

NEW INVENTIONS.

New Machine for Paring Apples, &c.

We have recently seen a machine for paring apples, &c., invented by Wm. Lazelle, of which Messrs. Smith and Fenwick, 14 Vandam street, this city, are the assignees, which is peculiar in its construction and superior in its operation. The knife is stationary, and the fork which holds the apple to it revolves, and has two motions, the one rotary and the other in a transverse horizontal arc from the heel to the point of the apple; the fork which holds the apple is mounted on a spindle which receives motion by a pinion working on a stationary rack, which is part of a circle. The machine is operated by simply pushing the handle backwards and forwards, making the wheel to traverse over the stationary rack, and thus move the spindle on which is the apple fork.

Copper Buoys for Steamboats.

G. W. Hildreth and S. L. Chase, of Lockport, N. Y., suggests to us the propriety and utility of furnishing buoys made of sheet copper for steamboats and other sailing vessels. They can be made of a shape to be placed under seats, under berths, between timbers, and stationary seats can be made of them. Enough of them can be secured in different parts of a boat to float it, if it should spring a leak, and they would not be burned if the boat caught fire. In this respect they have a decided superiority over cork, or india rubber inflated buoys.

Improved Scythe Fastening.

Messrs James Broadhead, William Broadhead, and A. B. Cobb, of Jamestown, Chataque Co., N. Y., have taken measures to secure a patent for a new improvement in scythe fastenings. By means of a metal loop and a screw the scythe is secured and fastened to the snath in a far superior and convenient manner to that of wedges, and at the same time the screw sets the scythe to give it the peculiar *hang* suitable to every mower, by raising the heel or setting the scythe, as may be desired. By turning the screw in one direction the scythe is fastened, and by turning it in the contrary direction it is loosened, this is quickly done, and certainly it is a simple mode of doing it.

Improved Lock.

Messrs. Thomas Murphy, and W. H. Butler, of New York City, have invented an excellent improvement in locks for safes, bank vaults, &c. The improvements consist of a peculiar manner of operating the tumblers of the lock by means of racks, and placing the tumblers and racks within suitable cases, the tumbler case being movable, thus allowing the tumblers to be thrown out of gear with racks. By this arrangement the key may be changed or altered in form every time the door of the safe or vault is locked, thus rendering the lock less liable to be opened by burglars. There is also a guard or stop so arranged as to prevent a pressure being obtained upon the bolt of the tumblers, thus securing the great means of preventing the lock being picked. Measures have been taken to secure a patent.

Improvement in Buckles.

Peter P. R. Hayden, of this city (New York) has invented a new and useful improvement in buckles, the nature of which consists in a peculiar manner of uniting the two ends of the body of the buckle by means of a boss at each of the ends, which form a bulb, around which one end of the tongue is clasped. The end of the tongue which surrounds the bulb has a groove in it to prevent it from slipping off. By this arrangement the two ends of the body of the buckle are firmly secured to the tongue, and it is always kept in its proper place. Measures have been taken to secure a patent.

New Cut-Off.

Wm. Camerer, of Reading, Pa., has invented an improvement in valve cut-off gear for locomotives and other engines, for which he has taken measures to secure a patent. The cut-off is that which slides on the back of the slide valve, and the improvement consists in connecting the cut-off with a slotted link, one

end of which is connected with the valve eccentric and the other end with another eccentric, set in a different position on the crank axle, the means of connection between the cut-off and link being a stud secured to the cut-off rod, and furnished with a box fitting to the slot in the link. By moving the link so as to bring either end nearer the stud, the relative movements of the valve and cut-off are altered, and the time or point of the stroke of the piston at which the cut-off is effected, may be varied at the pleasure of engineer.

A New Composition.

We see it going the rounds of the daily papers, that Lieut. Watson, of the British Navy, has proposed a mixture of india rubber and saw dust, as a lining for the interior of vessels. By its elasticity it collapses when penetrated by a ball, it deadens concussion, and by its buoyancy will keep a vessel afloat, though it be riddled with shot; it also prevents splinters. This composition, although set forth by those papers as something new, is some years old, and was proposed two years ago to line iron steamers with.

Plow and Cultivator Combined.

We have received from some source a small model of a Plow and Cultivator combined. If we mistake not, it is the second one of the kind sent us; now, as there is neither name on the model nor letter accompanying it, we are of course unable to correspond with the inventor. We earnestly solicit persons who send models to this office, that they attach cards to them, bearing the inventor's name and residence, this will save considerable trouble and delay.

PATENT BALANCE GATE.



The accompanying engraving is a front elevation of an improved Balance Gate, invented by William C. Van Hoesen, of Leeds, Green Co., N. Y.; a patent was granted for it on the 14th of last April.

A is the gate, having its two side pieces, *a* hung by pivots, to the posts, *c*. The side piece, *a*, extends upwards some distance, and has a weight or counterpoise, *B*, which balances the gate upon the pivots. *C* is a half pulley attached to the side piece, where the pivot passes through. Two ropes, *d*, pass around this half pulley and are attached to the small side rod, *e*, the other ends of the two ropes pass around pulleys, *f f*, which are placed in horizontal arms, *D*, said arms being secured in upright posts, *E*; there is an arm and post on each side of the gate. The small side rod, *e*, is attached at its lower end to the latch, *g*, which is pressed into the catch, *l*, by the spring, *h*. At the opposite end of the gate there is a similar latch, *g*, and catch, *l*, said latch having a cord *i*, attached to it, and passing over a pulley, *j* in the upper cross rail of the gate, directly over the

face of said rail, and passes under a small pulley, *k*, and is there attached to the small side rod. By this arrangement both of the latches, *g*, are relieved from the catches, *l* by raising upwards the small side rod, *e*. *F* is a horizontal cross piece attached to the gate post, *c*; at the upper end, this cross piece has two catches, *m*, upon it,—one at each end—into which the latch, *g*, is forced by the spring, *h*, when the gate is opened or raised in a horizontal position.

The nature of this invention consists in having the several parts of the gate constructed and arranged so that it may be opened and closed by the driver of a vehicle without the driver leaving his seat. The gate is balanced on its pivots, and the two latches are operated by the two ropes, one at each side of the gate. As the driver approaches the gate he pulls the rope suspended from the arm and raises the gate; when the driver has passed through he pulls the rope on the other side and the gate descends to its original position.

OPERATION.—Supposing an equestrian or a

person in a vehicle approaching the gate—representation of the manner being shown in the engraving—by pulling down the rope the latches are released from the catches, *l*, and the gate being balanced on the pivots by the counterpoise, *B*, the half pulley, *C*, will turn, and the gate will be elevated. When the gate reaches a horizontal position, it is retained there by means of a latch, being forced into the catch, *m*, by the spring, *h*. The vehicle or equestrian passes through, and then pulls on the cord on the other side of the gate, which releases the latch from the catch, *m*, when the half pulley turns and the gate descends, and swings into its original vertical position. The gate is operated alike by persons passing in both directions. It is a very convenient gate certainly; this will be at once acknowledged, and it can be made strong and very durable. The gate, as represented, is nearly swung up to its horizontal position, to let the female equestrian pass through.

More information may be obtained by letter addressed to B. E. & Ira Buckman, No. 94 Fulton st., this city.

readers may expect to see it illustrated and described in our columns.

Machine for Forming Leaves of Springs for Carriages.

Messrs. Garret Shepherd, and John J. Reid, of this city, New York, have taken measures to secure a patent, the nature of which consists in bending or forming the leaves of springs for vehicles, by means of dies placed within a suitable sash, which is movable. The dies correspond in shape to that which it is designed to make the leaves. One of them is stationary, and the other movable, the movable one being operated by a rack and pinion. The bar of metal to be operated on is heated and placed upon the upper surface of the lower die, the upper die is forced upon it and bends it to the precise shape. When it is bent, the movable sash to which the dies are attached is lowered, until the leaf operated

upon, and which is still between the dies, is immersed in a vessel of water at the lower part of the frame.

The Scotch Reaping Machine.

A writer in the London Times states that the Rev. P. Bell, about whose reaping machine we made a few remarks last week, made one for P. B. Yates, Madison Co., N. Y., America in 1834. If this is so, Mr Yates will be pleased to inform his countrymen here, so that we may know whether the horse power reaper was first produced at home or came over the Big Herring Pond. Mr. Yates, report yourself.

Descent from a Balloon.

Madame Poiévin, a French lady, recently descended from a balloon, near London, by a parachute. This was one of the most daring feats ever performed.