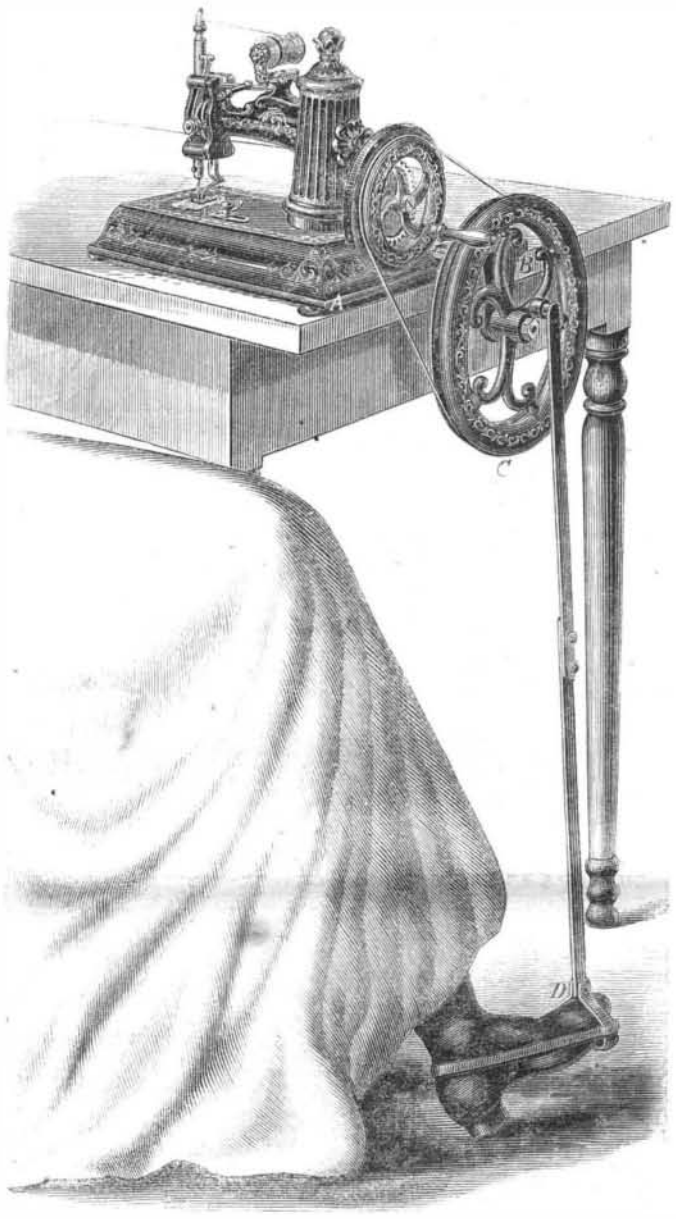
Improved Motion for Sewing Machines.

Many of the lower-priced sewing machines have no treadle or other means of applying power, except a small balance-wheel and a handle therein. It is difficult to get sufficient velocity on these machines without driving the hand and arm at such a rate that the operator is soon tired out; moreover one hand is always occupied in moving the machine so that attention is distracted from the work, which is often injured thereby. The engraving published herewith shows a method of attaching a treadle to such machines so that they are moved by the foot of the operator the same as all other machines. The treadle only has to be purchased where the operator has the machine, and not an expensive piece of cabinet work such as the table often is.



FOLSOM'S MOTION FOR SEWING MACHINES.

The method of attaching the treadle is as follows:—A cast-iron plate, A, is fitted to two studs on the bottom of the machine and is prolonged at the end furthest from the reader to receive a clamp, B, which carries the main driving wheel, C. From this wheel a rod proceeds to a stirrup, D, at the end, which constitutes a treadle, light and durable. It can be easily put on and taken off any table without marring the surface, and will greatly facilitate operations.

The machine to which the treadle is attached is very neatly got up and does good work for one of its class, that is, the single thread machine.

For further particulars address J. G. Folsom, Winchendon, Mass., who has an application pending before the Patent Office on this invention.

Academy of Sciences.

Father Secchi sent an account of the spectra of some stars, as seen by him recently in a new spectrometer by Merz, with a prism by Hofmann, of Paris. A drawing of the spectrum of *a* Orionis accompanied the communication. The spectrum of Sirius is decribed by the learned author as resembling that of sulphur.

M. De Vergnette-Lamotte sent a long memoir "On the Preservation of Wines by the Employment of Heat." M. Pasteur, reviving an old suggestion of Appert, proposes to heat wine for a few minutes to 75° or 80° C. The author objects to this, and says it is better to submit the wines for some time to a temperature not exceeding 45°. He seems to admit, however, that Appert's or Pasteur's plan answers well with the more saccharine and alcoholic wines, like ports and sherries, etc.

M. Fouque presented a memoir "On the Chemical Phenomena of Volcanoes." Only the general conclusions of the author are given in the *Comptes Rendus*, and the most interesting of these is the last. The author wished to demonstrate that the contact of sea water with the molten mass on which the solid crust of the earth rests is sufficient to account for all the eruptive phenomena. With this view he made some synthetical experiments, having for their object the reproduction of some of the substances he had found in the fumaroles of Mount Etna. In the course of his experiments he found that steam alone decomposes chloride of sodium, forming caustic soda and hydrochloric acid; and, further, that sulphate of lime and chloride of sodium react on each other in the presence of the vapor of water, producing sulphate of soda, and many other compounds he has noticed in volcanic emanations. Is it possible that the first of these observations may lead to the simplification of the soda process?—*Chemical News.*

Extension of Patents.

Many valuable patents are allowed to expire every year for the want of a little care on the part of patentees in not applying for an extension. The petition must be filed in the Patent Office at least ninety days before the expiration of the patent, which gives time for the preparation of testimony. Inventors who have patents dated in 1852, and who may wish to have them extended for seven years, can receive all necessary advice how to proceed, by addressing this office.

HOPKINS'S WATER COOLEER.

This water cooler is composed of an inner and an outer casing, with the intervening space filled with any non-conducting material. The inner casing is made to receive the ice as it is delivered to the consumer without the necessity of cutting away the corners and otherwise breaking it—as in the ordinary round cooler. The great loss of ice resulting from the necessity of cutting it into small pieces and exposing a much greater amount of surface to the water is avoided, while the external dimensions do not have to be any larger than in ordinary coolers.

After the block of ice is placed with the water in the cooler, as in ordinary ones, the covers are replaced and the water may be replenished through the reservoir, A, which is so arranged as to shut off all communication with the external air to the interior of the cooler. Hence, there is no necessity for removing the cover except to introduce more ice.

A glance at the reservoir will always indicate the hight of the water in the interior of the cooler. As the water is introduced gradually at the base of the ice, says the inventor, with the covers tight, it does not melt as rapidly as when poured upon it from above with the covers off, which, at the same time, admits the warm surrounding air.

It is claimed that this cooler will save from thirty-three to fifty per cent of ice, as it was in use last season, while the cost will be but a trifle more than ordinary coolers. Samples may be seen at the warerooms of J. Hall Reohrman, No. 606 Cherry street, Philadelphia, where orders will be received. State rights will be disposed of on application to the patentee, No. 1,107 Walnut street.

It was patented Jan. 16, 1866, by E. E. Hopkins, of Philadelphia, Pa.

FAST WORK.—Benj. F. Avery, of Louisville, Ky., informs us that for three months past he has finished 2,000 plows per week. He turned out over 622 in one day, which, we should say, was rapid work.

OF THE 529,241 persons who visited Kew Gardens last year 260,040 arrived on Sundays, and 269,201 on week days.

FROM THE STEAM PRESS OF JOHN A. GRAY AND GREEN.