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AN IMPORTANT CRISIS IN THE HISTORY OF NEWSPAPER PUBLISHING.

This is a time of severe trial to all newspaper and book publishers; and the prosperity—yea, the very business existence—of many of them is suspended upon a slender thread. That hitherto great national blessing, cheap literature, is likely for the present to receive a severe shock, and possibly its death-blow. We will take the case of the SCIENTIFIC AMERICAN as an illustration of what we have to say on this important topic. For nearly eighteen years this journal has not failed of a single weekly issue; and during that long period we have devoted our best energies and a large amount of active capital to make it the best as it certainly is the cheapest journal in the world devoted to popular science. At the commencement of the "new series"—July 1859—we enlarged the size of the SCIENTIFIC AMERICAN at least one-third, without increasing its rate of subscription. This was done at a greatly-increased cost to us; but notwithstanding this, and in spite of the great "rebellion" and the consequent stoppage of its circulation in all the seceded States, the SCIENTIFIC AMERICAN has gone on, steadily and prosperously, holding its own with the most favored journals of the land. We have regularly, and at a vastly-increased expense to us, given to its patrons, each week, a sheet of 16 pages, printed on the best quality of paper, manufactured expressly for us; and we have profusely illustrated each number with the finest specimens of engravings, prepared expressly by our own artists. In short, we have spared neither time, talents nor money in furnishing a paper which, considering its low price of subscription, is justly regarded as a marvel among the enterprises of cheap literature.

At length a crisis has reached us when we must earnestly consider how far we can continue to maintain this standard of excellence at the present subscription price of the SCIENTIFIC AMERICAN; and, in order that our thousands of readers may fully understand the difficulties that now beset the entire publishing interests of the country, we will explain the matter fully. It is safe to say that the newspaper press of the United States is unrivaled for combined cheapness and enterprise; but, with very few exceptions, no journal has flourished without a large share of advertising patronage. To rely upon the mere circulation of a paper, at the current subscription rates, would soon exhaust the pecuniary means of most publishers. Take, for example, the three leading two-cent "dailies" now published in this city, namely, the *Herald*, *Times* and *Tribune*, if without a large advertising patronage—the greater the circulation the greater the loss to their proprietors. The public, while enjoying the blessings of a cheap press, does not often take this fact into account; yet it is nevertheless true. We have never sought for the SCIENTIFIC AMERICAN a large advertising patronage, but have always desired to give our readers the fullest

possible benefit of our columns for illustrations and reading matter; had we not, however, enjoyed a large professional business, we could not have sustained the paper without a large advertising patronage or an increase in the price of subscription. The war now being waged for our priceless national heritage is working sad mischief to the newspaper interest. A heavy tax is laid upon white paper, also upon advertisements; but these two items we should cheerfully pay as a moiety of our proportion of the war expenses; these, however, are not the worst difficulties that we have to encounter. Owing to the great scarcity of the raw material from which paper is made, the price of the manufactured article has advanced to very nearly fifty per cent, with a prospect of a still greater advance before the first day of January; and it is even intimated that the supply of paper cannot meet the wants of the publishers. Paper-makers will not and cannot, prudently, enter into contracts to supply publishers. They will only sell from week to week at their own prices; and, as usual, speculators are busy in getting hold of every article that goes into the manufacture of paper, with a view still further to enhance the price of the manufactured article.

With this preliminary explanation we come to the vital question at issue, namely: "How shall we adequately meet these contingencies, keeping our own interests and the interests of our generous patrons equally in view?" At the present price of paper our terms of subscription do not pay for the unprinted sheet, to say nothing of the great outlay of type, composition and presswork; hence we are reduced to the alternative of either reducing the size of the SCIENTIFIC AMERICAN or of advancing its subscription price. On the first day of January, 1863, we shall enter upon a new volume. We wish to not only keep our journal fully up to its present standard, but to make its acknowledged excellence to advance as much as it is possible for us to do. We have, therefore, decided to raise the price of single subscriptions to \$3 per annum, with a corresponding reduction to clubs, as heretofore. We think this course will best satisfy our patrons; and we assure them that as soon as the time arrives when we can do so, we shall gladly reduce the rates to the old figures. The matter is now with our hitherto-generous patrons; and, if they still regard the SCIENTIFIC AMERICAN as being valuable to them, we trust they will continue to take it. We shall do our best to furnish them with a liberal equivalent for their continued subscriptions.

SLACKNESS AT THE PATENT OFFICE.

Nothing is more true than that the lack of constant employment begets indolence. When the Patent Office was crowded with business we seldom had occasion to complain at any delay in the examination of cases or lack of promptness in disposing of business in this bureau. But during the last year, and especially the past six months, there has been a noticeable slackness in several departments of the office, for which there is no apparent reason, except upon the principle that "the less one has to do, the less inclined and apt is he to perform well what he has to do."

In 1860 more than twice as many applications were made for patents as are likely to be made this year (1862); and but little, if any, more "help" was then employed in the Patent Office than there is now; still cases are not as promptly acted upon, in some of the examiners' rooms, as they were in that year of great prosperity. The delay in examining and giving decisions upon cases discourages inventors and creates dissatisfaction, which the Commissioner should try to avoid. Some of the examiners, we are happy to say, keep their work well done up, and give a decision in a case within a few days after the application is filed; but there are others who are several months behind in their examinations.

Now, if some of the examiners have so much to do that they cannot get through with their work promptly, why are they not relieved and part of their cases sent to less crowded rooms? There is certainly a sufficiently large examining force in the Patent Office to keep all the work done up snug; and we trust the Commissioner will see to it that the labors of the office are so distributed that no examiner may

excuse himself from not acting upon cases which have been before him for several months, on the ground that he has not yet had time to take the matter up for examination. Will the Commissioner infuse a little more vigor in some of the departments of the Patent Office?

THE CONTINENTAL TELEGRAPH.

The Atlantic has been united to the Pacific by an electric cord 3,500 miles in length, and through this, the largest electric circuit in the world, messages were flashed on the 6th inst. New York and San Francisco now hold daily converse. This is one of the grandest commercial and scientific achievements of the age. The history of the electric telegraph is as wonderful as the story of "Aladdin's Wonderful Lamp." It is but eighteen years since the first line of telegraph was laid on our continent, between Washington and Baltimore, and now more than 50,000 miles of wire throb daily with messages of love, hope, fear and business, conveyed between every city and almost every hamlet in our land. When our first line was laid California was almost an unknown land, and was in the entire possession of the wandering Indian and the degenerate Spaniard; now a splendid Pacific empire, belonging to the Union, exists on the Pacific, and its numerous prosperous cities and villages give proof of the intense energy and enterprise of our people. In 1861 the continental line of telegraph was commenced by parties starting from Fort Kearney for the West, and from Sacramento for the East, and both pushed toward Salt Lake City at the rate of from eight to ten miles per day. This overland telegraph has been working for about a year, in conjunction with the "Pony Express," and now the entire line, from ocean to ocean, is completed, and the voice of the Atlantic is echoed by the Pacific in a few seconds of time. Let us cherish the hope that a railroad across the continent will soon follow the telegraph.

GENERAL MITCHELL.

Among the many distinguished persons who have fallen victims to our unhappy war, none seem to be more generally regretted than Ormsby McKnight Mitchell, the astronomer General. His death resulted from malaria fever, and occurred at Beaufort, S. C., on the 30th of last month. When news of the event reached this city the public heart seemed deeply moved with a sorrowful impulse. General Mitchell was born in Union county, Kentucky, August 28, 1810, but he removed when a youth from that State to Lebanon, Ohio, where he received a cadet's commission to obtain a military education at West Point. From Ohio to the Hudson he traveled a great part of the way on foot, and when he arrived at his destination all the material wealth which he possessed in the world consisted of fifty cents in his pocket and the clothing bound on his back. In 1829, he graduated with a high reputation in mathematics, and for a few years subsequently he acted as one of the assistant professors in our national military academy. After this he returned to Ohio, and in 1834 became Professor of Mathematics and Astronomy in Cincinnati College. In this situation he acquired deserved celebrity as a teacher of his favorite science and as a popular lecturer. In many of our cities he has delivered courses of lectures, and most lovers of science in this country have been both instructed and delighted with his eloquent descriptions of "the starry heavens." He was of medium height, possessed of a wiry frame and was endowed with a clear intellect and great energy of character. The Observatory at Cincinnati was erected through his suggestions and instrumentality, and he devoted an immense amount of thought and labor to have it furnished with superior philosophical instruments. In conjunction with the late Dr. John Locke he was very successful in designing and obtaining valuable and ingenious mechanism for recording astronomical observations. It is stated that he discovered the exact period of the rotation of the planet Mars, and by two published works on astronomy his fame as a scientific author was widely extended.

In 1859, General Mitchell became chief director of the Dudley Observatory at Albany, N. Y., maintaining at the same time his connection with the Observatory at Cincinnati. While thus engaged he was