

of the wrestlers, profiting by a moment in which his adversary has unguarded himself, will rush upon him and attack him by the front hold stroke. In this stroke, the wrestler passes his two arms around the body of his adversary, and, clasping his hands to gain more strength, endeavors to make him bend the loins, to draw him upon his breast, and then, lifting him from the ground so as to make him lose foothold, to throw him forward, so that, in falling heavily upon him, he may make his shoulders touch the carpet. But, probably, things will not proceed in this way, and the attacked adversary will resist. If he has not been able to avoid the hold, he will respond (according as he has one arm or both in the grip of his adversary) by a hold, and the two wrestlers will find themselves breast to breast head to head, and arms locked behind each other's back (Fig. 3, No. 3).

The two wrestlers might remain in such an embrace for a very long time, each waiting for his rival to weaken in the loins or in the grip of his arms. In rural wrestling, adversaries are seen to remain thus immovable for from five to ten minutes, a length of time that seems interminable to spectators. Professionals abridge such time by a return. As a general thing, this will be by a hank stroke (Fig. 3, No. 4). In this case, the wrestler, profiting by the fact that his adversary has one of his legs, for example, advanced against the interior of his own, will try to make him pivot and roll upon his hip, so that he may lose his equilibrium, turn upon his side and fall upon his back. This is the left hank stroke (Fig. 3, No. 4). Will the wrestler thus turned upon his back touch ground with his shoulders? It is not very probable. If he is supple and nimble, he will hasten to form the bridge. The bridge is a parade that is seen employed at every instant in wrestling matches. In order to play this stroke, the wrestler, at the moment that he feels himself falling upon his back, reverses his head, throws his elbows and forearms backward, and bends his legs under him. Through this sort of bridge with five pillars he will always endeavor to keep his shoulders away from the ground (Fig. 3, No. 5).

The first wrestler will probably try to crush the adversary who forms the bridge under his weight, and will likewise endeavor to make him lose his equilibrium by pushing his head and arms from under him. In order to avoid the danger, the second wrestler will take advantage of the first favorable moment for quickly turning over so as to bring himself upon his hands and knees (Fig. 3, No. 6). The first wrestler, who is likewise upon his knees, since he is endeavoring to crush his adversary who formed the bridge, will then be able to make one of the finest attacks of wrestling—the backward hold. In this stroke, the wrestler, seizing the adversary's body with his arms (Fig. 3, No. 6), lifts him, places him upon his shoulder (Fig. 3, No. 7), and, after swinging him like a load, pitches him

forward, trying by this fall to stun him and make him land upon his shoulders. It is a terrible stroke, and one of great effect.

Another stroke, which likewise borders upon acrobatics, is as follows: We have seen that in the preliminaries to a match each wrestler makes a feint of seizing the head of his adversary. If, by chance, the latter does not know how to avoid the attack, he will be submitted to a singularly painful experience. The wrestler, having succeeded in surrounding the head of his adversary with his arm, turns around and throws him upon his back, and then stooping, and ever pulling upon the neck of his victim, throws the latter head over heels in front of him. This somersault ends in a fearful fall upon the back. It is a stroke that is often employed by a professional wrestler with an amateur whom he wishes to discourage. The unfortunate individual, half choked, his body dislocated by the traction to which it has been submitted, and stunned by the somersault, falls heavily upon the ground and is in an unfit condition to react or seek a parade.

There are a large number of other attacks that we cannot describe here, but an enumeration of which will be found in manuals upon the subject of wrestling.

The name of such attacks indicates approximately their mode of execution: The hank stroke (Fig. 3, No. 8); getting the head in chancery (Fig. 3, No. 9); the buttock (Fig. 3, No. 11); the shoulder stroke (Fig. 3, No. 12).

Then come the parades, three in number, which consist in pressing the front, back or side of the adversary's neck strongly with the forearm, so as to prevent him from breathing or to dislocate his vertebral column, and, in either case, to make him let go his hold.—La Nature.

#### Fruit as Medicine.

Why for ages have people eaten apple sauce with their roast goose and sucking pig? Simply because the acids and pectones in the fruit assist in digesting the fats so abundant in this kind of food. For the same reason at the end of a heavy dinner we eat our cooked fruits, and when we want their digestive action even more developed we take them after dinner in their natural uncooked state as dessert. In the past ages instinct has taught men to do this; to-day science tells them why they did it, and this same science tells us that fruit should be eaten as an aid to digestion of other foods much more than it is now. Cultivated fruits, such as apples, pears, cherries, strawberries, grapes, etc., contain on analysis very similar proportions of the same ingredients, which are about one per cent of malic and other acids, and one per cent of flesh-forming albuminoids, with over eighty per cent of water.

Digestion depends upon the action of pepsin in the stomach upon the food, which is greatly aided by the acids of the stomach. Fats are digested by these acids and the bile from the liver. Now, the acids and pectones in fruit peculiarly assist the acids of the stomach. Only lately even royalty has been taking lemon juice in tea instead of sugar, and lemon juice has been prescribed largely by physicians to help weak digestion, simply because these acids exist very abundantly in the lemon.—From the Popular Science Monthly.

#### Discovery of a Great River in Canada.

The Toronto Evening Mail says that Dr. Bell, of the Geological Survey, who has just returned from a trip to James Bay, reports having discovered a great river in the north, as well as many other interesting things. He left about the end of June. The route was direct north from Ottawa, across the height of land to Rupert's house on James Bay, by the most direct water course. The trip by water course was nearly 800 miles. Five hundred miles of this route, or the entire distance from the height of land to James Bay, was through an altogether unexplored region unknown to any one but the Indian hunter. Shortly after they crossed the height of land the party followed an unknown river, which gradually widened until it assumed a great size. They followed this river to James Bay, which forms the southern extremity of the great Hudson's Bay. The river had three large branches, one of which has its source north of Three Rivers, another in the Lake St. John region, and the third near Lake Mistassini. The new river, for which the Indians have no name, is much larger than the Ottawa, and Dr. Bell affirms it to be the sixth of the great rivers of the world, five of which are to be found in Canada. Its average width is considerably more than a mile, and it has expansions many miles in width. It flows through a low level clay country, is very deep, and may be called a new Nile of the north. The river is 500 miles in length, and great stretches would be navigable for steamers. Toward James Bay there are successions of great rapids, which render it useless as an inland route. These rapids cannot be ascended except with great difficulty. The river banks are very heavily wooded with pine, spruce, tamarack, balsam, and white birch. The primeval forest extends along the whole length of the river. Fire has not wrought any destruction yet. Until the height of land is crossed Dr. Bell says the soil is sandy, but having crossed the watershed, the land is of a rich clay loam, well adapted to agricultural purposes. By experiments wheat and barley have been grown in districts of the same latitude. Returning, the party crossed James Bay from Rupert's house, and back by Moose and Missineiba Rivers, till they reached the Canadian Pacific Railway, north of Lake Superior.

#### RECENTLY PATENTED INVENTIONS.

##### Electrical.

**CONVERTING OR TRANSFORMING CURRENTS.**—Paul Boucherot, Paris, France. This invention provides a method of transforming electric currents to obtain constant effective voltage, affording a current of constant intensity where a periodic electromotive force of a constant effective average value is given; also for obtaining a constant effective difference of potential where a current of constant effective intensity is given. Any kind of apparatus is employed having capacity and self-induction, with coefficients of appropriate values, and the function of the apparatus is similar to that of a transformer, except that instead of the electromotive force being in the secondary circuit, it is the current which is constant, irrespective of the resistance.

**SNAP SWITCH.**—Joseph H. McEvoy, Waterbury, Conn. This invention relates to switches in which the contact between terminals is made and broken by a sudden snap-spring action, to make a quick and positive connection and avoid the making of arcs. Combined with an intermittently rotating switch bar, a winding key and a spiral spring, are two disks laid flat against each other and connected loosely by a slot and pin, one of the disks being connected to the switch bar and having stop projections and the other disk being connected to the winding stem and having cams corresponding to the stop projections, while a detent bearing against the stop projections is operated upon by the cams. The switch may be cheaply made of punched pieces and quickly assembled.

##### Railway Appliances.

**SAFETY AND EMERGENCY BRAKE.**—Felix McDermott, Worcester, Mass. This improvement is more especially designed for use on street cars, and provides for brake levers under the car platform, extending transversely, and carrying shoes which are pressed outward into braking contact with the rails. On the lower end of a rod actuated by a hand wheel is a cam engaging the pivoted inner ends of the brake levers, to force the latter outward, another cam returning or releasing the levers.

##### Mining.

**CONCENTRATING GOLD.**—Charles Sill and William Wright, New York City. For quickly and economically separating the largest possible quantity of gold from sand or earth, these inventors arrange a concentrating drum above an amalgam table over which rollers move in advance of the drum, there being an operative connection between the drum and rollers to cause

the latter to reciprocate on the table when the drum is rotated. Means are provided for concentrating any gold that may escape from the first concentrating process.

##### Mechanical.

**PUNCH.**—Charles Hood, Puyallup, Washington. This is a tool designed chiefly for sheet metal, to be fitted in the bench plate of a tin shop after the manner of shears, and to be operated by hand. It comprises two parallel plates between which is a lever handle, the plates having jaws in front between which a female die is adjustably held while a punch lever carries a die punch fulcrumed between the plates, a handle lever being connected to the punch lever by intermeshing teeth.

**COMBINATION TOOL.**—Henry C. Caldwell, Lancaster, N. Y. This tool comprises a pair of plier jaws provided with a hammer poll and a hatchet blade, one handle being formed into a screw driver bit and the other into a claw, while the plier jaws have projecting portions forming grips with serrated faces adapted to serve as a wrench, a hand vise, or a pipe tong. This multiplicate tool is neat in design, takes up but little room, and may be produced at a moderate cost.

##### Agricultural.

**THRASHING MACHINE.**—Jesse Morningstar, Pettisville, Ohio. This improvement provides simple means whereby the straw and grain will be fed from the cylinder or concave to a reciprocating floor, in connection with which are operated rakes having substantially parallel movement with the floor in both directions. When the rakes move in a direction to feed the straw their teeth are above the upper surface of the floor, but when they move in a direction to receive the straw their teeth are withdrawn from the floor and its upper surface is free, or that portion of the surface is free through which the rakes pass.

**HAY LOADER.**—August Westman, Tracy, Minn. In this machine a revolving cylinder is employed in connection with a carrier, the hay being gathered by the cylinder and elevated to the wagon above the carrier, the invention providing an improved construction of the finger cylinder, which is rotatably mounted on a wheeled frame and has longitudinal slots in which are located finger-carrying shafts. The machine is simple, inexpensive, and durable.

##### Miscellaneous.

**DUMPING SCOWS.**—Scott Webber, Pigeon Cove, Mass. For deck-dumping vessels this in-

vention provides an improved launching table for dumping on both sides simultaneously, thus insuring an even rising of the vessel and preventing careening. Opposed platform sections have each overlapping recessed brackets and a longitudinal separable sectional locking rod is suspended freely above the brackets to be lowered into and raised out of all the recesses when rotated, or to have one or more of its sections when uncoupled similarly operated to release the corresponding platform sections.

**GATE.**—Henry P. Talbot, Harrisburg, Oregon. This gate is designed to be strong, light and inexpensive, especially adapted for farm and stockyards, and it may be opened and closed by one in a vehicle or on horseback as readily as by one afoot. The gate slides in a supporting frame where an operating wheel is journaled with attached lever, a second wheel and attached pulley being also journaled in the frame, and a cable being passed around the operating wheel and the pulley, while a cable connected to the front and rear of the gate is also passed around the pulley, and means are provided for operating the lever of the operating wheel from either side of the gate.

**SHUTTER FASTENER.**—Charles Barrow, Paterson, N. J. This is a simple device for easily opening and closing a shutter and fastening it in the open or closed position. It comprises a shank adapted to pass through the shutter and having a headed outer end arranged to engage a spring-retaining device to hold the shutter in its open position, while a catch engages a projection on the sill to hold the shutter closed.

**CURTAIN OR BLIND FIXTURE.**—Thomas U. Walter, Huntington, West Va. This improvement is designed to facilitate the ready adjustment and secure holding of a curtain or inside blind without the use of the coil spring and spring-compressing devices heretofore commonly employed, a slight pressure on the rod or bar at the lower end of the curtain releasing the catch member and freeing the curtain or blind to permit its free movement. Guideways of the sash frame have a rack member, and the pull rod of the spring-retained curtain has a catch mechanism which is substantially automatic in its action, being operated by the ordinary pressure or pull used in raising or lowering a curtain or blind.

**BUTTON HOLE MOISTENER.**—Charles Miller, New York City. For readily moistening the starched surface around the button hole of a garment to facilitate buttoning, this inventor provides a little implement having a guide lip to enter the button hole, while in immediate proximity thereto is a reservoir with apertured head, the reservoir containing an absorbent material, the moisture of which is pressed through the openings of the head.

**BELT SLIDE AND SKIRT SUPPORTER.**—Louis Sanders, Brooklyn, N. Y. The body of this slide has hooks adapted to support a skirt, and the tongue has a spur or pin which enters the belt when the tongue engages the keeper or body of the slide, holding the slide in a given position on the belt and preventing the belt from buckling up within the slide.

**STAIR CARPET FASTENER.**—Milton T. J. Ochs, Allentown, Pa. This improvement consists principally of two plates or rods adjustably and pivotally connected to each other and having their outer ends adapted to engage the tread and the nosing of the stairs to fasten the carpet in place. The device is easily operated, its construction being on the toggle-link principle, and it is cheaply made.

**CONDENSED MILK CAN.**—Constance A. Smith, Brooklyn, N. Y. This can has a bottom aperture closed by a spring-pressed slide moving in guideways on the bottom of the can. The can is of ornamental appearance and is designed to facilitate serving measured quantities from the can without tipping or pouring, as now practiced.

**PAPER BOX.**—Edward E. Pinkerton, Sioux City, Iowa. This is an improvement on a formerly patented invention of the same inventor providing a box that is cheap to manufacture and in which the several heads readily interlock to securely fasten the parts together. The blank is cut or stamped from a single sheet of material.

**SPACING GAGE.**—James H. Foster, Meriden, Conn. This is a device designed to facilitate hand printing with ready made characters, enabling the operator to place the characters in proper position to form accurately spaced and aligned words.

##### Designs.

**DISH.**—Hippolyte J. M. P. La Bastide, Limoges, France. The cover and body of this dish are in what is known as the Lafayette shape, the handles each involving a curved leaf figure and a curved stem figure, and there being minor surface decorations of the cover and body.

**PENCIL CLASP.**—William E. Wood, Portland, Oregon. This is a clasp for attaching a pencil to a pocket, the device being simply formed of a single piece of spring metal.

NOTE.—Copies of any of the above patents will be furnished by Munn & Co., for 25 cents each. Please send name of the patentee, title of invention, and date of this paper.