HORSE HAY FORK .- James Dampman, Lebanon, Pa.- This invention relates to improvements in locking devices for horse hav forks, and consists in a sliding block on the elevating rope, having a fixed and a pivoted jaw for engaging and holding the upper end of the tine not connected to the hoisting rope: the said upper end being provided with an eve which, when brought up to the locking position, will receive the hooked end of the pivoted jaw, which is then closed up against the fixed jaw by pressing the shank into the space between the sides of the movable block, where it is secured by a spring catch having a trip cord connected to its free end, and passing out laterally through a hole in one of the sides of the block, so that when pulled it will disengage the spring catch, and trip the holding jaw, to permit the opening of the tines of the fork for discharging.

AUXILIARY PROPULSION OF VESSELS .- John Bourne, London, England. The object of this invention is to provide a propelling mechanism for sailing ships in calms or light winds, which mechanism, while of average efficiency, shall be capable of being readily put into or out of operation, so that it will, when not used, leave the ship in all other respects the same as if it had not been applied.

HOLLOW GRATE BAR.-George E. Turner, Chicago, Ill.-This invention 

to fold together upon the wick, so as to completely cover it when turned down, and thus extinguishes the flame; said jaws being readily separable by the wick as it is turned up by the ratchet wheel to be lighted.

STEAM ENGINE.-C. C. Waggoner, St. Johns, Ohio.-This invention con-

PNEUMATIC CENTRIFUGAL POWER REGULATOR.-Charles A. Sullivan, Starkville, Miss.—This invention relates to means for regulating the 98,219.—BOOTJACK.—S. P. Babcock, Adrian, Mich. evolution of a spring driver, and to preventing a useless and too rapid 98,220.—HARVESTER.—L. M. Batty, Canton, Ohio. expenditure of its power. The invention consists in certain combinations 98,221.—CHURN DASHER.—F. Bosom (assignor to himself and and arrangements of auxiliary mechanism to restrain the actuating power, which, together, constitute the pneumatic centrifugal power regulator.

98,222.—PROPELLING APPARATUS.—John Bourne, No. 1 Northern Property Ratts Bosom (Batty Canton, Ohio. 98,222.—PROPELLING APPARATUS.—John Bourne, No. 1 Northern Property Ratts Bosom (Batty Canton, Ohio. 98,222.—PROPELLING APPARATUS.—John Bourne, No. 1 Northern Property Ratts Bosom (Batty Canton, Ohio. 98,221.—Churn Dasher.—F. Bosom (Batty Canton, Ohio. 98

98,223.—WATER WHEEL.—McK. A. Brooks, La Porte, Ind. 98,224.—FINISHING CASE FOR RAILWAY BARS.—John Burt, Detroit, Mich. 98,225.—MACHINE FOR LAYING OUT SASH AND BLIND.—G.W. 108,225.—MACHINE FOR CARRIAGE SPRING.—Daniel Shockey, Waynesborough, Pa.—This invention relates to a spring apparatus in which the cross bars on which the

the axies, and springs are interposed to check the downward movements of such cross bars. The invention consists in interposing springs to check the upward movements of such guide bars.

KNITTING MACHINE—John Kent, New York city.—This invention relates to a new and usefulimprovement in machines for knitting cotton, linen, and woolen goods or garments; and consists in 'attaching to the ordinary knitting machine certain mechanisms whereby the goods or garment of being seamed or sewed together, while, in fact, the goods are formed enlands of the control of t tire, and with unbroken thread.

COMBINED SEEDER AND CULTIVATOR.-Clark Alvord, Westford, Wis. This invention relates to a seeder, and consists of a seeder wheel placed in front or rear, and, for the most part, outside the seed box, but entering partially within the same, and receiving in its circumferential V-shaped groove a portion of the seed, which portion it carries under and out, and discharges; the circumferential groove being provided with transverse partitions, so constructed as to carry the seed before them until the proper moment, and then discharge it over the stop.

Mode of Curing Cheese and Preserving the same when Cutiing.—Artemas Holbredge, West Burlington, N. Y.—This invention relates to an improved mode of putting up, curing, packing, and preserving cheese where by it is designed to improve the quality of the cheese, render it capa ble of preservation a greater length of time, economize in space in pack ing, storing, and shipping, and to economize and preserve it in cutting for The invention also comprises an improved mode of ascertaining and cutting off the exact amount required.

SASH AND BLIND MARKER.-George W. Burton, Bordentown, N. J.-This 

WHEEL FOR VEHICLES .- Horatio Keys, Terre Haute, Ind .- This invention relates to a new manner of securing the spokes in the hub of a wheel, with an object of obtaining a firm hold and of facilitating repair in case one or more of the spokes should be broken.

RAILROAD CHAIR.-Loyst J. Smith, Whitehall, N. Y.-This invention re lates to a new suspension railroad chair, which is so constructed that it will constitute a durable and reliable connection of railroads and a noiseless support of the same.

## NEW BOOKS AND PUBLICATIONS.

CIVIL ARCHITECTURE. Being a Complete Theoretical and and Practical System of Building, containing the Fundamental Principles of the Art. By Edward Shaw, Architect, to which is added a Treatise on Gothic Architecture, etc., by Thomas W. Silloway and George M. Harding, Architects. The whole Illustrated by One Hundred and Two Plates, finely engraved on copper. Eleventh edition. Philadelphia: Henry Carey Baird, Industrial Publisher, 406 Walnut street. Price, by mail, free of postage to any part of the United States, \$10.00.

work of this character which can reach eleven editions scarcely needs other evidence of its worth. As its title imports, it is not a mere collection of designs of little value to any but the finished designer, but a complete elementary treatise, beginning at the foundation of the science; and after taking its reader by pleasant and easy gradations through the first principles, teaching him how to apply them in actual work.

The present edition is enriched by the substitution of twenty new plates for those less in keeping with modern improvements, four of which are by Pugin, one of the best English authors on architecture. The whole work has been thoroughly and carefully revised, and, as it now stands, forms the best American work on the science of architecture extant.

## ILLUSTRATED REGISTER OF RURAL AFFAIRS.

This annual, published by Luther Tucker & Son, Albany, N. Y., contains 150 illustrations and a valuable assortment of useful hints and information for farmers and housewives. The price is only 30 cents.

## FLORAL GUIDE.

James Vick, of Rochester, N. Y., has issued a very beautiful illustrated catalogue of flowers. The engravings are exquisitely done.

THE Phrenological Journal, for January, is received, with the usual num ber of graphic sketches of character, portraits of distinguished men, and other entertaining features, which render it one of the most readable of American publications. The present number is peculiarly rich, and by the courtesy of its publishers, it furnished us last week with a fine portrait of M. Lesseps, and a sketch of his life, which is, at this time, of especial interest in connection with the recent construction of the great Suez

THE INSURANCE MONITOR, C. C. Hine editor and proprietor, 176 Broad way. New York, is one of the ablest monthlies devoted to a specialty published. To all interested in insurance matters, directly or indirectly, it is a sine qua non, and its miscellany cannot but prove acceptable to the intelligent general reader.

# Official List of Latents.

### Issued by the United States Patent Office.

FOR THE WEEK ENDING DEC. 28, 1869.

Reported Officially for the Scientific American

SCHEDULE OF PATEN'	r office fees:		
On each caveat			\$1
On filing each application for	r a Patent (sevente	en vears)	\$1
On issuing each original Pat	ent	,,	82
On appeal to Commissioner	of Patents		
Un application for Reissue.			
On application for Extension On granting the Extension.	n of Patent		\$5
On granting the Extension.			\$5
: On Illing a Disclaimer			
On an application for Design	n (three and a half	vears)	\$∄
On an application for Design	n (seven vears)		
On an application for Desig	n (fourteen years)		\$3
In addition to which there	are some small reve	en ue-stamp taxes. Re	sident
of Canada and Nova Scotia	pay \$500 on applicat	ion.	
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For copy of Claim of any Pa	tent (vened writhin 20	1667FF 9	\$1
I wanter the constitution of the same and	Dr. Flo Enth for LE 11. Lettebre 110	31	

97,970.—BASE-BURNING FIREPLACE HEATER. — Samuel B. Sexton, Baltimore, Md. Dated December 14, 1869; antedated November 23, 1869.
98,216.—STEAM ENGINE GOVERNOR.—C. D. Allen, New York - Samuel B.

sists in a novel and peculiar mechanism for shifting the valves, whereby the operation may be performed in one sixteenth of the time of the stroke.

Salling Mandated Dec. 24, 1869.

Salling Apparatus. — E. Averill, Sacramento, Cal.

98,218.—WATER ELEVATOR.—Jabez K. Babcock, Shortsville,

thumberland Terrace, Regent's Park Road, England. 98,223.—WATER WHEEL.—McK. A. Brooks, La Porte, Ind.

98,231.—PLANING MACHINE.—G. W. Cole, Canton, Ill. 98,232.—PISTON AND PISTON PACKING.—O. Collier, Sacramen

10, Cal.
98,233.—SIGNAL FOR RAILWAYS.—James P. Coulter, Bloomington, Ill.
98,234.—BALL-AND-SOCKET JOINT.—R. R. Craig and J. Craig,
Nevada, Cal.
98,235.—SPUR.—Seth Craig, Philadelphia, Pa.
98,236.—HAY FORK.—Jas. Dampman (assignor to W.A. Moyer),
Lebanon, Pa.

98.237.—SKATE.—C. T. Day, Newark, N. J.

98,237.—SKATE.—C. T. Day, Newark, N. J.
98,238.—STEAM-BOILER FURNACE.—R. S. Dillon (assignor to himselfand G. H. Russell), Detroit, Mich.
98,239.—CHARCOAL FURNACE.—W. T. Downs, St. Louis, Mo. Antedated Dec. 11, 1869.
98,240.—HOOP-CUTTING AND DRESSING MACHINE.—F. Ellis assignor to himselfand J. S. Ellis). Sylvania, Ohio.
98,241.—STEERING APPARATUS.—Edward Fox (assignor to himselfand J. J. Walton), New York city.
98,242.—TRUSS FOR VESSELS.—Charles Furbish, Bucksport, Me.

Antedated Dec. 17, 1869. 98,247.—HITCHING POST.—John Gibson, Jr., Albany, N. Y.

Antedated Dec. 18, 1869.

98,248.—RAILROAD-CAR HEATER.—John Gibson, Jr., Albany, -Securing Legs to Stoves.-John Gibson, Jr., Alba-

98,249.—SECURING LEGS TO STOVES.—John Gibson, Jr., Aluany, N. Y.
98,250.—HEAD REST.—D. R. V. Goetchins, Little Falls, N. Y. 98,251.—Shovel Plow.—Frank Goss, Wexford, Pa. 98,252.—Combined Seed Sower and Harrow.—A. D. Gray,

Chariton, Iowa. 98,253.—Paper Feeder.—J. H. Gray and W. B. Turner, St.

Anthony, Minn.

98,254.—REGISTER FOR SPINNING JACK.—Henry Greenwood, Gilbertsville. Mass.

98,255.—APPARATUS FOR RAISING AND LOWERING CHANDELIERS AND LAMPS.—H. S. Hall, Boston. Mass.

98,256.—HAIR CUTTER.—G. A. Harley, New York city.

98,257.—HYDRAULIC NOZZLE.—Aaron Harris, Laporte, Cal. 98,258.—Horse Hay Fork.—Elam Harter, Dowagiac, Mich. 98,259.—GRAPPLING HOOK.—Elam Harter, Dowagiac, Mich.

98,260.—ANTI-FRICTION JOURNAL BEARING FOR HOISTING MACHINES, ETC.—R. G. Hatfield, New York city.
98,261.—CURTAIN FIXTURE.—Rufus E. Hitchcock, Waterbury,

Conn. 98,262.—Curing Cheese.—Artemas Holbredge, West Burlington, N. Y.
98,263.—DRIED-BEEF CUTTER.—C.J.Holmes and D.C. Holmes,

Stafford Springs, Conn.

98,264.—LAMP.—John Horton (assignor to B. B. Schneider), New York city. 98,265.—Boring and Mortising Machine.—John Humphrey,

98,266.—Grain Smutter, Scourer, and Separator.—J. C. Hunt, Terre Haute, Ind., and W. W. Ingraham, Chicago. Ill. 98,267.—Reversible Chair. — William H. Joeckel, New

York city. 98,268.—PROPELLER WHEEL.—J. A. Joyner, New York city. 98,269.—ROTARY TABLE WAITER.—A. N. Kellogg, Chicago,

98,270.—Machine for Grinding Glass Jars.—A. W. Kelly and J. B. Samuel, Philadelphia, Pa.

98,271.—Button.—John Kenmuir, Leavenworth, Kansas.

98,272.—Knitting Machine.—John Kent, New York city.

98,273.—Carriage Wheel.—Horatio Keys, Terre Haute,

98.274.—Bob Slep.—John Killefer, West Richfield, Ohio.

98,275.—PULLEY BLOCK.—C. H. Knapp, Lawrenceville, Pa. 98,276.—TABLE.—H. F. Learnard, Mazo Manie, Wis. 93,277.—Brake for Carriages.—Benjamin F. Leet, Dayton,

Nevada.

98,278.—METALLIC CARTRIDGE.—Chas. D. Leet. Vienna, Austria, and B. B. Hotchkiss, New York city. Antedated December 15, 1889. 98,279.—Steam Pump.—J. A. Lidback (assignor to himself

98,279.—STEAM FUMP.—J. A. LIGIDACK (assignor to minisen and Henry Baker), Portland, Me. 98,280.—AXLE GAGE.—Gottlieb Luedke, Princeton, Wis. 98,281.—HARROW.—C. R. Macy, Bedminster, N. J. 98,282.—CHARCOAL COOKING FURNACE.—Angelina Madison,

Cincinnati, Ohio. Antestated Dec. 15, 1-69.

98,283.—TRACE FASTENING.—W. W. Mallery and C. H. Sage, 98,366.—Pump.—Isaac N. Forrester, Bridgeport, Conn. Copenhagen, N. Y.

98,284.—HARVESTER RAKE.—F. H. Manny, Rockford, Ill. 98,285.—APPARATUS FOR BLEACHING AND DEFECATING CANE JUICE.—J. C. Marsh (assignor to G. R. Marsh), Alexandria, La. 98,286.—Welt Knife.—Elezer May, Natick, Mass. 98,287.—Street Box for Gas Pipes.—Emerson McMillin, Inches Obja.

Tronton, Ohio.

98,288.—CHURN.—A. H. McWaine, Shickshinny, Pa.

98,289.—WATCHMAN'S TIME DETECTOR.—A. Meyer, Stuttgart, Germany, assignor to Theodor Hahn.

98,290.—BAR OF HORSESHOE BLANKS.—James Montgomery,

98,299.—Bar of Holossias Sing Sing. N. Y. 98,291.—Spider.—Elias Nashold, Rockford, Ill. 98,292.—Hay Spreader.—Eben W. Nichols, Worcester,

Mass.
98,293.—DRAFT AND SPARK EXTINGUISHING DEVICE FOR STEAM GENERATORS.—J. S. Patric and Lewis Patric, Rochester, N. Y. Antedated Dec. 24, 1869.
98,294.—Tube Cutter.—John Peace, Camden, N. J.
98,295.—Shipwrights' Clamp.—Wm. H. Phillips, Bridge-

town, N. J. 98,296.—ELECTRICAL ANNUNCIATOR FOR HOTELS.—Henry B. 98,296.—ELECTRICAL ANNUNCIATOR FOR HOTELS.—Henry B. Porter, Chicago, III. 98,297.—PULVERIZING CHASER.—Theophilus Pugh, Chicago, III. Antedated Aug. 7, 1859.
98,298.—SOFA AND TABLE.—Wm. Reichenbach and Frietrich Roschdiantzky, Chicago, III.
98,299.—LOCK FOR SATCHELS AND CARPET BAGS.—William Roemer, Newark, N. J.
98,300.—BUTTON AND PIN FOR CARPET BAGS, ETC.—Wm. Roemer, Newark, N. J.

98,301.—Base-Burning Stove.—J. J. Roeper, Philadelphia,

98,302.—Propelling Boats.—D. J. Ross, Havre de Grace, 98,303.—HARVESTER CUTTER.—Jacob Schneider, Canton,

98,304.—CHEWING GUM.—Wm. F. Semple, Mount Vernon,

Ohio.

98,305.—PI.ANE FOR SHAVING WHALEBONE.—J. A. Sevey,
Boston, Mass.

98,306.—PERPETUAL BRICK BURNER.—Zachariah Shaw, Ypsilanti, Mich.

98,307.—CURTAIN FIXTURE.—John Shorey and F. H. Butler
(assignors to said Shorey and John Griffith), Lowell, Mass. Antedated
Dec. 18, 1869.

98,308.—MACHINE FOR FOLDING CLOTH.—Augustus Simpson (assignor to Woonsocket Iron Foundery), Woonsocket, H. 1.

98,309.—SPINDLE FOR SPINNING SILK.—George Singleton,
(assignor to himself, J. F. Preston and J. N. Leonard), Rockville, Conn.

(assignor to himself, J. F. Preston and J. N. Leonard), Rockville, Conn., Robert Singleton and E. K. Rose, Paterson, N. J., and Leonard & Lockhart, Chicago, Ill.

98,310.—APPARATUS FOR PACKING STUFFING BOX.—D. L.

98,310.—APPARATUS FOR PACKING STUFFING BOX.—D. L. Smith, Montana, Iowa.
98,311.—HAMES AND COLLARS.—J. G. Smith, Oregon, Wis., assignor to himself and F. A. Vichery, Mason City, III.
98,312.—RAILWAY RAIL CHAIR.—L. J. Smith (assignor to himself and E. H. Gardi :cr), Whitchall, N. Y.
98,313.—SEED PLANTER.—J. L. Strait, Cooksville, Miss.
98,314.—PNEUMATIC CENTRIFUGAL POWER REGULATOR.—C. A. Sullivan Starkville Miss

C. A. Sullivan, Starkville, Miss. 98,315.—HAMES FASTENER.—W. H. Tillou, Le Roy, N. Y. 98,316.—BREECH-LOADING ORDNANCE.—E. H. Tobey, Chica-

98,316.—BREECH-LOADING ORDNANCE.—E. H. 100ey, Unicago, III.
98,317.—MACHINE FOR QUARRYING AND DRESSING STONE.
-Frederick Townsend, Albany, N. Y.
98,318.—MEAT CUTTER.—G. P. Treulieb, Baltimore, Md.
98,319.—WATER WHEEL.—R. W. Trude, Clearfield Bridge,

98,320.—Sun Dial.—Ludwig Ignatius Trueg, St. Vincents, 98,321.—Hollow Grate Bar Frame.—G. E. 'Turner, Chicago, III.
98,322.—Governor Valve.—Thomas Warren, Flint, Mich.
98,323.—Horseshoe.—Thos. Waterhouse, West Gorham, and C. F. McKenney, Saco, Me.
98,324.—WHEELBARROW.—J. G. Weir, Pittsburgh, Pa.
98,325.—Bed Lounge.—B. C. Wilkins, Elgin, Ill.
98,326.—Cultivator.—J. A. Wilson, Hamburg, Iowa.
98,327.—Card Holder.—S. E. Adamson, Philadelphia, Pa.
96,328.—Eaves Trough.—Wm. Adel, Rockton, Ill.
98,329.—Stone Separator.—Henry Aiken, Philadelphia,

Pa. 98,330.—TURBINE WATER WHEEL.—O. N. Angell and A. J.

98,330.—TURBINE WATER WHEEL.—O. N. Angell and A. J. Angell, Providence, R. I.
98,331.—MACHINE FOR THE MANUFACTURE OF SPOKED, WHEELS.—E. A. Archibalt. Methuen, Mass.
98,332.—OIL CAN.—A. N. N. Aubin, Montreal, Canada.
98,332.—PEAT MACHINE.—Amie N. N. Aubin, Montreal, Canada.

98,334.—SHINGLE MACHINE.—Joseph Baker, Sheridan, assigner to himself and R. C. Hathaway, Ionia, Mich. Antedated Dec. 9, 1899.

98,335.—Combined Harrow and Seed Sower.—E. A. Barton, Boonville, Ind.
98,336.—ENAMELING IRON AND STEEL.—Benj. Baugh, Chad-

wick. near Bronsgrove, England. 98,337.—HAND CULTIVATOR.—Luman L. Beach, Mount Upton, 98,338.—Buttons.—C. Becker and Morris Wise, New York

98,339.—Spring Bed Bottom.—C. H. Berry, East Somerville, 98,340.—Tobacco Cutter.—Seymour A. Bostwick, Laconia,

98,341.—Combined Cotton Scraper and Cultivator.— B. F. Bowling, Holly Springs. Miss. 98,342.—Crossing Signals for Railways.—C. M. Bow-

98,342.—CROSSING SIGNALS FOR RAILWAYS.—C. M. Bowman, Washington, D. C.

98.343.—APPARATUS FOR FILTERING VOLATILE LIQUIDS.—Washington Boyce, Tuscola, Ill. Antedated Dec. 17, 1869.

98,344.—KING BOLT FOR RAILWAY CAR TRUCKS.—James M. Bucklin, St. Louis, Mo.

98,345.—REED ORGAN.—Riley Burdett, Chicago, Ill.

98,346.—GRAIN SEPARATOR.—Henry K. Burkholder, Clear Spring, Pa.

98,347.—Automatic Fan.—C. F. Burleigh, Tuftonborough,

98,347.—AUTOMATIC FAN.—C. F. Burieign, Tuitonoorougn, N. H.
98,348.—LAWN MOWER.—Luke Chapman (assignor to himself and the Collins Company), Collinsville. Conn.
98,349.—BUTTOMHOLE CUTTER.—D. G. Chase, Boston, Mass.
98,350.—CORN MARKER.—J. T. Corbitt, Des Moines, Iowa.
98,351.—CHILDREN'S CARRIAGE.—B. P. Crandall, New York

98,352.—SIGNAL BOX MECHANISM FOR FIRE ALARM TELE-GRAPH.—M. G. Crane, Newton, Mass., assignor to J. M. Gardiner, St Louis, Mo. 98,353.—PISTON LIQUID METER.—Robert Creuzbaur, Brook-

98,353.—PISTON LIQUID METER.—MODEL CICLESCA, 2019, N.Y.
98,354.—PLATING IRON FOR THE MANUFACTURE OF HINGES, ETC.—J. J. Crooke, Southfield, N.Y., and Lewis Crooke, New York city.
98,355.—STUMP EXTRACTOR.—C. W. Dawson, Paynesville,

98,35%,--Apparatus for Floating Ships over Sand Bars.

198,355.—APPARATUS FOR FLOATHING SHIPS OVER SAND DARS.

-E. M. Deey, New York city.

98,357.—TOBACCO PRESS.—S. P. Dick and D. R. Musselman Louisville, Ky.

98,358.—CHOKE-BLOCK FOR RAILWAYS.—John Donaldson, George Reavely, and James Francis, Galashiels, Scotland.

98,359.—BEDSTEAD AND LOUNGE.—Jacob Dourson, Columbus Obio

98,360.—EXTENSION TABLE ROLLER SLIDE.—Jacob Dourson,

Columbus, Ohio.
98.361.—QUILTING FRAME.—A. E. Ellis, Friendsville, Ill.
98.362.—WAITER.—Obed Fahnestock, Lebanon, Ind.

98,363.—MACHINE FOR MILLING KNIFE-EDGES OF SCALE-BRAMS.—Henry Fairbanks, St. Johnsbury, Vt. 98,364.—MANUFACTURE OF SHEET-IRON.—William Fields, Wilmington, Del. 98,365.—SASH CORD GUIDE BLOCK.—J. M. Ford, Brooklyn, N.Y.