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THE LARGEST YET.

We print this week two editions of the SCIENTIFIC AMERICAN, the combined issue of which reaches the large number of One Hundred and Ninety Thousand copies. The quantity of paper required for the two editions is Five Hundred and Thirty Reams, and the weight, Thirty-Nine Thousand Seven Hundred and Fifty Pounds—little less than Twenty Tons. We believe this to be the largest circulation of any paper of its class ever issued in a single week.

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ANOTHER NEEDED AMENDMENT OF THE PATENT LAW.

By the present law, the grantee of any interest in a patent has ninety days within which to file his conveyance for record. If he complies with that rule, his rights are determined by the date of his deed. This furnishes abundant and unnecessary opportunity for fraud, and often imposes great hardships on innocent and careful purchasers.

He who after full examination finds the title of a patent complete and unencumbered often feels safe in paying his money therefor, and in making extensive arrangements for engaging in the manufacture thereof. Ninety days thereafter

he may learn that an assignment one day older than his has just been filed in the Office, and has rendered his title worthless. This ought not so to be.

In some of the States of the Union, the registry laws relative to the conveyance of real estate have had a like provision, but experience has shown the inexpediency of such a rule. Priority of right is now generally given to the purchaser who first files his deed for record. This is a wise regulation; for if some one must suffer wrong, good policy as well as justice dictates that it should be the negligent rather than the vigilant. Is not this an equally sound maxim as applied to the sale of a patent?

At all events, the ninety days now allowed to the purchaser of a patent is much too great. No great mischief would result from allowing such a purchaser hardly time enough to send his deed to the Patent Office. If he failed to do this, his rights should be postponed to those of any other bona fide purchaser whose deed was first on record. A rule of vigilance similar to that which is observed in order to charge the indorser of a protested promissory note might best protect the just rights of both purchasers, and would furnish little room for injury of the kind above referred to.

But there is a still more crying evil of a similar character. A license under our present law need not be recorded at all. A bona fide purchaser, who has waited ninety days before paying the purchase money or doing any other irrevocable act, may afterwards find, to his dismay, that there are licenses in existence, running the entire lifetime of his patent and covering the whole scope of his conveyance, which is thus rendered wholly valueless. Opportunities for successful wrong are here presented, for which there is no excuse. They are unworthy of the intelligence of the age and country. The hand of reform should be applied here without delay.

GOVERNMENT MONOPOLY OF THE TELEGRAPH LINES.

The argument of Mr. G. P. Lowery, before the Congressional Committee, in opposition to the Hubbard Postal Telegraph bill, contains much forcible reasoning. Whether or not Congress has the right to make telegraphic intercommunication a government monopoly is clearly a constitutional question, based upon the interpretation of the sections which confer upon the national legislature the power to establish post offices and post roads, and to regulate commerce. The advocates of the scheme hold that, under these provisions, Congress has the necessary power, and urge that the telegraph must be regarded in similar light as the mails; if the government has the right to monopolize the dissemination of information through the carriage of missives in the latter case, it has the same right through the transmission of signals in the former. The opponents of the bill, including all the present private telegraphic corporations, deny the above premises, and draw a wide margin of difference between the establishment of the post offices and roads and that of the telegraph. They maintain that the post office is simply the medium through which the government tenders itself to carry parcels of a limited weight for a limited price, and this entirely regardless as to the contents of the parcels, whether the same be a means of transferring ideas from one person to another, or a mere mass of material substance. The telegraph, on the other hand, is per se a medium for transmitting information, and nothing else.

Mr. Lowery elaborates these views with much ingenuity and cogency in his argument. He points out that the post office is an agency, the original design or motive of which was, doubtless, to favor the transmission of intelligence, public or private, between the people: its function is the carrying of packages which may contain information. Because this possibility exists, and Congress controls the means of conveyance, therefore it is urged by the advocates of the plan that Congress should control another medium which conveys nothing, but merely transmits information as such—a clearly illogical sequence.

To borrow Mr. Lowery's illustration: Suppose A and B are talking together a couple of feet apart. A crosses the street, and the conversation is still maintained by raising the voices; or one person may go to the garret and the other to the cellar of a house, and yet converse through a speaking tube. They may separate by a wider interval and talk by pre-arranged signals made with their arms; or lastly, they may place an interval of a thousand miles between them, and still continue their remarks by the aid of the telegraphic wire. A's mind meets that of B just as instantly through the telegraphic signals as through the medium of oral words. In the one case a conducting wire, through which a current passes, is the means; in the other, sound-conducting air, through which certain vibrations are transmitted, serves the same purpose. The extension of the telegraph, then, from between A and B to between every individual in the United States and everywhere else, virtually places all the people within the sound of each other's voices. If such were literally possible, then—if the government has the right to control batteries and wires in the one case—it has equally power to control the vocal cords and air in the other: in other words, to prevent people talking to each other save on the payment of tax—a reductio ad absurdum too palpable to need further demonstration. Of course the power once in the hands of any government to control interchange of information between the people converts that government into a despotism very different from that contemplated by the Constitution. That instrument, however, is a rigid one; and as it distinctly says "establish post offices and post roads" and "regulate commerce," and does not say anything about controlling information (however transmitted), it may be taken as reasonably certain that no judicial interpretation would discover in the plain provisions above quoted the degree of elasticity necessary to extend them to an

authorization to Congress to assume the ownership of the telegraph lines.

There are many, however, who would be willing to yield a point of right, if the expediency of the change were great. That is, if, by suppressing the private corporations and placing the telegraph under government control, the whole country would be manifestly benefited, not many would be found to oppose any legal means, if such could be reached, for accomplishing the object. But here again we are met by an array of considerations and facts which demonstrate the project to be plainly inexpedient. The latest reports of European government telegraphs show clearly that, instead of being a source of revenue to the countries where the system has been adopted, they are a source of expense. Statistics for 1873 show for the German Empire a deficit of \$661,727. France has a very slight surplus; but taking the aggregate receipts of seven countries—Germany, Hungary, Belgium, Denmark, France, Holland, and Switzerland—the expenditures are found to have exceeded them by \$1,075,510. As for England, the London Railway News, of late date, admits a deficiency of \$5,000 a week, and this increasing.

In adverting to this subject before, we pointed out that a comparison of the British tariff with our own, taking into consideration the enormous distances between points in this country, shows in the end that our rates could gain little in cheapness supposing our government to run the telegraph at once as efficiently as that of England now does. Again, the English post office carries letters for a penny, and makes five million dollars a year; ours charges three cents, and, according to Postmaster Jewell's report, there is a deficit of eight million dollars. The Postmaster General may well assert his intention to try and make the receipts and expenditures of the Department bear some proper relation to each other; and we may justly doubt even the accomplishment of this task for some time to come. It is absurd, however, to suppose that, beside this, a postal telegraph could be made into a paying enterprise, and not an additional burden on the taxpayers. There are other objections to the postal telegraph which we have not space here to detail. A government censorship of news is not to be desired in these days of high party feeling; nor is the saddling of the country with an immense host of new officials an inviting prospect—particularly when appointments will probably, as is the case now in other political positions, be governed by every other consideration save that of fitness for the work. The imposition of another tax is also objectionable. The telegraph is not employed by a great mass of the population. As it is now, it costs this class nothing; as it would be, they would be obliged to contribute to its support.

Postmaster Jewell's report, to all appearances, gives the postal telegraph scheme its practical quietus for this session; but as the project is nevertheless likely to be brought up and discussed, it is, perhaps, well that the public should understand wherein it fails both in law and in expediency. If the government chooses to erect or acquire telegraph lines for its own use and benefit, it certainly has the right to do so; but that it should compel the people to employ only those lines, by legislating the great telegraphic corporations out of existence and securing to itself the monopoly, we decidedly disbelieve.

THE TRANSIT OF VENUS.

Cable despatches from three of the American expeditions for the observation of the transit of Venus, respectively stationed in Japan, Siberia, and Tasmania, and from the British parties in India, China, and Egypt, announce the results thus far obtained. Professor E. Hall, telegraphing from Vladivostock, reports that, as the planet advanced and touched the sun's limb, the moment was signaled with accuracy; but owing to the drifting of haze and clouds between, it was impossible to obtain good photographs of the contacts. After Venus had crept half way across the sun's disk, however, thirteen good negatives were secured, so that it will be possible to map the planet's track on the photographic image of the sun after the observers return home. Professor Davidson, at Nagasaki, was also troubled with cloudy weather. The first contact could not be recorded, but the time of the second one was obtained excellently. A large number of accurate measurements were secured, however, and sixty clear photographs. The astronomers of this party were remarkably fortunate, as almost immediately after the occurrence of the phenomenon the sky became thickly clouded.

Messages from the British parties to the Astronomer Royal state that at Thebes, Egypt, numerous fine photographs were taken; and at Cairo and Suez, the closing stages of the transit were viewed under favorable auspices. The reports from Shanghai, China, are discouraging, and announce complete failure of all attempts, owing to the cloudy weather. The Indian observations seem to have been the most successful, upwards of one hundred negatives of the planet's position on the sun's disk being secured. The details of the micrometric measurements and of the instants of contact, it is also stated, were obtained with precision.

Professor Harkness, from Hobart Town, Tasmania, announces bad weather, but good results, in the shape of one hundred and thirteen photographs.

Altogether the reports are encouraging, and point to generally fair success. The despatches of Professors Harkness and Hall are the most important, owing to their stations being far north and far south of the Equator, and hence giving the most trustworthy data.

In this connection we notice a letter, from Mr. Lewis M. Rutherford, to the Times, in which he recommends the use of a short telescope and enlargement of the image by the intervention of an enlarging lens between the objective and the plate on which the photograph of the sun is taken, in lieu of