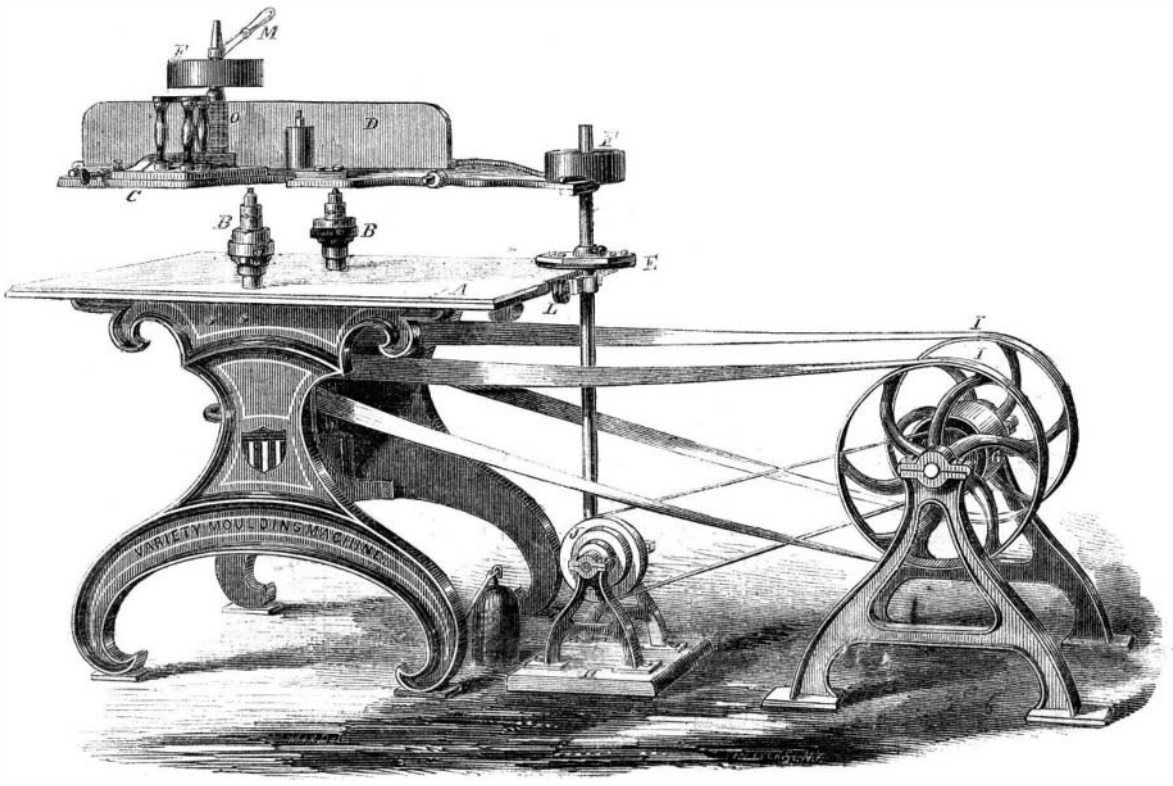
Scientific American.

A JOURNAL OF PRACTICAL INFORMATION IN ART, SCIENCE, MECHANICS, AGRICULTURE, CHEMISTRY, AND MANUFACTURES.

VOL. 1.—No. 21. NEW YORK, NOVEMBER 19, 1859. NEW SERIES.

VARIETY MOLDING MACHINE.

In our notices of the Fair of the American Institute, we mentioned, briefly, the machine for carving straight, waved, circular and elliptical moldings, called the "Variety Molding Machine," which was exhibited by S. M. Hamilton, and which attracted much attention. We now present full illustrations of it.

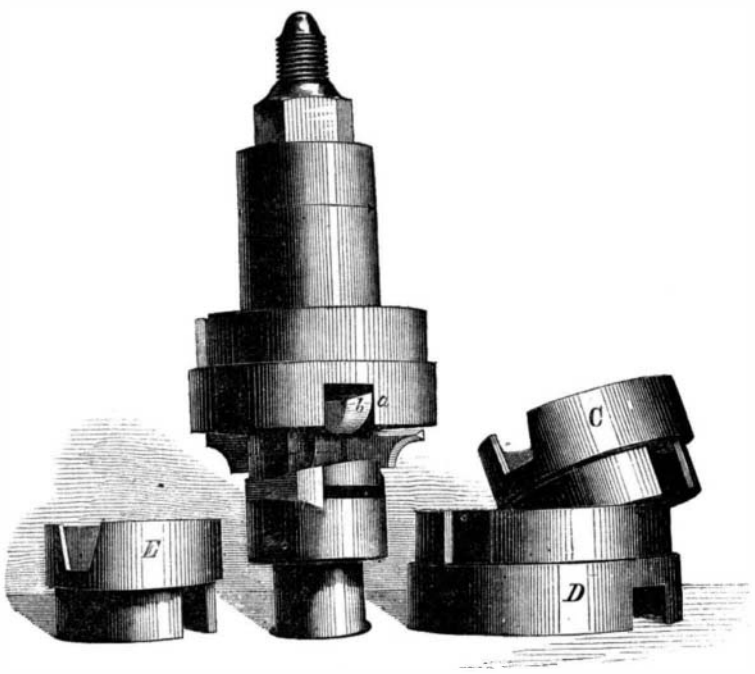


IMPROVED MOLDING MACHINE.

Fig. 1 is a perspective view. G is the driving pulley, I I the pulleys from which motion is taken for the heads, which run with quarter-twist belts. A represents the table, through which project the cutter-heads, B B. This view shows the machine as used in all irregular work, such as is done with a pattern or duplicate. Above the table, A, will be seen the straight molding attachment, raised for the purpose of giving a clearer view of the machine for its various uses. The cast-iron table, C, is provided with a rest, D, feed-roll, O, driving-pulley, F, shipper, M, with pressure rod and spring. When straight moldings are needed, the iron table, C, is placed upon the table, A, and a belt is passed around the pulleys, F F, to which motion is communicated by the conical pulleys, J, by the small belt from the counter shaft, H, upon which the pulleys, I I, are placed. The straight attachment, when put upon the machine, is secured by two nuts, which hold it firmly in its place.

For waved molding, the point of the table, C, is held by a weight, with a cord passing over the small pulley, L, against the cam, E. This table being held firmly on a pin at one end and resting against the cam, E, at the other, a very beautiful style of waved moldings, for ornamental purposes, is produced. A still more elegant variety may be made by inserting an inclined plane between the cutter-head and rest, D, thus running the work obliquely to the head.

Fig. 2 is a view of the combination cutter-head and guards, *a* C D E, are cylindrical flanges, projecting from a thin collar upon which they are cast. They are placed above the cutters and held between the collars, and serve as a plane stock to gage the thickness of the shaving, and prevent accidents by the cutters taking a sudden and deeper hold of the stuff than is necessary. The portion, *a*, of the guard projects below the top of the cutter, *b*. The work to be cut also comes above the lower line of cylinder, *a*. When the heads are adjusted, the point of the cutters are set as much beyond this revolving stock as is necessary to give the proper thickness of shaving. This makes the head safe to work, which, where stuff is held by hand, is very desirable. The cutters, as seen in the engraving, are made in sections, and set in double grooved collars at angles with each other. They are susceptible of many transpositions, thus reducing the cost of tools. The cylinders, *a* C D E, are of different sizes to suit the projection of the cutters, which may be more or less. The guard collars and cutters are all firmly held in their places by a turn of the nut on the top of the spindle.



The objects gained are as follows:—First, Saving of cutters, a transposition answering the purpose of a new tool, Second, working curved and complicate moldings in all conditions of the grain, without splitting; Third, the heaviest moldings can be worked with a divided cut as easily as a piece of one-third the size with a whole cutter; Fourth, cutters are more easily kept sharp, as there are fewer acute angles; Fifth, ease of adjustment, and the impossibility of their becoming loose in the head and flying out.

At the late Fair of the American Institute, this machine received the first award of a large gold medal, on the reverse of which is engraved, "Awarded to S. M. Hamilton for the best Variety Molding Machine. Combination of machinery for producing great results, 1859."

This machine is the result of several inventions, for which five patents have been taken—two by Isaac P. Tice, of Baltimore, Md.; two by Jonathan P. Grosvenor, of Lowell, Mass.; one by Lewis M. Berry, of Boston, Mass. S. M. Hamilton is appointed trustee proprietor, and in his name the business is transacted; therefore, all inquiries in relation to the matter should be addressed to him at Baltimore, Md.

TO BORE A HOLE THROUGH GLASS.—A drill supplied with emery and water is better than a diamond for making small holes through glass. As emery does not improve the edge of the drill, a piece of iron wire may be substituted. A diamond will cut out circles, making large holes, but is quite unsuited for boring. Common glass may be drilled with an ordinary bow-drill, by keeping one or two drops of spirits of turpentine on the glass at the point of the drill.

THE MANUFACTURES OF PATERSON, N. J.

THE SILK MANUFACTURE—FLAX AND HEMP—PAPER-MAKING—BLEACH, DYE AND PRINT WORKS—MISCELLANEOUS.

[Concluded from page 315.]

Although it is only 20 years since the first silk thread was spun by machinery west of the Hudson, yet Paterson has confessedly become the great seat of that beautiful manufacture, producing more than all other places in the Union put together. This result is owing, in an eminent degree, to the public-spirited and persevering exertions of John Ryle, one of the industrial pioneers of the age. It will be recollected that, in 1838, there sprung up an unusual excitement in this country, relative to the culture of raw silk; many an orchard having been unceremoniously cut down to be replaced with mulberry trees, on which worms that had no prospective existence were to browse and spin their glossy cocoons. At that time Christopher Colt leased an apartment in the Gun mill, and fitted it up with silk machinery. A brief experience satisfied him that the business could not be profitably conducted, and the attempt was abandoned. The concern was sold out to Geo. W. Murray, of New York, who engaged Mr. Ryle to superintend it. In 1840 work was resumed in an attic, with some half a dozen hands Subsequently, weaving was added to the spinning of silk, and for some time carried on, but abandoned, not because it proved unprofitable, but to make way for sewing silks, twists, &c., for which there was a heavier demand. The American flag which so long waved in graceful folds over the New York Crystal Palace, was spun and woven at Mr. Ryle's factory. His original design, and one which he has since perseveringly followed up, was to naturalize as much of the manufacture as could possibly be carried on in this country. For the success which has attended this undertaking, not only the people of Paterson, but of the whole Union, are placed under obligations. In 1846 Mr. Murray sold out the establishment to Mr. Ryle. The business continuing to increase rapidly, two large additional buildings of dressed stone were erected and stocked with machinery in 1851. Three years later, the foundation of the Murray mill was laid, and the mill opened in 1857. This fine factory is about 200 feet in length and surmounted by three parallel roofs, sustained by heavy iron columns. Steam power is used. In it and the Gun mill are 11,134 spindles of all kinds, now working up 1,800 lbs. of raw silk every week into fringe, tram, sewing silks, embroidery, twist, and everything in that line, besides dyeing it. The establishment is capable of turning out 2,500 lbs. of the finished article. The number of hands now employed is 500.

In 1850, a new silk factory, also driven by steam, was erected by John C. Benson, who is probably the oldest manufacturer and principal manager in the country, having been in the harness since 1810, in connection with the cotton, wool and silk interests. The number of spindles in Mr. Benson's establishment is 1,600, and the number of operatives usually from 60 to 80. The mill is capable of turning out 450 lbs. of finished goods per week—equal to a consumption of 480 lbs.—comprising fringes, embroidery, sewings, machine spool silk, &c. There is also a dye-house attached. Mr. Benson has made several improvements in silk machinery, and is at all times able to command the highest market prices.

Hamil & Booth went into operation in 1835. Last year they removed to the upper part of Murray mill, and enlarged their establishment. It now furnishes employment to 100 operatives, who turn out, weekly, 500 lbs. of fine silks, such as sewings, fringes, tram, and every description required by fringe manufacturers. The number of spindles of all kinds is 3,540. Their office is at No 540 Pearl-street, New York.

Stelle & Walthal followed in 1856, making the usual varieties of silk, in an apartment of the Star mill. They run 1,100 spindles and employ about 80 hands.

The spring of 1858 witnessed a vast increase in the number of places were silk was manufactured, this business having been the first to participate in returning prosperity. The demand was abundant, while the prices paid for raw material had gone down 50 per cent. It seemed for a time as if all creation were about to engage in making silk. Like all other excitements this had its day. Of the new concerns, the most important is that of D. B. & J. C. Fuller, who removed from Connecticut and built a neat factory near the railroad depot. These works are driven by steam, and employ 70 operatives on their "interlooped sewing-machine twist," for which a patent has been obtained by Mr. Fuller. The total number of spindles is 1,516, producing at present 175 lbs. per week of the finest quality. With additional machinery about to be put into the mill, the product can be increased about 30 per cent. Geo. W. Hooley is superintendent.

There are three other places where silk is produced, employing in all about 100 hands, and producing 350 lbs. per week. The total number of silk spindles running (all kinds) in Paterson are estimated at 15,000, besides 6,000 temporarily idle. The number of employees is 900, or 200 less than if all were in full blast. The weekly consumption of raw silk is 3,500 lbs., which might, with present facilities, be increased 33 per cent. The amount required for waste will average 8 per cent, and the wages paid about $3 per week to each operative, probably $125,000 per annum in the aggregate. The employment is light, healthy and pleasant; and the silk mills are, without exception, models of neatness and cheerfulness. In both these and the cotton factories, wages are now higher than for many years previously.

It has already been stated that linen duck was made in the Passaic mill as early as 1816, and that the linen manufacture was carried on for several years in the Phœnix mill. No other attempt, that we are aware of, was made until 1844, when the Dolphin mill was built on the upper canal, at its southern extremity. This is a very handsome and substantial structure of dressed stone, 200 feet in length and three stories high. Here flax and hemp of all kinds are spun and woven, principally into heavy fabrics, by an incorporated company, for which Mr. Meldrum is superintendent. The number of employees is 130. Another concern, with about a dozen hands engaged, has recently gone into operation.

Reference has already been made to Kinsey, Crane & Co.'s paper mill, which appears to have commenced running in 1804. Mr. Kinsey, the superintendent, was a practical paper-maker, and a very ingenious man. In watching the cotton transferred in a continuous roll from the cards, the idea occured to him that paper might be made by a similar process. In 1807 he applied for a patent, and two years afterwards his machinery went into operation with partial success. The fact that most of it had to be constructed of wood, or inferior materials, prevented the full realization of his hopes. His partners, who had furnished the means, decided, in opposition to Mr. Kinsey's wishes, to turn the building into a cotton factory, which it has ever since continued.

The Society for Establishing Useful Manufactures had, in 1836, completed a new factory, built of stone, near the Rogers' works. Next spring it was leased to Seymour & Butler, who subsequently dissolved, when the present firm of H. V. Butler & Co. was formed. The manufacture of fine paper was prosecuted with success in that establishment until the expiration of the lease, in 1858; the mill turning out 24,000 lbs. per week.

E. Curtis having purchased the lot formerly occupied by Paul & Beggs as a machine-shop, in the early part of 1837, put up a paper mill, and for a year or two turned out about 12,000 lbs. per week. Mr. Curtis failed in business, when the mill passed into the hands of Persse & Brooks, of New York, who retained it until 1840, when they sold out to Seymour & Butler. In 1850, the firm having been changed to H. V Butler & Co., they built the Ivanhoe mill, one of the most extensive, beautiful and complete establishments in the world. Since its commencement, we believe this mill has never stopped three days at a time, though running night and day. The works are driven by three large water-wheels and a steam-engine of 75-horse power. The main building is of dressed sandstone, and all are fire-proof. Two Fourdrinier machines run off 35,000 lbs. of the finest quality of paper every week, and other valuable improvements are in progress of construction. The number of employees at the Ivanhoe mill is 135.

The first works in the State where bleaching was done by chemicals, were erected in 1813 by James Shepherd, on Ackerman's brook, near Acquackanock, where the first goods, beetled and finished after the European style, were prepared for the New York market. Subsequently Mr. Shepherd removed to Connecticut, but returned to New Jersey, resuming near Little Falls. In 1837 he removed to Paterson, where he put up the Washington bleach-works, now part of Danforth, Cooke & Co.'s locomotive shop. Mr. Shepherd continued to prosecute the business until 1834, when he sold out to Mr. Danforth, since which time he has not been engaged in business. He is one of the few pioneers who never had to compound with a creditor.

It has been stated that the society commenced bleaching and printing (by hand) in 1794. They do not appear to have concerned themselves any further with the business until 1836, when they erected a large stone building on the upper canal for a Mr. Maitland. After passing through a number of hands, the place was finally absorbed by the Rogers' locomotive works, a few years ago.

The intelligence and energy of D. G. Scott have made bleaching, dyeing and printing, one of the great industrial resources of Paterson. Early in life, Mr. Scott had been engaged in the manufacture of linen goods; and having occasion to visit the place he was struck with the facilities it afforded for his present pursuit. In 1849 he commenced weaving and bleaching towels and diapers. Two years afterwards he purchased the Franklin mill, and added to his business dyeing and the printing of Canton flannel by machinery. This article in a short time was able to supersede the woolen altogether and drive it from the market. Finding the demand largely increasing, Mr. Scott, in 1855, purchased another lot, where he put up the Waverley mill. This was accidentally burned down two years afterwards, and rebuilt in the most substantial manner, the present edifice being one of the few mills in Paterson, combining architectural elegance with convenience and capaciousness. It is the largest and most complete establishment of its kind in the United States, and is fitted up with the first description of machinery. At these works (the only instance in this country), as many as six friction calenders are run together. Most of the coats now worn are lined with the product of these mills. The bleaching of shirtings and the printing of maddered calicoes and pantaloonery goods have also been extensively carried on for some time, from one to five colors being put on. All the work is done to order, the lining goods going altogether to the house of Thomas Munroe & Co., of New York. Mr. Scott was the first to do these goods by machinery, and it may be safely said that nowhere else has the same perfection been reached. The proprietor of these works is one of the most enterprising and public-spirited men of whom Paterson can boast. The number of employees in both mills is 300; quantity of coal consumed annually, 2,000 tuns; value of drugs and chemicals used, about $100,000. About $9,000 per month is distributed in the place for wages and other purposes. Arrangements are now in progress to erect a third factory on the Mallory mill lot (adjoining the Waverley), which, with one of the best water privileges in Paterson, has been purchased by Mr. Scott.

Since 1840, C. Huber has carried on the bleaching, coloring and spooling of cotton yarn for trimmings and fancy works, employing about a dozen hands. Mr. Huber is preparing to enlarge his premises considerably, as he is at present unable to turn out the work offering. The place where his factory is situated was not long since a dreary fen, which has been, by his exertions, converted into a paradise of beauty. He designs adding the making of native wine from the grape to his other business.

John Murphy, in the beginning of 1858, established the Victory mill on the old road leading to Little Falls, for the purpose of bleaching yarns and Canton flannels, the former being a new feature in Paterson. Previous to Mr. Murphy's successful attempt, yarns had to be sent out of the place to be bleached, and orders consequently were seldom or ever taken where yarns had to undergo this process. About 20 hands are employed at Mr. Murphy's mill, and from 2,500 lbs. to 3,000 lbs. turned out every day, in part for the New York market. Mr. Murphy is also about having an addition made to his establishment.

Wm. C. Brown employs from 15 to 20 hands in dyeing silk, cotton and worsted goods.

The distillation of pyroligneous acid and other liquors for calico-printers was commenced about 15 months ago by George Barnes. About 1,000 gallons are made every week, principally for the Paterson and New York markets.

Bobbin turning was commenced by Thos. Van Riper, on Peckman's creek, about 1795. Mr. Van Riper afterwards carried on the business for many years in Paterson. His son, P. V. H. Van Riper, has done a great deal to develop this branch of business, and his factory is at least the second of its kind in importance on this continent. Mr. Van Riper has invented or improved a large number of machines, and the speed with which a dog-wood pole is devoured by these "dogs of war" may well excite surprise. Roughing machines are made to despatch from 5,000 to 15,000 pieces per day; a finishing machine 20,000, and so on. Cotton, wool, silk, rope, and all other descriptions of bobbins are made at these works, and sent east, west, north and south. The number of employees usually ranges from 40 to 50. Two other shops in Paterson employ 15 hands each. One of these (John Cutler's) has been sixteen years in operation, and is prepared to fill orders of every kind in the line. This business was carried on for many years by Chauncey Andrews and Abm. Carter, previous to their decease.

The manufacture of plain and fancy woodwork for carpenters and builders is carried on very extensively by Andrew Derrom, whose establishment in West-street is now pronounced the most exteusive of its kind in the neighborhood of New York. Mr. Derrom began business in 1845, and has since enjoyed an unusually prosperous career. The works, built up from a small beginning, are capacious and fitted with all the modern improvements, the whole being driven by a new steam-engine of 25-horse power. The boiler arrangements are of a superior character, combining economy with convenience. Each of the four stories in the main building is occupied by a distinct department of the business. In one the lumber is received, sawed up and planed at railroad speed; elsewhere it is prepared for housebuilding, or cut up into sashes, blinds, meldings, and the like. The consumption of lumber per annum is fully one million feet, besides large quantities sold to other parties. The works at present employ about 40 men and boys. To the self-sacrificing exertions of Mr. Derrom, in a great degree, the people of Paterson are indebted for their excellent system of public schools, which are probably unsurpassed by those of any city of equal size and population.

Wood type-making was introduced, in 1842, by Wells & Webb, who lately dissolved partnership, each prosecuting the business on his own account. Mr. Wells has lately added the preparation of box-wood for engravers, together with all sorts of printing materials. His office is at No. 120 Fulton-street, New York. The business now employs from 12 to 15 persons.

The manufacture of carriage-ware, such as hubs, spokes, felloes, &c., was commenced by Quackenbush, Hathaway & Holt, at their Empire works, in 1858. In the same building Wm. H. Goetschius is engaged on chair stock. Bone-turning is carried on by Frederick Hencke, and moldings made by Ackerman & Snyder. The total number of hands employed around these works is from 25 to 30.

Tanning has been prosecuted since 1825 by John P. Brown, who employs 10 men constantly, and has 60 pits in operation. Most of his ware is sent to Newark and New York for harness. Benjamin Geroe has also been several years in the tanning business, employing some half a dozen hands in all.

Harness-making and carriage-building have been mainly carried on for home market. About half a dozen parties are engaged in one or both, and employ from 50 to 75 hands. Peter Mercelis has for two or three years been making harness; and H. P. Fox has commenced building carriages for the outside world.

The tobacco manufacture was begun by S. Allen (now Allen, Reynolds & Co.) a quarter of a century ago, and gives employment to 35 hands. The product of their factory has an extensive sale in the neighboring country, and as far west as Chicago or Nebraska City.

Coffee-roasting and grinding, as a distinct business, is of more recent date, having been introduced by J. P. Huntoon in 1841. Since then Mr. Huntoon has applied himself very energetically, and built up an extensive trade, which extends as far west as the "father of waters." The annual sales of coffee alone are 250,000 lbs. The Excelsior mill, built by Mr. Huntoon in 1855, is a large, neat and commodious structure, driven by steam, and keeping 10 or 12 persons at work. Mr Huntoon also laid the foundation of similar establishments in Newark and New Brunswick.

Soap and candle-making has been carried on since 1846 by A. Worth & Co., who have also built up a prosperous business. About 200 boxes of the former and 100 of the latter are made every week.

Brick-making is conducted by Van Blarcom & Co., and latterly by Westervelt & Scott, the total product being about five millions the present season. Van Blarcon & Co. have been nearly 20 years in the business, and send pretty largely to Bloomfield and Newark, as well as to Paterson.

John Bentley runs the only flour mill in the place, consuming about 250 bushels of grain daily, principally for the home market.

That whole section of the State is underlaid with beds of fine sandstone, extending to an unknown depth. At Little Falls these quarries, after having been worked so many years, are abandoned. Since 1852 the business has been successfully prosecuted near Paterson by Samuel Pope and by Hartley & Bradley. Mr. Pope's quarry employs from 25 to 30 men, and will yield this season about 8,000 tuns of stone for building purposes and monuments. This is delivered in Paterson, along the line of the Erie Railroad, and elsewhere. The Passaic county prison, a beautiful structure, was the first building of importance constructed of Mr. Pope's stone. The quarry has already been sunk to a depth of 90 feet, and will be continued probably an equal distance further, in order to allow a railroad to be laid down between it and the Morris Canal. The different layers of stone, from the surface conglomerate (once a sea beach) downward to the clear grit sandstone, are well worth a visit by the practical geologist.

The Paterson and Hudson River Railroad was chartered in January, 1831, and opened to the Bergen Hill junction in November, 1832; Philemon Dickerson (afterwards Governor of New Jersey), being the first president. Six years ago it was leased by the New York and Erie Company, who laid down a second track, and otherwise added to the facilities previously afforded. Their repair shop for the Union division, under the judicious management of Ezra Osborne, is located at Paterson, and employs 20 mechanics, besides laborers and others around the depot yard.

This series will not inaptly terminate by a short description of the Roswell House and adjoining grounds. Previous to 1837, the hill on which it stands was a naked mound of sand, extending in a continuous ridge nearly to the center of the town. At that time the late Mr. Colt began the erection of his magnificent mansion, which now adorns the summit, forming the first and most conspicuous object which meets the stranger's gaze. Along the precipitous sides of the hill carriage-ways and foot-paths have been constructed in every direction, now opening on the surrounding mountains, woods and fields; then on the bustling city, with its hundred factories; again on the noble edifice, flanked with greenhouses; and at other times on ponds where gracefully swim birds from the tropical climes, or graperies nestle, burthened with their luscious product. Through the liberality of the Colt family, these grounds have been thrown open to all well-disposed persons; and few visitors from a distance fail to feast their eyes on the scene, paying a merited tribute to the genius of Thom, whose "Tam o' Shanter" and "Souter Johnny," products of the Little Falls quarry, silently guard the entrance of the Roswell House.

P. S.—In a previous article, it should have been stated that the yarn and duck mills of Mr. John Colt, as well as Mr. Carrick's factory, ran throughout the crisis of 1837.

AN ASTRONOMICAL CLOCK.—There is in the town of Nantucket, Mass., an astronomical clock, made by Hon. Walter Folger, when he was only 22 years of age. The plan of the whole of its machinery was matured and completed in his mind before he commenced to put it together. It keeps the correct date of the year, and the figures change as the year changes. The sun and moon, represented by balls, appear to rise and set on the face of the clock, with all their variations and phases, as in the heavens. It also indicates the sun's place in the ecliptic, keeps an acconnt of the motion of the moon's nodes around the ecliptic, and the sun and moon's declination.

A CURIOUS FACT.

At the time of the explosion on board the *Great Eastern*, a curious fact was noticed: those who were most hurt and who first died seemed the least injured when they first appeared above deck, and even were able to walk aft without assistance. On this point a writer in the *London Times* says:—

"A man blown up by gunpowder is a mere figure of raw flesh which seldom moves after the explosion. Not so with men blown up by steam, who, for a few minutes are able to walk about, apparently unhurt, though, in fact, mortally injured beyond all hope of recovery. This was so with one or two, who, as they emerged from below, walked aft with that indescribable expression in their faces only resembling intense astonishment; and a certain faltering of the gait and movements like one who walks in his sleep. Where not begrimed by the smoke or ashes, the peculiar bright, soft whiteness of the face, hands or breast, told at once that the skin, though unbroken, had, in fact, been boiled by the steam. One man walked along with the movement and look I have endeavored to describe, and seemed quite unconscious that the flesh of his thighs (most probably by the ashes in the furnace) was burnt in deep holes. To some one who came to his assistance, he said, quietly: 'I am all right, there are others worse than me; go look after them. The poor man was the first to die. He expired quietly as if falling into a refreshing sleep."

SYMPATHY OF THE NERVES.—When the nerves, from long habit, have become accustomed to transmit their messages from distinct parts, and are suddenly cut off from them, they will retain along their trunks the sympathetic or sensational actions. Thus, a man who has a leg amputated will feel distinctly along the course of the trunk of the nerve sensation from toes which no longer exist. The mind is also influenced by this; and frequently this peculiar direct nervous action can only be allayed by that which is negative and reflex. A curious instance occurred within my own experience. An old sailor suffered much from this. He retained his diseased foot too long, but at last consented to an amputation. I knew him with only a wooden leg. When he had his nervous pains he always called for hot water, into which he put his wooden stump. If told of his folly in supposing that such a proceeding could do any good, he would become enraged, and his paroxysm of pain would increase; but if gratified, he took things easy, and the process actually appeared to do him good, though all must know there could be no real benefit. Still, here is the effect of mind over matter.—*New York Medical Press.*

THE OKRA PLANT.—The consumption of this plant has materially increased within a few years. Mr. John Buckland, of Monmouth county (N. J.), now raises seven acres per annum. When the pods are in a fresh state, they are used for soup, and give off a mucilage which enriches the soup materially, while the less soluble portions of the pod are softened together with the seeds, and produce an admirable potage. The "gumbo" of the South is made with this plant. The soup is always easy of digestion, and very nutritious. When the plant is suffered to ripen, the seeds are large and hard, and the amount produced is very great; these by being burned produce an imitation of coffee, scarcely inferior to the best Mocha, while the fibrous character of the pod strongly recommends it to paper-makers. It is perfectly evident to those who have examined it, that neither the aloe, the beechwood, ordinary straw, or any of the substances now being made use of in place of cotton or linen for paper, can surpass it for this use; and we are surprised that it has not found its way into general consumption.—*Working Farmer.*

LEHIGH ZINC.—The first merchantable spelter, viz., three car loads, 25 tuns, were shipped, week before last, by the Pennsylvania and Lehigh Zinc Company, via North Pennsylvania Railroad, to Philadelphia. We learn that Mr. Wetherill has also shipped spelter both to New York and Philadelphia, in small lots, made by a process differing from that of the Pennsylvania and Lehigh Zinc Company, and said to be more expensive. The works of the latter company at Bethlehem are under the superintendence of Mr. Joseph Wharton, of Philadelphia.—*Mauch Chunk Gazette.*