

STATE INSURANCE IN GERMANY.

Insurance Journal.

Germany is making heroic efforts to solve the problem of national insurance. Probably, there is only one man in Europe whose iron will and irresistible courage could have faced such a Herculean task. Prince Bismarck sees in a scheme of national insurance an antidote to the unlicensed Socialism which is held out to the poor of Germany as the alternative to the Imperialism and militarism, which is the life-breath of the existing constitution of the Empire. National insurance is, after all, but another name for State Socialism, just as insurance of all kinds is, after a fashion, a sort of orderly and lawful Socialism. It falls, of course, very far short of the Socialist's ideal, but it is akin to the system which he proposes, in so far that by its operation the strong assist the weak, the healthy contribute to the support of the sick, and the opulent help the needy. Germany is not rushing at a system of national insurance like a bull at a gate. It has already had practical experience of the working of such a measure, though on a narrow basis, and within restricted areas. The new law, however, includes within its scope nearly the whole of the working-class population of the country. If its promises are fulfilled, it will secure for the wage-earning classes a fair maintenance in the event of sickness and of disabling accident, and a pension in old age. Everybody amenable to the terms of the law contributes a weekly premium *pro rata* according to his wages, and the higher these payments the greater will be the benefits obtained, though the scale is a little more generous in its operation among the very poorest people than among the more prosperous assurers. The insurance fund is further swelled by payments exacted from employers, and the State itself assists by a fixed grant. The fund is to be administered by provincial boards, upon which the workmen and their employers will both be represented, but the whole machinery will be under Imperial control. It is hoped that, apart from the State subventions, the scheme will be self-supporting, but the data upon which the actuarial calculations have been framed, are almost purely conjectural, and it is impossible to foresee how the law will work. In short, in order to avoid that nameless terror which we know as Socialism, but which is merely a manifestation of the discontent of the dregs of society because they are dregs, Germany has taken a tremendous leap in the dark. It is a beautiful and beneficent ideal, which the framers of the measure have endeavoured to realise; it is an experiment which the whole world will watch with interest; but at the same time no one who knows anything of insurance will feel certain that the scheme will not end in ruin and disaster.

SPEED OF RIFLE BALLS.

Philadelphia Record.

How fast does a bullet travel? If it is in proper shape for traveling, Col. Flaggler and his officers say it ought to go at the rate of 1,275 feet a second upon leaving the rifle. This matter of speed is very important, and if a cartridge is five or ten feet too fast or too slow the quantity of powder must be changed. This matter of speed is tested in a very interesting way. At the northern end of the arsenal grounds is a long wooden shed, in which a distance of 100 feet has been carefully marked off. At either end of this space is a stand something like a target, with a large circular opening where the bullet's eye would be. Across each opening is stretched a small electric wire connected with a delicate instrument in another room. The rifle from which the firing is done is so aimed that the bullet which flies from it cuts both wires. Obviously the difference in time between the cutting of the first and of the second wire will mark the speed of the bullet through one hundred feet. The measurement of this brief space of time is done by an instrument of French invention called the Boulingue chronograph. When the first wire is cut, an electric circuit is broken and a rod which is suspended from a magnet falls a short distance, touching in its descent a point which makes a mark on its side. The breaking of the second wire lets drop a second, smaller rod in the same way. By means of the difference in the marks on the rods it is possible to estimate the difference in the time of their falling, and from this the speed of the bullet per second. This is a provision for detecting any error, and nearly absolute accuracy is secured.

SUPR. BYRNE, of Detroit, says the surface water which is pumped out of gas pipes is one of the best disinfectants known. Why, it is a fact that in some cities this water is spread around on the streets to disinfect filthy gutters and sink holes. It is true it does not smell very sweet, but what disinfectant does. We have orders every day for gas water to be used for medicinal purposes. Many people bathe in it, others apply it to the hand, and use it as a remedy for salt rheum and tetter, and still another uses it to boil it and inhale the steam. The latter use is for sore throat and diphtheria patients. By this surface water I do not mean the gas condensation which accumulates in a thick, dirty liquid resembling tar. That is of no use on earth.

A. D. 1900.

It was a chap of ancient mien and very ragged rig, With grizzled locks and countenance as wrinkled as a fig, Before me made obeisance low, held out his palsied hand, And thus poured out his tale of woe on Newport's sunny sand. "Oh pray, have pity on my lot, my path is very rough, I was a Western Senator—I now appear a 'lough' I 'done' my duty properly, and ne'er was known to fail. "Whene'er I got a chance to twist the British lion's tail. "Upon the Senate floor, my lad, I've talked for half a day "To prove the British beast to be in Freedom's flowery way. "Upon the Senate floor, my lad, I've knocked his claims so high "Ye'd think he'd hide behind his paws, roar once again, and die. "I scanned the daily British press for something to resent, "And swore I'd bombard London town if I were President. "In burning words I eulogised the bloody Clan-na-Gael. "And dubbed them 'true Americans' for twisting of that tail. "I didn't hate that lion, sir; nor harm him, sir, did I; "But politics was business, sir, beneath Columbia's sky; "And the very surest way your pocket interests to promote "Was shrieking hate for England, just to please the frisky vote. "Respect? No, don't! Oh, damn-Respect! You needn't make me blush; "I can do even that since I have cleared that public slush. "I wasn't the only Senator in 1889, "That trimmed the peaceful Eagle's claws to scratch across the brine. "Well, well, my lad, the day is past, and I am down at heel, "And where I lived in regal style am begging for a meal. "And all because that element of which the woods were full "Was pared off by the honest friends of Sam and Johnny Bull." TIM PANUM.

BILLIARD HISTORY.

All the Year Round.

King Louis XIV. was a great lover of billiards, and his magnificent nobles in their grand perukes, his marshals and generals, matched their skill against their royal master's about some elaborately inlaid billiard table in the royal saloons of Versailles. One Chamillard is recorded to have gained a high office of state from his skill in billiards, which the king delighted to witness. When the French game was introduced into England, at which time the regency in France brought something like peace and good will between the two nations, it soon superseded the old-fashioned game. It was played, according to contemporary accounts, "only with masts and balls," the mast being the masse, or mace, an instrument still to be met with in billiard rooms. With the mace the ball is pushed and not struck, and English players adhered to the mace long after it had been superseded on the Continent by the cue. And the mace was considered the lady's weapon even up to recent times. The French game was played with two white balls, and the play consisted in hazarding your adversary's ball and keeping out of the pocket yourself, just as single pool is played nowadays. But before the end of the century a third ball was introduced—the red ball—which bore the mysterious name of "carambole." And how to hit the two balls successively became one of the points of play, and the carom, or cannon, added a fresh interest to the play. With this came into existence the English game, par excellence, at which all hazards count to the striker, except that, unfortunately, one known as a coup, where his ball flies into a pocket without having touched another on its passage. Three things to avoid—Idleness, loquacity and flippant jesting. Three things to contend for—Honor, country and friends. Three things to like—Cordiality, good humor and cheerfulness. Three things to cultivate—Good books, good friends and good humor. Three things to love—Courage, gentleness and affection.

FASHION IN THE USE OF DISINFECTANTS.

Engineering and Mining Journal.

Ten years or more ago the discovery of salicylic acid was heralded with great applause, and a means by which all infection could be prevented seemed at last to have been found. It was claimed to stop putrefaction, and its use for the preservation of food was suggested and adopted on a small scale. In course of time it has not only fallen into disuse, but the French government, at least, has gone so far as to prohibit its use for the protection of food. The sanguine expectations of its admirers were far from being realized. Next copperas (iron sulphate) was rediscovered, and its use was recommended by the National Board of Health. Then, Koch, of Berlin, announced the remarkable efficiency of mercuric chloride, and it continued in fashion until Sternberg and his followers found that the good old-fashioned chloride of lime was "sure death" to microbes. Each one of these most valuable agents, as well as many others, has had its worth experimentally demonstrated by its advocates, among whom were able chemists, and its efficiency testified to by equally competent practitioners. The truth seems to be that of the numberless, simple and compound disinfecting agents which have been from time to time proposed, a great many have undoubtedly utility in special cases, a few are practically inert, and a less number have been absolutely harmful because applied without discretion. But the trouble is that too much is expected of a single agent. One disinfectant may successfully oppose a certain class of germs or a particular kind of chemical decomposition and recombination; it is therefore pushed before the public as a sort of cure-all, and when it fails under conditions to which it is not suited there is a reaction of sentiment, and its legitimate function is lost sight of. The enthusiastic investigator, who has just finished some successful experiments with a new agent or new applications for an old one, is a little apt to become infatuated with his favorite subject, and in presenting the results of his discoveries make the claims a trifle too broad. Then it is taken up by physicians, health officials, and the press, enlarging as it travels, like rumor, until the scope of its value is made well-nigh universal. On the other hand, the revulsion in case of partial failure often results in too sweeping denunciation. It seems strange that personal feeling and that queer mania of ours for change, called fashion, should hold such potent sway in so prosaic and practical a matter.

THE OLD HOME.

Scribner's.

An old home acquires power over the heart with course of time; it comes by degrees to touch the imagination with a sense of life inherent in itself. Its timbers are not dead wood. As the vibrations of the music constrain the fibers of the violin till, year by year, it gives forth a fuller and deeper tone, so the vibrations of life as generations go by shape the walls of a home into a responsive accord with the human experience that goes on within them. Birth and death; joy and sorrow; hope and disappointment—all that men endure and enjoy; give to it a constantly increasing sanctity and a power to affect the hearts of those who dwell within it. Memory awakens imagination. Each generation has set its lamp upon the home in some change, some improvement. The lapse of years alone makes it venerable, but if a succession of kindly, humane and loving men and women have dwelt in it it becomes the memorial happiness and an incentive to excellence. The older it is the sweeter and richer garden does it become of human charities and affections.

STEEL TIES.—The Western Railway Company of France, after two years' experience with a certain form of steel tie on a part of their system where the traffic is very heavy, are so well satisfied with the result that they have given an order for 5,000 to further extend the trials. It consists of a steel body, of an inverted U section, 0.20 metre broad, 0.08 metre deep, and 2.50 metres long. At the parts where the rails rest, chairs are cast on the tie itself, so as to envelop the whole section of the latter over a width of 0.10 metre. To hold these chairs in position, holes or slots are cut in the vertical faces of the tie, into which the metal of the casting runs. Being thus without movable attachments, there is no risk of derangement. The resistance to transverse strains is said to be seven times greater than that of the ordinary form of metal tie of the same surface, and twice that of a wooden sleeper. The rails, which on the Western lines are all double-headed, rest in the chair on a surface two and a half times larger than that of an ordinary chair. The cost is 14 francs, but there is nothing to be added for attachments and supports.

ON and after November 1, 1892, automatic couplers are to be used on all locomotives and freight cars in operation in the State of New York, which are owned by the companies operating railroads within the State. Neglect to comply with the provisions of this act is to be followed in every case by a fine of \$500.