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For the Week Ending July 17, 1886.

Price 10 cents. For sale by all newsdealers.

Detailed table of contents for the supplement, including sections like 'I. AGRICULTURE', 'II. ELECTRICITY', 'III. ENGINEERING AND MECHANICS', etc., with page numbers.

RECENTLY PROPOSED PATENT LEGISLATION.

In many cases, improperly drawn specifications, with 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 necessary alterations and amendments not having been made.

On the 22d of March of the present year, Mr. Ormsby B. Thomas introduced a bill designed to remedy 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.

In all such cases, the Commissioner of Patents is ordered to mail to the last known post office address of the person entitled thereto, informing him of his right to the sum in question, and stating that the amount will be forwarded to him on his written request for it.

The provisions of the bill above summarized seem eminently just ones. The fees of thirty-five dollars received by the Patent Office are intended to pay for the cost of searching for novelty, for clerical expenses, printing, lithographing, and the like.

PROGRESS OF SILK CULTURE IN THIS COUNTRY.

From the Sixth Annual Report of the Women's Silk Culture Association of the United States, it appears that while the present outlook for the industry is not as bright as it might be, there is still much to encourage its advocates.

assembly. A decided preference is shown for the various kinds of dress goods made out of silk.

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 shafting was introduced, with arrangements for six reels.

There is one aspect of silk culture which, in addition to its intrinsic commercial importance, makes it worthy of particular attention. And this is the employment it affords to women and children whose homes are in the country.

PROF. PICKERING'S EARLY EXPERIMENTS IN TELEGRAPHING SOUND.

In 1870, Prof. E. C. Pickering, then of the Massachusetts Institute of Technology, illustrated to an audience the transmission of sound by electricity in an experiment which the present telephone controversy makes particularly interesting.

His first receiver consisted of a powerful electro-magnet 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 armature 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.

From this it will be seen that as far back as 1870 a receiver was devised which consisted of a flexible iron diaphragm supported at its sides, and replacing the armature of an electro-magnet—a receiver, in fact, which differed in no way from that now in use.

THE NATION'S GREAT PROBLEM.

Prof. R. H. Thurston, Director of Sibley College, Cornell University, in his lecture before the graduating class of the Rose Polytechnic Institute, at Terre Haute, Ind., took for his subject the nation's great problem, the possibility of progress without revolution and without those periods of darkness and distress which have heretofore been its recording milestones.

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.

In the growth of our educational systems, we have reached this third stage, the period of refinement, in which, the elements of the complete system being pres-