and another from beneath the surface. This explanation attributes a considerable degree of transparence to the metals, more indeed than seems consistent with fact. Brück offered another theory, according to which the color of light reflected from bodies not possessing the metallic luster should be independent of the local color—that is, the color of the reflecting body—while in the case of metals the color of the reflected light is that attributed to the substance, the incident light being white. Brücke also considered that a certain intensity of reflection was a necessary condition for metallic luster, this intensity resulting from the opacity of the metals, and he mentions the phenomenon of total reflection as producing a perfect imitation of metallic luster. The theories of Dove and Brücke represent opposing views of the transparency of the metals; the one considers them as opaque, the other as transparent. Herr W. Spring (*Bul. Soc. Chim.*, 50, 219) endeavors to reconcile these views by a study of the nature of the surfaces of the solids he has obtained during his experiments on the compression of solids within polished steel cylinders. He finds that substances which in the form of powder are opaque produce solids that have a metallic luster, whatever the nature of the substance, while such substances as yield powders more or less transparent formed cylinders having vitreous surfaces, looking as if varnished.—*Scientific American.*

NICKEL BROMIDE.

Nickel bromide has been employed medicinally as a hypnotic and a sedative. According to Mr. A. Drew (*Amer. Jour. Pharm.*), it may be prepared conveniently by treating granulated nickel with bromine under water, and carefully evaporating the dark green solution, when the salt is obtained in deep green deliquescent crystals, freely soluble in water, but much less soluble in alcohol. The salt is conveniently administered in the form of a sirup, which may be prepared by placing 377 grains of bromine and 137 grains of nickel in a flask containing 12 ounces of water, digesting at a gentle heat until the reaction has ceased, filtering, and then adding 24 ounces of sugar and sufficient water to make 32 fluid ounces. The sirup, which is of a beautiful green color, contains in each fluid drachm 5 grains of crystallized nickel bromide, which is an average dose.

TO RESTORE THE FRESHNESS OF WORN CLOTHING.

The mystery to many people how the scourers of old clothes can make them almost as good as new is explained in the *American Analyst* as follows:—

Take, for instance, a shiny old coat, vest, or pair of pants of broadcloth, cassimere, or diagonal. The scourer makes a strong, warm soapsuds, and plunges the garment into it, souses it up and down, rubs the dirty places, if necessary puts it through a second suds, then rinses it through several waters, and hangs it to dry on the line. When nearly dry, he takes it in, rolls it up for an hour or two, and then presses it. An old cotton cloth is laid on the outside of the coat, and the iron passed over that until the wrinkles are out; but the iron is removed before the steam ceases to rise from the goods, else they would be shiny. Wrinkles that are obstinate are removed by laying a wet cloth over them, and passing the iron over that. If any shiny places are seen, they are treated as the wrinkles are; the iron is lifted, while the full cloud of steam rises, and brings the nap up with it. Cloth should always have a suds made specially for it, as if that which has been used for white cotton or woolen clothes, lint will be left in the water, and cling to the cloth. In this manner we have known the same coat and pantaloons to be renewed time and again, and have all the look and feel of new garments. Good broadcloth and its fellow cloths will bear many washings, and look better every time because of them.

THE JOHNSTOWN HORROR.

Though the Johnstown disaster occurred more than two months since, the interest of the public in so remarkable an event has not ceased to be active. H. S. Goodspeed & Co., of New York, have just issued a very complete and richly pictorial history of the event, which is a work of the deepest interest and power. No reader will care to lay aside this thrilling narrative unfinished. In the world's horrible records of evil wrought by the untamed forces of nature, few catastrophes have been more heart sickening. The fearful loss of life, the vast waste of property, the great interruption to business, destroying the complex machinery which fed so many thousands and contributed to the interests of the whole land, are hard to match. Death and ruin take a thousand shapes, but rarely have they assumed a guise so horrible as that in which they rushed down on the people of Conemaugh Valley. The record cannot fail to be of perennial interest, and to stir the hearts of all who read it for the next generation to come, for such a catastrophe, mercifully, comes but once in a century, if so often. Enough time has now elapsed to enable the proper verification of the facts to be made, and a careful and studied statement to be given to the public worthy of so startling a subject. Any hurried and hap-hazard narrative of an event which stands so unique in our history, is far from doing it even partial justice. The author has given us in this book a record both vigorous and accurate, and every reader should have the work in his hands. The book is an octavo handsomely printed and bound, and contains 522 pages, embellished with forty-eight fine full page illustrations. Agents are wanted. H. S. Goodspeed & Co. pay all the duty.

AN EARTHQUAKE.

On Wednesday, at about 4.45 a.m., we experienced here the heaviest earthquake since the memorable one of 1868. One occurred May 19th which was quite sharp, but that of Wednesday was more severe, though it only lasted about 14 seconds. It was felt at Napa, Oakland, Benicia, San Leandro, Petaluma, Santa Cruz, Mt. Hamilton and elsewhere. No special damage was done, though a few buildings and chimneys were cracked. Prof. Geo. Davidson says: "At my residence, Hyde, near California, the shock lasted 14 seconds. There was nearly at the middle of the oscillations a second shock. About 4h. 56m. there was a tremor of less than half a second's duration, up and down, and at 5h. 5m. a second tremor, slightly stronger, but of the same length.

"The main shock was east and west and gradually fell into oscillations running east-north-east and west-south-west.

"The amplitude of this earthquake shock is one-half greater than that of May 19th."

Astronomer Burckhalter, of the Chabot Observatory, Oakland, in speaking of the shock, said: "There is a great mistake as to the actual amount of movement of the earth in an earthquake. In the Chabot Observatory this morning the earth moved a little less than a quarter of an inch, and in