### ENGINEERING INVENTIONS.

A smoke consuming apparatus for steam boilers has been patented by Mr. Alfred Don, of 21 Cooper Street, Redfern, Sydney, New South Wales, Australia. This invention covers a novel apparatus for projecting a jet of combined air and steam into the fire box, making an increased combustion, and to consume and disperse the smoke in the fire box.

Mr. Louis A. Rudisill, of Charlotte, N. C. It has an its weight. armed link-securing wheel, with a bolt movable transversely across the path of the wheel, in combination with a drawhead, spring, and other novel features, making a simple and strong construction, in which it is not necessary to slack up the cars to uncouple.

A central rail fastening has been patented by Mr. Thomas A. Davies, of New York City. Combined with rails united by fish plates are opposing angle plates located centrally of the rails in engagement with the web and base, a fastening device passing through the web and plates, with other novel features, to prevent creeping of the rails, and requiring only a reduced and simple fish plate.

#### MISCELLANEOUS INVENTIONS.

A lubricant has been patented by Mr. Edward C. Leahy, of Halifax, Nova Scotia, Canada. It consists of cocoanut oil, lard, tallow, plumbago, yarn waste, tin crystals, carbonate of soda, and chloride of sodium, combined in certain specified proportions.

A wagon has been patented by Mr. Edward M. Allen, of Stafford, Md. Combined with front and rear axles and a perch connecting them are body supports pivoted on the axles, novel draught devices, with a particular form of brake construction

A flying machine has been patented by Mr. William Beeson, of Dillon, Montana Ter. It has amainsail and a tail or backsail, both supported from a board which ranges fore and aft under the mainsail, with a pendulum bar to which is affixed a support for the aeronaut.

A burglar alarm has been patented by Mr. William H. Reiff, of Philadelphia, Pa. It is a bell rung by a power, a detent for stopping the power mechanism, and pivoted trip which is set in position for engagement by an opening door, the latter causing the trip to fall and permitting the alarm to sound.

A flour bolt has been patented by Mr. John M. Cook, of Baltimore, Md. It is adapted to be run with equal facility in either direction, causing the stock to be delivered upon the cloth on both sides of the axis over an extended area, and is provided with a set of knockers for jarring the cloth and dislodging adhering stock simply and effectively.

A lamp supporting attachment has been patented by Mr. Nelson Guyer, of Lima, Ohio. A post or standard adapted for connection to a table has a tube fitted upon it, with an arm supporting a lamp bracket, and a second arm bracing the first arm and carrying pins and hooks, making a lamp support especially adapted for sewing machines or tables.

The manufacture of gas forms the subject of a patent is sued to Mr. William W. Dashiell, of Bergen Point, N. J. Combined with a gas apparatus are heating devices for an air, steam, and oil supply, the oil and steam being each supplied through a single conductor, and equally distributed in a generator over the fire.

A window frame and sash have been patented by Mr. John E. Jones, of New York City The sash has at its outer edges straight surfaces with inclined rabbets facing the window frame, combined with tapering strips secured to the window frame making a packed window frame and sash designed 17 more particularly for railway cars.

A spring vehicle has been patented by 18. Pictures of the great Lumber Raft recently lost at Messrs. Jonathan G. Huff and Lemuel H. Huff, of East Bend, N. C. This invention refers to light vehicles of the "side bar" description, being intended to relieve them of injurious strains, render them lighter, more durable, and easier riding, and to simplify and cheapen their construction.

A printing machine has been patented by Mr. Charles F. Howe, of Greenleaf, Kansas. It is a platen machine, for doing general newspaper printing, the ink rollers traveling forward and back on a main frame, the paper being carried by endless belts, and the invention covering various novel features of construction and the arrangement of parts.

A button attaching machine has been patented by Mr. Harrison Tone, of Denison, Texas. It is for securing the ordinary four-holed metal button to pants, and has different sizes of dies in combination with a plunger, the dies having a flange and central projection, with parallel oblique curved recesses, a washer being ordinarily used in connection with the button.

A washer cutter has been patented by Mr. Charles Wunderlich, of Washington, Mo. This invention covers a novel construction and arrangement of parts in a device in which the knives are removable for sharpening, and each is vertically adjustable to regulate the depth of cut according to the thickness of leather, rubber, or other material from which the disk or washer is to be cut.

A safety inkstand has been patented by Mr. Louis B. Prahar, of Brooklyn, N. Y. It is an improvement on a former patented invention of the same inventor, there being combined with the outer and inner casings and their covers a circularly bent spring with fine engravings. Ulustrating the most interesting plate between the casings, with arms extending from its upper edge, so that there will be no liability to

A draft, check, or other money order or instrument forms the subject of a patent issued to Mr. William T. Doremus, of Flatbuch, N. Y. It is made with spaces, and provided with numerals and words, whereby the instrument can be filled out in such

manner as to prevent it from being raised, the invention being an improvement on a former patented inven tion of the same inventor.

A vehicle wheel has been patented by Mr. G. L. Herrmann Schneidewind, of Altona, Prussia Germany. It is of the class known as "cycloid wheels," wherein the weight is distributed at various points on the periphery, so that, when the wheel is traveling A car coupler has been patented by in the direction of its revolution by the distribution of backward or forward, its momentum will be increased

> A can cover and clamp has been patented by Messrs. Edmund R. Bristol and Edward C. Gran, of Jordan, Minn. Combined with a can cover having a recess, and a top cross bar held over the cover, is an adjustable screw or pin fitted to the cross bar and entering the recess in the cover when the cross bar is locked, making a simple and inexpensive shipping can or package.

# SCIENTIFIC AMERICAN

### BUILDING EDITION

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  - plied, finished, and decorated.—Brick as a Building Material.—The Doorway of San Petronio at Bologna.-How I Build an Ice House,-Fireproof Wood.-Flow of Water through Pipes.-Classification of Styles.—Recent Discoveries at Pompeii.-Pressure at which Lead Pipes Burst .-New Materials and Inventions.—French Plaster. New Method of Waterproofing Brick Walls.-Building Prospects.-Importance of Carpentry.-Permeability of Building Materials.—Compost for Soleb, Ethiopia.—The Architect of Rome.—Worth- Robert Aitchison Perforated Metal Co., Chicago, Ill. "Fireproof" Buildings. - Compound for For the latest improved diamond prospecting drille Patching Stone.-The Chair of Queen Hatasu, illustrated.-The E. N. Gates System of Hot Water Chicago, Ill. Heating, illustrated.—How to Braze Brass to Copper.—An Agate Forest in Arizona.—Pratt's Blind Opener, illustrated.—Drawing Instruments.—The Cortright System of Metal Plate Roofing, with illustrations. - Adjustable Tools, illustrated. - Art Metal Work, with illustration.

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Greenwood & Co., Rochester, N.Y. See illus. adv., p.28. Pattern letters and figures to place on patterns for

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January 24, 1888.

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