## Electric Actions for Organs.

Attention has been attracted lately to the application of electricity to actions for organs, on both sides of the Atlantic, and several devices America. These devices have demon strated the feasibility of the plan. The object to be attained in the use of an electric action is to obviate the necessity of the complicated system of wooden trackers and its adjuncts, the complicated system of wooden trackers and its adjuncts, and to make a far lighter action, which will admit of the
placing of the key board at any distance from, and in any position relatively to the organ itself.
Mr. H. L. Roosevelt, of New York, patented through the Scientific American Agency, April 13, 1869, a very pretty, and in several respects unique device, relating to an improvement in electric organ actions.
This device requires a separate battery for each octave of the organ. This arrangement obviates the burning of the connections and waste of battery power.
Another prominent feature is the use of glycerin as a protective superstratum on the mercury in the cups, which ef fectually prevents oxidation and evaporation of that metal, as well as the oxidation of the point of the connecting wire. The ingenuity and efficiency of this feature of the invention will be at once obvious to those conversant with the difficulties which it is designed to obviate.
The pedal action and the manual are electrically united at the will of the performer by means of a sliding wedge or its equivalent, by means of which the mercury cups of key and pedal are connected by a wire dipped into both, and which causes a current from the key battery to be opened and closed causes a current from the
This brief description will give a general idea of the nature of the invention to those conversant with the details of electric machines. Without drawings and voluminous description it cannot be made very clear to those not posted in such details. The action works easily, and without the disagreeable rattling of the old tracker actions. An organ with this action attached is now on exbibition at the factory of Messrs. Hall \& Labaugh, the well-known organ builders in this city, where those interested are invited to call and ex amine its merits for themselves.

## enitarial summary.

Another Swindle-Mr. D. A. T. Black, who resides in Pennsylvania, has forwarded to us a letter addressed to him, by C. C. Havens \& Co., of 649 Broadway, Actuaries, Bankers, and Financial managers of the New York Jewelers' Co-opera-
tive Union-wherein Mr. Black in notified that ticket, No. tive Union-wherein Mr. Black in notified tbat ticket, No.
418 has drawn a gold watch valued at $\$ 200$, and that 5 per cent on its valuation must be paid within twelve days from date of notice. Mr. Black with all the innocence of Moses at the Fair, writes to us that the circular has come to him unsolicited, and not wishing to be imposed upon he asks us to investigate the matter in his behalf. If Mr. Black cannot see swindle all over the face of the various papers sent to him, then we advise him to forward the $\$ 10$, and learn just what such scoundrels are up to.

That remarkable carboniferous substance known as " min eral caoutchouc," which has hitherto been chiefly found at Cas tleton, in Derbyshire,England, in the lead mine of Odin, along with lead ore and calcite, is reported as discovered in Adelaide, South Australia. It is found in Australia on the surface of the ground, where the soil is sandy, through which it would appear to have exuded from beneath. When burnt off occasionally by the bush fires, it is found again after the winter season, in considerable quantities and of various thicknesses. Analysis proves it to contain 8.2 per cent, or somewhat more, of a pure hydro-carboniferous oil. Its value for gas-manufacturing purposes would be great, and it is also believed to be applicable to the production of certain dyes.
THe London Athenœum reports the discovery in the Bodleian Library, Oxford, of a single copy of a work printed by William Caxton, the first English printer, who commenced the practice of his art about the year 1480. Very few of the issues of ths pioneer publisher are in existence. The pamphlet just discovered is a short treatise upon death-bed repentance, and consists of sixteen quarto pages. The author of the treatise is unknown, but it appears to be a translation from the original Latin. The title, which forms the first paragraph of the first page, title pages being introduced later, is as follows: "Here begynneth a lytyll treatyse schortely compyled, and called ars: moriendi, that is to saye the craft for to deye for the helthe of mannes sowle."

The Macon and Brunswick Railroad is now wholly under contract, and will be completed from Brunswick to station No. 6. The junction of the Savannah, Albany, and Gulf Railroad by $t$.e first of July, and to Macon by the first of November next, in time for the State Fair, and for the cotton crop of 1869. This road gives Macon three outlets to the sea, via Macon and Augusta Railroad and Charleston, S. C. Georgia Central to Savannah, and Macon and Brunswick to Brunswick. The Macon and Brunswick Railroad will also build a line of telegraph from Macon to Brunswick.
Melted lead, which has a specific gravity of 11.5 will float on melted iron, which has a specific gravity of 7. This has been recently explained by Prof. Karmarsch, of Hanover, who finds that the lead when melted forms a hollow spheroid, which is filled with some vapor of lead, making it specifically lighter than iron. In smelting, however, certain ores of iron which contain lead, the lead is found at the bottom, whe owing to its specific gravity, we should expect to find it.

Dr. Carter Moffat has succeeded in fixing on paper the HOW TO KEEP CANALS OPEN IN WINTER-.-DECISION beautiful figures which are produced when oils, etc., are alowed to fall, drop by drop, on a surface of pure water, and which Professor Tomlinson, has shown to be charactéristic of each oil. The method is very simple, and is, briefly, to obtain pattern on water, note the time, lay on the paper, glazed ized downwarls, for an instant, take out, draw through a late of ink, remove, and wash with water. The process is capable of great extension, and will be valuable to paper stainers and others.
A NOT uncommon adulteration of glycerin is to mix sugar and dextrine with it. These substances have not hitherto been easy to discover when mixed with the glycerin ; the following process is, however, said to answer perfectly: To 5 drops of the glycerin to be tested add 100 to 120 drops of water, 3 to 4 centigrammes of ammonium molybdate, 1 drop of pure nitric acid ( 25 per cent), and boil for about a minute and a half. If any sugar or dextrine is present, the mixture assumes a deep blue color.

According to M. Millon, the disagreeable odor of bisulphide of carbon can be got rid of by distilling it with quicklime, the two having been in contact twenty-four hours. The distillate is received in a flask partially filled with clean copper turnings. The lime remaining in the retort is strongly colored. By means of the deodorized bisulphide, MM Millon ud Commaille have separated the perfume of milk to the extent of recognizing certain plants eaten by the cow-the Smymium olusatrum among others.
Herr Paalzow has been making experiments from which he concludes that there is no relation between the conductibility for heat and that for electricity. He has experimented on the following substances, and has found that they have the following order in point of conductibility of heat and electricity:-Heat: Mercury, water, sulphate of copper, sulphuric acid, sulphate of zinc, solution of sea-salt. Electricity : Mercury, sulphuric acid, solution of sea-salt, sulphate of zinc, sulphate of copper, water.

Patent Office Decision.-We hope none of our readers will omit to read the decision of Commissioner Fisher, published in another column. It is not only an interesting paper, but it sets forth in a strong light the views of the new Commissioner of Patents as to what constitutes a new and useful invention within themeaning of thelaw. There is a spirit of freshness and liberality about this decision which will commend it to the favor of inventors.
The Castor Bean is becoming an important article of culare in Texas. This year hundreds of acres are planted ; the soil is prolific, and in some instances has yielded 60 bushels of castor beans to the acre. Very little machinery has as yet been introduced for getting out the oil. The ramie plant is also attracting attention. It is looked upon as of great value to the South for the purpose of making ropes.

A Plumber of Davenport, Iowa. bought 35,000 pounds of army belt buckles at the Rock Island Government sale for about seven cents a pound. Ṫhey cost nearly one dollar a pound, and would have supplied an army of more than two hundred thousand men. They are to be melted down for the brass and solder.
Ir has been suggested to us by a distinguished engineer that the diamond turning tool noticed in our last issue might be advantageously applied to trueing up ordinary grindstones. The suggestion is based upon the character of the tool as well as actual experiment in its use for this purpose.
The German astronomer, Maedler has measured the hight of 1,093 mountains in the moon. Twenty-two of these are higher than Mount Blanc, which is within a few feet of being three miles high ; six are above 19,000 feet. The highest observed mountain in the moon is 24,844 feet high.

The Chicago Tribune says that a business depression of more than ordinary weight is felt in that city. There is dullness in trade ; the receipts and shipments of grain are below their usual average; and there is less than the usual demand for houses to rent and improved property for sale.

Velocity of the Wind.-It is stated that, at Philadel phia, the mean velocity of the wind during the entire year, is found to be about eleven miles an hour ; at Toronto its annual average velocity is nine miles; and at sea it is estimated at eighteen miles.
Rub some bichromate of potassa fine, pour over it about wice the bulk of sulphuric acid, and mix this with an equal quantity of water. The dirtiest brass is cleaned in a trice. Wash immediately in plenty of water, wipe it, rub perfectly dry, and polish with powdered rotten-stone.

A machine has been invented and put in operation in California, which, it is said, has cut, thrashed, cleaned, and sacked the wheat from twenty acres in ten hours, with only three men to work it.

The high price asked for pianofortes, it is stated, is due to the great strength required in the frame of the instrument to resist the tension of the strings, which, in some instances, amounts to sixteen tuns.

Thrine cooperative tores have failed in St. Louis during the past eighteen months.

Aldminum bells have been manufactured in France and Belgium. The experiment is a success.


## mandfacturing, mining, and railioad items.

Bessemer Steel-The Lonton Mining Journal says that it is understood that Mr. Bessemerhas signified his willingness to reduce his royalties from
2l. to $\& s .(d$. per tun, except for steel rails, for which a rebate of 20s.per tun 21. to 8 . ( d. per tun, except for stcel rails, for which a rebate of e 20 . per tun
is already allowed. Ordinary Bessemersteel will thus be reduced nearly 22 . per tun, and rails about 11. 10s. This will remove all inducements which might otherwise exist to infringe the patent rights remaining to 1 ir. Bessemer after the expiration of his principal patents in the course of next year, and at the same time will give an impetus to the steel rail trade, by permit-
ting the steel rails to be sold in the market at a price but little higher than ting the steel rails to be sold in the market at a price but little higher than
that of iron. If the Heaton process should solve the question of converting cheap pig iron into steel, iron rails may, probably, be entirely displaced. a Remariable Cave.-A remarkable natural cave has just been discovreri neal "White Pine," in the newly-developed silver district of Nevada. The opening is a bout six feet in diameter. On cl' aring the aperture from the loose rocks with which it was encumbered. a room twenty-five by forty feet was discovered, with passages leading from it to an indefnite distance, none of which has yet been explored. The walls are composed of lime
stone, intermixed with spar and mineral-bearing quartz, which promises to stone, intermixed with spar and m
yield rich returns to the miners.
The 10,000 pound equestrian statue of Washington, destined for the Public nent in Chicopee. The most of the work completion at the Ames establishcaparisoning of the charger astride which the colossalfgure of the Father of his Country is to be placed.
English workingmen are said to have formed a joint stock association, shares one pound each, for t.e e purpose offacilitating their emigration to
this country. They have sent out a delegation to Nebraska to report on the this country. They have sent out a delegat
desirableness of that country for a home.
The Colorado Miner says that the lar rest piece of silver bullion ever pro duced in the United States was recently taken off the cupel at the Brown
Company's works. The weight was 532 pounds Troy; currency 000. The amount of ore was between 29 and 0 tuns. 000 . The amount of ore was between 29 and 0 tuns.
The engineer of the Suez Canal. In. Lesseps, proposes to get up an inter 4 national excursion party of 100 gentlemen of different nationalities, who are to meet at Paris next spring, and thence proceed to Egypt, to be present
at the opening of the canal. The line of the excursion from that point lies through China and Japan, across the Pacific ocew to San Francisco, and via Pacific railroad to New York.
The value of Australasian gold imported into Britain during the two
months ending February 28 , of this year, was 658,5861 as compared with $85 ;$ months ending February 28 , of this year, was 6
cC 3. ir. the corresponding two months of 1868 .
The extraordinary expenses incurred by the city of San Francisco by rea * son of the earthquake and
year, amount to $\$ 200,000$.
The Mont Cenis tunnel has penetrated through the quartz and has come to a stratum of soft stone. The work is expected to be finished, on account of the easy working of this stone, about six months earlier than was heretofore the easy wo
The Missouri Paciffc Railroad Company bave ordered 46 new engines, 350 freight cars, and 1,500 tuns of new rails, preparatory to the ch
row gage, which, it is contemplated. winl be made in June.
The tariff in dispatches between this city and England, ou and after the ist of June. will be $\$ 10$ (gold) for ten words or less, and $\$ 1$ (gold) for each word in excess of the fímit.
The people of St. $\bar{\prime}$ ary and New Iberia, La., have organized an Immigrant abor Association, in order to meet the increasing demand for laborera in The St. Louis and Illinois Bridge Company commenced operations on the Illinois side of the river on the 11th of May. The boring was begun and will be continued until t
of the shore abutments.
A Pittsburgh oil firm have obtained a verdict agalnst the United states Telegraph Company, in the Court of CommonPle as,

