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THE SCIENTIFIC AMERICAN SUPPLEMENT
No. 310,
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CAN A PATENT BE SOLD BY SHERIFF FOR DEBT LIKE OTHER PROPERTY?

This question is frequently asked, and heretofore, in the absence of any definite decisions of the courts, we have been accustomed, for many years, to answer that an ordinary sheriff's sale of a patent would be invalid, while an assignment of the patent by the owner would hold good and carry title against such sheriff's sale. Further, we have held that the proper way for a creditor to obtain title to a debtor's patent is to procure an order from a competent court, compelling the debtor to sign a deed of conveyance.

This subject has lately received the attention of two separate courts, and we will here present the substance of both decisions.

The first case was in the Supreme Court of the District of Columbia, Murray *vs.* Ager, decided January, 1881. Murray, having recovered a judgment of $2,164 against Ager, who was the patentee of certain grain-dressing inventions, represented to the court that the only means he had to realize on his judgment was from the patent. Murray accordingly asked the court for an order compelling Ager to execute such assignments of patents to the purchaser as might be necessary to carry the title, in conformity with the patent laws.

The defendant admitted the judgment and ownership of the patents, but claimed that the latter were not subject to seizure and sale under the proceedings. The lower court took the same view and dismissed the bill; but on appeal the Supreme Court of the District reversed the decision of the lower court, and, in a very interesting and exhaustive decision, held substantially as follows:

"A court of equity may direct the sale of the interest of an inventor in his patent in order to satisfy a judgment obtained against him in a court of law, the writ of execution having been returned *nulla bona*, and for that purpose will require the patentee to make an assignment of the patent, as provided in Section 4,898 of the Revised Statutes of the United States, and in default of such assignment within a limited time, will appoint a trustee, with authority to execute the same."

The second case occurred in the Supreme Court of California, Pacific Bank *vs.* Robinson, decided April 19, 1881.

The court held that "a patent right issued under the laws of the United States may be required to be assigned to a receiver, under proceedings supplementary to execution, who may sell the same and apply the proceeds in satisfaction of judgment."

Thus, although an ordinary sheriff's sale of a debtor's patent right would be good for nothing, it appears from the foregoing cases that, when proper supplementary proceedings are taken, the courts may compel the debtor to make an assignment of his patent for the benefit of his creditors, or appoint a receiver for the patent, whose conveyance to the purchaser would be good.

LUMINOUS PAINT.

The introduction at this time of luminous paint is not the result of any recent discoveries or improvements in its manufacture, for we are told that the substance which Canton prepared was as good as any one can now make. Prof. Tuson, of London, has in his possession some of Canton's own make in a sealed tube, inscribed 1764, which retains its peculiar property to this day. It would seem as if the world was not yet ripe for the discovery, and it lay for more than a century a curious toy in chemical collections. Then all at once it springs into importance, both technically and for ornamental purposes.

In a lecture before the Berlin Polytechnic Society, Gaedicke gave some details of its history, which may prove of interest.

All the recipes for making the luminous material depend upon the formation of sulphur compounds, sulphides of barium, strontium, or calcium. They either set out with the sulphates, which are reduced in different ways, or with carbonates or oxides, that are treated with sulphur or its compounds.

The Bologonian phosphorus was made, according to John, from pulverized barytes, free from iron, by mixing it with gum tragacanth to a cake, drying this and heating it for an hour between layers of coal in a wind furnace. Osann reduced the sulphate of barium by igniting it in a current of hydrogen. In 1750 Markgraf heated sulphate of lime with charcoal—a method still in use to-day. Canton prepared a phosphorescent sulphur compound of lime, taking as his material burut oyster shells, which he treated with flowers of sulphur. Grotthus attempted to improve on this method, and Osann modified it by substituting for the flowers of sulphur a metallic sulphide, which gave up sulphur when heated, such as sulphides of antimony, tin, or mercury. Wach returned to Canton's method, but mixed the flowers of sulphur with small quantities of metallic oxides, such as antimony, with the view of obtaining different colors in this way. The color of the light is generally white, or, at first, bluish. Hyposulphite of strontium, or equal parts of carbonate of strontium and sulphur, when ignited for twenty or twenty-five minutes, at first over an ordinary Bunsen burner and then over the blast lamp, give a green light, while carbonate of barium and carbon give an orange-yellow light.

The pure sulphides do not give any light at all. Hence the chemical composition alone does not condition its power of giving out light, since of two substances having the same composition, one may be luminous while the other is not. It seems rather as if the power of giving light depends not only on the correct chemical composition, but also upon a definite molecular condition. Hence it happens that the luminous substance obtained from burnt mother of-pearl is better than that from burnt oyster shells; also that when slaked lime is the material employed the result differs from that obtained from aragonite, although in all four cases the resulting substance has the same chemical composition. The luminous material is scarcely at all attacked by the common atmospheric influences.

The action of light upon such substances may be compared to striking a bell. A momentary impulse excites it and causes the bell to vibrate and give forth a tone, which tone lasts for a certain length of time, continually growing feebler, until finally it ceases entirely. So, too, the phosphorescent body. Excited by a momentary illumination it gives out a bright light at first, which grows weaker and weaker, until at last it can only be perceived by a perfectly quiet eye in the deepest darkness, and at last comes to rest. The after-illumination of these substances under discussion last much longer than the after-sound of a bell, since the waves of light are much finer than the metallic vibrations of a ringing bell.

Most sources of light will excite phosphorescence in these substances, *e. g.*, a petroleum lamp, gaslight, and even a match. In these cases, of course, the substance must be brought close to the source of light. It is excited especially by burning magnesium wire and by the electric light, but daylight is the best. Since water does not affect this substance, and since its luminosity is not due to oxidation, and hence does not need the presence of atmospheric air, it will give light under water.

An alcohol lamp flame colored yellow by common salt will not excite it, but if the alcohol flame is colored blue by copper it will. In the sun's rays those which lie in the violet and ultra-violet act the most energetic, and they decrease in power toward the yellow. It is remarkable how the yellow and red rays destroy the effect of the opposing violet rays by extinguishing or considerably weakening the luminosity caused by these latter. Similar relations prevail when the substance is covered with colored glass. Dark blue glass, although it seems to considerably weaken the light, permits all the active rays to pass through, and at times, when daylight contains many of the red and yellow rays, a substance that has been covered with blue glass is more strongly excited than if exposed to pure daylight, because the blue glass prevents the extinguishing action of the red and yellow rays. If a surface that has been covered with phosphorescent paint is first excited and then one half covered with pasteboard and the other with yellow glass, the extinguishing effect of the latter will be very noticeable. The portion covered with pasteboard will continue luminous after that which was covered with glass is almost total dark.

Heat has a peculiar effect upon the phosphorescent body after it has been isolated. It causes it to give a more intense light for a short time, but the luminosity is then of shorter duration than it otherwise would be. Heat acts here somewhat as it does on a magnet, driving out the active power, so that it requires to be charged over again to set the power again in action.

It seems as if light bears the same relation to the phosphorescence of these bodies that electricity does to magnetism; hence the name of light-magnet would not be inappropriate.

The color of the light thrown out is independent of the color of the exciting rays—*i. e.*, a certain substance always glows with the same colored light whether it has been excited by a violet, blue, or colorless light. Neither does the color depend on the addition of certain metals, but seems to be the result of a definite molecular condition of the substance. The light emitted retains its color but a short time. No matter how prepared they all get to be one color after awhile—that is, white (?).

The duration of luminosity is differently stated by different authors. According to Gaedicke's observation the best ones made at the present time last nineteen hours; but it requires perfect darkness and an eye entirely at rest, like on waking in the morning, to detect the faint glimmer. The intensity of the light, like the sound of the bell, is greatest at first and then decreases more rapidly than it does afterward.

Its luminosity is instantly destroyed by chlorine gas, also by hydrochloric and nitric acids; more slowly by sulphuric acid. It is further destroyed by substances which darken its color, hence it cannot be mixed with varnishes that contain lead and blacken; iron is also injurious because it rusts.

When used as a paint it is mixed with some adhesive substance like glue, and can then be mixed with oil, water, or a light-colored varnish, and applied repeatedly to the object that is to be rendered luminous. It is well to prepare a white ground for it with chalk or zinc-white mixed with a little copal, which may be dissolved in oil of turpentine.

P. N.

A Large Catch of Striped Bass.

A very extraordinary catch of striped bass was made November 18, by the Blackford Fishing Company, of Montauk Point, Long Island. Some 4,000 pounds of fish were captured, the larger proportion of the fish weighing from 50 to 75 pounds, while perhaps as many more escaped from the nets. The majority of the fish were females, their eggs not being matured.