

**Lake Tahoe.**

So many reports are spread about concerning the depth of this wondrous sheet of water that but few really know which to accept. Some reports go to show that no soundings were ever obtained in the center of the lake, and others that the greatest depth is 2,300 feet. The following, ascertained from John McKinney, one of the oldest residents on the lake shore, and who assisted in taking the soundings, may prove interesting to the general public:

Fifteen miles of the lake on the State line average 1,400 feet. The center of the line is 1,500 feet deep. Three hundred yards from the mouth of Emerald Bay the water is 790 feet deep, and four miles east thereof the soundings are 1,400 feet. At Rubicon Rock, 300 feet from shore, the water is 850 feet deep, and four miles out, easterly, it reaches 1,460. At Sugar Pine Point, one-half mile south, the depth is 770 feet, and four miles out, pitching to the north, 1,500 feet. Half a mile from Idlewild the depth is 780 feet, and six miles out, 1,525 feet. At Saxton's old mill, near Tahoe City, 772 feet of water is found one-quarter of a mile from shore, and five miles east by north 1,608 feet is reached. At Observatory Point, one-quarter of a mile northeast from Tahoe City, soundings are 1,300 feet, and four miles east 1,640. Four miles south of Hot Springs 1,645 feet, the greatest depth in the lake, is found. Blue water in any portion of the lake averages 1,300 feet.

The temperature of the lake water at 800 feet is found to be 42°; at 1,506 feet, 39½°; at the surface in winter time, the temperature is 44°, and in deep water, during the summer, 65°.

The above will doubtless attract both interest and comment, but coming from the source it does, must be entitled to consideration. The theory of Mr. McKinney as to the original formation of the lake is that it occurred in the glacial period, and not from volcanic action, and if space permitted, his opinions on the subject would be given at this time; but it is certain that the bottom of the lake is riven, as are the surrounding mountains, into chasms and ravines, leaving plateaus that extend for miles, as do other valleys or land. Could the water be drained from the lake, the bottom would be several hundred feet lower than Carson valley, which valley was undoubtedly caused by the same operation as the lake, and was itself an inland sea or fresh water lake.

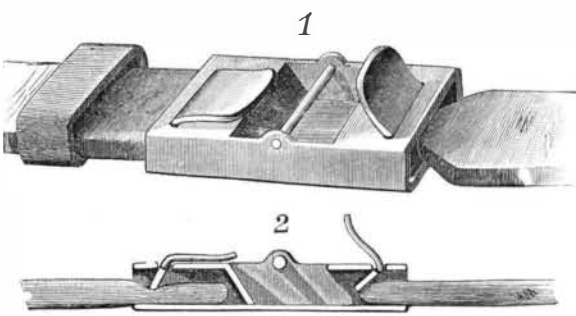
A deal of sound sense and deep study is evidenced by Mr. McKinney's theories and argument, and it would be much to the benefit of science if they could be published.—*Carson Tribune.*

**African Indigo.**

In his report on the trade of Tunis during last year, Mr. Consul Sandwith remarks that the cost of dyeing calico with indigo is a much more expensive operation in England than it is in Tunis. While the cost in England is, he estimates, from 5d. to 8d. per lb. of cloth, in Tunis the dyeing of a piece of cloth weighing 5½ lb. costs only 10d., or less than 2d. per lb. If, he adds, cotton goods were allowed temporary admission into Tunisian territory, so as to permit of their being dyed for re-export without duty, the establishment of indigo dye works on a large scale, and the importation of large quantities of cotton goods for dyeing and re-export to central, eastern, and northern Africa, where the color is so much appreciated, might be expected.

**IMPROVED BUCKLE.**

The engraving represents a buckle of simple construction, designed particularly for use on pantaloons and vest straps, to which it can be applied without stitching. In the top of each end of the frame is a slot,

**SCOVIL'S IMPROVED BUCKLE.**

in which is pivoted a lever, bent at an angle, as shown in the sectional view, Fig. 2. The lower end of this lever forms a jaw for grasping and holding the strap, and the upper end forms a handle piece, by which the lever can be turned to release the strap. At the right in the lower figure the strap is shown just entering the buckle, the handle of the lever being raised, and at the left the strap is shown held by the lever, whose upper arm rests upon the top of the frame.

This invention has been patented by Mr. Samuel J. Scovil, of Jamaica, N. Y.

**WARDROBE ATTACHMENT AND GARMENT HANGER.**

This wardrobe is so arranged that its available storage capacity is doubled, and any garment hung in it can be readily reached without removing any other garment hung within it. Secured to the rear end of the usual upper shelf is a metallic rod which extends forward beneath it in a line substantially parallel with it. The forward end of the rod is curved to form a

**CAZIER'S WARDROBE ATTACHMENT AND GARMENT HANGER.**

nose-like projection, and is secured to the shelf. The garment to be suspended is hung upon a yoke formed with a hook, which is caught upon the rod. In the end panel of the case is a door, so that after the garments have been hung up, any one of them may be removed without disturbing the others, by simply opening the door and taking out the garment. In a large sized wardrobe two rods may be used, and a door placed in each end panel. Or the rod can be attached to the shelf of a closet or clothes room, and used in the same way.

The garment hanger is clearly shown in the small view. A length of wire is bent in a peculiar way to form the suspending hook and upper portion of the yoke, the extending looped ends of the wire being united by a horizontal brace. This forms a cheap and durable yoke, which may be made from much smaller wire than the ordinary form.

These inventions have been patented by Mr. M. H. Cazier, of 100 Lake St., Chicago, Ill.

**The Products of Coal.**

Few persons have any idea of the wonderful products from a lump of coal—a lump of coal that is placed in the retort of a gas manufactory. Ordinarily burned, the combustion of a lump of coal results in carbonic acid smoke (which is merely soot, or, rather, the visible portion of smoke is soot) and the ash, in which are found silica, alumina, oxide of iron, phosphoric acid, sulphuric acid, potash, sodium, combined sulphur, sometimes traces of chlorine, titanitic acid, and other substances. In the gas retort a variety of products are obtained. The gas as it is carried through the hydraulic main to the purifying rooms takes with it tar and ammonia, the latter evolved from the nitrogen. The ammonia has to be washed out with water in an arrangement by which the ammonia is gathered and saved. Tons and tons of sulphate of ammonia are thus made, and become an article of commerce. The sulphur is removed by caustic lime or oxide of iron. The carbonic acid is also removed by lime, but the sulphurous acid cannot be removed, and, with several others, remains in the gas after all efforts to remove it. The others give the gas its smell.

By distillation, naphtha and asphaltum are obtained. Asphaltum is a dead oil, very useful to preserve wood. From this, too, carbolic acid is obtained—very important in surgical operations, as being the most valuable antiseptic known. From naphtha, benzole, eumol, toluol, and cymol are obtained. Naphtha, as is well known, is used as a burning fluid.

Benzole is a solvent for grease and oils, very useful in cleaning kid gloves and things of that kind.

Benzole treated with nitric acid produces nitrobenzole. This, singularly enough, is used as a flavoring extract by confectioners and for perfuming soap. When used for this purpose, it is known in commerce as the essence of myrrhane, which it is not, although it smells and tastes something like essence of myrrhane or oil of bitter almonds. Nitrobenzole is terribly poisonous, but not more so than other adulterants used by confectioners.

From nitrobenzole, aniline is obtained. This when first obtained is a perfectly colorless liquid, but darkens as it grows older. From aniline are obtained the coal tar colors, which are so very brilliant. The colors are of all hues. The one known as "Turkey red" is exactly similar to the red that used to be made from the madder root. Since the discovery of this aniline, it has almost completely broken up the raising of madder in Holland. There thousands of acres were devoted to the raising of madder root to get the Turkey red dye. It can be made much cheaper from the product of a gas factory.—*The Coal Trade Journal.*

**Eugenol.**

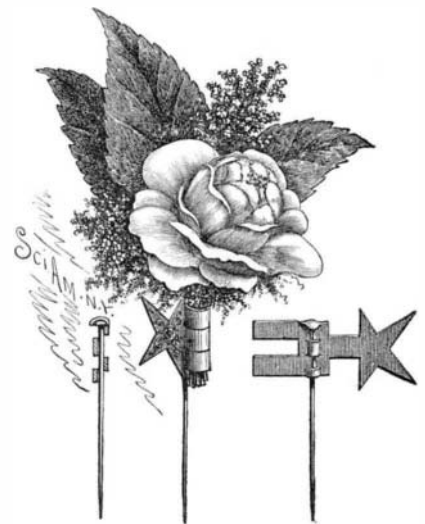
I do not remember to have seen anywhere a fully appreciative notice of *eugenol* among the lists of drugs used as disinfectants, antiseptics, deodorizers, and obtundents. It is a superior agent in all these particulars, and is free from the objectionable characteristics usually belonging to the class. Though sharp to the taste, it is not especially disagreeable. It is not caustic, like carbolic acid and creosote. It is not destructive to the tissues, and there is nothing to fear from a little excess in using. It can be employed without extra caution for thorough saturation of infected dentine, or passed freely to the extreme points of root canals. While it thoroughly disinfects, it does not cauterize. It does not coagulate the albumenoid surface, leaving material for putrefaction beyond in pulp canal and dentinal tubules, as carbolic acid does, but penetrates, saturates, mummifies, and stays. A root canal in which it has remained a day and a night is safe to fill, though previously septic.

Eugenol represents the strength of the essential oil of cloves. Whether its virtue comes from additional oxygen, as claimed by some, or mere exclusion of non-essential elements, I know not; but this I do know, that it is good. I have used it, to the exclusion of other agents in most cases, for nearly three years, and with great satisfaction. No other agent has contributed so much to my success in the treatment of pulpless teeth. As a pain obtundent, by application to super-sensitive dentine, eugenol has the virtues multiplied of the time honored oil of cloves. This, with its disinfectant qualities and general innocence, gives it a value above any other agent with which I am acquainted for use in teeth containing living pulps.

I believe eugenol has not yet found its way into the stock of druggists generally. Care must be exercised in ordering, that the common oil be not substituted. Every dentist should have it. It is indispensable.—*Garrett Newkirk, Dental Cosmos.*

**BOUQUET HOLDER.**

The pin held to the head or clasp is passed into the article to which the holder is to be held. The clasp is made with two fingers at one end and with a central

**McLANE'S BOUQUET HOLDER.**

finger at the other end. These fingers, being made of thin, flexible metal, can be easily bent by the hand around the stem of a flower or other article to clasp and hold it. The extremity of the single finger may be provided with an ornament of any preferred design. This holder can also be used for fastening price tickets to goods in show windows, and is adapted for holding a variety of articles, for purposes both useful and ornamental.

This invention has been patented by Mr. Alexander McLane, of 157 Oliver Street, Paterson, N. J.