

engages with. The apparatus may be used for setting out, cutting, or working divisions on circular or straight lines.

Mr. Fredrick Schneider, of Pagosa Springs, Col., has patented a very useful improvement in open links. The object of the invention is to provide a new and improved open link which is simple in construction and effective and convenient in use. The invention consists in an open link formed of two U-shaped sections provided with internal opposite projections at the ends, which sections are united by a connecting plate provided with recesses in the longitudinal edges to receive the projections at the ends of the U-shaped sections, all these parts being held together by a flat sliding cap and a split spring bolt passing through said cap and the connecting plate.

Mr. William E. Varney, of Daytonville, Iowa, has patented an improved fly-net punch. The object of this invention is to provide a machine for punching holes for the net strands in the leather bars or straps more rapidly and accurately than is now done and without removing any of the leather. The invention consists of a fly-net bar punch, in which a two-pronged fork or punch is reciprocated up and down, within a frame mounted on a table, by means of gearing and a flywheel shaft connected by an eccentric with the punch shaft, and in which the strap or bar to be operated upon is intermittently and automatically fed along the table by mechanism deriving its motion from the flywheel of the device. With this machine the work of preparing the straps or bars for fly netting for horses, etc., is performed with great economy of time and labor.

An improved vehicle gear, the object of which is to provide easier riding springs for buggies and other vehicles, has been patented by Mr. William Lockwood, of Madrid, N. Y. The invention consists in a combination of semi-elliptical springs, centrally secured on the top of the side bars in direction of the length of the latter, and curved end springs passing around the side bars up to and connecting with the extremities of the semi-elliptical springs. This improvement forms a very simple, easy, effective, and economical spring gear.

Mr. John M. Doyle, of North Springfield, Mo., has patented an improved bench dog. The object of this invention is the production of a movable and adjustable bench dog for carpenters' use, and it consists of a notched sliding rack bar or claw and a pivoted toothed lever secured in an angle frame, which frame is adapted to be attached to the bench by means of a lateral bolt or arm entering holes in the side of the bench. A ratchet construction of the frame and a pawl on the lever provide for locking the claw up to the work, and for releasing it therefrom when required. The simplicity and utility of this invention will be apparent to every carpenter.

**The Mines of Tasmania.**

A serious mining fever has been developed in Tasmania—the old Van Diemen's Land—based chiefly upon tin. The Mount Bischoff tin mine, described as a mountain of metal to be quarried rather than mined, is apparently one of the richest if not the richest deposits of tin in the world.

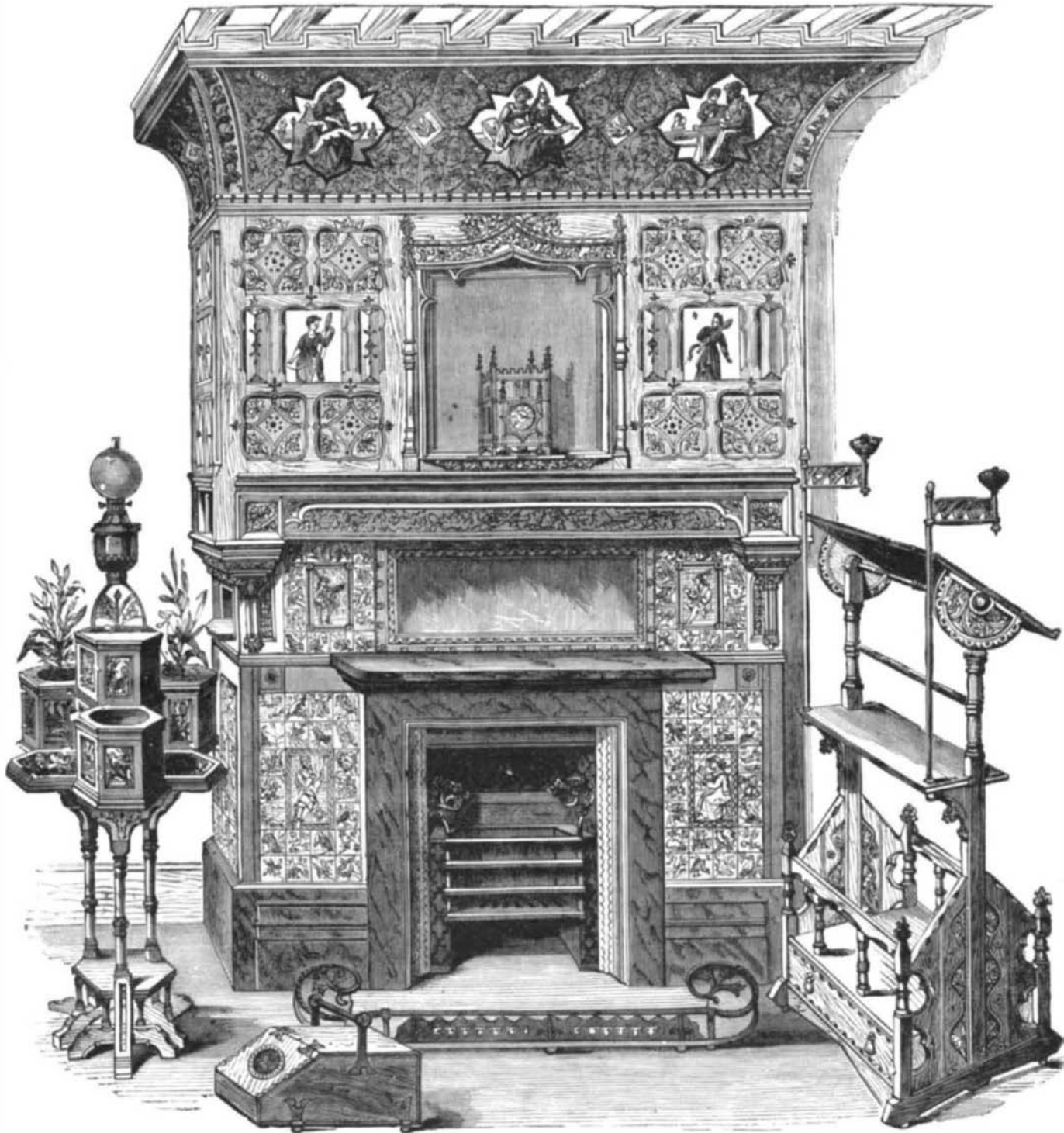
It was in the year 1872 that large deposits of tin ore were first discovered at Mount Bischoff, on the northern side of the island, opposite to Victoria. From the outset the mine

in its product of tin proved to be what the Burra Burra of South Australia was first as a copper mine, namely, a deposit so vast as to render superfluous the ordinarily tardy and expensive operations of mining. A mining fever set in, and successively were discovered, not merely many more tin deposits, but also gold, silver, bismuth, antimony, iron, and coal apparently inexhaustible.

From the year 1866 to June 30, 1879, the returns of gold were 48,753 ounces from the alluvial and 72,186 ounces from the quartz.

**ARTISTIC MANTELPIECE.**

The engraving represents a magnificent mantelpiece made by Messrs. Cox & Sons, of London, England. The wrought metal work is of exquisite workmanship, and the tiles,



MANTELPIECE BY COX & SONS LONDON ENGLAND.

and painted panels, and diapered patterns are thoroughly artistic. The woodwork is workmanlike in its construction, and the whole design, while massive and imposing, has an elegance that is extremely pleasing.

**An Ancient Great Lake in the West.**

The last quarterly report of the Kansas State Board of Agriculture contains the following: In the geological development it is conceded by scientists that the eastern portion of Kansas, a portion of Nebraska, Southern Iowa, Northern Missouri, etc., was once covered by a fresh water lake, and this body of water received numerous rivers and smaller streams; and that their turbid waters deposited a sediment, varying from a few feet to 150 feet thick.

**Strontianite.**

Since it has been shown by Professor Scheibler, of Berlin, that strontium is the most powerful medium of extraction in sugar refinery, owing to its capacity of combining with three parts of saccharate, the idea suggests itself that the same medium might be successfully employed in the arts, and form a not uninteresting subject of speculation for the chemist. Hitherto native strontianite—that is, the 90 to 95 per cent. pure carbonate of strontia (not the celestine which frequently is mistaken for the term strontianite)—has not been worked systematically in mines; but what used to be brought to the market was an inferior stone collected in

various parts of Germany, chiefly in Westphalia, where it is found on the surface of the fields. Little also has been collected in this manner, and necessarily the quality was subject to the greatest fluctuations. By Dr. Scheibler's important discovery a new era has begun in the matter of strontianite. Deposits of considerable importance have been opened in the Westphalian districts at a very great depth, and the supply of several ten thousand tons per annum seems to be secured, whereas only a short time ago it was not thought possible that more than a few hundred tons could in all be provided.—*Chemical News.*

**Ammonia in Pulmonary Diseases.**

At the meeting of the Royal Belgian Academy of Medicine, April 30, 1881, M. Melsens presented a memoir on the therapeutic applications of ammonia, its salts or its complex compounds, requesting that a committee be appointed to examine into the value of his conclusions relative to this question. M. Melsens' communication discusses the applicability of ammonia and its compounds to diseases of the respiratory organs. He concluded, from the fact that phthisical patients are benefited by inhaling the vapors of carbonate of ammonia emanating from stables, that the continuous and moderate inhalation of that salt would be efficacious in other pulmonary affections. He accordingly made the experiment upon himself during an attack of bronchitis, by wearing in a bag attached to his shirt several pieces of ammoniac carbonate. Having been completely cured in a few days by this treatment, he subsequently employed it in his practice, with uniform good results. He also applies the remedy directly to the respiratory passages, by means of the spray, with equal success.—*Bulletin de l'Académie Royale de Médecine de Belgique.*

**Carbolic Powder.**

A dry powder, containing a definite quantity of carbolic acid, in which

form the latter is most easily used as an antiseptic, is prepared, according to a Berlin journal, as follows: 60 parts of rosin and 15 parts of stearine are melted together with a gentle heat, and when the mass has somewhat cooled, but is still liquid, 25 parts of carbolic acid are added. The mixture is then mixed with 700 to 800 parts of precipitated carbonate of calcium, and by careful trituration reduced to a uniform powder. This is to be applied by means of a sprinkling box, which may be securely covered after use.

The powder may be applied either directly to wounds and sores, so as to produce an antiseptic scab, or it may be used for the extempore preparation of carbolicized jute dressing by placing several layers of jute, each separately dusted over with the powder, upon each other.

**Cotton Spindles in Fall River, Mass.**

The latest published statistics, as found in Earl's "Fall River and its Manufactories of 1880," indicate that very considerable additions have been made to the number of spindles in the city. On the first of July last there were 1,429,412 in operation in the city. At the time of the publication of Earl's book there were 1,364,199. This increase does not include any of the new mills. The new Border City, Sagamore, Shove, Bourne, Globe yarn mill, and the new corporation recently formed will add over 200,000 spindles more, making over 1,629,412 spindles in the city.—*Providence Journal.*