

RECENTLY PATENTED INVENTIONS.

Railway Appliances.

CAR COUPLING.—Simon J. Freeman, Bradford, Pa. This is a simple, durable and inexpensive coupling, adapted for application to either a freight or a passenger car, coupling automatically and holding securely until purposely uncoupled, the uncoupling being effected from either side or the top of the car. A spring-pressed knuckle is pivoted in the drawhead, the spring normally holding the knuckle in coupling position, and a finger is projected from the opposite front of the drawhead to extend beneath the knuckle, a shifting lever being provided whereby the knuckle may be carried to uncoupled position.

DUMPING FREIGHT CAR.—Robert M. Johnson, Flemington, N. J. Beneath the bottom of this car is a winding shaft to which is attached a chain extending transversely across the dumping doors, the opposite end of the chain being secured beneath the car. The construction and location of the mechanism is such that the dumping doors may be opened as readily in inclement weather as in good weather, the condition of the contents of the car having no effect upon the operation of the mechanism, while the entire area of the discharge opening in the car bottom may be exposed as required.

Mechanical Appliances.

FIBER MACHINE.—Luis B. y Sanchez, Matanzas, Cuba. Combined with carrying wheels or drums, one in advance of the other, over which pass cables, is a reversing mechanism between the drums adapted to turn a leaf end for end, cables acting in conjunction whereby the leaves are held in engagement with the reversing mechanism and with the drums. The leaves from which the fiber is to be extracted are fed at one end of the machine, which is designed to deliver the fiber in a perfect state at its opposite end, the leaf in its transit being so held that the skin and pulp of one half will be first bruised and loosened, the other half being held fixed, an automatic transfer of its position being then effected, after which the other half is subjected to the cleaning process, when the fibers are thoroughly cleaned and delivered in regular order to an apron. The cleaning rolls or cylinders are so constructed that they will not discolor the fiber.

MACHINE TO CUT TAN BARK.—Albert F. Jones, Salem, Mass. This machine has a casing in which is a transverse web, supporting knives, a hopper being arranged on the front end of the casing, and a wheel turning between the hopper and the web. The wheel is provided at its front end with knives for cutting the bark into strips, while wings held on the wheel form a feed for the fixed knives on the web. This machine is of simple construction, and designed to be durable and very effective in operation.

WRENCH.—Lewis C. Hurd, Durango, Col. This improvement consists of a bar forked at one end and provided with serrations on the inner surface of one of the arms of the fork, the bar being beveled and serrated at the opposite end and furnished with a pivoted serrated jaw, designed to act in conjunction with the serrated end of the bar as an adjustable wrench. A screw driver blade is formed on the outer end of the pivoted jaw, the implement forming a simple and inexpensive tool for turning and holding round or polygonal rods, nuts, gas burners, etc., and for the use of bicyclists to turn the spokes of the wheels.

Agricultural.

HAND CORN PLANTER.—Jeremiah W. Champion, Rochester, Mo. The seed receptacle of this planter is attached to a body board or plate which has a delivery chute at its lower end normally closed by a spring-controlled gate. In operation the delivery spout is pressed into the ground up to an adjustable gauge plate, when a slide is operated permitting the seed to escape into the ground and bringing more seed into a pocket ready for planting. A positive rotary feed is obtained by the device, and one that is very simple in construction and applicable to any form of hand planter.

PLANTER AND FERTILIZER DISTRIBUTER.—Joseph Laude, Monticello, Ark. This is a machine adapted to drop either fertilizer or seed, there being an adjustable auxiliary bottom fitted in the hopper whereby a fine or coarse fertilizer may be distributed, the feed wheel, as the machine is drawn over the ground, drawing the fertilizer from the hopper and dropping it, while agitators stir up and loosen the fertilizer to maintain a constant supply. The fertilizer or seed falls into a furrow opened by a forward plow and is covered by rear plows. The machine is of simple and inexpensive construction and designed to do its work very efficiently.

Miscellaneous.

LABELING MACHINE.—Frank Mueller, Albany, N. Y. This is an improved machine for quickly, accurately, and securely attaching labels to bottles, cans, and other receptacles, one operator, by its use, conveniently handling a large number of bottles and firmly attaching the labels. A bottle receiver contains a pad adapted to be dipped in a paste box next to which is a label table, revolving brushes being arranged next to the table, while there is a plunger for pressing a bottle between and through the brushes and means for imparting simultaneously a vertical sliding motion to the receiver and to the plunger.

BELAYING PIN.—John W. Collins, Ludington, Mich. A pendulum lever is used, according to this invention, in connection with belaying pins of novel construction upon a hinged plate upon the rail, the connection between the levers and the pins being so made that when a vessel lists dangerously the belaying pins will be acted upon on the weather side of the vessel to cause the sheets and halyards to automatically and quickly release themselves from the pins, thus permitting the hull of the vessel to right itself. The construction is such, also, that the halyards,

and other ropes may be shifted in a convenient and expeditious manner in the regular working of the vessel.

CASH RECORDER.—Wooster B. Metcalfe and Frank A. Ziegler, Hanover, Penn. This invention provides an improvement in cash drawers and recorders whereby a cash transaction, a credit purchase, the making of change, or paying out of an amount, will be duly entered upon a record slip, carried under a glass to prevent erasure or alteration, a bell being sounded as the drawer is opened. The box or casing in which the mechanism is arranged is designed to be locked and the key carried by the proprietor to prevent tampering with the record slip or mechanism.

CALENDAR AND KEY RING.—Andrew B. Dwiggins, Chicago, Ill. A perpetual pocket calendar which may also be used as a key ring is provided by this invention, the device having means for the easy attachment of keys to it, while it may be quickly and nicely adjusted to indicate the day of the week, month and year, and may be changed to adapt it for any year. It is preferably made of disk shape, so there will be no corners to wear on the pocket, and consists of a face and back plate centrally pivoted by a rivet, the face plate carrying near its rim the names of the months, and a square with figures up to 31, above which is a slot where the initials of the days of the week appear, showing through from the back plate as it is turned to the proper position. A split ring inserted in a marginal hole holds the two plates in correct position.

SELF-CLOSING GAS BURNER.—William M. Roberts, Joliet, Ill. This is a burner arranged to close automatically when the flame is accidentally blown out or the gas is shut off at a distant point. The tip passes through an opening in a plate made of two metal strips of different material, preferably brass and steel, so that when the plate is heated by the flame it bends upward. On the under side of the plate is a downwardly extending rod engaging a spring on the burner pressing on a wheel on the cock, the wheel containing a spring to close the cock when the other spring is disconnected, such disconnection being effected by the movement of the rod on the cooling of the plate to which it is attached.

BICYCLE MECHANISM.—David J. Hoopes, Philadelphia, Pa. This invention consists of a wheel formed with a hollow hub journaled in the bicycle frame, and carrying on its periphery a pinion in mesh with an internal gear wheel on a shaft passing through the hub, and also journaled in the bicycle frame. The improvement forms a driving mechanism of simple and durable construction, permitting of easily running the wheel at a high rate of speed and rendering its construction very compact and strong.

VEHICLE POLE.—John W. Jeffery, Canton, N. Y. This is an adjustable pole adapted to vehicles of different widths. The pole has a cross piece at its rear end, secured to the pole in the usual way, braces attached to the ends of the cross piece being secured to the pole by bolts, and the rear ends of the braces are provided with eyes, while between the eyes and the pole in each brace is a longitudinal slot. The pole iron passes through the eye on the brace, extending forward underneath, and the iron is adapted to be moved in or out and securely clamped to the brace in any desired position.

AXLE BEARING.—David Wigger, New York City. A simple, cheap, and easy running bearing is provided by this invention, adapted for application to all sorts of vehicles, and the outer end of the hub is so rounded off that when struck by the hub of another vehicle it is not likely to be injured. The outer end of the axle box is closed and its inner end recessed and screw-threaded, while the axle has enlarged bearings in the box and a collar to fit the recess, a nut on the axle entering the threaded portion of the box, and a binding screw being held partly in the nut and partly in the box.

HARNESS SADDLE.—Louis A. Mancini, Montclair, N. J. This is a saddle for single harness, and is so made as to be expeditiously and conveniently fitted to the back of any horse. The construction provides for holding the tree of the saddle at an elevation above the back of the animal to which the saddle is applied, and the pads are so made that they will not chafe or injure the skin, the pads being also amply ventilated.

REIN SUPPORT.—David Hand, Netherwood, N. J. This is an improvement on a formerly patented invention of the same inventor, providing a tail guard and line rest capable of attachment to any harness. The body of the device is formed of a rod or strap bent to form two forwardly converging members having their ends connected, in connection with inwardly and outwardly extending link-like rest arms and a rearwardly extending bow forming a tail guard. The device is very simple, durable and inexpensive, and in using it the lines cannot possibly become entangled with the animal's tail.

TRACE SUPPORT.—Russel W. Minard, Larned, Kansas. This is a simple and inexpensive metallic loop device adapted to be readily raised or lowered on the skirt to assume the proper position to carry the trace according to the size of the animal, the device being connected at its lower end with a strap to which the belly band may be buckled.

PIER.—Ommund Haerem, Houston, Texas. This invention relates to piers for bridges and other structures, the pier consisting of a shell having inside sets of ears through which are passed rods, each having at its lower end an anchor adapted to screw into the ground or bed of the river, nuts screwing on the upper threaded ends of the rods to abut against the upper set of ears. The shell is made of two vertical parabolic sections, the vertical side edges of the two sections being joined together and their joints extending in line with the current of water of the river. The construction possesses great strength and stability, and is readily sunk in the water and fastened in place.

BARREL.—James P. Cowden, Cedar Rapids, Iowa. This is a ventilated barrel for trans-

porting fruits, etc., designed to be light and of great strength, and retaining its original shape when the upper hoops are removed to take out the head. It is formed of a series of staves held spaced apart, each stave formed of an outer and an inner member, the ends of which abut and are secured together, while one or more hoops are interposed between the inner and outer members of the staves, whereby each stave is trussed and strengthened, the barrel thus affording an elastic covering to protect its contents from shock.

TRANSOM LIFTER.—Henry A. Brennan, 214 Warren Street, Jersey City, N. J. This is a window worker adapted for use in connection with tilting windows, etc., affording a safeguard against burglaries and facilitating ventilation, being also well adapted for use on a series of windows in factories and all kinds of buildings, and on steamboats, railroad cars, etc., the device being made to operate one or all the windows as desired. When the windows are one above the other a vertically movable hollow shaft connects with a portion of the windows, the shaft having a slot in one side, a rod held to slide in the shaft being also connected with a portion of the windows. The device may be conveniently worked from the inside, but holds the windows so they cannot be opened from the outside.

HEAD AND SHOULDER REST.—Levi L. Pletcher, McConnellsville, Ohio. This is a device for use in a coffin, consisting of two oppositely supported shafts projecting through the head wall, and adapted to be rotated and locked at any point, in connection with flexible bands, whereby the position of the head and shoulders may be altered as desired without touching the corpse.

CLAMP.—Wilhelm H. E. Brande, Hamburg, Germany. This is a device in which two jaws are pivotally connected intermediate of their ends and a hanger having a pin projects into inclined slots in the upper ends of the jaws, the clamp being designed to hold small articles, such as documents, garments, etc., the weight of the clamped articles increasing the firmness of the hold.

BED FAN.—William H. Wrigley, New Orleans, La. This is a device adapted to be set up by a bedside, and operated by a treadle by an attendant, consisting of a light standard from which projects a shaft carrying a fan wheel, the height of which can be readily adjusted, while the fan may be turned to throw the breeze in any direction. The device is operated noiselessly and almost entirely without friction.

UNDERWAIST.—George D. McKay, Aurora, Ill. This is a child's underwaist, designed to be a highly elastic and comfortable garment, with a central opening down the back, the portions of the garment on the sides of the opening being connected at the shoulder, with corresponding front portions crossed by elastic bands, while a vertical band attached to one of the cross bands connects with the lower portion of the body, etc.

DESIGN FOR A PEDESTAL.—Alexander J. Windmayer, Fort Madison, Iowa. This design includes a base in the form of a column, surmounted by a globe having clouds at its base, while on the globe is a statue to represent Columbus, bearing in his right hand an uplifted sword and the left hand grasping the staff of an unfurled flag. The globe is presented so that North America appears in front.

DESIGN FOR A BOTTLE.—Joseph P. Cherry, Nashville, Tenn. This is a design for an ink bottle in which the ink is used from the bottom and the surface for evaporation is limited to the cork hole, only the pen point being passed into the bottle, so that the ink will not creep up the holder, while the bottle, if accidentally tipped over, will always stop with the hole up.

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.

NEW BOOKS AND PUBLICATIONS.

THE MEDITERRANEAN SHORES OF AMERICA—SOUTHERN CALIFORNIA. Its climatic, physical and meteorological conditions. By P. C. Remondino, M.D. Philadelphia and London: The F. A. Davis Co., publishers. 1892. Pp. xiv, 160. Price, cloth, \$1.25. Paper 75 cents.

This work is an energetic eulogy on the beauties, healthfulness and attractiveness of Southern California. It presents numerous illustrations of different localities, with statements of the meteorology and healthfulness of the country. Among the illustrations we note one of an Indian 140 years old and another of a white man 119 years old, given as tributes to California's air.

THE HYGIENIC TREATMENT OF CONSUMPTION. By M. L. Holbrook, M.D. New York: M. L. Holbrook & Co. No date. Copyright, 1891. Pp. 219. No index. Price \$2.

The nature and causes of the disease, its prevention and treatment in its earlier stages, and its treatment in more advanced stages, form three divisions of this work, including 25 chapters. Many of the chapters are very practical in their titles, and the whole work seems composed from the general standpoint of common sense treatment of this complaint. A considerable portion of the work is devoted to physical culture, from Indian club exercises, through vocal, gymnastics and horseback exercise, down to the sun bath.

MANUAL OF ASSAYING GOLD, SILVER, COPPER AND LEAD ORES. By Walter Lee Brown, B.Sc. Chicago: E. H. Sargent & Co. 1892. Pp. 533. Price, \$2.50.

The fire assay of the ores of the metals named is the real subject of this work. The author distinguishes sharply between assaying and analyzing and devotes his work to scorification and crucible assays for the most part. We notice, however, that the volumetric assay of copper and quantation of gold are given

in the appendix. A bibliography of the subject, with the list of the principal ores of the United States, is also to be found in the appendix.

THE DRAINAGE OF HABITABLE BUILDINGS. By W. Lee Beardmore. New York: Macmillan & Co. London: Whittaker & Co. 1892. Pp. x, 89. Price \$1.50.

The general subject of house plumbing is treated by this author. The work is of special value as indicating an English author's view on a subject which has received a great deal of attention in this country. A number of illustrations are given as required and a full index closes the work.

A TEXT BOOK ON RETAINING WALLS AND MASONRY DAMS. By Mansfield Merriman. New York: John Wiley & Sons. 1892. Pp. iv, 122. No index. Price \$2.

The author's belief that example is better than precept has not prevented him from producing a very useful work treating of the subject of the resistance of walls to pressure, both with regard to overturning and sliding. Throughout the work analytical methods are used for investigating the problems, without, however, having recourse to the very highest mathematics. The work, as far as it goes, will be within the scope of all algebraists.

ELECTRICITY UP TO DATE FOR LIGHT, POWER AND TRACTION. By John B. Verity. London and New York: Frederick Warne & Co. Pp. 178. Price 75 cents.

Although no date is stated on the title page, the name of the work is supplemented and to some extent given a meaning by at least the dating of the preface—November, 1891. The work is treated largely from a trade and English standpoint. The particulars of the capital and operations of a number of English companies are given, and throughout the subject of practical and business electricity from the English standpoint is the motive of the work. It is to be remarked that an undated copy of a book entitled "Electricity up to Date" is rather confusing.

SCIENTIFIC AMERICAN

BUILDING EDITION.

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TABLE OF CONTENTS.

1. Handsome plate in colors of a residence recently erected at Plainfield, N. J. Perspective views, floor plans, etc. Oscar S. Teale, architect. Cost about \$12,000. An excellent design.
2. Plate in colors of a cottage erected at Bensonhurst, Long Island, N. Y. Perspective elevations and floor plans. Cost \$3,450 complete. P. F. Higgs, architect, New York.
3. Engravings and floor plans of the Crescent Block of six houses erected on Golden Hill, at Bridgeport, Conn. An excellent design. Total cost of six houses \$55,000 complete. Messrs. Longstaff & Hurd, architects, Bridgeport, Conn.
4. A handsome residence at Babylon, Long Island, N. Y., recently erected for F. H. Kalbfleisch, Esq. Cost \$17,500 complete. Two perspective views and floor plans. H. J. Hardenberg, New York, architect.
5. A school house at Upper Montclair, N. J. Perspective view and ground plans. Cost \$12,300 complete, including heating and ventilating apparatus. Geo. W. Da Cunha, architect, New York.
6. Perspective views of several very attractive dwellings located near New York.
7. A suburban residence of attractive design erected at Lowerre, N. Y. Cost \$2,800 complete. Floor plans and perspective view.
8. The St. James' Episcopal Church at Upper Montclair, N. J. A picturesque design. Cost \$8,000 complete. Messrs. Lamb & Rich, architects, New York. Perspective view and ground plan.
9. A residence at Ludlow, N. Y. Perspective and floor plans. Cost \$8,500 complete.
10. A comfortable summer residence at Asbury Park, N. J. Perspective and floor plans. Cost \$6,250 complete.
11. Proposed railway tower for the Columbian Exposition at Chicago.
12. Sketch of the new City Hall, Philadelphia.—A magnificent structure.
13. Miscellaneous contents: Cork pavement.—Best treatment of hardwood floors.—The twin staircase, illustrated.—The electric stair climber, illustrated.—The sick room temperature.—Stair builder's goods, illustrated.—Ornamental hardwood floors.—Large winding partition doors.—The "Alberene" laundry tub.—House heating and ventilation.—Nolan's hot water and steam heater, illustrated.—The crushing resistance of bricks.—An excellent motor, illustrated.—A successful hot water heater, illustrated.—The lacquer tree.—A self-retaining dumb waiter, illustrated.—Architectural wood turning, illustrated.

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