½.

**CANNOT HELP IT.**—The *Daily Journal* (of Wilmington, N. C.), under the above caption, informs its patrons that it "cannot help" putting its subscription price up to \$30 per annum. Think of that, ye newspaper patrons who consider \$3 per annum a large price! The same paper says there has been a great decline in household commodities, and that sugar and tobacco declined one dollar a pound in a single day. Wilmington must be a good place for speculators. In that city, also, common brown sheeting is quoted at \$6.12 per yard.

**\$50,000 REWARD.**—Mr. Henry Hart and five other mercantile firms advertise, in the *Wilmington (N. C.) Daily Journal*, that "they will pay fifty thousand dollars reward for the arrest and conviction of any person or persons who, on the night of the 8th of February, set fire to the cotton stored in their yard"

Either they must have a valuable stock of cotton to afford so large a reward, or else they do not very highly value the currency in which they propose to pay the reward—probably the latter.

The *Confederate* (published at Raleigh, N. C.) contains the following:—

**A GOOD SIGN.**—There was no meeting of the "Agitators" in this city last night, as has been for some time contemplated. We welcome this as an omen of good. God grant it may be an indication that the leaders see the evil of their course, and are commencing to retrace their footsteps. If so, every good citizen in the land will rejoice.

The "Agitators" referred to above are the "Unionists" of North Carolina who have openly avowed their wishes to return to their former allegiance. The suspension of the *habeas corpus* act, and the relentless rebel rule under which they live, with the persecutions they suffer and with which they are threatened has intimidated the "Agitators" for the time being; but there is a smouldering fire in the breast of a majority of the people of North Carolina which will break out at no distant day, and then Jeff Davis and his co-traitors must look out for their necks.

**TOO GOOD TO BE TRUE.**—We have information from a lady just out from Knoxville, says an exchange, that the notorious Wm. G. Brownlow died in that city a few days since. There are but few we know of who have ever heard of this vile traitor and renegade, who will not regret that in dying a natural death he cheated the gallows of its due.—*Richmond Whig.*

It is good that it is not true that Parson Brownlow died at Knoxville lately. He has been sick, but we are happy to learn that he is out again, and engaged in stirring up the loyal citizens of East Tennessee to stand by the "old flag." We wish the editor of the *Whig* was the same sort of a "vile traitor" as he terms Mr. Brownlow.

**THE BETTER DAY THE BETTER DEED.**—The rebel Congress has appointed the first of April as the day on which one-third of the value of Mr. Memminger's currency will be "repudiated." The sufferers by the act of confiscation probably think this day to have been chosen in compliment to themselves, the victims of perhaps the hughest practical joke ever played off on All Fools' Day.

#### TO MACHINISTS AND OTHERS

Let all those interested in the mechanic arts, and in the manufacture of machinery, recollect that on Monday, the 28th of March, only one week from this, the Metropolitan Fair will open. In offerings to the good cause for which this Fair was started, mechanics and engineers must not be behind any other department. A building 150 feet long and 37 feet wide has been erected expressly for machinery. Let it be filled to its utmost limit. This much is due, not only to the cause, but to our inventors, machinists and manufacturers. For circulars or special information address A. W. Craven, Engineer, the Chairman of Committee on Machinery, Croton Aqueduct Department,

#### Rust Joints.

Very many persons have heard of the term "rust joint" as applied to steam engines, but do not know its significance. A rust joint is one made by cast-iron borings with urine, or salt water and sal ammoniac without the urine. In using this material when two flanges are to be joined, there is a short rib or ring cast on the face of the flanges; said rings being brought in contact with the screw bolts. There is then a space all round in which the wet borings are to be driven as tightly as possible with a steel drift, clear up to the outside of the flange. This makes a perfectly tight joint, but it must not be driven in cold weather, as the borings freeze and render the joint liable to leak; neither must any grease be allowed to touch the faces of the flanges or the borings; if this is not cared for, the joint will not rust fast and the work will be spoiled.

#### A Substitute for Eggs.

As a matter of general interest, we will state that corn starch is an excellent substitute for eggs for culinary purposes; one spoonful of corn starch being reckoned equal to a single egg.—*Philadelphia News.*

[A substitute for any article must have some quality in common with that which it supplants. Eggs are only useful to make cakes or cookery light; their other qualities, such as enriching food or making it more palatable, are subordinate. Starch is no substitute for albumen, and cannot in any way supply the place of eggs.—Eds.]