A Wealthy Miner.

The San Francisco *Mail* tells this story of one of the wealthy miners of that section: Mr. Fair was born in Ireland in 1831, and came to the United States in 1843. He acquired his business education in Chicago, and came to California during the gold excitement in 1849. Since that time he has devoted himself principally to mining, and from that source is now enjoying an income of about $600,000 per month. Mr. Fair resides in Virginia City, and personally superintends the work on the Consolidated Virginia and California mines. His house on B street is one of the sights of the town, being pure white, and as prettily ornamented as a toy. In the front yard there is a bird house elevated on a pole, and it is finished in the highest style of art. No bird was ever known to enter it.

There is very little of the snob about Mr. Fair. It is true that he has furnished for his family a barouche, drawn by four horses, with gold-nobbed harness, but a pair of geldings drag his own buggy, and there is no gilt upon the straps.

Notwithstanding his immense wealth, Mr. Fair is not a happy man. Certain persons scattered through Nevada are convinced that the bonanza king has wronged them in sundry financial operations, and would be pleased to blow the top of his head off. Until within eight or nine months Mr. Fair drove a single horse through the streets of Virginia, and, it is said, carried a loaded revolver in his boot. Latterly he has ridden behind a span, and beside him in the buggy is a horseman named Mooney, who has the reputation of being an exceedingly hard hitter and a handy man in a row. Mooney does all the driving for the Fair family. At the house on B street the greatest precautions are taken against any attack. A watchman prowls about the yard all night, and another is stationed in the hall within doors.

The popular name for Mr. Fair among the Virginians is "Slippery Jim." He is exceedingly polite to everybody, and "my son" is one of his favorite forms of address. Bores have no terrors for him. To a young and disagreeably inquisitive tourist, Mr. Fair is the essence of suavity. Placing his hand upon the shoulder of the stranger, he will say, with an engaging smile: "My son, would it be too much to ask of you to come around tomorrow? These mines are any amount of trouble to me, and business, you know, makes imperative demands upon one's time." Then he goes to a clerk, and says: "If that idiot comes again, tell him I'm not in."

There are a good many stories current in Virginia illustrative of Mr. Fair's peculiar style of doing things. One is that at a time when a certain cross-cut in the Consolidated Virginia, showing very rich ore, and it was politic to keep the fact secret, Fair went down the shaft about midnight, and found two miners in the main drift cooling off.

"My son," said Mr. Fair, picking up a piece of rock that had fallen from a car from the cross-cut, and addressing one of the men: "my son, what do you think that rock is worth?"

"It won't pay for crushing," answered the judicious miner.

"What do you think, my son?" asked Fair, turning to the other. The man, anxious to display his knowledge, blurted out:

"It's worth two thousand a ton if it's worth a cent."

"You're a miner," said Mr. Fair, approvingly; and five minutes later he ordered the foreman to discharge the second speaker, on the ground that "he knew too much."

Fashion Notes.

Tan color is revived.

Tight sleeves are *de rigueur*.

Buttercups are favorite flowers.

Small caps are very fashionable.

Small yellow roses are in demand.

Putty color is revived for kid gloves.

No birds are seen on the new bonnets.

Madras ginghams are in vogue again.

The "Imperial" is the leading dolman.

Orange and flame color are fashionable.

"No wine," is the rule for the kettledrum.

Visits of ceremony should always be short.

French and English chips are on the wane.

Black and tilleul is a popular combination.

The Normandy is the leading spring bonnet.

The "Corisande" is a beautiful new overskirt.

Square box-toed boots are the most fashionable.

Bonnets with pointed crowns are things of the past.

The princesse is the favorite dress for little girls.

Several kinds of tea are served at a kettledrum,

Plush gauze is one of the new bonnet trimmings.

For summer wear long white lace mittens are shown.

Tan and brown are the favorite combinations in the new wraps.

Gold and steel are combined in bonnet and coiffure ornaments.

All shades of yellow are freely used in trimming spring bonnets.

Gray and tan in pale shades are the glove colors of the moment.

The new shades of green are sea foam, crystal, cascade and bronze.

Ruches of lace and crepe lisse are used for face trimmings of bonnets.

A pretty visiting toilet is *en regle* for kettledrums or luncheon parties.

Silk Algerine gauzes in Oriental stripes are shown for evening dresses.

Undressed kid gloves have almost superseded dressed kids for street wear.

Among the millinery novelties are straw works and straw laces.

Dolmans and scarf mantles are worn, but so are half long French sacks.

Birds and birds' wings have flown away from the spring millinery openings.

The new bonnets are small, but are made to look large with the trimmings.

A hint to busy people: When your neighbor is sick, if you would do your friend a kindness, be helpful to the doctor and a blessing to society, just stay at home until you are sent for; keep out of the sick room unless the physician asks you to aid him in treating the case. If this one rule was usually observed, epidemics and contagious diseases would be easily held in abeyance.

Messrs. Nichols and Ogle, rival candidates for the mayoralty of Galveston, tossed pennies to determine who should retire from the race, and the latter has refused a nomination.

HOW SARDINES ARE PREPARED.

Menhaden Used in this Country—How the Fish is Got Ready for Market—Great Increase in the Trade during the Last Seven Years.

The American Sardine Company started the business of preparing sardines for sale about seven years ago, at Port Monmouth, N. J. Some idea of the extent of these works may be gained from the fact that in 1873 the company manufactured and sold 470,000 cans, a quantity which was nearly equal to the total importation of foreign sardines in 1870, the year when the company was started. In 1874 the production was equally large, but during the last two seasons the catch has been small, owing to the scarcity of the fish which the company selected as a substitute for the sardine—the menhaden or ocean trout, commonly called the "moss bunker." Its color is silvery, spotted with dark brown. These fish abound in the bays and deep rivers which indent the coasts of New Brunswick, Newfoundland and Nova Scotia, and in the spring and fall appear also in great numbers along the New England coast and in the Raritan bay. Here during the season they are caught by the employees of the sardine company, who begin operations about May first and continue the work until November first. The flesh of the menhaden is sweet and nutritious and is by many preferred to that of the imported sardine, the only defect being the unusual number of bones. These, however, are now removed by a mechanical process, for which the company secured a patent in 1872.

The president of the company recently gave a *Tribune* reporter the following information as to the manner of catching the fish and the process of manufacture: The menhaden is a timid fish and swims upon the surface. When at early dawn a school is descried by the ripples on the surface, the small boats are lowered from the sloops which have been lying off the ground since midnight, and a long net about 700 feet in length and descending twelve or thirteen feet into the water is carried out on both sides until the school is surrounded. The fish are then ladled out by the fishermen with "scoops," placed on board the sloops, and brought to the factory docks at Port Monmouth. In the factory they are first brought to the "scaler," a long shaft with twelve revolving wheels filled with long blunt teeth, which removed the scales. The heads are then cut off, the entrails removed, and the fishes are placed in washing troughs, above which are circular revolving brushes, by contact with which the fishes are thoroughly cleaned, and the bones removed. They are then put in pickling vats for several hours, until well salted; from these they are transferred to the cooking cans, which are placed in the steaming tanks, seven in number, each capable of holding 1,000 boxes. From the steaming tanks they pass to a long table, and are finally packed in permanent cans. After oil and spices have been placed in the cans, they are sealed. The time occupied in the whole process is about three days.

Prior to 1874 the sales were confined to this country, but during the last two years large quantities have been exported to Russia, Germany, Australia, England and South America. Last year application for agencies in France were received, but as, owing to the small yield last season, the existing demand could not be supplied, it was deemed inadvisable to undertake new contracts. The company now employ 150 men. An extensive catch is expected during the coming season, and preparations are making to enlarge the works.

A Peculiar General.

One of the late Gen. Changarnier's peculiarities was a horror of tobacco. He has been seen at home, where he was otherwise the kindiest of hosts, pursuing unfortunate smokers even into remote corners, harassing them, reducing them, partly by pleasant banter and partly by serious expostulation, to sullen submission, and bringing them up in triumph to the drawing-room. In fact, in this particular respect he seems to have treated his guests as a stern but fatherly old colonel might treat a parcel of subalterns. An odd story is told of him in the time when he was himself a subaltern. He and two comrades had been dining together; and they had dined so well that one of the comrades, overcome with wine and the heat of a discussion which ensued, lost his head and struck Changarnier, who turned deadly pale and felt that he must fight somebody. But he was far too generous to fight his intoxicated friend. He left the room without saying a word, went into a neighboring coffee-house where the students of the place were wont to assemble, and administered a couple of cuffs to the first unoffending student he came across, and, when swords were drawn, followed this outrage up with a severe wound in the shoulder. He then returned to his friend, who had no recollection of anything that had occurred, and said to him: "What a bore you are! You've obliged me to run a poor devil through the shoulder who never did anything to me. It's perfectly ridiculous." And so the two embraced, and no more was said.

Giving him a Load.

A story is going the rounds about old Cooke, the actor, whose will is at present the subject of such exciting and costly litigation in London. The old gentleman went out with a friend to have a day's shooting, and, to add additional zest to their sport, it was agreed that Mr. Cooke should carry home all his friend shot, and his friend all that Mr. Cooke managed to kill. As fortune would have it, Mr. Cooke had particularly bad luck and shot nothing, while the other was in excellent form, and slaughtered quite a host of game of all sorts. So the poor old gentleman, according to the terms of the bet, was compelled, grievously against his will, to carry all the game on his own shoulders, and got unmercifully chaffed for his pains by his unsympathizing companion. The old man bore it all with grim patience, until going along the road they stumbled upon a huge grunter. In the twinkling of an eye Cooke's gun was at his shoulder, and the pig fell dead, a trophy to his skill. "There now," said the hunter, turning to his companion, "take up that and carry it home," which his now disconsolate friend proceeded to do.

Why He Resigned.

When asked for the reasons that induced him to tender his resignation, Senator Cameron, of Pennsylvania, said: "I am seventy-eight years old, and think that I have been in public life long enough, and that I will never find a better time to retire. I am tired of the care and worry of office, of having to turn away good people whom I would be glad to serve if I had the power, and of being annoyed by bad people seeking to make use of me. I am rich, and need not subject myself to all this trouble."

CLARK'S "O.N.T." SPOOL COTTON

How, and Where it is Made---The Clark Thread Company---Largest Works in the New World---Acres of Splendid Buildings---Forests of Wonderful Machinery.

The Process of Manufacture.

Down in the Cotton Fields---The Employees' Societies --- The Clark Hose Company---A Grand Relief Society---Employees' Centennial Excursion---The Renowned Eureka Club and Thistle Band.

MANY INTERESTING PARTICULARS.

[From the Essex County *Press*, Newark, N. J.]

At the foot of Clark street, in the Eighth ward of the city of Newark, on the banks of the Passaic, occupying several acres of ground, upon which are buildings the flooring of which measures nearly eight acres, are situated the largest thread works in the New World, employing about fifteen hundred hands and paying out every two weeks from sixteen to twenty thousand dollars in wages, to be distributed by the employees among different classes and occupations in the city, and from fifteen to twenty thousand per month to other parties here, who, in various ways, are connected with this vast establishment. Although having the largest pay roll of any employers in New Jersey, and contributing more to the welfare and prosperity of the city than all its financial Institutions combined, we hear less in the newspapers of this world of wealth makers than of some second-class money lending shop on Broad street. It would be useless for any one to attempt to trace to their source all the varied industries which have entered into the production of Clark's "O. N. T." Spool Cotton, which is sold by every merchant dealing in dry goods, fancy goods, hosiery, notions, etc., in the United States, and contains two hundred yards of that indispensable article, strong, smooth and beautiful. It is made up of

NEARLY FORTY-TWO MILLION DOUBLINGS,

and yet is so fine as to be hardly visible a few inches from the naked eye. The immense capital invested in The Clark Thread Company's Works and the vast volume of business, amounting to several millions per annum, extending to every part of the United States, is one of the principal sources of Newark's prosperity. What it is and the blessings which flow from it, are not realized by one in a thousand of the people who dwell within the sound of their tower bell. Notwithstanding the large amount of money which the establishment was to pour into the hands of every merchant and trader in the city, as events have shown, the first thing which the City Fathers did when these works were being erected was to tax the bricks and material not yet shaped into buildings. It was on a par with the intelligence and appreciation of the

REAL SOURCES OF WEALTH,

usually exhibited by the average politician. Had it been some trust company or curbstone broker that asked exemption, it would probably have been granted. Some idea of the value of these works to the community may be had by an illustration of a thing which might really happen at any time. The Clark Thread Company employ, as stated, about fifteen hundred persons, paying out to them sixteen to twenty thousand dollars every two weeks. These hundreds of hands pay out that money to the butcher, the baker, the grocer, the clothier, the dry goods merchant, and all who have anything to sell get a part of it in some way, either directly or indirectly. From their hands it goes to pay debts, meet obligations and fill the channels of trade with the circulating medium called money, and which is to business what blood is to the human system, giving it life, animation and power. Suppose to-night those works were

DESTROYED BY FIRE.

They are fully insured. The Clark Thread Company receive their insurance in cash from their underwriters. They say to themselves: "Business is dull, sales are uncertain, profits are small, the future is unknown, and our taxes are heavy. The vast business requires close attention and persistent energy. We will not take this money and rebuild the works, but adopt the plan pursued by most moneyed men, viz: go to Washington, buy government bonds, bring them home, put them in a tin box, pay no taxes, and sit down to take our ease, eat, drink and be merry, with no thought of care, supported in luxury without risk by the interest on our bonds, paid by taxation of the producing classes." Can any man calculate the wide spread ruin which would follow such a calamity and course of action by The Clark Thread Company? It would be incalculable. All those people who earned money to purchase what they wanted to buy, would be added to the list of paupers who to-day clamor for work or bread. Misery, want,

STARVATION AND CRIME

would be the fruit of such a course. But this is exactly what has been done throughout the country, and explains why one in twelve in Newark are to-day supported by the city. The productive capital of the country, which employed our now idle millions, has been put into government bonds, and appalling destitution and want are on every hand, and increasing at a fearful rate. Labor is the source of all wealth and prosperity, and there is no loss equal to that which follows enforced idleness of the producing classes. There is no music so full of joy and peace and good will to men as the song of labor and the music of machinery. Better far that all other songs be hushed and every note be stilled, rather than those, and to them we now introduce the reader.

ON THE DOCK

of The Clark Thread Company, which is five hundred feet long, is a mountain of two or three thousand tons of coal, drawn out of boats at the wharf by a donkey engine, and the bales of cotton find their way from the same wharf to the brick house, for the storage of that precious material, one pound of which will make one hundred miles of thread, containing about forty-two million doublings. The mind cannot grasp the numerical fact. But four grades of cotton are ordinarily used in the manufacture of Clark's "O. N. T." Spool Cotton, and known as "Sea Island Cotton." This comes principally from South Carolina and is grown on the small islands along the coast. Considerable is raised on the peninsulas and around the bays and inlets, but it is not equal to that of the sea islands, which is the finest in the world. The first bag of this sea island cotton of the crop of 1876 was purchased by the Clark Thread Company at fifty cents per pound. The inland cotton is not used in the manufacture of thread, being too short in the fiber. On these sea islands were the richest planters of the South in

THE OLD SLAVE DAYS,

many of them having as high as six hundred slaves, and compared with whom the feudal lords of England were children in luxury, hospitality, and elegance. But to-day all is changed. Those vast estates are cut up into small plantations, many of them owned by the negroes, who now call no man master. They bring in their season's product, sometimes on a mule and again in large quantities. Brokers on the ground or at the landings, buy and pay the negroes for their cotton, often dividing the money according to the labor performed in raising the crop. Some lease the lands of the former owners, but the old state of things is "dun clar' gone." This trade and traffic, it may be fairly expected, will in a few years largely increase the wealth and intelligence of the race in these localities.

THE SEA ISLAND COTTON

brings treble the price of inland. An acre will produce in the neighborhood of three hundred and fifty pounds of seed cotton, which when ginned weighs about seventy-five pounds, or one to five. The negroes without doubt will eventually grow all the cotton, as not one in five of the Northern men have thus far succeeded in their attempts. Let the reader remember that we have not looked at a single piece of machinery yet, and then calculate the number of people and the amount of wealth, these works employ and produce, before we reach the factory. The sail, the mine, commerce and manufactures, all find employment to supply The Clark Thread Company's works, and when they stop the cotton may bloom and fall unplucked, the coal miner may starve on a bed of black diamonds, the sails on the rivers be spread to the breeze no more, and the lathes in a hundred shops be left to rust in silence. The manufacture of Clark's "O. N. T." Spool Cotton embraces the islands of the sea and penetrates the bowels of the earth, utilizing the treasures of wealth on every hand, enriching and blessing mankind at every step, from the womb of ages to the spindles of Newark. We will now examine into the immediate sources of the power which drives the endless machinery of this vast hive of industry, with its sixty miles of belting and about seventy miles of steam pipe for heating purposes.

WE ENTER THE ENGINE HOUSE,

itself large enough for an ordinary factory. Here is a mighty production of human brain and brawn. In the presence of this monster, with its majestic tread, one feels his own insignificance and frailty. This vast piece of machinery, moving silently, save the sharp click of the improved steam cut-offs, is equal in power to the combined draft of six hundred horses, and is two engines in one, usually termed a double engine. The fly-wheel traveling at the rate of forty-eight revolutions per minute and carrying three huge belts on its surface, each two feet wide, is seventy-eight feet in circumference, twenty-five feet in diameter and weighs thirty tons or sixty thousand pounds. The shaft is fourteen inches in thickness, the double cylinders are twenty-six inches in diameter, with condensers, and a stroke of five feet. They were built by Corliss, in 1874. One of the three belts on the fly-wheel is one hundred and fifty feet in length. But even this double monster could not run the works. It has a big twin brother, and together they travel every day for ten hours on their endless journey, and never get tired. They are wonders of power and elegant workmanship, worthy of a visit from any one who wants to see the

BIGGEST PAIR OF TWINS

in New Jersey. They are supplied with steam from nine immense tubular boilers and four large upright boilers, Corliss' plan. They consume twenty-five tons of coal per day, which will give some idea of the amount of steam necessary to drive the immense establishment. Besides these there are three ordinary sized engines, made by Watts, Campbell & Co., of Newark, in different parts of the works, making seven in all, a grand total of nearly fourteen hundred horse power. The young mountain of coal, which looks enough to last the whole city a year, is rebuilt by two hundred and fifty ton boat loads, at brief intervals.

MANUFACTURING THE THREAD.

The cotton is brought in bales to the mixing rooms, when it is examined and placed in bins, according to the different grades, ready for the scutching machines, which open and beat the material, cleaning it from the dirt and sand it contains in the bale. After going through the scruching machine, it comes out in the shape of a roll, like wall paper, comparatively soft, white and clean. It is, however, really in a very rough state, compared with the fineness and perfection that is to be reached. Several of these scutching machines are running continually, and their sound is like the roar of a lightning express train, as it whirls past the platform where you stand. The first scutcher is fed with the bale cotton from a hopper which lets it through into knives set in large rollers, which revolve with tremendous force, and lightning speed, picking the cotton into small pieces, and passing it by suction of air, on to other rollers, between which it goes and comes out in the shape of a web or "lap" in large rolls. Four of these rolls are then placed upon a machine like the first and run together through the same process of

PICKING AND BEATING AND CLEANING,

when it comes out again in the same shape as before, rolled to exactly the thickness which it is desired to make the "silver" from which the thread yarn is to be spun. What a "silver" is will be learned further on. The machine is so delicately set that it regulates the thickness of the web or lap to within half an ounce, in a web of five feet, weighing only twelve to eighteen ounces. After being put through three scutching machines in this way and coming out with eight thicknesses of web or lap similar to that produced by the first process, it is ready for the carding machines. This department is filled with Carding Machines, Drawing Frames, Lappers, and Combing Machines, a perfect labyrinth of belting, pulleys and machinery, the noise of which is like the roar of many waters mingled with the clatter of a thousand wheels. One of the large rolls of web or lap that came from the last scutching machine is placed on a carding machine which takes and runs it

BETWEEN THE TEETH

of a large and small cylinder for the purpose of drawing out the entangled fibers and laying them parallel or in the same line of direction and also to remove the small pellicles or motes which may have escaped the action of the scutching machine. After being treated in this way, a comber or doffer takes the web from the small cylinder, which is now a delicate guaze; and it is gathered up and passed through a small hole, say half an inch in size, after which it is coiled in a revolving can. The whole process is one of wonderful delicacy, the material being so finely worked that a breath of air would break it. This card contains ninety thousand square teeth to a foot, or a total of four million one hundred and eighty-six thousand. On the carding machine is a little joker that works like some old man, raising the wire covered flats from the teeth of the carder, which it cleans, and throws off the particles of dirt and coarse cotton left on them. Six of the

TIN CANS CALLED CARD SLIVERS,

in which the roll is wound are now taken to another machine called a Drawing Frame and run together into one "sliver." These six are so light that when they are passed together through a hole and made one, they fall into another sliver and are then no larger than one of the six from which it was made, although they have not yet been twisted at all. Fourteen of these cans full of slivers are placed at the "Lapper" and run between two rollers, making a new web nine inches wide and half an inch thick, which comes out like the original roll from the scutching machine that takes the cotton from the bales, only that now it is soft and delicate as is possible to conceive, weighing only one hundred and forty-five grains to the yard, nine inches wide. It now goes in rolls to a wonderful little machine, a French invention, first introduced in this country by The Clark Thread Company. It is a refined carding machine, the product of which is as much superior in fineness to the large carders just described as the most elegant silk goods are to

THE COARSEST COTTON CLOTH.

It is called the French combing machine and is only used by the best thread makers, as it is very expensive and while it makes the thread superior in quality, it adds twenty per cent. to the cost of manufacture. Six of the rolls of webbing are now passed together through the combing machine between two rollers, and combed by innumerable steel teeth to the fineness of gossamer and the thinness of a spider's web. It passes on, is gathered into one soft round "sliver" again, goes through rollers once more, when it is coiled into cans as before, with a loss of twenty per cent. on the material which composed the web when it was put on the French machine. It is a texture so fine and soft that one cannot but wonder how it bears its own weight. After the last process, six of the slivers are again put through the drawing frame making one sliver no larger than any of the six from which it is drawn. Then six of these last are put through the same process reducing them in size six times, and adding that to the length. This is repeated three times, and each time they are coiled into cans. The last sliver is the same size and weight as when the process began, although doubled four hundred and thirty-five thousand, four hundred and fifty-six times. The last cans are now taken to

THE FIRST SLUBBING FRAME,

from which cans they are passed through rollers, then twisted to about the size of a lead pencil, and wound on bobbins, all by the same machine. From this they go to the second slubbing frame, where one hundred and two spindles on each machine are winding yarn from two hundred and four bobbins, which came from the first slubber, two threads being wound upon one spool. The next or intermediate slubbing machine winds upon one hundred and seventy-six spools, from three hundred and fifty-two bobbins, which came from the second slubber. The next and last is called the roving machine, and fills two hundred and forty spools, which came from four hundred and eighty bobbins, from the intermediate slubbing machine. By this repetition of doubling and twisting the yarn is fast becoming strong and hard. We now follow the yarn called "roving" to the self-acting "mule," which makes eight hundred and forty threads of yarn from sixteen hundred and eighty bobbins. This wonderful machine, two of which are operated by one man, draws out the yarn and twists it from sixteen hundred and eighty spools, when it comes away, and on its return winds it on eight hundred cops (spools) making the last number of thread yarn. We now come to

THE THREAD MILL,

which is a distinct and independent department. The cotton yarn comes here, and first goes to the cop winding machines, where it is run from the cops, through delicate balances, over soft felt ground, upon bobbins, two threads together upon one. From the cop winding department, the bobbings go to the slinging department, where the two threads that were run together on the spool, in the cop winding department, are twisted or spun in one thread. The thread, as it is unwound, runs through water, and rapidly over glass guides, and the bobbin which receives it revolves five thousand times per minute twisting hundreds of threads on each machine. After being twisted two threads together, making one hard thread, three of the latter are again run together on a bobbin, the same as in the first cop winding department. Three of these are now twisted together, making six strans, and

THE PROCESS OF TWISTING THEM

is exactly the same as the one last described. It is known as the finishing twisting department. When the thread comes from the finishing twisting department, it is inspected with the greatest care, by skillful persons, and put through several tests before passing the reeling department, to be wound in skeins for the bleach house. The machines in this department are very curious, and daily turn out vast quantities of thread, which is packed, and given a through ticket to the bleach and dye houses. They measure off the thread into skeins of an exact length and size, and when they have reeled off just the right amount of yarn, always stop, and unlike some kind of yarners, they never forget to tell the same story without variations. Again after coming from the reels,

THE THREAD IS CAREFULLY INSPECTED,

the work employing several girls, who take all the rough and imperfect thread from the hanks. After this second inspection, we find it next in the bleach house. The bleach and dye houses are among the most interesting departments of this vast establishment, although not the most agreeable. The progress in washing machinery, that is here exhibited, would make our grandmothers think that the millenium had come. The baby washer, as we call it, of this concern, is rather a large child, whose place and uses will appear later. After the thread is sent from the inspection department to the bleach and dye houses, it is unpacked, counted and put into large tanks, immense loads at a time, and boiled by steam for several hours, which takes out the dirt and

CLEANS IT PERFECTLY.

It is then put through washings oft, and preparations wonderful and curious. The water used, we judge, would have increased the flood just about enough to have lifted Noah's ark from the snag on Mount Ararat. Some of the wash tubs are of stone, and all are on a scale equal in magnitude to any of Col. Seller's schemes for making millions. The loads of thread are put in and taken out of boilers, rinsers, washers, dryers and half a dozen other processes by machinery. Then after all this, it goes right back to those huge steam boilers, and the same thing is done over again. The dry room is heated by seven thousand five hundred feet of steam pipe, and can be regulated to any desired temperature. After leaving the reeling department, the thread that is to be colored goes to the dye house, and that which is to remain white, to the bleach house. In the dye house is the patent dyeing machine, used only to dye black. It does the work far better than by hand and is equal to the labor of more than a dozen men.

ALL COLORS OF THREAD

are made, and the quantities of soaps, dye stuffs, and other material of the kind used, are immense. Eighty thousand gallons of water are consumed daily in the bleach house alone, and one of the Artesian wells of The Clark Thread Company has a capacity of one hundred and fifty thousand gallons per day. This is a remarkable well, sixteen feet deep and eight feet in diameter, of which Professor Maynard, the New York chemist, said it produced the purest water he ever saw. It makes a man thirsty to look at it, and is absolutely free from any particles of matter, by chemical test. The thread is blued on a big scale, which gives that handsome tint so greatly admired by the ladies. Then it is committed to the tender mercies of the baby washer, which are cruel, and goes through it ten times. The baby is built like an ordinary washing machine, but each of the rollers weighs a thousand pounds, and as the thread passes through the water into the washer

THEY HOP AND JUMP

and pound with antics queer, but it does the business thoroughly. This was formerly done by the old fashioned pounder and barrel which our grandmothers used to set us at when we were boys, before going to school in the morning. Then it is drawn through the rinser, which is a simple and novel machine continually supplied with pure Artesian well water. The thread passes over a roller into the water, comes up again over another roller, then down into the water, and up and down, and out and in, and out and up over the reels into great boxes on wheels, from which it is put into a large water extractor, a perforated hollow cylinder, revolving several thousand times per minute, and then it is transported to the drying room. In this way five hundred heads can be finsed in four minutes which used to take an hour and a half. After the thread has come out of the drying room,

COLORED OR UNCOLORED,

it goes to the warerooms, where it is counted and put in packages to be given out preparatory to being wound upon spools for the market. The thread having reached this stage of perfection, has become very valuable and is looked after with the greatest care. Tickets direct it to its different departments and denote its size, quality, etc. The inspection and testing of thread is one of the most important features in its production, and it would surprise the lady who sews day after day with Clark's "O.N.T." Spool Cotton, to know by what patient and constant care the perfect smoothness and regularity of the thread was secured. It is now taken to the hank winding department and wound upon large bobbins, when it is ready for the last wind upon the spools, from which it is taken by the consumers for its thousand uses of necessity and utility, from tying the rag on the boy's whittled and bloody finger, to the delicate embroidery of the wedding garment.

THE SPOOLING DEPARTMENT.

The spooling room is a busy place, where spools of thread of all sizes and colors by tens of thousands are wound every day, two hundred yards on a spool. The self-acting spooling machine is a marvelous piece of mechanism. The spools are placed in an iron gutter by the operator, when the machine picks them up, puts them on a shaft eight at a time, winds the thread upon them at the rate of three thousand revolutions per minute, cuts a little slot in the edge of the spool, catches the thread in it, nips it off, drops the spools full of thread into boxes below, picks up eight more empty spools, places, winds and drops them as before, and never makes a mistake. The machine, which is used in this country only by The Clark Thread Company, was exhibited by them at the Centennial, and with their magnificent case of goods, was one of the great attractions among the many wonders of the exhibition. From the spooling department, the spooled thread is taken to

THE WAREROOM,

where the beautiful little label containing the name, number, etc., of the thread, is put on by girls. The quickest of them will put labels on the ends of nine or ten thousand in a day, all of which have to be moistened by the tongue, placed on the spool, and then struck with the hand to paste it. Some of these girls work about as quick as lightning. After ticketing, the spools of thread are put into boxes of one dozen each. They are then ready for packing. About twenty-five thousand feet of lumber per month is cut at the mills, in Michigan, to the various lengths required, and all that is done here is to put the boxes together. A private wire runs from the works in Newark to the New York office, and the line is kept busy in sending orders and transmitting messages of the company. In the short time we were there several large orders came in from different parts of the country, and among them were some from Maine, Texas, California, Wisconsin, Oregon, etc. The Clark Thread Company sends out annually vast quantities of show cards, calendars, etc., some of which are magnificent specimens of the lithographic and printers' art.

IS THIS IS A FAIR COUNT?

The number of feet of draft which one pound of cotton undergoes is one trillion, seven hundred and seventy-two billion, three hundred and twenty million, six hundred and thirty-five thousand, six hundred feet, or stated in figures, 1,772,320,635,600, a distance of 335,477,582½ miles. The following demonstrates the apparently incredible statement: The web of cotton from which this immense length of thread is drawn is forty inches wide. It goes to the carder, where it is drawn to 4x120, equal to 480 feet. Then the drawing frame increases it to 480x6, equal to 2,880; the lapper 2,880x2¼, equal to 6,480; the comber draws it out to 6,480x26, equal to 168,480; then it goes to the first head drawing frame, where 168,480x6 equal to 1,010,880.

THE SECOND DRAWING FRAME

multiplies the last length by six again making 1,010,880x6 equal to 6,065,280, which repeated on the third drawing frame makes a length of 6,065,280x6 equal to 36,391,680 feet. Now comes the first slubbing frame where 36,391,680x5 is equal to 181,958,400; the second slubber 181,968,400x4½ equal to 818,812,800; the intermediate slubber 181,958,400x6 equal to 4,612,876,800; the finishing thread winding machine makes the total length of the thread 4,612,876,80x6 equal to 29,477,260,800. Now it goes on bobbins to the "mill" where 29,477,260,800x9¼ gives us 272,664,662,400 feet. We then multiply the last number of feet which states the total length of one pound of cotton drawn into thread, by the length of the original web, which is six and a half feet, and have the total as stated before 272,664,662,400x6½ feet making a grand total of 1,772,320,635,600 feet. The cotton, when finished as yarn, has been doubled six million, nine hundred and sixty-seven thousand, two hundred and ninety-six times (6,967,295), in passing through the different processes. When the yarn is made into six cord finished thread, the above number of doublings have been multiplied by six, making a total of 41,803,762 doublings. Now divide the total draft, 1,772,327,632,600, by the total doublings, and if the work is correct, we shall have the total number of feet of yarn in a pound of cotton, which is 254,337 feet. But there has been 20 per cent. loss in the manufacture, which must be added, making a total of 305,254 feet of yarn for a pound of cotton, of 120 hanks of 840 yards each, enough to reach from New York to Trenton, a distance of sixty miles.

MACHINE AND CABINET SHOPS, BOX FACTORY AND PRINTING HOUSE.

The Clark Thread Company do all their printing and lithographing at the works here. Four printing presses are kept running all the time, and in the lithograph department one steam press and six or eight hand lithograph presses are continually employed. In both departments the practice of the "art preservative" is in the highest style. Orders for the paper box department in the one item of straw board are given as high as eighty to one hundred tons at a time. In the machine shop a large number of men are employed in making new machinery and keeping in repair the vast quantity in use in the various departments of the works. The cabinet factory turns out about two hundred cabinets per day. The bobbins, etc., used in the mill are made here. In fact about all the Clark Thread Company go outside for is the raw material. They manufacture all they use, except a few of the more intricate or patented machines.

THE CLARK HOSE COMPANY.

One of the best organized and equipped fire companies in the city of Newark is the "Clark Hose Company," organized May 15th, 1869. There are twenty members, employees of the factory, brave, active men, trained by frequent practice to their duty, and proud of their company and outfit. Their equipment is as follows: Two hose carriages with wrenches, bars and axes, carrying seven hundred and fifty feet of hose on reels and two pipes with extra nozzles. They also command nine hundred feet of hose with pipes and nozzles in twenty-one different stations, in and around the factory, one Cameron fire pump, one Worthington, one Watts & Campbell, and one Blake pump, one hundred and seventy-eight filled buckets in their proper places throughout the works, sixteen hand pumps, sprinklers in all the rooms of the cotton mill, the packing house, the machine and carpenter shop and the drying rooms. There are also sprinklers in the two top floors of the thread mill and in the warehouse, and there are thirty-five fire plugs or hydrants on the premises. Regular meetings are held on the second Monday in each month, and practice is had every two weeks. Examination of all the valves, hydrants, pumps and other equipments takes place on the first of each month, and a minute report of the exact condition, position and effectiveness of the fire service made to The Clark Thread Company.

THE CLARK THREAD COMPANY RELIEF SOCIETY.

One of the best and most beneficial organizations which constitutes a part of the system and care of the Clark Thread Company for their employees, is the Relief Society. It was organized January 22d, 1870, for the purpose of providing a fund for the relief of those who might, by accident or sickness, be incapacitated from sustaining themselves. All the employees of the company must be members of the society, and each receives assistance when needed, from the fund according to the amount paid in, which must be at least one cent per week, but no one is permitted to pay in an amount which would draw, in case of sickness, more than half their average weekly wages. Every cent paid in draws seventy-five cents per week. The Clark Thread Company contributes five dollars per week to the fund without cessation, but all others cease their contributions when the unexpended balance in the treasury reaches fifteen hundred dollars. When the fund is reduced to seven hundred dollars, payments are renewed. The payments into the treasury average about nine months in the year. We hope that this humane and systematic organization may find many imitators among the manufacturers of Newark and throughout the country, who read this article. The company pays interest at seven per cent. on the money in the treasury, besides their five dollars per week into the fund. Since its organization one thousand three hundred and ninety-seven members have been relieved, and twenty-four deaths have occurred in the society. The reason that the receipts for 1874 and 1876 are less than usual is because the fund had reached the maximum of $1,500, and payments were stopped. The following very interesting table shows the amount received and paid out from 1870 to 1876 inclusive:

Years.	Receipts.	Payments.
1870	$1,742.34	$1,504.28
1871	2,247.95	2,010.82
1872	2,114.42	1,704.88
1873	2,381.57	1,742.21
1874	856.60	1,595.19
1875	1,541.01	1,624.75
"	77.04	
1876	953.31	1,751.94
Total	$12,923.34	$11,936.12

Balance in treasury Jan. 1, 1877, $986.82.

HOW CLARK'S "O. N. T." SPOOL COTTON ORIGINATED.

Until within a few years, the great difficulty to be overcome in the introduction of sewing machines, was the objections made by manufacturers and operators to the then popular threads. These complaints were so loud and well founded that the sale of sewing machines was greatly impeded on account of the impossibility of obtaining a thread adapted to their use. Mr. George A. Clark, appreciating the difficulty, introduced into the American market the now famous Clark's "O. N. T." Spool Cotton, all numbers being six cord, from 8 to 100, which met the demand, did away with all complaints, and long since established its reputation as the best thread in use for sewing machines or hand sewing. To Mr. George A. Clark belongs the credit of being the first to supply those fine qualities of Six Cord Spool Cotton with which his name is associated. The thread is used and recommended by agents of the Singer, Wheeler & Wilson, Grover & Baker, Domestic, Howe, Florence, Weed, Wilson, Blees, Remington, Secor, Home, Lathrop and other sewing machine companies. The superior quality of Clark's "O. N. T." Spool Cotton soon secured for it an immense sale, but with the great popularity of the goods came also counterfeits which made it necessary for the manufacturers to adopt a trade mark for their own and the public's protection, and now upon every genuine spool of their thread is the following:

This trademark is familiar to every merchant in the United States, and all who have ever tried the genuine Clark's "O. N. T." Spool Cotton, continue to use it.

EMPLOYEES AT THE CENTENNIAL.

A noticeable feature of The Clark Thread Company has always been their thoughtful and considerate attention to the welfare and pleasure of their employees. The Centennial Exhibition afforded an opportunity for its practical illustration which should not pass unnoticed in this article. Desiring to give all their operatives an opportunity to witness the great Exhibition at Philadelphia of what the nation had accomplished during the first hundred years of its existence in industry and art, the company planned and carried to complete success a monster excursion to Philadelphia, which embraced their fifteen hundred employees, with invited guests, members of the press, and the mayor and Common Council of the City of Newark. Some idea of its extent may be gained when it is known that forty-five railroad coaches were employed for their accommodation, and the cost for transportation, admission, entertainment, etc., exceeded six thousand dollars. But this large sum is small compared with the unalloyed pleasure which was afforded the grand army of industrious people who find employment at the Clark Thread Company Works in Newark. The Common Council passed and caused to be beautifully engrossed and presented to the Company, a series of resolutions from which for lack of space we copy only the following extract:

Resolved, That we witnessed with great satisfaction the kindness and attention shown by the officers of this Company to their fifteen hundred working people and the evident good feeling that exists between them; recognizing that when labor and capital thus harmonize, prosperity must ensue.

Resolved, That the location of the CLARK THREAD COMPANY in our city, with their immense works, and their army of operatives, has proved a vast benefit, and that Newark is and should be, justly proud of her manufactures on which her growth and prosperity must ever depend, and that this municipality should foster and encourage by every proper means their establishment and success.

Resolutions of thanks to the Company were also passed by the employees.

THE EUREKA BOAT CLUB AND THISTLE BAND.

The now famous crew, which came so near winning the prize against the world, at the Centennial International Regatta last August, is from The Clark Thread Company's Works principally. It has a list of thirty-five active and about forty honorary members. It is the champion crew of the Passaic, and has beaten the celebrated Atlantic crew of New York. They won the first heat on Monday, August 28th, 1876, at Philadelphia, beating the Dublin and Argonauta crews. On the second day they were beaten by the celebrated Beaverwycks, of Albany, by only six seconds, the Beaverwycks winning the championship of the world on the last day, the Newark boys of The Clark Thread Company coming very close to the championship of the world.

The Thistle Band, one of the best in the State is organized from the employees of the company and plays for all the many excursions and festivals of the employees, besides answering outside calls when made. They accompanied the Eurekas to Philadelphia, and also the grand excursion of the employees to the Centennial last year, and always play at all the regattas in which the Eurekas take part.

THE NEW YORK HOUSE.

At No. 400 Broadway, corner of Walker street, New York is the splendid marble building of George A. Clark & Brother, the selling agents of The Clark Thread Company. The entire five stories of their magnificent place are fitted up with every facility possible for the prompt transaction of their immense business.