years ago. Wales & Co., of Wales, Mass., and Messrs. Hilliard & Spencer, of Manchester, Conn., exhibit some pieces of fine satinets. The color and finish of all these goods are excellent.

Cassimeres appear to be the most common woolen cloths at the Fair; the Middlesex Co. Lowell, Mass., exhibit a number of pieces; the Powhattan Co., Moosup, Conn., make a large display of ribbed and plain cassimeres.

A. Morse, of Eaton, Madison Co., N. Y., exposes some beautiful black doeskin; the Bay State Mills, Mass., display some excellent beaver cloth, and the American Mills, Rockville, Conn., exhibit a few pieces of double-fold fancy cassimere, of very good quality.

It requires a large capital to conduct the manufacture of woolen cloth on the most approved principles, to produce fine goods.—Fresh wool does not work freely, therefore wealthy manufacturers have always a large stock ahead, so that it can attain a proper age before they commence to work it. Age—a few months, at least—imparts to it, by some cause not very well understood, a superior working quality, which gives an advantage to companies who can lay up a large stock. A great desire to produce cheap goods with a good surface has led woolen manufacturers to use too much cotton in their warps. They display much skill, we admit, in covering it up with the wool; but such goods after a little wear, become bare, and fade in color, and they do not possess that soft and agreeable feeling to the touch that belongs to goods made entirely of wool. We have seen statements in some of our daily papers to the effect that American wool was not sufficiently fine for the manufacture of the finest kinds of woolen cloth. This is an error. As fine qualities of wool are now raised in the United States as can be found anywhere. We only wish that there was more of it. According to the capacities of our country for sheep-grazing, not a tithe of wool is raised that might be.

Pianofortes and Melodeons.

Messrs. R. G. Nellis & Co., 547 Broadway, N. Y., exhibit one of Speer and Marx's patent (1852) Culindron, or Cylindrical Pianofortes, which presents a very beautiful and ornamental appearance. It occupies a prominent position in the central part of the Palace, and is the "observed of all observers." The principal feature of novelty consists in having the strings arranged around an upright hollow cylinder, which forms the sounding-board. It is alleged that a cylindrical sounding-board acts on the principle of a drum, and gives a certain roundness, fullness, and richness of note which the ordinary instruments do not possess. Another advantage is that two pianos may be combined in one, with but little increase of space. Thus the instrument at the Palace has two key-boards, and is, in fact, a double piano. It is elegantly finished and makes a fine display. The position in which it is placed, however, is very bad for sound, and the merits of the invention are, therefore, not so fully apparent as they otherwise would be. Mr. R. G. Nellis uses, in connection with the instrument, a recently-patented contrivance relating to the working parts. For an engraving and full description of the Culindron see SCIENTIFIC AMERICAN, Vol. 8, page 73.

William Miller, 158 East 21st st., New York, exhibits several improved pianos, the novelty consisting in stringing some of the lower or bass octaves over the center of the sounding-board. The wires for these octaves extend the whole length of the piano. It is claimed that instruments thus made have a certain richness and fullness of sound that other pianos do not possess.

Messrs. Chickering & Co., Boston, Mass., exhibit a magnificent grand piano, and several others, large and small, which evince the most careful and excellent workmanship

Henry Hanson, 100 Center st.. New York, exhibits a new diagonal scale piano.

William Compton, 103 East 40th st., exhibits a patent arch-shape rest, plank plate, and, reversible bridge piano.

Anthony Kuhn, Baltimore, Md., exhibits a grand patent Harp Dulciana piano. It is a beautiful object. A large and splendid harp crowns the upper part of the instrument, whose strings, when the keys are played, send out delicious sounds.

Among other fine specimens of pianos and melodeons we notice those exhibited by T. Gilbert & Co., Boston, Mass., Taylor & Farley, Worcester, Mass., Earnest Gabler, N. Y., Grovesteen & Truslow, N. Y., Horace Waters, N. Y., Schultz & Ludoloff, N. Y., Steinway & Sons, N. Y., Theodore Roz, N. Y.

Broadcast Seed Sowers.

H. Willard, of Vergennes, Vt., exhibits some of his lately patented seed sowers, which present a novel and practical appearance, and attract considerable attention among agricultural visitors. The machine consists of a two wheeled vehicle, which carries two small revolving seed cylinders, which scatter the seed upon an inclined board, whence it falls to the ground. The inclined board is furnished with certain upright slats or guides, which insure an even scattering of the seed upon the ground, no matter whether the surface is level or hilly. A rotary harrow is attached behind, which covers the seed as fast as scattered. The seed falls only between the wheels of the vehicle, so that the operator is never in doubt as to where the grain is spread. The machine can be readily adjusted to sow in hills or in drills, The driver rides upon a convenient seat. Several other important advantages are secured which our limited space prevents us from naming. For engraving and description see SCIENTIFIC AMERICAN, Vol. 11, page 361.

Wm. S. Sampson, of Boston, Mass., exhibits a broadcast sowing machine. It is in the shape of a hand-cart, and it is said will sow forty acres per day, at an expense of 3 cents per acre.

Hay and Cotton Presses.

C. J. Fay, of North Lincoln, Me., exhibits a full sized hay and cotton press, which is very strong, durable, and simple. Price $100. For engraving and full description see SCIENTIFIC AMERICAN, Vol. XI., page 249.

G. D. Harris, of Fitchburgh, Mass., exhibits one of Ruggles' Patent Combined Cotton and Hay Press and Stump Puller. By a very simple and compact arrangement of a lever frame and gearing, a tremendous power is exerted upon the substance pressed. Or the press may be quickly disconnected, and the machine used as a stump puller, or for moving buildings, raising burdens, etc. Price $100 and up. For an engraving and full description see SCIENTIFIC AMERICAN, Vol. XII, page 5.

Farmers and Mechanics Manufacturing Co., of Greenpoint, L. I., exhibit Ingersoll's patent Hay and Cotton Press, which possesses the merit of cheapness, compactness, simplicity, strength, durability, ease, and rapidity of operation. Price $50. See engraving and description in SCIENTIFIC AMERICAN, Vol. 11, page 233.

W. Deering & Co., Albany, N. Y., exhibit Dederick's Patent Parallel Lever, Cotton, and Hay Press. It is claimed for this machine that the follower can never cant or bind against the sides of the press. It operates with great power and speed. Two men and a boy, it is alleged, can bale from five to nine tuns of hay per day. Price $100 and up. See engraving and description in the SCIENTIFIC AMERICAN, Vol. 11, page 384.

James A. Disbrow, of Poughkeepsie, N. Y., exhibits a new press, which will be found fully illustrated and described in the present number of our paper.

Cow Milking Contrivance.

John W. Kingman, of Dover, N. H., exhibits an air-tight milk pail, from which the air is exhausted by means of a small lever or pump handle. Four flexible tubes, each having a rubber pocket at its extremity, receive and clasp the cows teats. By pumping with the lever the air is exhausted from the pail and suction produced upon the teats, which causes the milk to flow rapidly into the pail. This contrivance is said to be a good one, and to operate with success. It certainly has the merit of cheapness and simplicity.

Fruit Grinder and Press.

Wm. O. Hickock, of the Eagle Works, Harrisburgh, Pa., exhibits a newly patented portable apparatus for grinding and pressing fruit of all kinds, such as apples, currants, grapes, etc. Cider, currant and grape wine, etc., may be readily made for private use. From 6 to 12 barrels of cider can be made per day, by one man. The grinding is done by merely turning a crank. The pressing is effected by a powerful screw and lever. The machine occupies a space of only 2 1-2 by 3 feet, and weighs but 370 lbs. all complete. It is therefore very compact. Price $25 and up. For family use, in town or country, machines of this kind are "just the thing."

Car Springs.

F. M. Ray, of this city, exhibits large operating models of his volute car springs. Their elasticity and strength is shown by placing them under long levers, heavily weighted. We have seen a number of testimonials from experienced railroad officers, whose companies have these springs in use, and they speak of them in the highest terms. We understand Mr. Ray has an extensive demand for the spring, and that it gives full satisfaction.

P. G. Gardiner, of this city, also exhibits his newly patented volute springs for cars and other purposes. They are highly spoken of, and extensively manufactured.

Jno. W. Adams, of Harlem, N. Y., exhibits his new spring for cars, etc. It is composed of convex disks of steel placed between solid plates of iron. A very excellent spring is thus obtained, strong, durable, and comparatively cheap.

Speed and Bailey, Jersey City, N. J., exhibit their new corrugated plate car springs, which are composed of small metallic plates, having corrugated surfaces. The plates are piled together, and appear to form excellent springs.

Hall's Power Loom.

Another new Power Loom called the "Vic Loom," has been placed on exhibition. By certain devices in this loom, when the reed is beating up the filling, it is perfectly firm, but it will afterwards liberate itself entirely, and swing back, if the shuttle should be obstructed or fail to pass through the warp. All breakage or injury to the web by the obstruction of the shuttle in its race is in this manner prevented, and the common protector dispensed with. This loom can, therefore, be run at a very high, and also at a low velocity—from 80 to 220 picks per minute—without any rearrangement of its parts. It is a good loom, and occupies six inches less space than the common ones—an important advantage. The inventor is Elijah Hall, of Rochester, N. Y.; it was patented on the 12th of February last, and the price is only $55. Some of these looms are now in operation at Jones' Cotton Mill, Rochester, N. Y., and in Harmony Mills, Cohoes, N. Y., and another in the Steam Mill, at Newburg, N. Y.

Manufacturers of cotton cloth visiting the Fair, cannot but be favorably impressed with the improvements embraced in all the looms on exhibition. The parallel picker-staff motion of the Stockport looms has no equal, and the reed arrangement of Hall's loom is a peculiar and excellent invention. Patents for both looms were obtained through the Scientific American Patent Agency.

India Rubber Manufactures.

Vulcanized India Rubber fabrics are among the most astonishing triumphs of modern inventive genius, enterprise, and skill, and they had their origin and have their principal seats of manufacture in the United States. It is not many years since that all india rubber was only used for was erasing pencil marks from white paper; now it is manufactured into every variety of form, and applied to a countless number of useful purposes.

The united India Rubber Companies of our country make an excellent display of their goods in the North-West Gallery of the Palace; we have endeavored to collect a list of them, to show its adaptable character. The articles on exhibition consist of coats, pants, carriage cloths, piano and table covers, (beautifully printed in various colors) blankets, saddle and gas bags, aprons, beds, pillows, boots and shoes, hose and tubeing, life-preservers, bath mats, water buckets, hats and caps, bottles, drinking cups, diving, or submarine dresses, (one shown suspended, with a diver's helmet,) breast pumps, nursing bottles, cupping cups, water bags, gloves, all kinds of toys, balls, combs, packing for steam engines, belting for machinery, pencil cases, pen holders, pulleys, insulated telegraph wire, and valises in imitation of morocco leather. The nature of india rubber renders every article to which it is applied air and water tight, elastic, tough, and strong, not liable to be affected with the weather. These are qualities of an important and useful character. A very small amount of the india rubber in each article is sufficient to impart air and water-tight qualities to it; in fact, some india rubber goods, such as overshoes, contain but a mininium of the gum elastic, the rest being very cheap materials—hence enormous profits have been derived by the manufacturers of such goods. The best valve packing is made of 30 lbs. of india rubber, 6 lbs. of lampblack, 22 lbs. red or white lead, and 22 oz. of sulphur; these metalizing substances are all very cheap. India rubber is easily rendered plastic, and combines readily with almost every substance, such as the oxyds of metals, clay, pulverized sand, gums, carbon, sawdust, ground cork, &c. It is, certainly, one of the most wonderful and useful products of nature that has ever been applied to the arts.

Trial of Fire Engines.

Trials of steam fire engines took place last week at the Crystal Palace, in competition for the gold medal, between the machine of Lee & Learned, New York, and that of Sillsby, Mynderse & Co, of Seneca Falls, N. Y. These were the only steam fire engines exhibited.

Steam was raised to 45 lbs. pressure in Lee & Learned's machine in 11 1-4 minutes after lighting the fire, and the engine commenced throwing water. Through 65 feet of hose and a 1 3-8 inch nozzle, the distance thrown was 125 feet, and with a 1 1-4 inch nozzle, 178 feet horizontally.

Sillsby, Mynderse and Co.'s machine exhibited a pressure of 35 lbs. of steam in 24 minutes after lighting the fire, and threw the water 115 and 179 feet. This trial took place on Wednesday, and was not deemed satisfactory by Messrs. Sillsby & Mynderse. Another trial was, therefore, agreed to be made at 2 o'clock P. M. on Saturday.

On this occasion the engine of Lee & Learned commenced playing in 7 minutes after the fire was lighted, and in 10 1-2 minutes had a pressure of 140 lbs. in the boiler. It threw a stream horizontally of 171 feet 10 inches, out of a 1 1-4 inch. nozzle—solid column 120 feet; out of an 1 1-2 inch nozzle it threw a stream of 172 feet 4 inches—solid column, 116 feet.

Sillsby & Mynderse's machine commenced to play in 14 1-2 minutes after the fire was kindled. It threw a stream 167 feet horizontally out of a 1 1-4 inch nozzle—solid column 126 feet 4 inches. It played 20 minutes, when the steam got very low, and it then stopped. It did not do so well as on the previous trial. It could not generate steam in sufficient quantities to work it; while the engine of L. & L. from the moment it commenced working, never ceased, and seemed to have no difficulty in generating plenty of steam.

This was a very exciting trial. The place selected was alongside of the Croton Reservoir, outside of the Palace, and there was a great crowd present.

A Destructive Freshet.

It is difficult to account for the unexpected falls of rain which take place some times in certain localities. Thus the northern part of this State was visited with tremendous rains during the last week of September, by which great damage to property has been caused by he sudden and great rise of certain streams and rivers. The Essex County *Republican* states that the Ausable river rose higher than it was ever known before, and as there is a great deal of manufacturing carried on along its banks, much damage has been done. The dam at Keesville was carried away, and saw mills, grist mills, nail works, machine shops, and rolling mills were destroyed. At Clintonville a number of factories and saw mills were nearly destroyed; at Ausable Forks the destruction of property was also very great, and more lamentable than all, nine persons were drowned.