

of a code of ethics, if we must have one. Should this anticipation prove true, the society may fairly be looked to to indorse the committee's recommendations, and, broached under such auspices, they may stand a chance of sober consideration by the American Medical Association. The committee is not likely to recommend radical changes unless it is made plain to them that such changes are approved of by a considerable portion of the profession. We trust, therefore, that those who have given thought to these matters may bring their views and conclusions to the committee's knowledge, either by publishing them or by direct correspondence with the committee.

For our part, we would urge upon the committee that it would be an act of propriety, as well as a matter of simple justice, to secure the abrogation of that portion of the code that proclaims it "derogatory to professional character . . . for a physician to hold a patent for any surgical instrument or medicine."

We do not propose to argue at length as to the propriety or impropriety of a physician's holding such a patent, for we think that the statement which we have quoted from the code would not have commended itself to physicians in general, nor have been suffered to remain so long a part of the code, had it not been bolstered up by being incorporated into the same sentence that declares it also derogatory "to dispense a secret nostrum." Whether this grouping of the two acts for common denunciation was an ingenious device on the part of those who abhorred the idea of a physician's holding a patent and who chose this way to spread their abhorrence, we are unable to say; but it is certain that the idea of dispensing secret nostrums is revolting to high-minded men, and, when they find this practice classed in the same category with the possession of a patent, it is no wonder that, without giving the matter much thought, they gradually come to look upon the latter as a heinous offense.

Very little reflection is needed, however, to show how diverse the two are, and how monstrous it is to class them together. The code has no denunciation for the holder of a copyright; and yet there is no essential difference between a copyright and a patent. A copyright covers a publication, and every one recognizes that about this there can be no secrecy; hence to couple the holding of a copyright with the dispensing of a secret nostrum would carry its own refutation. But a patent also is a publication—nothing of secret composition or of secret mechanism can be patented. Analogy shows us, then, that there is nothing in the nature of things to justify the assertion that it is derogatory to professional character for a physician to hold a patent. As a matter of fact, we find that some physicians do hold patents, and that they are not looked upon by their professional brethren as having debased themselves by so doing. We understand that Paquelin's cautery is patented. Whether the patent is held by the inventor or by the maker matters little, for, if now held by any other person than M. Paquelin, it must have been held by him originally. Who has whispered that M. Paquelin has degraded himself? Is an act right in France, but wrong in America? What, then, shall be said of Dr. Dawson, who patented cautery battery of his invention? We have not heard that he has lost caste, and, for our part, we admire the independence he showed in acquiring and holding the patent right as much as we admire the ingenuity displayed in the construction of the battery.

By declining to throw obloquy upon these gentlemen the profession has shown that it does not regard the possession of a patent as derogatory. That declaration in the code that so set it down is, therefore, a dead letter and ought to be expunged.—*N. Y. Medical Journal.*

#### Imitation Jewels.

The following are some of the very latest recipes for making imitation stones. Rue Turbigo, Paris, exhibits some paste jewels which even connoisseurs cannot readily distinguish from the real article, and must make use of scales or file to be satisfied whether they are handling a product of nature or of art.

The imitation of precious stones is to-day an interesting pursuit of chemistry, although in ages of antiquity Egypt and Greece had already attained in it a high perfection. All the precious stones, except opal, may be successfully imitated. The easiest of counterfeiting is the chrysolite.

The coloring substances are the following oxides: Gold, for purple (*Purpura Cassia*); silver, for yellowish green; copper, for bright green; iron, for pale red; cobalt, for blue; tin, for white; manganese, in small quantity to make the glass devoid of color; in a larger, to give it an amethyst color; in great quantity, to make it black and opaque; antimony, for reddish hyacinth color.

To prepare the mass for the body proceed as follows: Pure flint or rock crystal is heated white, cooled in water, pulverized, and sifted with a silk sieve; thereupon exposed to the action of muriatic acid for several hours, washed, dried, and again sifted. Of this substance five different bases are prepared:

For the first base— $1\frac{1}{2}$  parts of the flint or rock crystal powder;  $2\frac{1}{2}$  white lead in scales;  $\frac{1}{2}$  saltpeter;  $\frac{1}{2}$  borax;  $\frac{1}{2}$  white arsenic.

For the second base—1 part prepared flint;  $2\frac{1}{2}$  white lead;  $\frac{1}{2}$  cream of tartar;  $\frac{1}{4}$  calcined borax.

For the third—1 part prepared rock crystal; 2 red lead;  $\frac{1}{2}$  saltpeter;  $\frac{1}{2}$  cream of tartar; pulverize the mixture, melt it three times, and after every melting pour into cold water. This for the three preceding bases.

For the fourth—1 part prepared rock crystal; 3 calcined

borax; 1 part cream of tartar; melt, pour the mass into lukewarm water, add an even amount of red lead (*minimum*), and repeat the melting and cooling twice.

For the fifth base—Take 1 part prepared rock crystal and 3 cream of tartar, melt in a crucible, dissolve the mass in warm water, and add nitric acid as long as a boiling takes place; it is then carefully washed, dried, and  $1\frac{1}{2}$  parts white lead are added. To  $1\frac{1}{2}$  parts of this mixture add  $\frac{1}{2}$  calcined borax, next melt and pour into cold water. This makes, when  $\frac{1}{2}$  part saltpeter is added, a handsome crystal glass, which, without further addition, makes the artificial diamond, called Strass, from its inventor.

The following are recipes for imitations of precious stones:

*For Yellow Diamond*—16 ounces of fourth base; 24 grains horn silver; 10 grains antimony.

*Sapphire*—25 ounces of fifth base; 2 drachms 46 grains cobalt.

*Oriental Ruby*—1 ounce of fifth base, and a mixture of 2 drachms 48 grains purple of gold, and the same quantity of sulphuret of antimony and fusible manganese, and 2 ounces of rock crystal; or, 20 ounces of the flint base,  $\frac{1}{2}$  ounce fusible manganese, and 2 ounces rock crystal.

*Baluy Ruby*—16 ounces of fifth base, and the preceding coloring substance, lessened by one-fourth; or, 20 ounces flint base, same coloring mass, but less manganese by one-fourth.

*Oriental Topaz*—24 ounces of first or third base; 5 drachms black antimony.

*Brazilian Topaz*—24 ounces of second or third base; 1 ounce 24 grains black antimony; 8 grains purpura cassia (purple of gold).

*Saconian Topaz*—24 ounces of first or third base; 6 drachms black antimony.

*Amethyst*—24 ounces of fifth base; 4 drachms manganese; 4 grains purple of gold.

*Emerald*—15 ounces of any one base; 1 drachm blue carbonate of copper; 6 grains antimony; or, 1 ounce of second base; 20 black antimony; 4 grains cobalt.

*Beryl*—24 ounces of third base; 96 grains black antimony; 4 grains cobalt.

*Common Opal*—1 ounce of third base; 2 grains loadstone; 26 grains of some absorbing earth.

For the imitation of pearls, thin balls of glass are used, which by an addition of a small quantity of potash and oxide of lead, receive a bluish glittering sheen, and the inner sides of which are covered with the scales of a small river fish (*Cyprinus alburnus*). To make these scales pliable and adhesive, they are steeped for some time in spirits of ammonia in which a small amount of isinglass has been dissolved. Messrs. Savary & Mosbach exhibit some which, being solid, are in all respects equal to the Roman.

#### MISCELLANEOUS INVENTIONS.

**THE DIVISION OF THE CIRCLE.**—The problem, long ago practically abandoned by mathematicians as impossible, of dividing exactly, theoretically and mechanically, any angle into any number of parts, has at last been solved. A patent protecting the mechanical means used for this purpose was issued to O. P. Dexter, who has written a pamphlet ("The Division of Angles") fully explaining the mathematical theory of the subject, which, we understand, will be published at an early date by the American News Company of New York.

In the business of taking oysters from the bottom of the river or bay the dredge is hauled along the bottom by a rope or lever attached to the vessel, whose movement through the water supplies the power to drag the dredge. Now, this business places the operators in great danger of life and limb, due to a violent backward motion of the crank in case the dredge should strike a "hang" or a large stone or other obstruction on the bed of the river or bay. Mr. John S. Stuart, of Crisfield, Md., has patented a simple and efficient form of dredge winder which obviates this danger. It consists in recessing the end of the spool and providing it with a circular series of inwardly-projecting ratchet teeth, then fixing rigidly on the shaft at the end of the spool a disk, and outside of this a loose ratchet wheel and pawl with right-angular dogs acting through the stationary disk from the loose ratchet wheel upon the spool, so that the spool may be wound up or automatically released when an extraordinary strain is put upon the rope.

An improved apparatus for transmitting motion has been patented by Mr. Stephen Dennis and Antonio Samper, of Paris, France. This invention relates to improvements on the invention the subject of former Letters Patent dated 16th July, 1879, for mechanism for the transmission of motion by means of bands, ropes, or chains wound spirally on drums or surfaces receiving rotary motion.

An improved pen holder has been patented by Mr. Daniel Hepp, of Chicago, Ill. The object of this invention is to enable several parallel lines to be drawn at one stroke of the pen. It consists in connecting two pen holders to one staff, and securing them together by set-screws, so that they can be easily and quickly adjusted to enable the pens to draw several parallel lines.

Mr. William Von Bergen, of Andover, Mass., has patented an apparatus that can be used at will either as a photographic camera or as a magic lantern, thereby saving the expense of two instruments.

An improvement in fences has been patented by Mr. James A. Manning, of Danville, Ind. The object of this

invention is to facilitate the construction of fences and increase their strength and durability.

Mr. Joseph T. Hammick, of Rhinebeck, N. Y., has patented an improved car coupling and detaching device, by means of which cars may be coupled and uncoupled without going between them by using the ordinary link, either straight or crooked.

An improved fire escape has been patented by Messrs. Alfred J. Harrison, Alexander H. Birkmire, and Frederick Lowe, of Parkville, Conn. This invention relates to that class of devices that are designed to be operated from the street for affording means of escape to inmates of burning houses, and it consists of the combination with screw-actuated lazy-tongs of hinged sliding supporting blocks, whereby the tongs may be inclined toward a building, and of devices for holding them in that position; and it consists, further, in combination with the adjustable tongs and supporting blocks, of a rope ladder and a flexible tubular conductor for affording direct means of ascent and descent.

An improved handle socket for shovels, spades, and scoops has been patented by Mr. Patrick W. Groom, of St. Louis, Mo. The invention consists in a socket provided with a flange having recesses in its under surface around the rivet holes, so that the lower heads of the rivets and that part of the sheet iron of the shovel or scoop covered by these rivet heads will be driven into these recesses, whereby the heads of the rivets will become flush with the under surface of the shovel, and consequently will not wear off as rapidly as they do in the shovels of ordinary construction.

#### The New Cunard Liner Servia.

While this splendid new vessel, to ply between New York and Liverpool, built by Messrs. Thomson, of Clydebank, was proceeding down the Clyde a few days ago, with the object of having her experimental trials made, it was observed that a crack was opening out in the main crank shaft. Although it might have been possible to work the vessel for some time with the imperfect shaft, yet it has been deemed advisable to have it taken out and either thoroughly repaired or a new one substituted. The work will, it is expected, occupy about two months. The shaft was made at the Lancefield Forge, Glasgow, and is probably the largest hitherto placed in any Clyde-built steamer. Along with the above fact a very remarkable circumstance transpired, namely, the existence of a flaw in the corresponding portion of the spare shaft, which was made at the Mersey Iron and Steel Forge, Birkenhead. A new shaft has since been ordered, and no fewer than four furnaces will be at work on as many separate forgings for making a "built" shaft, the crank pin of which is to be of steel. The Servia is a vessel of 8,500 tons, 530 feet in length, and the largest merchant vessel yet built, with the exception of the City of Rome, recently launched at Barrow-in-Furness, excluding the Great Eastern.

#### An English Opinion of American Locomotives.

R. M. Brereton, an English engineer, says concerning American locomotives: "I argue that the greater duty done by the American motor is due to the better design and better system of working the locomotives. The American builder excels in the system of framing and counterbalancing, and in designs of crank axles, etc., so that the engine may run remarkably easy and without jar round sharp curves, and work not only on the light roads, but also diminish the wear and tear on the solid roads, and at the same time increase the effective tractive force. The English engine is a very heavy affair, and in running it not only wears and tears itself very rapidly, but also the roadway, and by its unsteadiness and jar it greatly fatigues the drivers and firemen. I have ridden hundreds of miles on engines in India, in France, and in the United States, and have always found the American engine most easy and comfortable; but I never did the English or the Continental engines. It is almost impossible to give these engines their full hauling power, simply because the greater portion of the weight cannot be thrown on the driving wheels."

#### Trial of the Largest Dredger in the World.

The new iron hopper dredger recently constructed by Messrs. W. Simons & Co., Renfrew, for Otago, was lately tried on the Clyde, and dredged at the rate of 400 tons per hour, which was plunged into its own hold or hopper cavity, capable of containing 1,300 tons of spoil. At the same time it loaded with several hundred tons the new government steamer Perseverance, which came alongside. Afterwards, by steam appliances, its bucket girder was elevated, and its twin screw propellers put in motion, and the vessel steamed away down the Clyde to the measured mile, where the loaded speed was tested at  $7\frac{1}{2}$  knots per hour; the vessel then steamed down the Firth of Clyde, where its large cargo was instantly deposited through its bottom in 60 fathoms water.

This vessel dredges from 5 feet to 35 feet depth, has twin screws, and is propelled and worked by two independent sets of compound engines of 700 horse power, and besides loading its own cargo, it can fill if required a fleet of barges on the old system. It is the property of the Otago Harbor Board, and will steam to New Zealand.

The trial of dredging, steaming, maneuvering, and depositing was considered very satisfactory; this being the tenth and largest hopper dredger constructed by Messrs. Simons & Co., who are the inventors and originators of the system. It is also worthy of note that, owing to the enterprise of the above small colony, they will have a dredger the equal of which is neither in Europe nor America.