Scientific American.

ESTABLISHED 1845.

MUNN & CO., Editors and Proprietors. PUBLISHED WEEKLY AT

No. 361 BROADWAY, NEW YORK.

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A. E. BEACH

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NEW YORK, SATURDAY, JULY 17, 1886.

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Witset between -First paper
The Prevertion of Naphthalene Deposits.—An apparatus for use in the manufacture of illuminating gas.—I figure. RECENTLY PROPOSED PATENT LEGISLATION.

In many cases, improperly drawn specifications, with various kinds of dress goods made out of silk. drawings not acceptable under the Patent Office rules, have been forwarded to the Commissioner of Patents. accompanied by the preliminary fee of fifteen dollars. Of such applications, some have gone no farther, the statement have forwarded the preliminary fee of fifteen dollars. Again, it often happens that the final fee of the lack of experience in their culture, coupled with twenty dollars is paid in, and the application aban-the high price of expert reelers, have been serious drawdoned after such payment. Sometimes the entire fee of thirty-five dollars is sent in advance with the appli- these are accidental circumstances, and will be discation, which is subsequently abandoned. Hitherto, and at present, in such cases the amount received in three years. It is pleasant to record the fact that the excess by the Commissioner cannot by law be returned. Much injustice is apparent in these transactions. Money is received by the government, and retained by it, for which no equivalent is given. There are now home of the industry, Southern France. many thousands of dollars in the Treasury received from these sources. It seems clear that it is a case for to its intrinsic commercial importance, makes it worthy legal relief.

by B. Thomas introduced a bill designed to remedy the country. the evil. In general terms, it authorized the Commissioner of Patents to refund these fees where possible, and in all cases to make efforts to do so by writing to the applicants, The bill was twice read, and referred to the Committee on Patents, who reported a substitute (H. R. bill No. 9,474) on the 16th of June. It is for the transmission of sound by electricity in an experithe purpose of authorizing and directing the Commistment which the present telephone controversy makes sioner of Patents to notify the class of applicants in particularly interesting. question that their fees are subject to their order. It classifies the fees, 1st, as those sent to the Patent Office with applications which have never been completed or placed in condition for examination, and have betwenty dollars paid on applications which have never been patented, and which have become abandoned.

In all such cases, the Commissioner of Patents is to the sum in question, and stating that the amount will be forwarded to him on his written request for it. When the request is received, the Commissioner is directed to return the money, under such rules as may receipts of the office.

cost of searching for novelty, for clerical expenses, as musical notes. printing, lithographing, and the like. There was never in the way of a search for novelty, and other work inhas been effected, it seems unjust for the government! Technology. to retain the amounts so received. A large surplus exists to-day in the Treasury of the United States to the credit of the Patent Office. Much of it has been! justly entitled to.

PROGRESS OF SILK CULTURE IN THIS COUNTRY.

From the Sixth Annual Report of the Women's Silk age its advocates in believing that it will one day win for itself an important place among the industrial in the culture of silk cocoons in the agricultural districts is on the increase, and there has been an improvement in both the quantity and quality of the Corron Seed.—In expression of the chemical from the seed and seed and seed and seed and seed and the seed and commercial raw silk have also been improved, and the prices are somewhat higher than formerly. That there is an immense field for the silk culturist in this coun-ment of the modern steam engine, Prof. Thurston try, if only the industry can once be established upon a commercial basis, is shown by a glance at the custom house statistics. Not infrequently the monthly imports of silk and silk goods amount to as much as five 8778 million dollars. Or perhaps it is even better appre-

assembly. A decided preference is shown for the

A recent feature in the work of the Association has been its management of the Government Experimental Station in silk culture. A filature, or silk reeling station, was established in Philadelphia, and a line of necessary alterations and amendments not having been shafting was introduced, with arrangements for six made. In other cases, inventors, ignorant of the laws reels. Early in June, 1885, three American reels were relating to patents, have sent to the Commissioner a put into operation. A market was soon found for all simple statement to the effect that they proposed to the reeled silk produced, and also for all the waste, so take out a patent for certain inventions, and with this that the undertaking may be said to rest on a business footing. The small quantity of cocoons produced, and backs to the financial success of the enterprise. But pelled, it is believed, by the results of the next two or three reels made in Philadelphia are pronounced by experts to be superior to any of those imported, not excepting the improved forms brought from the very

There is one aspect of silk culture which, in addition of particular attention. And this is the employment On the 22d of March of the present year, Mr. Orms- it affords to women and children whose homes are in

PROF. PICKERING'S EARLY EXPERIMENTS IN TELE-GRAPHING SOUND.

In 1870, Prof. E. C. Pickering, then of the Massachusetts Institute of Technology, illustrated to an audience

His first receiver consisted of a powerful electromagnet attached to the bottom of a wooden box, the cover of which was replaced by a tin plate, having a soft iron armature attached to its center. The armacome abandoned by lapse of time; 2d, as final fees of ture approached the magnet, but was not in contact. The transmitter was a sonometer, around the wire of which a short wire was wound, dipping into mercury. An electric current was passed through both wires, the ordered to mail to the last known post office address of mercury, and the magnet. When the main wire of the the person entitled thereto, informing him of his right sonometer was made to vibrate, the current at each vibration was broken at the surface of the mercury. When the circuit was made, the magnet drew the plate down; and when broken, the elasticity of the plate drew it back. A loud sound was thus produced, the be required to efficiently and safely carry out the pro- pitch of which could be varied by changing the length visions of the proposed law. In order to prevent any or tension of the wire of the sonometer. This experifurther accumulation of fees paid by mistake, the ment was shown to the American Association for the Commissioner is authorized to refund them, for the fu- Advancement of Science, at its annual meeting, and ture, as soon as received, drawing upon the current was repeated in the course of several lectures. On again repeating this experiment in 1879, when the sub-The provisions of the bill above summarized seem ject of the transmission of sound by means of electricienimently just ones. The fees of thirty-five dollars re- ty had assumed commercial importance, it was found ceived by the Patent Office are intended to pay for the that ordinary conversation could be heard as readily

From this it will be seen that as far back as 1870 a any idea of making them a source of profit or of gen-ireceiver was devised which consisted of a flexible iron eral revenue to the government. Under equitable diaphragm supported at its sides, and replacing the management, the amounts received by the office should armature of an electro-magnet—a receiver, in fact, be spent upon forwarding its business, and expediting which differed in no way from that now in use. In 1879, the issuing of patents. When, therefore, through error the possibility of its use as a telephone was also demonor otherwise, fees are paid for which no return is given strated, and though intended originally for a discontinuous current, it was equally suitable for a continuvolved in the completion of the application, or for ous one. The apparatus used in these early experiwhich, as in the case of final fees, no issuing of a patent | ments is now in the possession of the Institute of

THE NATION'S GREAT PROBLEM.

Prof. R. H. Thurston, Director of Sibley College, derived from the sources described. The repayment Cornell University, in his lecture before the graduatof as many inventors as could be found would not, we ing class of the Rose Polytechnic Institute, at Terre are convinced, seriously deplete this idle amount. For Haute, Ind., took for his subject the nation's great the future, if the revenues were somewhat reduced, it problem, the possibility of progress without revolution would be only equitable and just to submit to such re- and without those periods of darkness and distress duction. The government should in no sense be a which have heretofore been its recording milestones. money maker, and should receive no fees that it is not The solution of this problem he finds in education, the careful, moral cultivation of the people at large. There are, it is said, two distinct systems of education, the old or gymnastic, and the new or technical; but a deeper interpretation of the intellectual life shows no Culture Association of the United States, it appears such distinction. However better adapted the new that while the present outlook for the industry is not 'education may be to our present wants, it has at its as bright as it might be, there is still much to encour- foundation the elements of the old. The technical education, which is now beginning to receive proper recognition in our systems of culture, is simply the suppleenterprises of America. The number of those engaged ment to our older, incomplete academic training. In the ideal education, the citizen is fitted for the successful pursuit of every desirable object in life.

The education at school and college is no longer regarded as a finality, but simply as a means to an end, and that end is the student's life work and culture. Some years ago, in tracing the history of the developdivided its growth into three periods-speculation, application in several distinct forms, and, finally, a period of refinement.

In the growth of our educational systems, we have reached this third stage, the period of refinement, in use clated when one studies the attire of any American which, the elements of the complete system being pres-