

Correspondence.

The New Supplement Reference Catalogue.

To the Editor of the SCIENTIFIC AMERICAN: Many thanks for the SUPPLEMENT catalogue. It is indeed a valuable aid to quickly find the articles in the SUPPLEMENT. I have nearly all the numbers of SCIENTIFIC AMERICAN and SUPPLEMENT and constantly use them for reference. They have been of greatest value to me in the study of natural sciences.

Rev. MARCUS KIEK.

St. Francis Seraphicus Convent, Cincinnati, June 11, 1897.

Death of Father Kneipp.

Father Sebastian Kneipp, the genial old priest whose water cure, or grass cure, made him famous, died at Woerishofen, Bavaria, on June 17, in the seventy-sixth year of his age. Father Kneipp was a unique figure in the history of the healing art. His fame came from his original method of treating diseased persons by means, chiefly, of cold water applied in a variety of ways. He practiced the cure for over a lifetime, although it came into general vogue only in the last five years. He was born in 1821, and after leaving school worked as a weaver until the age of twenty-seven, when he began to study medicine and theology, having long desired to become a priest. He was in ill health, and in a delirium of fever he rushed from his room and thrust his feet through the ice in a pond, and instead of becoming worse found he was much better for the shock, and so began systematic experiments along this line.

He was admitted to holy orders and went to the village of Woerishofen in Bavaria, where he earned the love of his neighbors and the mountain folk, whom he had cured of disease by the cold water treatment. His fame was for a long time local, but in time it spread all over the world, and people came to him for treatment in large numbers. The doctors looked askance at the spectacle of a priest making use of the methods only ascribed to a charlatan, but he really was no charlatan. At last notable persons began to come to him for treatment. Emperor Francis Joseph took a course of it on two occasions. The Archduke Joseph of Austria also underwent the cure, and it was an amusing sight to see some of the notables of Europe walking barefoot in the dewy grass in frock coats and white cravats. This barefoot walking became the best known system introduced by Father Kneipp. His belief was that most illness was the result of the luxury of modern living, and his aim was to improve the circulation and tone up the system. He made use of local bathing and applications together with steam baths which were sometimes medicated with herbs. To stimulate and restore the circulation, he ordered the barefoot walking and cold douches. He always made it a point to see his patients himself, and he made no charges for his services. Contributions from relieved patients he used for parish work. For a long time there were not accommodations for the visitors in the village; but this has been remedied. In recognition of his work, the Pope bestowed on Father Kneipp an honorary office, which carried with it the title of Monsignor. In 1894 the Monsignor was called to Rome to treat the Pontiff, and it was announced after some time that, by his treatment, the Pope's health had been restored. Kneipp societies have been established in most countries of the world. The method of treatment has made some headway in the United States.

The Work of the Postal Congress.

The fifth convention of the Universal Postal Congress adjourned at Washington, June 15. It was decided to hold the next meeting at Rome, Italy, in February, 1903. The final sessions were devoted to the signing of the general treaty, which becomes operative on January 1, 1899. Each delegate signed these papers subject to the formal ratification of his government. The originals will be deposited in the archives of the state department and certified copies will be sent to all the governments comprising the Universal Postal Union. The following is an official resume of the results of the work of the Congress:

1. The principal treaty, which includes the entry of Corea into the Postal Union; the declaration of the Orange Free State (which failed to send a delegate to Washington) that it hoped soon to enter the union; and the declaration of the Chinese empire (which was represented in the congress) that it will observe the regulations of the union as soon as the organization of its service permits.
2. The conditions in which the countries of the union will pay reciprocally the intermediary transit rates have been facilitated, and tariff diminished quite materially on a graduated scale for the ensuing six years.
3. Uniform colors have been projected for postage stamps.
4. Postal cards unpaid are subject to a double tax, that is, four cents in the place of the former tax, which was ten cents, the same as for unpaid letters.
5. Circulars produced on a machine (typewritten) in quantities of twenty circulars, all of the same charac-

ter, are admitted to the international mails at the same rates as printed circulars.

6. Samples of merchandise are admitted up to 350 grammes.

7. Objects of natural history, animals, dried plants, or preserved geological specimens are admitted as samples.

8. The question of the creation of a universal postage stamp brought up, and the proposition defeated, on account of the difficulties which would occur in putting into practice that important innovation, especially because of the diversity of currency standards.

9. Special arrangements concerning packages of declared value, postal orders, books of identity, and subscriptions to journals have been thoroughly revised. (This country is not actually concerned in these arrangements, mostly affecting the states of the Continent of Europe.)

Recent Patent and Trade Mark Decisions.

Warner v. Stinson (Decision of Secretary of Interior, 78 O. G., 1901.

Jurisdiction of the Secretary of the Interior over Judicial Acts of the Commissioner of Patents.—The Secretary of the Interior has no jurisdiction over acts of the Commissioner of Patents that are judicial in their nature. To construe and apply a rule of the Patent Office is a judicial act. At any rate, appeal will not lie to the Secretary of the Interior over an interlocutory order of the Commissioner of Patents.

Jenkins v. Jenkins (Decision of Secretary of Interior), 78 O. G., 1902.

Judicial Act of the Commissioner of Patents.—The decision as to whether an interference will be allowed to proceed or not is judicial in its nature, and likewise the question whether any one may be a proper party to an interference, and in either case appeal does not lie to the Secretary of the Interior.

Diamond Match Company v. Hanover Match Company (U. S. C. C., Pa.), 78 Fed. Rep., 622.

Match Making Machine.—The Sisum patent, No. 281,408, for a machine for bundling match sticks, has been held valid as to claims 1 and 10 and to be entitled to the liberal application of the doctrine of equivalence. The Donnelly patent, No. 292,474, for a match-making machine has been held valid as to claim 2.

Fowler v. Dodge (Commissioner's Decision), 78 O. G., 2045.

True Inventor of Linotype Machines.—Joseph C. Fowler has been held to have been the true inventor of the linotype machine set forth in his application filed October 1, 1893, as against the application of Philip T. Dodge.

Sufficiency of Disclosure.—The drawing or other disclosure of an invention must be clear enough to enable one skilled in the art to construct a machine, and the specification may fail in this while showing an adequate and complete conception of the invention.

Reduction to Practice.—Where the specification and drawings are sufficient to show an intellectual conception of an improvement, but not clear enough to enable those skilled in the art to make the machine, the filing of the application does not amount to constructive reduction to practice.

Arnold v. Tyler (Commissioner's Decision), 79 O. G., 154.

Reduction to Practice.—Reduction to practice may be made with an experimental device, if it be by practical and successful operation and in such use as it would have to stand when manufactured. The use of a shoe last in trimming soles is not a reduction to practice of the same last for leveling soles, where the conditions are different and the strain is greater. Where the device was laid away for four years without use, there is a strong presumption that it was merely an unsuccessful experiment in the former alleged use, and the claim that the party was, during the four years, trying to devise means to make the device practical is inconsistent with the contention that such device was in its first use a complete reduction to practice. The fact that the applicant made inquiries as to the patentability of the device is immaterial to the question of reduction to practice or of due diligence therein. Delay for four years is conclusive evidence of lack of due diligence in reducing a simple device to practice, at least where the party had ample means.

An Airship Takes Fire.

A dispatch from Berlin, dated June 12, states that Herr Woelfert, a noted aeronaut, and his assistant Knabe, made an experimental ascent in a steerable airship from the Tempelhof field. When the balloon, which had been filled at the military ballooning establishment, had reached a considerable height, estimates of which vary from 1,700 to 3,000 feet, a loud explosion occurred, and the next moment the balloon was seen to be ablaze. The car, which was also on fire, detached itself from the burning silk and fell with fearful rapidity to the ground. Both of the occupants were found to be dead. Their bodies were horribly burned. It appears that the benzine used in the steering motor exploded, causing the disaster.

Science Notes.

The American Academy of Medicine held its twenty-second annual meeting on May 29 and 31, at Philadelphia. It was largely attended.

It is said that some of the heirs-at-law of the late Alfred Nobel are contesting his will, by which he bequeathed his property for the advancement of science.

Dr. Charles W. Dabney has been appointed special agent in charge of the scientific and statistical investigation of the United States Department of Agriculture.

The Carlsberg fund for scientific purposes has offered about \$40,000 to the Danish scientific expedition to the east coast of Greenland, for the purpose of making a chart of the coast northward to Angmagalik.

At a recent meeting of the Academie des Sciences, in Paris, M. Henri Moissan communicated the results of his experiments with Prof. Dewar in the liquefaction of fluorine gas. We have already referred to this interesting experiment. Though solid fluorine has not yet been obtained, M. Moissan is sanguine that this astonishing result will also be secured.

An interesting discovery from a geological point of view was recently made by an explorer in the mountains of Witzies Hoek, Natal, says *Le Génie Civil*. On the summit of an extinct volcano, on the edge of a lake that occupies the crater, soundings revealed a layer of sand inclosing small diamonds. It would be interesting to know whether these diamonds were there accidentally, that is, as the result of washing operations carried on by the natives, or whether this discovery corresponds to an actual mine of diamonds, for the hills of Witzies Hoek are not situated in regions known to be diamond bearing. On this last hypothesis, the presence of precious stones in the crater of a volcano would doubtless throw some light on the formation of the gems in nature.

Mr. J. C. Merryweather, the well known manufacturer of fire apparatus in London, makes a most useful suggestion on the subject of the protection of churches from fire. After referring to the dangers of fire in such buildings from defects in the heating and lighting apparatus, he proposes that each church tower should be fitted with a tank or tanks, kept full of water by means of a pump and hose or fixed pipe, the pump to take supply from a well or other available source. From the tanks he suggests a pipe being carried into the church, with hydrants and hose in convenient positions. The water tanks would then enable powerful jets to be brought to bear immediately an outbreak of fire was discovered. The cost of the arrangement would be small, and doubtless the destruction of many sacred buildings by fire would be prevented. Canterbury Cathedral has been saved three times by its own fire apparatus, and the recent fire at St. George's, Hanover Square, proves that even in London there is considerable risk of fire in places of worship.

In his second lecture on "Liquid Air as an Agent of Research," delivered at the Royal Institution, says The Engineer, Professor Dewar continued his remarks on the critical constants of gases, and brought forward some interesting speculations founded on this extension of certain laws, known by experiment to hold good at accessible temperatures, to bodies which one could never hope to be able to examine in the liquid state. With regard to the theory that carbon is a very important constituent of the sun, he pointed out that the density of the latter was 1.4. Supposing it to consist of carbon at the critical temperature, its density when cooled to liquefaction would become 4.2, according to known laws, and if it were cooled to the temperature of this earth, its density would increase by something like one-quarter. Therefore, the density of the materials of the earth—which was 5.5—did not appear to be far removed from the density of the sun at the same temperature. The lecturer, for the first time in public, froze a specimen of argon, supplied by Lord Rayleigh, to the solid state by means of liquid air at a temperature more than 200 degrees below zero.

Working in the physical laboratory of the Massachusetts Institute of Technology, Mr. R. W. Wood has succeeded in producing diffraction phenomena with Roentgen rays, says Nature. The source of the rays was an arc-like discharge between two very small beads of platinum in a high vacuum. The discharge bulb was only about an inch in diameter, while the radiation—which came from an area about the size of a pin head—was strong enough to show the bones in the forearm. The "arc" appeared to be a new form of cathode discharge, and could only be produced under peculiar conditions. Mr. Wood used a tube with a platinum slit 0.1 mm. wide, mounted within the bulb at a distance of 2 mm. from the radiating bead. The second slit of variable width was placed at a distance of 10 cm. from the first, and the photographic plate at distances varying from 10 to 30 cm. from this. The images of the slit on the plate showed a distinct dark line on each edge, which could only be explained on the supposition that interference occurred. The plate was at too great a distance from the slit for such an effect to be produced by reflection of the rays from the edges. Images of fine wires showed similar phenomena.