



The Fair of the American Institute.  
No. 2.

#### GOLD PENS.

We perceive that gold pens flourish this year in a conspicuous manner, among which Bagley's retains a high position, but we perceive a new improvement introduced to the Fair this year by Mr. Barnard A. Warren of York st. Brooklyn. The pen is set in the holder in a peculiar way, and inside is fixed a silver pallet, which, pressing upon the lower side of the nib, but raising from the body of the pen itself, serves to hold a supply of ink with one dip to write rapidly a half a page of MSS,—while only a given quantity is allowed to flow from the point at each pressure of the hand. Thus any danger of blotting, with the swiftest writing, is entirely obviated, and a great improvement effected, which will be fully and particularly appreciated by all whose occupations force them into a rapid chirography. A cut of this pen is to be found in Vol. 3 Scientific American.

#### TELEGRAPH.

House's electric printing telegraph occupied much attention. It is an ingenious instrument and is played like a piano. The managers were communicating by it with Philadelphia. As we intend to describe this instrument more fully in our treatise on the telegraph, we will say no more about it at present.

#### NORTH'S SPHERICAL MILL.

This mill of Mr. North, of Jersey City, and but recently patented, is certainly a new and useful improvement in grinding mills. It was highly approved by all those who saw it and understood its principle. The nature of its invention consists in giving a cup with a large ball below rotary motions, the motion of the one being contrary to the other—the very best method of grinding such substances as indigo, &c. From one of these mills being in operation at Messrs. Sibley & Co.'s, Bergen Hill, its practical results (the only true test of merit) are good—no substance can resist its grinding powers. In the old mills the balls only have motion.

#### ROTARY ENGINE.

Gen. Howard exhibited his steam wheel last week, and J. H. Von Schmidt his rotary pump. This pump is very excellent and will throw a good stream of water according to the power applied.

#### DOG POWERS.

A Dog Power machine was exhibited by Messrs. Crane, of N. J. It is simply a rotary foot horse power, using the moveable circle as a traction power to drive friction wheels that propel a shaft. This is a much better way to employ dogs than to keep them for yelping. Any farmer might construct a power of this kind, and it is very useful for churning, washing potatoes, shelling corn, &c.

#### HARNESS MACHINE.

A machine for making weaver's heddles the property of Messrs. Vogel and Thomas of Saccarappa, in Maine, is the most curious and ingenious machine at the Fair or that has been exhibited for many years. It makes beautiful heddles—and one girl can make 18,000 per day. Next week we shall publish a full illustrated description, of this wonderful machine as we believe that it is of great moment to our manufacturers. More information can be obtained about it at present at this office.

#### AGRICULTURAL IMPROVEMENTS.

The Avenue to the Hall is crowded this year as usual with corn shellers, straw cutters ploughs, &c. We noticed especially the premium Straw Cutter of Mr. Byron Densmore, Brockport, Monroe Co. N. Y. This straw cutter was only patented last June, and it uses the best of all ways to cut, namely, the dip and lift motion. It has already taken six premiums and although it is made of the best materials it costs only \$15. Farmers should have good tools, and here is a cutter that cannot fail to give satisfaction. The Agricultural

improvements are of an unusual excellence and variety.

A number of very beautiful Omnibuses and Hose Carts attract universal attention.

#### WASHING MACHINE.

Washing machines are not quite so numerous this as last year, and therefore not so much variety. The Ladies Delight we perceive is still favorably exhibited, but Ira Avery's vertical rotary, along with his wringer, should be in every family—the wringer especially.

A very good Clothes Drier—a series of circular lines revolving on a vertical shaft is also exhibited. This is not new, but very useful.

#### GAS APPARATUS.

Mr. Crutchet exhibits what is called his "solar gas light," it is a portable retort, and a good invention and has been highly recommended. It is our opinion, that with a small portable gas retort, all our farmers who burn hard wood, might save their gas light out of it, by having a small purifier and receiver. They might thus save their tallow which is always a cash article.

Mr. A. Maish, exhibits his improved gas meter, and it has been justly admired.

#### PORTABLE FORGE AND BELLOWS.

Messrs. Taylor and Flagler of No. 211 Water st. N. Y., exhibit Mac Queen's Portable Forge and Bellows, which is a good apparatus. A patent was lately secured for a valuable improvement on this forge. E. & S. D. Gould of Newark N. J. exhibit a really good portable Morticing Machine.

#### WINDLASSES.

A number of windlasses are exhibited, but we saw none that was superior in our opinion to Mr. C. Leavit's of Rockville, Ct. The principle of this windlass, is the application of the toggle joint in combination with the lever.

#### COOKING STOVES.

A great variety of these are exhibited and it is morally impossible to give an opinion regarding their comparative merits. We observe however one defect in every stove, viz. the difficulty in cleaning out the furnace of ashes and cinders—there is not a single stove but might have a sliding perforated bottom in combination with the ribs, whereby it could be easily cleaned out, but we suppose that more fingers must suffer before our recommendation will be attended to—circular stoves have swinging bottoms, to be sure, but they have the defect of being difficult to kindle.

#### A PILL MACHINE.

A Pill machine is exhibited—a wonderful little catch, roll and snap apparatus. It can grind out pills by the hundred and as a gentleman observed, it was just the thing for our people. The dough for the pills is fed into a hopper and it is then cut out into pill form by a small revolving wheel with its periphery full of moulds which drops them as it revolves and they are then rubbed and doused over with pill dust and fitted for the bolting operation. A couple of grooved rollers to feed in the dough, cutting it off at pill distances would form the pill faster, but taking this machine for all in all, it is a unique.

#### MANUFACTURES.

We observe some beautiful samples of Cotton Cord made at Mr. Noyes' factory, in William st. this city. This article, is a splendid imitation of the imported Linen Cord, and might fairly be mistaken for it. It has all the appearance and nearly the strength; certainly no cotton cord ever manufactured before in this country, or any other, can compare with it.

#### A NEW LIFE PRESERVER.

We witnessed many curious scenes in the city during this week and last, and among the rest we were particularly struck with the properties of a new life preserver invented by Messrs Ralston and Phillips, the former of Washington Co. and the latter of Pittsburg Pa. It consists of an improved dress of india rubber cloth, part of which is inflated and in which the swimmer is encased. We saw Mr. Ralston enjoy a rough and tumble in the East River and he came out, threw off his preserver and (having all clothes on) not a thread was wet. A young man of the name of Lowell, crossed from Williamsburg to this city in it—a distance of about three miles with steam-boats passing him every few minutes, and when he arrived at Peck Slip, he came out

of his shell dry, ready for parade. It is a most excellent invention and Mr. Ralston informs us that he has applied for a patent.

A person wearing one of these life preservers can carry from fifty to one hundred lbs., in addition to their person, and float four persons in the water, without sinking, and can take no other position on the water, except with the head and shoulders entirely above the water.

The entire person save the face, is enclosed, enabling the wearer to float in an erect, or sleep in a reclining posture, or with paddles which are attached, propel himself at the rate of three miles per hour. His person is kept entirely dry, and the heat of his body is so retained, that he is warm and comfortable, when floating on water in cold weather.

#### IRON PLANING MACHINES.

A number of these are exhibited, but that of Mr. Hartson No. 42 Gold st. this city, and a cut of which is to be found page 297 Vol. 3, Scientific American is the best that we have seen, both as it regards solidity, correctness and beauty of workmanship. Mr. Hartson has a good sale for his machines because his workmanship—the very essence of good tools—is of the first stamp.

His Drill at the Fair has been highly praised by good practical mechanics, who are the best judges. Those who desire good Lathes, Iron Planing Machines and Drills, will not be disappointed in purchasing of Mr. Hartson.

ANOTHER FIRE AND WATER PROOF PAINT. Among many substances which have been brought forward for this purpose, we can specially testify that (No. 2015) a paint made from transition argillite, and discovered by James M. Albright of Schenectady, N. Y. is a most excellent and unequalled substance. We have exposed it to heat, air, &c. and it becomes harder and better. It can mix with many paints and is not very dark, and it can be employed for all kinds of painting, it being capable of taking a very fine polish. All wood painted with this, is made Fire Proof and we cannot but consider it to be a most important discovery, for it is cheap and is to be found not confined to one place but scattered throughout our broad land.

#### M. Leverrier's Planet.

We extract the following from the account given by the National of the last sitting of the Paris Academy of Sciences, on the 29th ult. :—"That planet,—how shall we express ourselves?—that wonderful planet discovered in the height of the skies, without the use of the telescope by the direct sight of the mind—that planet, the discovery of which caused a sensation in the world, dissension between two rival nations, had been an incentive to the imagination of poets, the liberality of chancellors, the passionate curiosity of women and even of children. Well, that planet does not exist. What! will you say there is not in the skies a planet called Neptune? That that astra was not seen on the 23d of September 1846, near the star Delta of the Capricorn, by a German named Galle, who was decorated for having made the discovery? Since that epoch the new planet has not been again seen by astronomers, who have observed its revolution and measured all its movements? Have astronomers then told a falsehood? No: Neptune exists, but it is not the planet announced by M. Leverrier." The truth of this assertion was admitted by M. Leverrier himself.

#### Opposition of Improvements.

On the western coast of England, it has been the custom from time immemorial for a number of old women to act in the capacity of bathing the young ladies of the aristocracy. But recently these old bathing women have been greatly scandalized by the intrusion of a new machine which is quite an innovation in its way. It has a moveable screen, behind which damsels can be ducked in secret. They regard the whole as a sign of degeneracy and mock modesty. And these ideas are more sensible than some others we have heard advanced against innovations.

The Manchester Examiner mentions an argument advanced by a Bolton man to prove that the moon was not inhabited—no Scotchman had been known to visit it.

#### New use for Castor Oil.

The Alton Telegraph says: "We were presented by Mr. E. Morse of this city, with one of his candles manufactured from castor oil, and were induced to test its qualities with a sperm candle. The experiment resulted in the demonstration that the castor oil lasted longer than the sperm candle, and the light of the former was decidedly more brilliant and extensive than that of the latter. We could not discover the least unpleasant smell from burning the castor oil candle, and believe that they are well calculated to supersede entirely the use of the sperm candle. Mr. M. informs us, they could be afforded by the quantity at twenty-five cents per pound—about one-half the cost of the sperm candles."

Will not some of our farmers try olive culture? It grows well in Greece and Spain, and we certainly have the same climate as those countries, in some of our States. No oil combines so well with barilla to form good soap, as the olive. It is good for domestic use as food, and it also burns well. It is a source of great profit to Turkey, as they supply Great Britain for the making of her fine soaps and the dyeing of her Adrianople Red.

#### Vancouver's Island and the Hudson's Bay Company.

In the House of Lords, on 20th ult. Lord Mounteagle, in moving for papers relative to the cession of Vancouver's Island to the Hudson's Bay Company, took the opportunity to urge the impolicy of that transaction. Earl Gray defended the grant, on the ground that it was the most effectual mode of preventing "squattling" from America, which in a short time would place the practical possession of the Island in the hands of the United States. He asserted that the Hudson's Bay Company were better prepared to colonize the Island than other parties, and that the most ample security had been taken for the proper government of the colony, and its resumption by the crown at the end of eleven years, on equitable terms if deemed necessary.

An aristocratic government gave the Island to the Hudson Bay Company. Well, we hope that the Company will be more generous to emigrants than the government, but we must say it was wretched policy—as has been proven by every patent grant in the United States and the Canadas

#### The Artesian Well at New Haven.

This artesian well it seems is no great shakes of a job after all, as it respects the labor to sink the tubes, for not a single strip of rock had to be drilled for the purpose and only 40 feet of tube was necessary. But one good thing was accomplished viz. the finding of water, not very pure we believe, such a short distance below the surface, to rise to the top of the tube. The pipe was forced down by strong pressure, through about 36 feet of blue mud into a bed of sand, which was penetrated to the further distance of about four feet, when a bed of gravel was reached, when water rose at the top of the pipe sufficient for all the supply that can be desired.

In 1825 there was opened in Cochin China a canal, twenty-three miles long, eighty feet wide, and twelve feet deep. It was begun and finished in six weeks, although carried through large forests and over extensive marshes. 20,000 men worked upon it day and night, and it is stated that 7000 died of fatigue.

Soap Stone Griddles for cooking buckwheat cakes have been introduced. They are represented as capital, baking the cake finely and without the use of grease.

Mr. J. Orr and a number of artists from this city have gone to the sources of the Hudson, to take sketches for Townsend & Orr's Panorama of the Hudson River.

Volcanic coal is found in abundance in the Sandwich Islands, and burns better than mineral pitch.

The government has hired sixteen of the spacious stores on the Atlantic Dock, Brooklyn, for a period of 15 years, at the rate of \$60,000 per annum.

Potatoes around this city are fast decaying with the rot.