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(Illustrated articles are marked with an asterisk.)

A. E. BEACH.

THE GREAT SEWING MACHINE JOB BEFORE CONGRESS.

We recently alluded to the application now pending be fore Congress for the extension of the Wilson sewing machine patent which covers the feeding device, a feature which all sewing machines must have. The existence of this patent is a bar to the introduction of a variety of improved machines, which will be brought out next year if the Wilson patent is not extended, for it expires in 1873. The owners of improvements are not allowed by the parties who control the Wilson patent to put their goods in the market.

The Sewing Machine Ring, consisting of the Wheeler & Wilson Company, the Singer Company, the Grover & Baker Company, and the Howe Company have had the almost exclusive monopoly of the sewing machine business for the past quarter of a century. This is long enough in all conscience.

Under the shadow of these patents, Wilson's patent being a chief one, they have wrung from our people many millions of dollars in profits, and to day they charge American citizens sixty-five dollars for the same machines that they sell on the other side of the Atlantic for half the money. It would be a wicked thing for Congress to do to extend this monopoly. It has lasted long enough, and ought now to die a natural death.

In the memorial of W. L. Groot and others, we find the following interesting particulars :-

The corporations above named "are now selling machines in England, Ireland, Scotland, France, Belgium, Holland, Austria, Russia, Prussia, Norway, Denmark, Sweden, Spain, and other countries of Europe, at one half the price they offer the same sewing machines to our own people, and cheaper than they can be produced by the poorly paid labor of Europe, where the manufacturer, who has no patents to dread and no 'combination' to interfere, realizes, even at the price of one half what we must pay, a profit of 100 per cent. This unjust discrimination carries its own strong logic why no further extension shall be granted to enable a few to oppress thousands.

NUMBER AND PRICE OF SEWING MACHINES.

Not counting the great number of sewing machines made and sold since the origin of the business, the chief patent of which has expired and is now sought to be renewed by Congressional legislation, your memorialists annex the number

at \$65 must be reduced to \$32.50, and there will be no difference between our people and those in Europe, as there is an abundance of capital anxious to produce better sewing machines at \$35 than are now sold at \$65, and to have liberal, legitimate reward for both labor and capital.

Your memorialists will be ready at any time to appear before Congress, both in person and by attorney, to give such additional proofs, and to propound such questions, to the applicants or their attorney, as it is impossible to present in the limits of this memorial.

SEWING MACHINES AND THEIR EFFECT UPON HEALTH.

It is one of the accompaniments of almost every change in human habits, brought about by advances in civilization, that the health of the public is influenced in some way. Often new complaints are engendered, or old ones are complicated, so that medical science is kept constantly on the alert to combat attacks from unexpected quarters. It has been charged against that most valuable of modern labor saving inventions, the sewing machine, that the act of impelling it by foot power, as almost universally practiced, has resulted in injury to female health. At first these charges were hardly more than surmises, but they were finally made direct and positive, with how much reason it is the object of this article to enquire. Fortunately for our purpose, we find in the report of the Massachusetts State Board of Health an extended discussion of the subject, from the pen of Arthur Nichols, M. D., which contains many facts and statistics drawn from various sources. Of these facts we shall freely avail ourselves, and shall thereby further the object of the publication of all such reports, the general enlightenment of the public.

In 1860, Dr. A. K. Gardner expressed, in the American Medical Times, his opinion that the exercise of propelling sewing machines with the feet, so far from being injurious, is really beneficial inasmuch as it gives exercise, which, though it affects only part of the body, is still better than no exercise at all.

Dr. Vernois stated, in 1862, in the Annales d'Hygiéne Publique, that, both in males and females, the motion produced cramps, partial paralysis, and, in females just begin ing to operate, a peculiar and injurious nervous excitement.

Dr. William Ord, in a report on the sanitary condition of dressmakers and needlewomen in London, 1863, states that, while in general the exercise is beneficial and tends to improve the health of females, the cramped position sometimes causes pain in the chest and indigestion, and that delicate women are greatly exhausted by this particular work.

This testimony was followed by something far different in 866, from M. Guibout, physician to the Hôpital Saint Louis, in Paris, who, in a paper read before the Société Médicale des Hôpitaux, made such strong statements, in regard to the effect of sewing machines upon female health, that general apprehension resulted. Shortly after the reading of this paper, Dr. Feurnier attributed a case of paralysis of sensation in bottom of the foot, occurring in a girl admitted to the same hospital, to the use of the sewing machine; and the publication of this case increased the general alarm.

The opinions of Dr. Espagne, Professor at the Montpellier University in France, were published in 1869, in which he denies that any injuries result, from the use of the feet on ewing machines, other than general fatigue and muscular Dain.

Next follow the published opinions of the celebrated Dr. Decaisne, who has done so much toward enlightening the world upon the effects, of various trades, professions, and callings, upon the health of those engaged in them. He examined and questioned a large number of women, searched hospital records, and came to the conclusions which are thus summarized :

"The effects of this work upon the muscular system differ in no respect from those of any other kind of excessive labor involving the use of certain portions of the body to the exclusion of others. The affections most commonly complained of are muscular pains, pain in the region of the kidneys, and cramps in the lower extremities; none of which, however, are developed among those working three or four hours daily. These pains, cramps, etc., are most commonly found among beginners, and usually diminish after one has become accusomed to the motion of the machine.

The use of the sewing machine, when employed within moderate limits, without overworking, as is too often done, is attended with no greater inconvenience to health than made in 1870 only by the companies forming this 'combina- working with the needle, as was shown by the examination of 28 women between the ages of 18 and 40, employed from three to four hours daily." We now come to the investigations of the Massachusetts State Board of Health. The Board circulated widely this printed question, "Have you observed any injury to health from the use of sewing machines moved by foot power? If so, please to send us all the information you may have on the subject." To this question, 138 replies were received, representing 120 different towns. Of this number, 80 report one or more instances of injury, and 58 return negative or doubtful answers. We cannot give place to even a synopsis of the various replies. They however establish the fact that, among operatives on sewing machines, certain complaints do exist in greater proportion than with other females, while they as plainly show that this results not from the exercise itself but from is excess. It is avowed by Dr. Nichols that these complaints pare not inseparable from the propulsion of the sewing machine by the feet, but that excessive work of this kind is very likely to be followed by injury, if not by total prostration.

might be far from excessive with another. The number of hours per day these operators work would not injure them were the machines driven by steam power. Anything more than from five to ten minutes labor, without rest, on the brakes of the old style fire engine would be excessive for most men. But because this labor is too much, it does not follow that an engine cannot be made upon which a man might work six hours without over fatigue.

Operators at sewing machines are obliged to sit with backs entirely unsupported and the knees elevated, thus keeping the spinal muscles constantly on the stretch, inducing the pain in the small of the back which is the most constant effect of work of this kind. This irritation is reflected by sympathy to other parts, and general debility finally results. We have never seen any satisfactory reason why the tables of sewing machines which are operated by foot power should not be brought up over the lap, so that the operator might sit leaning slightly backward, with the spine thoroughly supported and the limbs extended. We proposed this once to a leading manufacturer, and were told that the notion that women were injured by working on sewing machines had no foundation in fact. We argued that those who had investigated the subject, though claiming that moderate exercise of this sort would not injure, almost unanimously insisted that excess would injure, and added that profitable employment with such machines implied an extent of labor which these authorities claimed to be excessive on machines as at present constructed. We failed, however, to convince him that any improvement in form was either desirable or practicable. Notwithstanding this discouragement, we put our idea to the test of actual trial, and found that all who had been accustomed to work on the old machine, who tried the modified position above described, were unanimous in testifying to the superior comfort and ease secured by it. There may be im. provements made in treadles, as suggested by Dr. Nichols, but these do not reach the root of the evil. It is the position, not the mere labor of propelling the machines, that fatigues the operator.

Those who tried our plan of raising and bringing the table up nearer the person, and placing the treadles farther away, found no difficulty, in handling the work or in keeping it properly placed on the table, as the manufacturer above alluded to seemed to apprehend. The whole body was placed in an easy unconstrained position, and so supported as to rest rather than fatigue the back. We look to see some such change made in the construction of sewing machines. They are so valuable in many departments of industry that in vention will not rest till their full utility is developed. The value of an improvement that would enable an operator to work even one hour per day longer than at present, without injurious fatigue, can scarcely be over estimated.

DEATH OF SAMUEL F. B. MORSE.

After a few days' illness which, with his great age, led to anticipation of a fatal result, Professor Morse died at ten minutes before eight o'clock in the evening of Tuesday, the 2d of April. His long and varied life, and his universal renown, will give interest to the following particulars:

He was born at Charlestown, Mass., on April 27, 1791. His early education was acquired at Yale College, and his career would have been through life that of a painter, had not circumstances directed his attention to scientific pursuits. With a view of following the first named vocation, he left the United States in 1811, in company with Washington Allston, to study his art under the tuition of the well known Benjamin West. The Society of Arts, of London, recognized the mer its of the young artist, and awarded him a medal for a piece of sculpture, a "Dying Hercules.' After four years' absence, he returned to his native country and subsequently established an association which, after many changes and against much opposition, became, in 1826, the National Academy of Design. He again visited Europe in 1829, and, while on that continent, was elected to the Professorship of Literature of the Arts of Design, in thecity of New York University. In the year 1826 or 1827, his attention had reverted to electro-magnetism and cognate subjects, of which his education at Yale had given him a sound practical knowledge; and he had an additional incentive to this pursuit in his close and intimate acquaintance with John Freeman Dana, then a colaborer with Morse in the lecture theater of the New York Athenæum. He returned from his second visit to Europe in 1832, and in conversation with his fellow passengers on the ship (the Sully) concerning the recent obtaining of an electric spark from a magnet, mentioned the idea of an electro-magnetic and chemical recording telegraph. The more zealous and indiscreet of his admirers claim for this conversation the credit due to an original idea, whereas the desirability and possibility of telegraphing by means of electricity had alrealy occupied the attention of Mr. Ronald, who had erected eight miles of insulated wire in his garden and dispatched signals through it, and who published an faccount of his method in the year 1823. Other inventors in England and France, in the latter part of the eighteenth century, had been working towards a similar object, and it is impossible and unnecessary to decide to whom the thought first came. Certain it is that it had been largely canvassed long before Professor Morse's labors commenced. But it is to Morse that the credit of long and enduring perseverance in introducing a practical and efficient telegraph is due; and he was enbled to do this great service to mankind by the invention of the electro-magnet by Joseph Henry, to whom all users of electro-magnetism, for whatever purpose, must confess themselves indebted.

nation,' the statement being made under oath :

Singer Manufacturing Company sold 127,833 Wheeler & Wilson Manufacturing Company sold . 83,208 Grover & Baker Sewing Machine Company sold.... 57.402 The Howe Sewing Machine Company sold 75.156

These were retailed at an average price of \$65 each, making in the aggregate \$22,333,935. The same number of sewing machines would have retailed in Europe at half the price charged here, and our people must pay for this number sold them \$11,166,967.50 more than the people of Europe are charged. This great product is only of four companies, not counting many others, all of whom have paid a tribute to this 'combination.' Their aggregate wealth is more than \$50,000,000, and all of it is cleargain, the small amounts which were originally invested being too insignificant for comparison at this day. This is easily apparent when the incontrovertible fact is made known that the cost of each sewing machine sold at \$65 is less than \$12. If this patent is not extended, the price of all sewing machines now selling | Now what is excessive work with one kind of a machine

It is hardly necessary, just now, to describe the difficulties against which Morse fought so courageously. Recent events