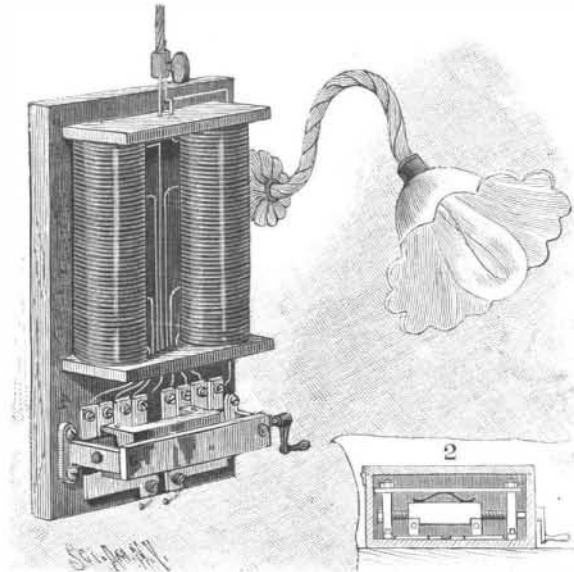


A NEW ELECTRIC CURRENT REGULATOR.

To regulate the intensity of an electric current, more particularly as used with incandescent electric lamps, the improvement represented in the accompanying illustration has been patented by William Hawker, of Windsor Mills, Quebec, Canada. The regulator is designed to be of especial value in a sick room or hospital, or in other places where it is desired to turn down the light as may be done with a gas jet, without entirely ex-

**HAWKER'S ELECTRIC CURRENT REGULATOR.**

tinguishing it, and it may also be used with many devices, the principle being designed by the inventor for application with either alternating or direct currents. On a suitable base plate is a pair of resistance coils and four pairs of contact plates, as shown in Fig. 1, and shunts extend from the first pair of contact plates to connections with the lower ends of the coils. From the second pair of contact plates the shunts are tapped into the coils at a point perhaps a quarter or a third of the distance up, and from the third pair of contact plates the shunts are connected with the coils at a still higher point, while the last pair are connected with the lead wires, from one of which a shunt leads into the upper end of one resistance coil and from the other a shunt leads to the upper end of the other coil. On the base are two main contact plates with which the lamp wires are connected; and to close the circuit between them and the plates connecting with the resistance coils, a block of insulating material is employed, as shown in Fig. 2, the block being moved by a screw shaft having at its outer end a crank handle, and the block having at its ends metal plates electrically connected by a strip of metal. As will be readily understood, a varying resistance, increasing or diminishing the intensity of the light, is obtained by connecting the several plates to the resistance coils at different points. The improvement is here shown adapted for use in connection with one incandescent lamp, but the regulator may be made of any suitable size for use in connection with a series of lamps or other devices, although the inventor has patented another form of regulator designed to use with a number of lights.

Celebration of Niagara's Electric Power.

The successful transmission of electric power from Niagara Falls to Buffalo was celebrated January 12 by a banquet at the Ellicott Club, of Buffalo, which was attended by about 400 invited guests. The menu cards were elaborately gotten up, the covers being made of aluminum manufactured at Niagara Falls with the electricity developed there, and with the name of each guest engraved thereon. Among those present were Nikola Tesla, of New York; Elisha Thomson, of Lynn, Mass.; E. J. Houston, of Philadelphia; Charles F. Brush, of Cleveland; Elisha Gray, of Chicago; Charles A.

Coffin, of Boston; George Westinghouse, of Pittsburg; John E. Hudson, of Boston; W. J. Johnston, of the Electrical World; D. O. Mills, of New York; Edward A. Adams, president of the Cataract Construction Company; Francis Lynde Stetson, of New York; Charles Lanier, of New York; S. E. Barton, of Chicago; W. H. Lawrence, of Cleveland; Frederick A. Nichols, president of the National Electrical Association; Dr. Louis Duncan, president of the American Institute of Electrical Engineers; C. A. Cutler, of New York; S. Dana Green, of Schenectady; Dr. Coleman Sellers, of Philadelphia; Frank W. Hawley, of Pittsburg; and Joseph Wetzler, of the Electrical Engineer.

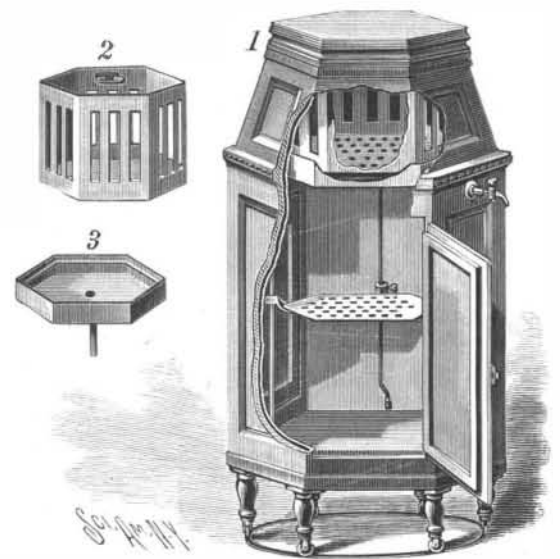
A Sixth Century Copyright Suit.

In Mr. George Haven Putnam's interesting work, "Books and their Makers during the Middle Ages," he gives what is probably the first contention for copyright in the history of European literature. St. Columba (A. D. 521-597) belongs to the Irish saints, though the greatest part of his life was spent in Scotland. When visiting his master, Finnian, he made a hurried and clandestine copy of the abbot's Psalter. He shut himself up in the church where the book was kept, to carry on his nefarious labors. A nocturnal wanderer, attracted by the light, carried the story to the abbot, and Finnian, indignant at the piracy, claimed the copy from Columba on the ground that the transcript is the offspring of the original work. Columba refused to give up the manuscript and the case was referred to King Diarmid at Tara for adjudication. The opinion of the king was given in a phrase which has since become a proverb in Ireland: "To every cow her calf, and, consequently, to every book her copy." Columba was greatly incensed at the decision and raised a revolt in which the powerful clans of his relatives succeeded in overcoming the king. This manuscript, which was the cause of civil war, was afterward greatly venerated as a kind of national and religious palladium. This Psalter went by the name of Cathoc, or "the fighter." It was preserved in the O'Donnell family for thirteen hundred years. It is believed that the famous "Book of Kells," a copy of the Gospels, was also the work of Columba, the poet monk.

A COMPLETE series of photographs of the late Chinese-Japanese war, taken on the spot, forms a feature of the international photographic exhibition now being held at Berlin, says Wilson's Photographic Magazine. The collection has excited much interest as the most comprehensive photographic record of war yet shown.

**IRRIGATION WORK, NAVAHO RESERVATION.****A CONVENIENT HOUSEHOLD REFRIGERATOR.**

The illustration represents a refrigerator arranged to turn on a track, in order to afford ready access to its interior, for which purpose it is provided with three doors, on alternate sections of its hexagonal sides. The improvement has been patented by Joseph Bell, of No. 2087 Washington Avenue, New York City. In Fig. 1 the refrigerator is represented with one of its doors open, and a portion of the casing broken away to show

**BELL'S HOUSEHOLD REFRIGERATOR.**

the interior, Fig. 2 representing the ice box and Fig. 3 the drip pan, forming a support in which the ice box rests when in position in the refrigerator, the pipe in its bottom leading to the discharge faucet at one side. The body of the refrigerator has an interior lining of metal, at a slight distance away from the inner face of the body, to form an air space. The ice box has slotted openings in its sides to facilitate the free circulation of air, and has handles by which it may be readily removed, the ice being inserted by lifting the cover at the top, and the drip pan, in which the ice box is held, being supported by brackets. Adjacent to the closed sides of the refrigerator body are vertical supporting rods, on which are fitted to slide the projecting arms of shelves, which are secured in place as desired by means of thumbscrews. As will be seen, the interior of the body is readily accessible through either of its doors, the shelves may be conveniently adjusted up and down, and the various parts are readily removable to facilitate the thorough cleaning of the interior.

RECENT IRRIGATION WORK ON THE NAVAHO RESERVATION.

BY COSMOS MINDELEFF.

In its efforts to better the condition of our Indian tribes, the Indian Office has been devoting much attention to their industrial development, and the effects of this policy are already marked and in the highest degree satisfactory. It is now apparent that many of the tribes need only proper instruction and encouragement to develop into prosperous farming communities. The irrigation works and ditches on the Navaho Reservation afford a fair indication of what can be done. In March, 1893, Congress made an appropriation for irrigation ditches and artesian wells and for the increase and preservation of the water supply on that reservation. A superintendent of irrigation and engineer in charge was appointed about a year later—Mr. E. C. Vincent—and active work commenced in July, 1894. At that time there was an available balance of a little more than \$50,000.

The Navahos have always been classed as a "wild tribe," and, while they have given us comparatively little trouble since we acquired their country through its conquest from Mexico, in 1846, by Gen. Kearney and the "Army of the West," they are wild by nature. In fact, they have al-