New Inventions.

Improved Seed Drill and Cultivator.

The agricultural interests of our country are greater than any other, but they cannot be dissevered from the mechanical—the farmer and mechanic are twin brothers—for while plowing and sowing are agricultural operations, these operations cannot be performed without mechanical implements, (the sowing may be done by hand, but it must be covered by the harrow). Within a few years great attention has been devoted to sowing grain by machines in drills, and a great number of improvements have been made to sow the seed correctly. Not many years passed since no such machine as a seed drill was used throughout the whole extent of our broad domain,—now such machines are very common. It is said that wheat and all kinds of grain sown with a drill, yield better crops, and the quantity of seed to the acre can be regulated to a nicety; one thing is certain, the sowing is uniform.

Francis Vandoren, of Adrian, Co. of Lenawee, Mich., has applied for a patent for a very simple but good improvement on drills for sowing broadcast. A cylinder with longitudinal buckets, revolves in the seed box, and each bucket, as it revolves, carries down a certain amount of grain below the bottom of the seed box, where it is discharged through a sieve or spreading wires, evenly upon the soil.

Improvement for Blinds of Windows.

In conversation with a friend, a few evenings since, he incidentally mentioned that he had seen no improvements whatever made in Venetian blinds, and thought it would be well for us to call the attention of our inventors to the subject. He, at the same time, mentioned that he thought good blinds could be made of cast iron. While reading the London Mechanics' Magazine, this week, we noticed that a patent had been granted, on the 30th of last November (but only enrolled on the 4th of last June, 1851), to H. P. Burt, C. E., of London, for the very improvement hinted at, viz, cast-iron Venetian blinds. His claim is for making laths of iron or metal, embossed, corrugated, or simply curved, perforated, and painted or japanned, according to taste. He also claims an arrangement for raising and lowering such blinds, and preserving the parallelism of the laths, without the multiplicity of cords generally employed. We do not know what this arrangement is, but we hope the hint will not be lost to our inventors. Venetian blinds cost five shillings per foot, and poor miserably constructed things they are at that.

New Cannon for throwing Chain Shot.

Mr. Adam Lemmers, of Newark, N. J., has invented and taken measures to secure a patent for a new method of throwing chain shot which will carry terror into the bulwarks or camp of the foe. It consists of a cannon constructed with two bores describing an angle, into each of which is put a ball—the two being united by a chain. It will be evident that when the cannon is discharged, the balls will stretch out the chain according to its length and the angle of the two barrels of the cannon, this will sweep down masts and rigging in great style.

The gun is so arranged on the carriage that the barrels can be turned so as to discharge the chain in a horizontal or vertical direction.

Improved Plow.

Mr. Geo. A. Walker, of Annville, Lebanon Co., Pa., has applied for an improvement in securing the point of the self-sharpening plow, and the point is so constructed and arranged, that when it wears dull it may be taken out and reversed, the edge that was uppermost being placed underneath, as the shank fits either way in a recess for that purpose.

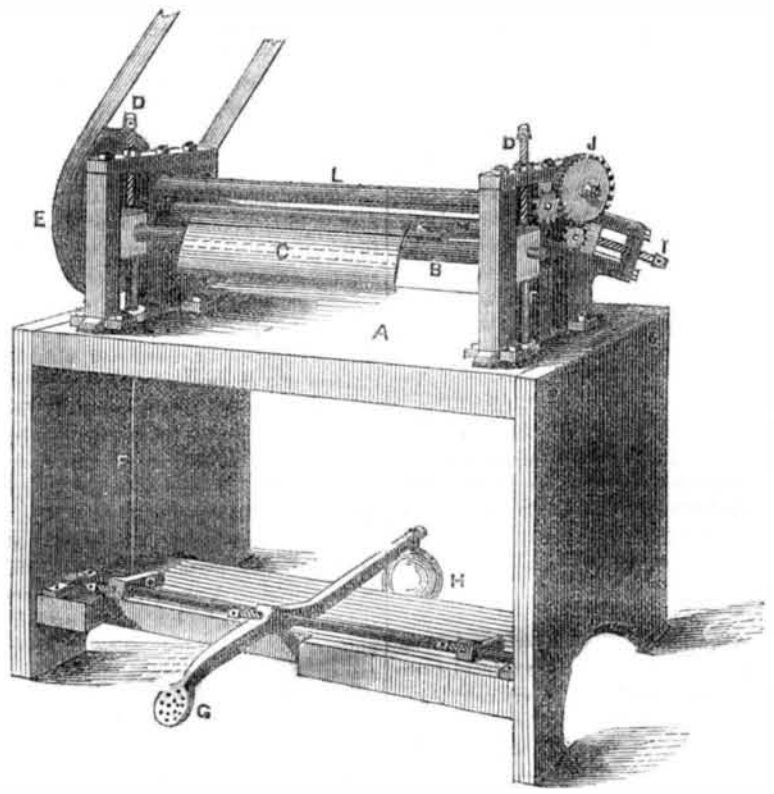
Improved Lock.

Mr. Conrad Liebrich, of Philadelphia, has invented and taken measures to secure a patent for an improvement in Locks, which, by a very simple addition, prevents the lock from being wrenched or torn off; and it also obviates the necessity of having a back plate to the lock. The lock is provided with a guard on the ledge, which is formed on the upper part of the plate by bending down the inner edge of the ledge. The hasp of the lock is kept from uneven play and cannot be easily pried or twisted off by burglars' tools.

Improvement in Steam Boilers.

Mr. J. W. Richards, of this city, has invented and taken measures to secure a patent for an improvement in steam boilers, consisting of tubes within the steam room or upper part of the boiler, through which tubes the steam is made to circulate prior to its exit for furnishing the supply to the cylinder of the engine, in a drier and more elastic condition, and to prevent the water being carried into the steam chest by priming.

IMPROVED MACHINE FOR ROLLING UP SHEET METAL PIPE.



This machine is the invention of Mr. Wm. Ostrander, of this city, and is patented by Ostrander & Webster. It consists of three rollers, L M B, (the same as ordinary stovepipe rollers); J is an independent pinion which meshes in the smaller ones fastened to the rollers, L and M, which gives them both the same line of motion; the roller, B, is raised or lowered by the treadel, G, in connection with F F, upon which rest the boxes of B. D D are set screws to adjust the height and pressure of B; I is a set screw, which raises or lowers M, which regulates the space between L, M, and B. K is a mandril constructed of wood, upon which the pipe is formed, it is covered with the same material that is desired to be rolled or formed up by the machine, the seam or joint left unsoldered, in which the sheet, C, is placed, and there held while being formed between the three rollers. E is the pulley and belt; A is the bench; H is a weight which is used only when the machine is worked by a crank. The operation by steam is as follows: the rollers, L and M, are in constant motion, the mandril, K, is taken out from the three rollers, and the edge of the sheet, C, to be formed, is slipped between the mandril and its covering; it is then laid in the space it occupies as represented in the engraving; the foot is applied to G, which raises the roller, B, until the mandril, K, is brought in contact with L and M; the three rollers, together with the mandril, are revolved, and the sheet, C, is drawn in and formed closely about the mandril; the foot is then removed from G, which allows the roller, B, to drop down, and permits the mandril, K, to be taken out and the newly-formed pipe to be slipped off, whose edge, in nearly every instance, will be "laid" close enough for soldering: should the metal be so stiff and hard as to prevent its edge being laid in the first rolling, it will be perfectly so when rolled a second time on the bare wooden mandril. This roller is capable of forming up from three to five thousand feet of pipe per 10 hours, in 20 inch joints, by a boy. It does not require the use of mallets, to lay the edges. It can be made as long as any sheet of metal requires, inasmuch as the rollers can be braced from the outside without being interfered with. It can be used in the old way for stovepipe, &c., by removing the pinion, J, up out of the way, and bringing the rollers, L M, close together.

This machine is now in practical use by Woolcock & Ostrander, No. 57 Ann street, N. Y., who make large quantities of speaking and other pipes with it. Rights may be had at very low prices by applying to Ostrander & Webster, 57 Ann street, N Y.

Improvement in the Photographic Art.

Mr. Talbot, who is well know for his improvement in the photographic art, has just announced another which enables him to obtain images of objects moving with a certain velocity, a thing found impossible heretofore. One of his experiments is thus described:—"A paper covered with printed letters was pasted upon a disc, so arranged that a rapid rotary motion was capable of being imparted to it. A *camera obscura*, in which was placed a plate of extreme sensibility, prepared by the peculiar method of Mr. Talbot, was so disposed as to receive the image of the disc in motion. Near the disc itself was placed a powerful electrical battery. The room was darkened by closing all the shutters. The disc is made to rotate as fast as possible, then the *camera obscura* is opened, and immediately by means of the electrical battery, an instantaneous vivid flash of light is thrown upon the disc. The plate is then withdrawn from the *camera obscura* and proves to have been impressed with the image of the letters on the disc, in a perfectly distinct and faultless manner, absolutely as if the disc had not been in motion at all." Mr. Talbot's experiment overcomes the double difficulty presented by an instantaneous flash of light producing the image and the velocity of the rotary movement of the disc.

Iron Veneering for Fronts of Buildings.

Mr. L. A. Gouch, of Harlem, has invented and is now applying a new improvement in arcbitecture. This is ornamental cast iron plates put on the front of a house, like veneering on cabinet work. The castings are made in the plates and put on by a permanent elastic cement which allows for the expansion and contraction of the metal. The plates can be sand-grained after they are put on and a house can, at but little extra expense, be ornamented by this improvement, with all the embellishments of the richest scroll and frieze mouldings, to rival the most ornate sculpturings of the Grecian or Italian schools.

The Art of Flying---A Wonderful Feat.

A French journal has a letter from Madrid giving an account of a successful experiment with a new apparatus for flying. The flyer was a Miss Juanita Parez, who though rather fat and corpulent, moved through the air, by the help of wings, with great ease and rapidity. She was advertised to fly a distance of above 1,200 feet, raising above 600, but exceeded the programme both in height and distance. No description of the structure of the wings is given. They have a spread of some fifteen feet, are fastened by ligaments of great flexibility, and arranged so as to move with great rapidity; they make a noise like a wind-mill. The astonishment at Madrid at so novel a phenomena is described as immense, and no wonder: just to think of a corpulent damsel flying through the air and making a noise like a windmill. The same paper announces that a Mr. Thomas Darville, at Paris, has invented a complete apparatus for flying, and that he proposes to exhibit it at the Champ de Mars in the course of the present month, when he will fly from the Military School to Challiot. He will be accompanied by his two sons, one of twenty-two and the other of seventeen years. The preparation of three sets of wings has delayed the exhibition until now. The inventor has tried his apparatus privately, with complete success, having flown across the Seine with it at 1 o'clock in the morning. His wings have a spread of 15 feet, and by their help the flyer can move up and down in the air with all the facility of a swallow, skimming along near the ground or mounting upright to the sky at his pleasure.

A balloon is now in the course of construction near New York city; it will perhaps make an excursion some day shortly. We hear that it is to be propelled by 2 small steam engines. It will take the wind out of the Spanish and French high flyers. These are the days of highfaulting.

Polley's Plan of Opening and Closing Shutters and Blinds.

Mr. Henry Polley, of Leominster, Worcester Co., Mass., who applied some time ago for a patent for an improved method of opening and closing shutters and blinds by rack and pinion arranged in a very excellent manner, has applied it to a great number of window blinds and it has, we are informed, given universal satisfaction, his method being considered by those who have used it superior to others in use.

Improved Water Wheel.

Mr. Wm. A. Crowell, of Lime Rock, Litchfield Co., Conn., has taken measures to secure a patent for a new water wheel, which has been stated to have some advantages over others in use. This improvement is in the construction of the buckets.

Discovery of a New Metal.

Dr. Bergemann, in making some experiments with the Woehlerite and Enkolite from the zirkon-syenite of Brevig, in Norway, has separated a substance which, both in its oxidized state, as well as in its compounds, differs from all the known simple bodies. He has decided that it is a metallic substance and has given it the name of donarium, after the Teutonic god Donar, the Northern Thor

The Vulcanizing of India Rubber.

We see by the London Athenæum, as copied in the Franklin Journal, that the discovery of Vulcanizing India Rubber is claimed for Mr. Hancock, of London, in 1843. Our account, last week, of the India Rubber Patent Case, in London, proves the discovery to be an American one:—"honor to whom honor is due."

On last Saturday evening our city was visited by one of the most terrific thunder storms we ever witnessed. One man, we hear, was killed by the lightning. The air since has been cool and refreshing in comparison to what it was last week. Storms purify the air and restore electtical equilibrium.