

She soon had the children to bed with but little ceremony in the way of supper. As the twilight shadows fell she drew her chair to the window, and looking out upon the coming of the gloom and of the stars, she soliloquized as follows: "The spirit of Dennis was wild as to-day, shure. He don't like Larry, and that is so. Bad luck to the day! If I am to live such a life as Mrs. Larry, I had better stay as Widow Harty." And she did "stay" as Widow Harty, for Larry never came back for his answer, and it was months before she set eyes upon him again.—G. W. T. C., in *Rural Press*.

FRENCH MERCHANT SHIPPING.

The new law under which French shipbuilders and ship owners are to receive substantial bounties from the State, has already had quite a contrary effect to what was expected. The jealousy of manufacturers has been aroused, and a reaction has set in which must be regarded as a signal for more clamorous demands in the same direction. A writer in the *France* ridicules the statement in the preamble to the new act that the bounties are accorded "in compensation for the charges which the Customs tariff imposes on shipbuilders," and "for the charges imposed on the merchant navy for furnishing recruits and the service of the military marine." "If," says the writer, "the Customs tariff is defective, it should be amended. Otherwise, now that bounties have been granted to shipbuilders, the same favor must be accorded to cotton spinners, forgemasters, and everybody else." Moreover, it is pointed out by the writer that, if, after all the efforts made to improve the position of the French commercial marine, they should result in failure, ship owners might console themselves by the thought that the evil, Great Britain alone excepted, is universal, and that bounties will nowhere bring about the slightest remedy. The article concludes:

"Italy, which formerly built ships representing an annual tonnage of 100,000, did not perhaps, add 20,000 tons to her home-built shipping a year ago. The United States, which at one time carried by sea 90 per cent. of their own merchandise, were only represented last year by 15 per cent. A fatal revolution has occurred. Steam has swept away sails, and iron and steel have taken the place of wood. And with what result? That vessels are now mostly built where iron, steel, machinery and coal are obtainable at the lowest rates, or, in other words, at Glasgow on the Clyde, Newcastle on the Tyne, and Sunderland on the Wear. The shipbuilding yards of London and Liverpool have themselves had to give way." The French will sooner or later regret that common-sense views such as these should have had no effect in altering the mischievous decision arrived at by the French Legislature, which, however, fortunately, is not irrevocable.—*Iron*.

RAILROAD BUILDING IN THE UNITED STATES. With one single exception, there were more miles of railroad built last year than heretofore in the history of the Union. Fifty years ago (1830) there were but 23 miles of railroad in the United States. Ten years later (1840) the lines had extended to 2,818 miles. At the end of the next decade (1850) there were 9,021 miles; and, according to the reports for 1860, the railroads of the country had reached 30,635 miles. And within the next 10 years, which embraces the period of the civil war, the mileage was nearly doubled. Ere the mutterings of the war had died away the recuperative power, enterprise and genius of the American people were revealed as never before, in establishing and extending the lines of travel and commerce, so that in 1871, the mileage of new road completed amounted to the enormous amount of 7,670 miles. During last year 5,296 miles of track were laid down.

THERE are 121 mines listed at the New York Boards. The February sales were 3,782,000 shares, including 2,340,000 shares of Colorado claims.

HOT AND COLD BATHS.

The *London Lancet* in a recent number points out the difference between the effects of hot and cold baths. The effects of the cold bath, it says, being mainly due to impressions made upon the cutaneous nerves, the modifications of the cold bath largely depend on their power of increasing its stimulating action. The colder the water the more violent the impression. The frequent change of water, such as is found in the sea or in running streams, increases the stimulating effect. Great force of impact, as when water falls from a height or comes forcibly through a hose upon the body; the division of the stream, as is seen in shower baths and needle baths, and the addition of acids or salt to the water, all act, it would seem, by increasing the stimulating power which the water exerts upon the cutaneous nerves.

Warm baths produce an effect upon the skin directly contrary to that brought about by cold water. The cutaneous vessels dilate immediately under the influence of the heat; and although this dilation is followed by a contraction of the vessels, this contraction is seldom excessive, and the ultimate result of a warm bath is to increase the cutaneous circulation. The pulse and respiration are both quickened, as in the cold bath. The warm bath increases the temperature of the body, and by lessening the necessity for the internal production of heat, decreases the call made upon certain vital processes, and enables life to be sustained with a less expenditure of force. While a cold bath causes a certain stiffness of the muscles, if continued for too long a time, a warm bath relieves stiffness and fatigue. The ultimate results of hot and cold baths, if their temperature be moderate, are about the same, the difference being to use the words of Braun, that "cold refreshes by stimulating the functions, heat by physically facilitating them; and in this lies the important practical difference between the cold water and the hot water systems."

SUNDAY DINNER.—Sunday, by a large majority of mankind, is made a day of feasting, and the Sunday dinner is the principal one of the whole week. If there is any scrimping it is done through the week and the strength of the purse and efforts of the housewife are both concentrated and brought to a focus upon a Sunday dinner. Sunday is said to be a day of rest; but very little rest does the stomach find when it is loaded with an assorted cargo of highly seasoned viands, which gives it a job of overwork. And this is more onerous and provoking, as its owner lounges around and takes little or no exercise, which leaves the other organs without employment, and the poor stomach has to work on all alone, although it often exercises its constitutional right of grumbling at its owner's indiscretion and gluttony, which hath such extent that by the close of the day he feels much like a stuffed anaconda. If the quantity of food we eat is to be regulated by the exercise of the body, then the Sunday meal should be the lightest of the week, as usually but little physical exercise is taken on that day, whereas the contrary is the fact and the appetite is nursed and whetted throughout the week that it may make an onslaught on the fat of the laud on Sunday, which is a manifest impropriety and a gross violation of the laws of health.

HYDROPHOBIA VIRUS.—That obscure poison which produces hydrophobia has been known to lie latent in the human system for years before developing its fatal results. M. Pasteur asserts that the supposition is well supported that the virus does develop in certain organs, and not, as in other cases, in the blood; and that when, after a period variable according to circumstances, the organized poison passes into the blood severe symptoms come on rapidly, and the victim soon dies. An explanation substantially the same as this had long been advanced as a mere theory, but now M. Pasteur advances it as an ascertained physiological fact.

INDUSTRIAL SECRETS.

A century ago, what a man discovered in the arts he concealed. Workmen were put upon an oath never to reveal the process used by their employers. Doors were kept closed, artisans going out were searched, visitors were rigorously excluded from admission, and false operations blinded the workmen themselves. The mysteries of every craft were hedged in by thick-set fences of empirical pretensions and judicial affirmation. The royal manufactories of porcelain, for example, were carried on in Europe with a spirit of jealous exclusiveness. His Majesty of Saxony was especially circumpect. Not content with the oath of secrecy imposed upon his workpeople, he would not abate his kingly suspicion in favor of a brother monarch. Neither king or king's delegate might enter the tabooed walls of Meissen. What is erroneously called the Dresden porcelain—that exquisite pottery of which the world has never seen its like—was produced for 200 years by a process so secret that neither the bribery of princes nor the garrulity of the operatives revealed it.

Other discoveries have been less successfully guarded, fortunately for the world. The manufacture of tinware in England originated in a stolen secret. Few readers need be informed that tinware is simply thin iron plated with tin by being dipped into the molten metal. In theory, it is an easy matter to clean the surface of iron, dip it into a bath of boiling tin, remove it enveloped with a silvery metal to a place of cooling. In practice, however, the process is one of the most difficult in the arts. It was discovered in Holland, and guarded from publicity with the utmost vigilance for more than half a century. England tried in vain to discover the secret, until James Sherman, a Cornish miner, insinuated himself master of the secret, and brought it home. The secret of manufacturing cast steel was also stealthily obtained, and is now within the reach of all artisans.

CHLORAL FOR TOOTHACHE AND FACRACHE.—Dr. Sporer in a St. Petersburg medical journal, after referring to the great benefit he had derived from chloral, whether administered internally or as an embrocation dissolved in almond oil, for the relief of rheumatic and other pain, states that in toothache and its accompanying facial pain a most effective remedy is found in dissolving from a scruple to half a drachm in two drachms of glycerine, and applying a plug of wadding soaked in this to the carious tooth. As, however, this causes in some cases considerable irritation of the mucous membrane of the mouth, he has during the last four years always applied the chloral in substance. From a half to at most one grain of the granules of chloral are wrapped in a little wool to keep them together, and placed in the cavity of the tooth. When the chloral has dissolved the accumulated saliva is to be spit out. If the tooth is in the upper jaw the chloral should be kept on by the finger until dissolved. The most violent toothache is in a few minutes relieved. He cites some cases in which most distressing and long-abiding toothache, accompanied by severe prurpialgia, was thus promptly cured.

THE SENSE OF COLOR.—At a recent meeting of the French Association for the Advancement of Science, M. Carpentier, of Nancy, read a paper, in which he propounded the somewhat novel theory that the sense of light and that of colors are independent. Since white light is the sum total of the various colors, it has been commonly thought that the sensation of white light was simply the sum total of the sensations of its constituent colors. On the ground that the sensitiveness of the eye for white light may be increased—as, for instance, by the previous absence of all light—without the sensitiveness for color being increased, he urges that there is a color sense as distinct from that of light as is the sense of touch from the sense of heat.