

## FARMERS' CLUB.

The Farmers' Club of the American Institute held its regular weekly meeting at its Room at the Cooper Institute on Tuesday afternoon, June 6th, the President, N. C. Ely, Esq., in the chair.

## PROFITS OF STRAWBERRY CULTURE.

Mr. Bergen stated that the statistics of the strawberry culture in Burlington County, N. J., and two or three of the adjoining counties, had been collected, and it was found that the average yield per acre was 58 bushels, and the average price was \$6 per bushel. The average yield of blackberries is 48 bushels to the acre, and the average price \$4 per bushel. The yield of strawberries seemed to the speaker very small, as we have had accounts of 300 or 400, and even of 700 bushels to the acre. But he supposed the statistics embraced all the fields, good and poor.

He remarked further that experience had taught him that it is unwise to attempt to gather more than one crop of strawberries from the same plants. Set the plants in the spring and take good care of them through the season; then gather the crop the next year, and turn the vines under.

Mr. Carpenter confirmed this opinion, except where strawberries are cultivated in hills; then they should be richly manured every fall, the manure spaded in the spring, and the ground should be mulched. In regard to the profits of strawberry culture, a friend of Mr. Carpenter's, in Burlington county, was having 1,500 quarts per day picked for the Philadelphia market, and they sell for 40 cents per quart. A neighbor of his is gathering 2,500 quarts per day, thus receiving more than \$1,000 daily for strawberries. In both these cases the variety cultivated is the French seedling, a large, early and productive kind.

## SEEDLING ROSES.

Mr. William A. Burgess, of Glen Cove, presented a bushel-basket full of different varieties of seedling roses, which were produced by himself from the seed. He remarked that the idea had prevailed that seedling roses could be produced only in France, but the truth was, that they could be propagated from the seed here better than in France. He advised everybody to plant their rose seed. He had obtained blossoms in nine weeks from the time the seed sprouted.

## THE WAY TO GET RID OF ROSEBUGS.

Mr. Solon Robinson observed that he was very much troubled with rosebugs this year, his grapes being threatened with total destruction by them. He had, however a plant of spirea—the Spirea Lindliana—which is so attractive to the rosebugs that they all collect upon it, and it is then very easy to pull them off and roast them—the only mode of destroying them that he had found effectual.

## Gum Copal.

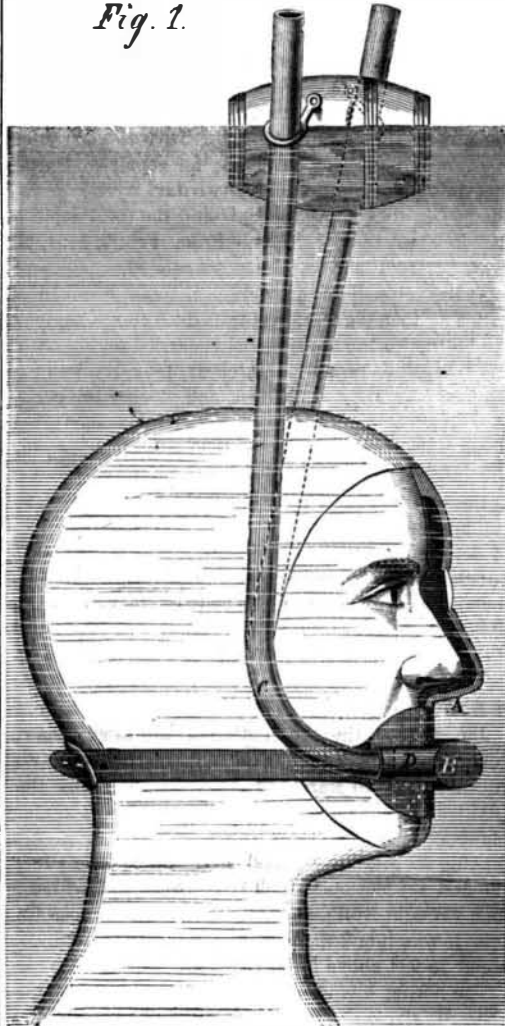
The purest and best gum copal in the world is found on the mainland of Africa, near Zanzibar. It is, without doubt, a fossil gum. It is dug from the earth by negroes, and by them carried to the Banian traders, in small quantities, for sale. When it reaches Zanzibar, it is in a very dirty state, and requires much sifting and garbling before it is merchantable; it is then cleansed with solution of soda-ash and lime, put up carefully in boxes, when it is ready for the home market. That it is a gum may be proved from the fact of its rough or "goose-skin" surface, which no doubt is an impression of the sand or earth when it ran down from the tree in a soft state. Pieces, too, are found with sticks, leaves, and insects preserved in them in the most perfect state. Large and uncouth-looking pieces will often have many impurities, such as dirt, sand, and hundreds of little black ants in them, giving the copal a dirty, dingy appearance. At the diggings no copal trees are found, or even any signs of them; and to this time it is mere conjecture in what ages these deposits of copal were made, probably many thousands of years ago. I have tried to get specimens of anything the negroes might dig up with the copal; but they, in every case, say that they get nothing whatever. There are copal trees on the coast and on the island; but the gum from them is not a merchantable article at all, and when mixed with the fossil gum, is always rejected. Without doubt the quality of that dug is made as pure as it is, by the chemical action of the peculiar kind of earth in which it is buried. Some copal is found on this island, but it is so poor that it is not much sought.—*Pacific Monthly*.

## HAWKINS'S DIVING MASK.

This invention is intended to assert the respiration of divers, or persons exposed to noxious gases, foul vapors, smoke, etc.

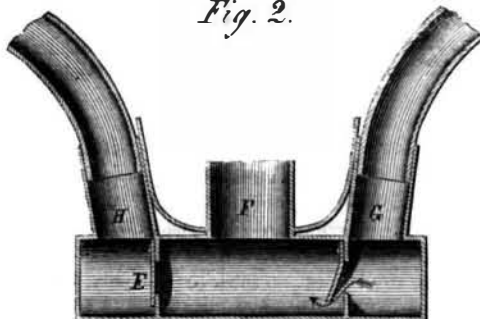
By the use of it fresh air can always be led to any point where the atmosphere is vitiated. Thus, in diving—going to a depth below the surface of the sea—great difficulty is experienced in breathing, as is commonly known, and fresh air has to be pumped or forced down to persons who follow such calling.

Fig. 1.



The engravings published herewith represent a contrivance for regulating the admission of pure and the exit of foul air to and from the lungs. To this end the mask is fitted with a T-shaped tube, B, which has pipes, C, issuing from its branches, D. In the T there is a compartment, as in Fig. 2, in which the valves, E, fit. The mouth-piece is at F, and it will be seen that as the cold air is forced down or falls by its gravity in the pipe, C, the heated air expelled from the lungs rises naturally through the

Fig. 2.



valve, H, thus rendering exhalation and inhalation comparatively free, and separating pure from foul air. This device would be useful in foul wells where carbonic acid gas collects in cess pools, or in similar places.

Patented through the Scientific American Patent Agency March 21, 1865, by James Hawkins, of Braddock's Field, Pa.; for further information address him at that place.

CORNISH PUMPING ENGINES.—The number of pumping engines reported for March is 36. They have consumed 3,048 tons of coal, and lifted 23.2 million tons

of water 10 fms. high. The average duty of the whole is, therefore, 51,400,000 lbs. lifted 1 ft. high by the consumption of 112 lbs. of coal.

## RECENT ENGLISH PATENTS.

## GELLERAT'S STEAM ROLLING AND PORTABLE ENGINES.

This invention, patented as a communication to Mr. Henry, the patent agent, Fleet street, consists of an apparatus, mounted on axles which carry rollers, acting both as propelling and bearing wheels or rollers, and which can be caused to converge or move out of the parallel, in order to turn the engine to either side. Motion is communicated to them by a train of toothed wheels driving a chain-wheel, mounted on the axle-box, and transmitting rotary motion to the bearing-wheels or rollers by a crank arm or short connecting rod jointed to a radial arm of such wheel or roller. The axles are not fixtures, but are suspended in brackets, fitted with friction-rollers, and they are moved by a double-threaded worm, or right and left handed screw, which takes into nuts, and is worked by handle and bevel gear.

## CLAVEL'S LAMP-GLASS HOLDERS.

The specification of this patent, recently filed by Mr. Henry, patent agent, Fleet street, consists in constructing the sockets, holders, or supports for gas and lamp glasses, or chimneys, adjustable as to size, or extensible and contractible, so that one holder will serve for various sizes of glass or chimney. This is effected by forming the socket or holder with slots, and tightening or loosening it, so as to vary its diameter, either by a conical outer ring, or by an incomplete ring or cylinder, with a break or opening in it, fitted with a screw; or the holder itself may be of the form of an incomplete ring or interrupted cylinder, opened and closed, or tightened or loosened, by a screw. The improvement may be applied to the rings or lower parts of frames or supports fitted round chimneys or glasses of lamps or burners to receive shades or reflectors.

## RAILWAY TRANSIT.

Mr. John Routledge, carriage-department manager of the West Hartlepool Railway, has recently effected an improvement in railway passenger traffic, in rounding extreme curves in the line, that cannot fail to prove highly useful and beneficial to the traveling public. Some of the immediate results of the improvement will be to insure perfect safety, with long carriages, at a high rate of speed, and prevent what is known as the crease of the tire and side of the rail. There are three pairs of wheels, the center ones performing the radiating process, and the end ones connected with the center by rods, are made to the requirements of the case, no matter how great the curve may be. The invention was tested a short time since by Mr. W. S. Leng, the West Hartlepool Harbor and Railway manager, on the curve near Hartlepool station, and found to be a complete success.—*Stockton and Hartlepool Mercury*.

[This is the same thing as the Bissel truck which has been in use for years in this country.—Eds.]

## How to Combine Fat and Oil with Aniline Red.

Dr. E. Jacobsen gives the following process:—He first separates rosaniline from commercial fuchsine by heating with soda or digestion with ammonia, washes and dries it. He then adds the rosaniline to oleic acid or melted stearic acid as long as it will dissolve, or puts them together in equivalent proportions. An excess of oleic acid must be avoided when the compound is required for a varnish, as it delays the drying. Oleate or stearate of rosaniline easily dissolves in fats or oils, and colors these an intense red. If it is wanted for a linseed oil varnish, the linseed oil must be free from lead. The compound must be kept from the fire, or it soon burns blue, probably by the reducing action of the fatty acids. The best red color is obtained in linseed oil varnish. Stearin with oleate or stearate of rosaniline appears a bluish red. Paraffine appears to act as a reducing agent with the compounds of fatty acids and aniline, and changes to a dirty violet color; the mixture then is inapplicable to the coloring of paraffine or stearin candles. The oleate or stearate of rosaniline is a good coloring agent for hair oil or pomatum, but from the instability of the color seems inapplicable for oil painting or varnishes.—*Dingler's Polytech. Journal*.