

NEW INVENTIONS.

New Rail for Railroads.

An improvement in the construction of rails upon those parts of railroads adjoining switches, has been constructed by J. F. Fanning, of Union, N. Y. The object of the improvement is to prevent the cars from running off the track in cases where the switch is not properly adjusted. The manner in which this is effected is as follows: each of the rails which connects with the switch is provided with long flanges upon the top at their inner edges, and guides or shorter flanges near their outer edges; this will render it nearly impossible for the engine to run off the track, even though the switch be moved considerably out of line with the adjoining rails, for if the switch be moved too far to the right, two of the wheels of the engine will bear up against the longer flange of the left rail, and the other two against the shorter flange or guide of the right one, and therefore, as it moves toward the terminus of the angle formed by the flanges of the adjoining rails, they will gradually be drawn toward the main or straight track, and be caused to fall or slide into the same. The like result will be produced, *vice versa*. In case the switch is moved too far, or to the left of a direct line with the main track, considerable difficulty has been experienced, and many accidents have occurred, often, however, through care in passing railroad switches; should this be found to remedy the difficulty it will contribute considerably to the safety of railroad travelling. Measures have been taken by the inventor to secure a patent.

New Annunciator for Hotels.

A new Annunciator has been invented by Wm. Horsfall, of New York City, who has taken measures to secure a patent. The improvement relates to the construction and arrangement of the index plates. They are so constructed that each of them can be operated and its number exposed to view, and also the alarm sounded, by simply employing a vertical rod having a horizontal lifter or tripping arm, which extends underneath each of the swinging index plates, the said rod and arm being arranged in such relation to the rocking or swinging frame, which carries the alarm bell, that as either of the rods are raised for the purpose of tripping one of the index plates and exposing its number to view, the said frame and bell will also be raised, and the pendulous hammer allowed to descend some distance and consequently when the rod descends, which it does instantly after the index plate has been tripped, the swinging frame and its alarm bell will descend also and cause the short finger of the pendulous hammer to be operated upon by a lever connected to the arm which sustains the bell and the long arm or weighted end of the pendulous hammer to raise, strike the bell, and sound the alarm. Another feature in this invention relates to the method of throwing the index plates, either separately or a number together, back to their proper places, after the number has been seen and attended to. These arrangements for constructing and operating Annunciators are quite simple and convenient. In case any part should become disarranged, it is more easily repaired in this structure than in the common arrangement.

Corn and Seed Planter.

An improved machine for planting corn and other seeds, has been invented by R. C. Wrenn, of Mount Gilead, Ohio. The novelty of this invention consists in discharging the grain at regular intervals, and in hills at any desired distance apart, by means of one or more cams upon the face, and near the periphery of the driving wheel. These cams operate certain slides which convey the grain from the hopper to the hollow drill tooth. After the discharge of the grain into the drill is effected, the slides are instantaneously brought back to their natural position by means of elbow shifters attached to the slides and operated by the cams. By this very simple arrangement the necessity of employing shifting levers or other complex machinery, to be operated by hand, is dispensed with. Mr. Wrenn has taken measures to secure a patent.

CAMP'S IMPROVED CHIMNEY VENTILATOR.

The improvements in Chimney Ventilators illustrated by the above engravings were patented by Mortimer M. Camp, of New Haven, Conn., August 17, 1852.

Figure 1 is a perspective view of the whole ventilator, and figure 2 is a vertical section through the centre, with the whole of the two wheels, *c c* and *e e*, shown in perspective. The same letters represent the same parts in both engravings.

A, figure 1, is a cylinder with openings cut for the admission of currents of air, and a

spreading or conical base, D, which covers the lower portion of the ventilator. Guide plates or buckets, B, direct the current of air coming from any direction through the rectangular openings, C, upon the spiral vertical fan wheel, *c c*, hung upon the shaft, *a a*, in bearings, *b b*; F is an inverted hollow cone with a cylindrical base, which forms the base of the ventilator, and within which is the spiral fan wheel, *e e*, upon the same shaft with *c c*, and similar to it in construction, except that the latter is inverted upon the shaft in order to

Figure 1.

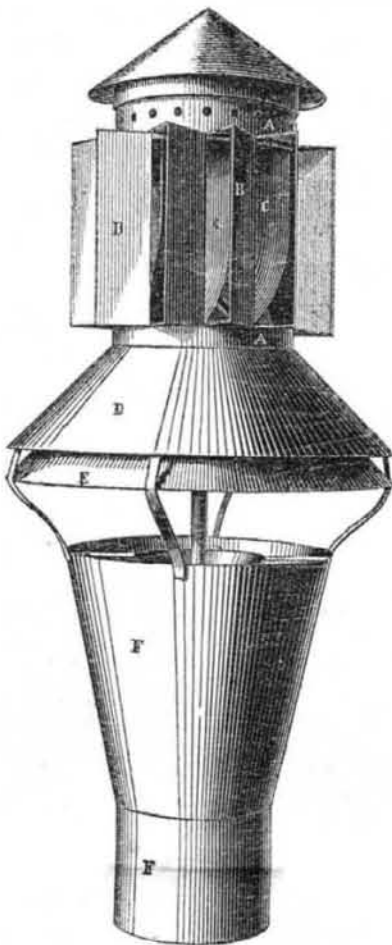
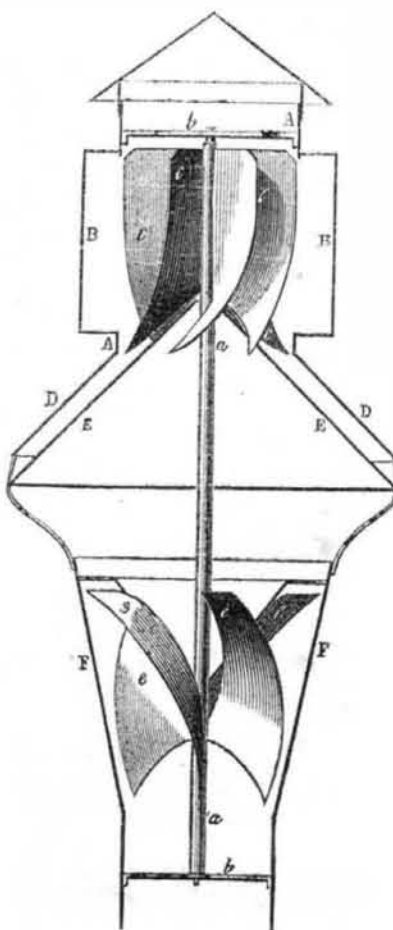


Figure 2.

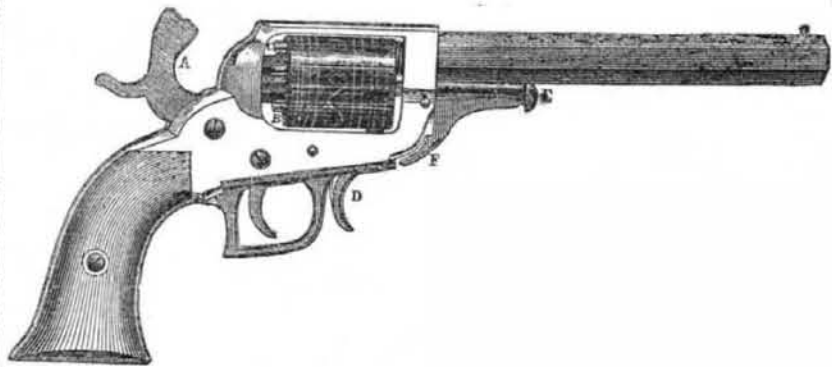


direct the current in an opposite direction. The wings of these fan wheels are broader at their bases or where they are attached to the shaft, so as nearly to fill the cylinders in which they revolve, but taper toward their opposite ends, where they are curved and pointed so as to fit around the points of the hollow cones over which they turn in the manner represented in figure 2. Whenever a current of air strikes the upper fan wheel, which will always be at an inclination to its shaft, being directed in its entrance through the cylinder, a rapid motion is given to both wheels, and the air from the upper cylinder is carried downward by the spiral wings, and passes out again between the hollow cone, E,

and the base, D, of the cylinder, A. The same motion being communicated to the lower wheel draws the smoke upward and tends to expel it from the top, between the hollow conical portion, E, and the smaller inverted cone, around which the wheel, *e e*, revolves, as shown in figure 1. This arrangement will doubtless preclude the air from passing down the pipe, F, while the wheel, *e e*, is in motion, which will always be the case when there are currents of air sufficient to drive it.

More information may be obtained by letter addressed to Cannon & Brother, 134 Chapel street, New Haven, Conn., who are sole agents for selling rights, and who will attend promptly to any communication.

WHITNEY'S REPEATING PISTOL.



The annexed engraving is a side view of a new Repeating Pistol, invented by E. Whitney, of New Haven, Conn., who has taken measures to secure a patent for the same. It is exceedingly simple in its construction, and merits the attention of all those engaged in the manufacture, practice, and use of fire arms. A is the hammer which is made in the usual way; B is a revolving charge cylinder, the most simple and easy managed we ever saw. There are six charge chambers in the front end of this cylinder, and C are the nip-

plers for receiving the caps; E is a steel pin which passes through a central orifice in cylinder, B, into the back of the stock, and serves as the spindle or axis on which the charge cylinder rotates. This pin is held in its place by a trigger pin, F, which has a sneak at its outer end projecting into a notch in pin, E, and holding it fast. Small dark notches are represented on the side of the cylinder near the front end. A spring trigger, D, projects through the plate of the stock into one of these notches, and holds the charge cy-

linder at the proper point with a charge chamber opposite to the barrel, and prevents it rotating. When a shot is fired, by pressing on D with the finger, the cylinder is released, is turned with the left hand on its axis pin E, and when the next charged chamber comes opposite to the barrel, the spring of D, projects into a notch and retains the cylinder at that point.

By pressing the finger upon F, the sneak releases pin, E, which can be drawn out in a second, and cylinder B, taken out to recharge, or half a dozen of such cylinders may be kept charged in one cartridge box or pocket, and 30 shots fired off with great rapidity, for it is but the work of a few moments to take out a discharged cylinder, and put in a new charged one.

Mr. Whitney is the son of the famous inventor of the cotton gin, and we must say that he has constructed the most simple and effective revolving pistol that has yet been brought under our notice. His pistols are made of the best materials; the parts are few and simple; the barrel and cylinder are of the best cast-steel, their shooting qualities are excellent, and we understand that they are sold at very reasonable prices.

More information may be obtained from the manufacturer by letter or otherwise.

New Process for Obtaining Carburetted Hydrogen Gas from Coal Tar.

The extensive production of carburetted hydrogen gas from coal or rosin tar, or other like substances, has been thought by many good chemists to be quite impracticable, one of the difficulties to be overcome is that of obtaining a retort so constructed that the coal tar, which is made to enter it in fluid form, will not cool it sufficiently to destroy the product, and cause an incrustation of the tar upon the sides of the retort. This difficulty has been obviated by Stephen Meredith, of Erie, Pa. Mr. Meredith has constructed a novel retort for the accomplishment of the object above stated. It is so formed that a heated surface is constantly presented to the fluid tar. This is effected by placing within the retort, longitudinally, a cylinder which may be made to revolve in bearings, working in stuffing boxes, to prevent the escape of the gas from the retort. A pipe or tube passes longitudinally into the retort and over the entire length of the cylinder, the portion of the tube within the retort being perforated to permit the fluid tar, which enters the retort through the pipe to fall upon the cylinder. As the cylinder revolves it constantly presents a new surface to the heated retort, thus the tar is prevented from forming incrustations and burning on the sides of the retort, but is readily converted into gas. Measures have been taken by the inventor to obtain a patent.

New Reversible Stove pipe Collar.

R. R. Finch, Jr., of New York City, has invented and taken measures to secure a patent for the above. By means of this improvement in the construction of stoves, the necessity for an elbow is, in most cases obviated; a collar is placed over the flue of the stove and attached to it by a button, this collar may be inclined in various directions at pleasure, in order to receive the stove-pipe from the chimney at any angle desired. The pipe may pass from the stove horizontally, or extend up any desired distance before it enters the flue of the chimney, the change being effected without the use of elbows, as in the usual manner.

New Process for making Daguerreotype Plates.

An improvement in the construction of these plates has been invented by Geo. Englehard of New York City. The method employed by him is this, instead of forming the base of the plate of copper, and then coating it with silver, a pure zinc plate is used for the electrotype process, or a zinc plate first coated with copper and then with silver, and afterwards polished in the usual manner. Mr. Englehard thinks these plates take impressions more readily and leave a finer picture than those made by the old process. The expense of making these plates is less than those made of copper. The inventor has taken measures to secure a patent.

A few drops of kreosote on brown paper, put in the holes of rats, it is said, will drive them away.