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# Scientific American.

#### THE ENCOURAGEMENT OF INVENTIONS-WITH A RESERVATION.

away from him. Having control of something that everybody wants, the patentee becomes an "odious monopolist." before the invention was made and after it was adopted, but bt' by the manufacture of good and cheap drinks. only between their condition with the invention and paying i Not long since A. Schmitz, who drank natural wine one that is grudged him.

the editorial comments of the *Herald* on Judge Nixon's recent effect. decision sustaining the right of the Bate Refrigerating Company to the processes covered by their patent.

The Herald says: "Our patent laws sometimes lead to practical absurdities. If there be but one safe and economicalmethod of preserving fresh meats shipped to Europe, the make it for the general interest of commerce that this method should be free to all. It would be well if all patents were granted subject to revocation in the public interest on payment of a reasonable compensation. Processes are often patented of such extreme simplicity that hundreds of ingenthem with an explicit reservation in favor of the public."

The absurdity of this position is simply grotesque. It aspublic;" but that its purpose is to reward the inventor only. encouragement simply as a means to an end, and that end a violent headache set in which lasted until late in the night. is the advancement of the useful arts and sciences for the public benefit. The proposed reservation would simply defeat the end aimed at by attaching a penalty to successful invention.

The alleged obstructiveness of the more perfect inventions when patented is equally absurd. Admit, for the sake of ness of the chest. At noon he had no appetite, and threw argument, the assumption that there is but one safe and economical method of shipping fresh meat to Europe. Without seized with a violent headache that lasted until evening, and the inducements held out by the Patent Office that method, the next day he did not feel well. would not have been developed, perfected, and patented. Knowing that a successful solution of the problem would be injurious to health remains in the liquors made by ferment profitable to them, the inventor and his associates thought, ing this sugar. Possibly not all starch-sugar has the same studied, and experimented until the solution was gained, and then accepted the terms offered by the government for the after fermenting and evaporating, which turns the plane of temporary monopoly of their system. Without the inven- polarization to the right. It is probable that all are more or tion there could be, it is assumed, no profitable shipment of less injurious according as it contains more or less of this fresh meat to Europe. With it such shipment is possible. substance, So far there has been an extension, not an obstruction of trade. Other men are at liberty to perfect, if they can, the or was already there, and whether its injurious effects are previously existing methods or to devise new methods. They not destroyed or neutralized by the alcohol in which it is plead that they cannot; therefore, they say, our inventor usually dissolved, are questions which he does not attempt must let them use his method for nothing, or for a price to answer. which they think is reasonable. If he will not consent he is an obstructor of trade!

To revoke the "obstructive" patent because its value has led other men to covet the privilege it covers would be a become so general as that of writing ink. And yet it is rare breach of contract on the part of the public that would react to find an ink that fulfills all the conditions required of it. disastrously in the discouragement of further invention. To' This is explainable upon the ground that ink recipes are not confiscate the property indirectly by compelling the owner constructed according to any chemical formula, but that we to surrender it at a price not fixed or agreed to by himself are compelled to rely upon empirical experiments and make would be equally impolitic and scarcely less unjust. We use of the results gathered by practical experience. A good doubt whether there was ever an invention which the black ink must flow easily from the pen, and must yield either inventor would not part with for a "reasonable compensa- immediately or in a short time a deep black writing. It tion." g to be of great public utility the "government should possess sediment when kept in airtight bottles. In ordinary ink botthe power to open it to universal use without waiting seventeen years for the expiration of a patent," and calls this a to the atmosphere the faster it will form. An ink that is to revision of the patent laws "in the interest of justice and be used for important documents must not be washed out common sense." If a patentee, realizing the great value of with water or absolute alcohol so as to be permanently illegadvertising in the Herald, should insist that the government ible. ought to compel the Herald to advertise his patented invention "for the public benefit" for nothing, or at a price or, as in the case of common black ink, a finely divided, inwhich the patentee or his friends might fix as reasonable, the soluble precipitate suspended in water. The chief materials Herald would probably speak disrespectfully of his intelli- used for making this ink are gallnuts, green vitriol, and gum, gence.

#### IS GLUCOSE UNWHOLESOME ?

The manufacture of glucose and starch sugar having in A curious phase of opinion crops out constantly in news- creased with surprising rapidity recently we are frequently paper comments on patents and the rights of inventors. Even asked whether its use will injure the health. Some claim journals of metropolitan dignity and influence give frequent that it will, others assert the contrary. Reliable experiments evidence of it, and thus unwittingly encourage the attacks by competent persons are rare, and every fact which throws upon the patent system of parties interested in the infringe- any light upon the subject is welcome and will have its ment of patent rights. The opinion referred to is hard to effect. We are, therefore, willing to give place to certain formulate, but it seems to be, in brief, that inventors ought statements made by Dr. J. Nessler, of Baden, in regard to always to be encouraged - provided they do not invent too his own experience with starch sugar. In Germany the starch much or do their work too well. In all secondary and rela-<sup>1</sup> is made from potatoes, and of course German glucose may postively unimportant matters the inventor's rights should be sess some properties unlike ours, which is made from cornstrictly respected and rigorously guarded; but when the in-starch. The specimen used by Dr. Nessler in his experiventor produces some article or process of exceptional value, ments may or may not have been a fair average of the glusomething that the public cannot afford to do without, after cose made in that country, but his statements will suggest to they have learned to use it, then it should promptly be taken courageous parties at home the propriety of putting American glucose to the same tests or similar ones.

This kind of sugar has been used for nearly fifty years, says His service to the public in producing so great a conveuience Dr. Nessler, for improving sour wine, in making beer, and is forgotten or grudgingly admitted. The direct or indirect in confectionery. Since starch is not injurious to the health, advantage of the invention to the public may be a thousand and the sulphuric acid is almost completely removed, it was dollars to every hundred dollars received by the inventor for, assumed that no hurtful substance could be formed by the its use; the thousand is accepted as a natural right and no action of dilute acid on starch. Up to a very recent period account is made of it, while the inventor's hundred is eyed in o one harbored a suspicion that starch sugar could exert any askance as so much paid for an intangible idea. It was such injurious effect. This kind of sugar is cheaper and is better a simple thing! Scores of people must have thought of it if fitted, for other reasons too, for making cheap drinks than he had not; why, then, should people pay for what they cane or beet sugar. It had, therefore, been recommended might have had for nothing if they had only had the mind to officially and privately, even by Dr. Nessler himself, under think of it? No comparison is made between their condition, the conviction that the use of brandy could best be checked

for it, and their condition having the invention and not pay- day and wine containing glucose the next day, tried the exing for it. The visible thing is the inventor's profit, and periment of injecting the unfermentable substance contained in starch sugar into the veins of a dog. He noticed that A pretty illustration of this thankless logic is furnished in starch sugar had, or might have, a stupefying or narcotic

Incited by these statements of Schmitz, Dr. Nessler began some experiments with the unformentable constituents of such sugar. He obtained from Alsace a 20 per cent solution of a sugar which was free from arsenic and in which there was 26 per cent of unfermentable substances. To the soluvast dimensions and possibilities of this expanding trade tion he added enough yeast to set up fermentation, and when this was added, filtered the liquid and evaporated one liter of it to a sirup. The alcohol and any other volatile product of fermentation were thus expelled. This sirup was now diluted to 100 c.c., so that it contained ten times as much of the various unchanged constituents as the original solution. ious minds would readily discover them, and when the patent At 7 A.M. he took 50 c.c. (nearly 2 fluid ounces), representinjuriously obstructs a great branch of foreign trade the publing 100 grammes of sugar, and at 10 A.M. as much more. lic should not be compelled to await its expiration. The Its taste was bitter and repulsive. Toward noon he felt government which creates these artificial rights should grant rather badly, but not sufficiently to be able to ascribe with certainty any hurtful action to the extract which he had taken. At 2 P.M. he took as much of the residue as represented sumes that the patent system is not designed "in favor of the 100 grammes of sugar, but this time it had not been evaporated so far as the first time, but only to two-fifths. An The truth is the patent system regards the inventor and his hour later a violent perspiration broke out, and a little later

> A few days later Dr. Barth, assistant at the experimental station, took the unfermented portion from 90 grammes (over 3 ounces) of the starch-sugarat 10 A.M. The fermented and filtered liquid was again evaporated to three-fifths. A cold perspiration soon showed itself, attended with a tightup the soup which he had eaten. In the afternoon he was

> Dr. Nessler thinks there can be no doubt left a substance effect, but there is always a bitter substance or extract left

Whether this substance is formed during the fermentation

WRITING INK.

There are few chemical preparations the use of which has

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must not corrode metallic pens nor destroy the paper. The Herald asserts that when an invention has been proved Further than this, a good ink should contain no considerable tles a sediment will always form, and the more it is exposed

> Ink may consist of either a clear solution of any dyestuff, which are employed in the most varied proportions. The