

ard. The general influence of the principles adopted by the company leads these prominent workmen to feel that they are intrusted with a degree of guardianship of those under them, and this feeling is very manifest. Respect for the manhood of a workman molds him.

3. Many of the work-people have invested their funds in *savings banks*, and this is specially encouraged. Formerly the company received deposits from the work-people, allowing an annual interest of six per cent., but for some prudential reasons this plan was abandoned, and the depositors were encouraged to invest in chartered banks. The company held in their hands, at one time, more than \$100,000 of the savings of their work-people, which has been changed into other channels. There is no doubt that their deposits now exceed this sum largely.

4. Quite a number of the work-people own *houses* free of debt, while others have been partially assisted by the company, it receiving a portion of their wages each month in reduction of the debt. More than \$50,000 are thus invested.

5. Others invest their funds in the bonds of the United States Government in preference to savings banks.

6. Several of the workmen are owners of the *stock* of the company, and have the same rights in regard to the control of the officers and general management as other stockholders.

7. Investments of earnings in premiums on *life insurance* have been made by many of the workmen.

8. More than one of the workmen have been members of the City Government in its board of aldermen and common council, and not an annual election passes without the choice of one or more to some of these important offices.

The pecuniary success of the company has warranted a liberal spirit in the payment of wages to the work-people. The least sum now paid in weekly wages to the youngest employed is \$1 82 in gold, and the number belonging to this class is very small. Boys of sixteen years do not receive less than \$2 85 in gold weekly. The least amount paid weekly to men is \$6 75 in gold, while a very large majority receive much more. Females receive from \$2 48 in gold weekly to \$6 72, while a few earn more. This excepts young girls, whose wages are the least sum named above.

Spinners, weavers, and a few others, are paid in accordance with their products, some of them earning very large wages.

The stockholders, as previously stated, have invested \$2,500,000 in the company. During the past twelve years they have received in dividends more than \$3,000,000, and the fixed property has cost a much larger sum than the amount of the capital stock. The treasurer, furthermore, holds in his possession a very large amount of undivided earnings, with which to purchase cotton, wool, and other materials, for cash.

#### PROGRESS OF THE WORKING CLASSES.

We have received from Messrs. Geo. Routledge & Son, No. 416 Broome street, a volume of 300 pages, bearing the above suggestive title. The work embraces a great variety of topics, bearing upon the social condition of the overwrought working classes of Great Britain, and the moral and legal agencies employed toward their reformation during the past thirty-five years. The information and the statistics contained in this volume, are worthy to be studied by every manufacturer in our country who employs a considerable number of hands.

The cotton manufacturers of Manchester were a shrewd, sturdy, square-set, selfish body of men more conspicuous for their business management than for humanity in dealing with those whose labors were necessary to the success of their undertaking. It is not to be wondered, therefore, that the evils growing out of this state of things were of a dreadful character. The absence of education stunted the mind while increasing labor dwarfed and deformed the body, and the short hours of relaxation from toil allowed to the factory worker, were commonly spent in the most sensual and degrading pursuits until the evils were almost unbearable.

The testimony of an English philanthropist, given in 1832, says:

"The population employed in the cotton factories rises at five o'clock in the morning, works in the mills from six until eight, and returns home for half an hour or forty minutes to breakfast. This meal generally consists of tea or coffee, with a little bread. The tea is almost always of a bad, and sometimes of a deleterious quality. The operatives return to the mills and workshops until twelve o'clock, when an hour is allowed for dinner. Among those who obtain the lower rate of wages this meal generally consists of boiled potatoes. The mess of potatoes is put into one large dish, melted lard and butter are poured upon them, and a few pieces of fried fat bacon are sometimes mingled with them, and but seldom a little meat. Those who obtain better wages add a greater proportion of animal food to this meal, at least three times in the week; but the quantity consumed by the laboring population is not great. The family sits around the table, and each rapidly appropriates his portion on a plate, or they will plunge their spoons into the dish, and with an animal eagerness satisfy the cravings of their appetites."

After thus describing the half-savage domestic habits of the people, he goes on to describe their general surroundings: "The population nourished on this aliment is crowded into one dense mass in cottages separated by narrow, unpaved, and almost pestilential streets, in an atmosphere loaded with smoke, and the exhalations of a large manufacturing city. The operatives are congregated into mills and workshops during twelve hours in the day, in an enervating heated atmosphere, which is frequently loaded with dust or the filaments of cotton, or impure from constant respiration, or from other causes. They are drudges, who watch the movements

and assist the operations of a mighty material force, which toils with an energy ever unconscious of fatigue. The state of the streets powerfully affects the health of their inhabitants; sporadic cases of typhus chiefly appear in those which are narrow, ill-ventilated, unpaved, or which contain heaps of refuse or stagnant pools."

"What were the amusements of the masses, thus overworked, ill-fed, ill-housed,—left for the most part uneducated? Large numbers of working people attended fairs and wakes, at the latter of which jumping in sacks, climbing greased poles, grinning through horse collars for tobacco, hunting pigs with soaped tails, were the choicest diversions. An almost general unchastity—the proofs of which are as abundant as they would be painful to adduce—prevailed among the women employed in factories, and generally throughout the lowest ranks of the working population. But drink was the mainspring of enjoyment. When Saturday evening came, indulgences began which continued until Sunday evening. Fiddles were to be heard on all sides, and limp-looking men and pale-faced women thronged the public houses, and reeled and jiggered till they were turned, drunk and riotous, into the streets, at most unseasonable hours. On the Sunday morning the public houses were again thronged that the thirst following the indulgence of the night might be quenched. When church hour approached, however, the churchwardens, with long staves tipped with silver, sallied forth, and, when possible, seized all the drunken and unkempt upon whom they could lay their hands, and these, being carefully lodged in a pew provided for them, were left there to enjoy the sermon, while their captors usually adjourned to some tavern near at hand, for the purpose of rewarding themselves with a glass or two for the important services they had rendered to morality and religion. In fact, sullen, silent work alternated with noisy, drunken riot; and Easter and Whitsuntide debauches, with an occasional outbreak during some favorite 'wakes,' rounded the whole life of the factory worker."

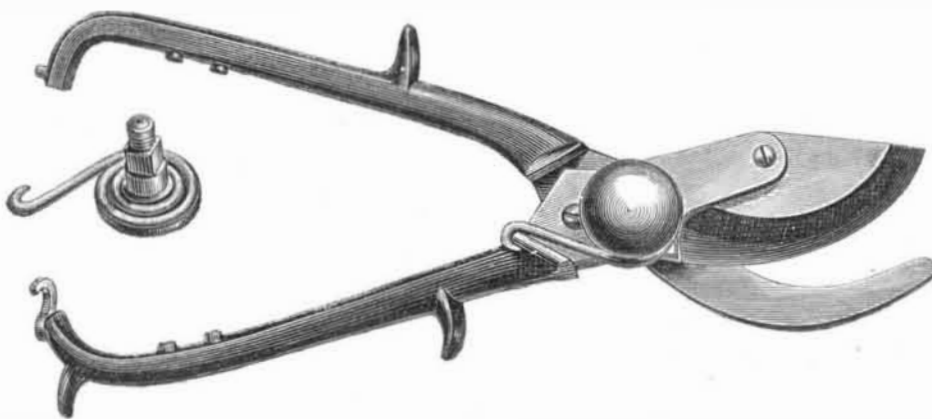
It appears from the volume before us that the first efforts towards the reformation of factory abuse began among the more thoughtful of the operatives who proposed the "Short Time Bill," the agitation of which brought about the organization of trade societies, in nearly all of which there was a tendency to violence. Riots were not uncommon, and the union men habitually refused to work with non-union men or "Knobsticks," as they were nick-named, and often maltreated and even murdered them.

The mercenary practices of employers had become so oppressive that human nature broke down under the severe burdens heaped upon the working classes and under the infliction of wrongs to which those in power seemed indifferent, it cannot be wondered at, though always to be regretted, that violent demonstrations were put forth. The volume briefly sketches the various agencies brought into existence to reform the abuses of the factory system, and now it appears that progress has been general and continuous, and that chiefly through influences which have proceeded from the class itself.

At the present moment in Europe, as well as our own country, the factory system is vastly improved and improving. The operatives are not degraded by ignorance and vice, and children are not allowed to enter factories and to be excluded from the privilege of schools and such outdoor exercises as tend to develop the mental and physical powers. We are happy to record the progress of the working classes.

#### Improved Spring and Bolt for Shears.

The object of this invention is to arrange a spring for opening the blades and jaws of scissors, shears, hand nippers,



BERGNER'S SPRING AND BOLT FOR SHEARS.

punches, etc., which shall be always effective and out of the way of the hand in using the implement. The engraving shows a pair of pruning shears with this improved spring. The details are shown plainly in the small figure.

The bolt which holds the two blades in connection, has a broad cap or head that conceals and retains in place a coiled spring, one end of which passes through a hole in the shank of the bolt under the head, and the other, formed into a hook, engages with a projection made on the handle of one of the blades. Soon as the pressure of the fingers is relaxed, the tension of the spring acts on the handle of the jaw and throws the blades apart. The rivet or bolt is secured by a nut on its end in the usual way, one blade fitting a squared place on the shank of the bolt and the other turning freely on the cylindrical portion.

The patent bears date of June 23, 1868, and all applications

for rights, etc., may be made to the patentee, Georg Bergner, or to L. Wattenberg, Washington, Mo.

#### Poisonous Champagne.

It is much to be doubted whether alcohol or any of the sparkling and seducing liquors which contain it are to be considered, even when pure, as anything but poisons. The following extract from the *Grocer* will show the character of the factitious substances which are vended in modern times, and may prove both interesting and instructive:

"There is nothing but roguery to be found in villainous man!" exclaimed Sir John Falstaff on detecting lime in his sack. Could the fat knight now revisit the earth, he would have to admit that the art of doctoring wines had been carried far beyond the stage reached when 'a cup of sack with lime in it' set him moralizing on human depravity. He would have an opportunity of trying 'something sparkling,' compared with which limed sack was a harmless mixture. We cannot blink the fact that much of the so-called 'champagne' which is ostentatiously set before heated guests at public and private assemblies is simply the product of fraudulent ingenuity—a detestable counterfeit which resembles the natural wine just as the Champagne Charley of the music halls resembles a finished gentleman. Its color and flavor are adventitious, its bouquet is artificial, and its

"Beaded bubbles, winking at the brim."

may be traced to the condenser of a modified soda water machine. Happily a disputed contract has led to an exposure which will probably check the further growth of the British champagne trade. From the recent case of Cox against Barnett we gather many interesting particulars respecting the fabrication of this aerated stuff. Our present object is to call special attention to the chemical facts elicited at the trial of this case, and to explain our reasons for believing that 'champagne' of British manufacture is generally contaminated with lead. The case was an action to recover damages from a machine maker for a breach of contract. With the laudable intention of carrying on business as a manufacturer of aerated wines, the plaintiff purchased from the defendant, at the cost of £135, a champagne machine, on the understanding that it was capable of producing a hundred quarts of champagne or aerated wine daily. The 'champagne,' in its 'still' condition, consisted of light white wine, fortified and flavored with a sirup technically termed 'trente-six,' and to convert it into sparkling wine it had to be impregnated with carbonic acid gas in the condenser of the machine. According to the plaintiff, the wine left the condenser turbid, and those who tasted it suffered severely from sore lips. Dr. Matthiessen, F. R. S., the eminent chemist of St. Mary's Hospital, submitted the product to analysis, and actually extracted from a single gallon no less than four grains of metallic lead, in quantity corresponding to about two thirds of a grain per bottle! With characteristic acuteness, he then performed a number of experiments to determine the action of lead and solder on samples of wine originally free from lead, and in every case he found the wine contaminated with the poisonous metal. We have had an opportunity of checking Dr. Matthiessen's results, and can vouch to their accuracy. The free acid of the wine attacks lead and solder with great rapidity, and, by suitable processes, the dissolved lead can be separated from the wine and weighed. An examination of the condenser in court brought to light the source of the lead, for almost the whole of the interior was found to be covered with solder. The principal witness for the defendant was a champagne manufacturer of twenty-five years' experience, not from the department of the Marne, but from an unrecognized wine district in the city of London. This gentleman swore that neither, tin, lead, nor solder would affect the wine; that the

condenser exhibited was a first rate article; that he himself had for a long time manufactured 'champagne' with the aid of similar machines, and that one of his condensers contained a lump of solder as big as a hen's egg! He did not inform the court whether the unhappy consumers of his wine had escaped lead colic. The examination of this witness elicited the curious fact that he imported grapes from France to make champagne in London." French champagne made in England!

ALASKA.—Late advices from Alaska are very encouraging. Coal mines have been discovered near Sitka, on the mainland. The quality is considered unequalled, and the seam is over twenty feet wide and traceable for some distance. The coal was tried on the United States steamer *Sigisno* and pronounced excellent. It has the appearance of pure anthracite, and is superior to any Lehigh coal. In addition to this discovery, Alaska is likely to become a place of fashionable resort in hot weather.

WINE is becoming an important article of manufacture in Kansas. The Lawrence papers state that the wine producers are now actively employed in gathering an abundant crop of summer grapes.