

RECENTLY PATENTED INVENTIONS. Engineering.

STEAM ACTUATED VALVE.—Henry Breitenstein, Laramie, Wyoming. For direct acting duplex engines this inventor has provided an improvement designed to utilize the steam to the fullest advantage, the construction being simple and durable.

STEAM TRAP.—Henry Creamer, New York City. This is a device of simple and durable construction for automatically conducting water of condensation from engines, steam heating systems, etc., back to the boiler.

LIQUEFYING GAS.—Francis B. Deane, Lynchburg, Va. To liquefy gas by compression, this inventor has provided a combined hydrostatic press and pump especially adapted to do the work effectively and economically.

VITRIFICATION FURNACE.—Peter K. Sommer, Mannheim, Germany. This furnace comprises a set of gas burners in an inner burning chamber lined with refractory material and surrounded by an outer cylinder for the combustion gases, there being a second outer chamber through which the air passes to the gas burners.

Railway Appliances.

CAR COUPLING.—Battie K. Richardson, Nashville, Tenn. This is a coupling of the side latching type, of simple and durable construction, and adapted for automatic coupling with a similar coupling on another car, while the uncoupling may be effected from the sides or top of a car.

TRACK SANDING APPARATUS.—Oliver P. Murry and James V. K. Walker, Portsmouth, Va. According to this invention, a valve operating in unison with the engineer's brake valve controls an air blast from the main air reservoir to the sand discharge pipe.

CATTLE CAR.—Ferdinand E. Canda, New York City. The protection of the feed and water troughs of a cattle car against injury when the car is loaded with general freight is the design of this improvement.

TRAIN ORDER AND SIGNALING DEVICE.—Leonard T. Crabtree, New London, Wis. This is an improvement upon formerly patented inventions of the same inventor in devices for railroads using the block signal, and embracing mechanism for the control of moving trains, embodying also a train signaling device and a co-operating train order annunciator.

Mechanical.

CARPENTER'S AND JOINER'S SQUARE.—Solomon H. Bretz, Battle Creek, Mich. This is a composite tool in which the limbs are jointed together and graduated on arcs of circles defined by two undercut opposite shoulders on one limb, and bevel edged and mating curved flanges on the other limb.

WIRE SWAGING MACHINE.—Albert De M. Ramacciotti, New York City (executor of Francis

Ramacciotti, deceased). This is a machine especially adapted for swaging wire strings for musical instruments, the machine being adjustable to operate upon strings of various lengths and of high temper, leaving the strings at their flattened surfaces smooth and flawless.

MILLSTONE DRESS.—Joseph H. Brown, Madison, Ga. According to this improvement the millstone has main furrows and auxiliary furrows extending to the skirt of the stone, and at the center the face is sloped slightly toward the eye or draft circle.

Miscellaneous.

WHEELED SCRAPER.—William Ackerman and Albert A. Hasselquist, box No. 532, Elgin, Ill. This is a machine carrying a scoop, and adapted for scraping roads or similar work, the scoop being entirely under the control of one man, who may also drive the team by which the machine is drawn along.

WAGON DUMPING DEVICE.—Charles H. Pearson, Smithshire, Ill. This inventor has provided improved means for elevating a loaded wagon and the subsequent dumping discharge of the load automatically.

PROPELLER.—Martin Davies, Jersey City, N. J. This inventor has provided an improved means of securing propeller blades to the hub or end of the screw shaft.

PNEUMATIC VALVE.—Frederick Fichter, Rockaway, N. J. This is an improvement especially adapted for use in connection with inflated cushions, pneumatic tires, etc.

DRUGGIST'S STILL.—Charles R. Beck, Baltimore, Md. The conical condensing hood of this apparatus has at its apex a filling opening, and from base to top is surrounded by a water jacket, with inlet and outlet openings near the top and bottom to permit water circulation, while there is a base trough and a supplemental trough above it within the hood.

ENVELOPE OR STAMP MOISTENER.—Henry A. Fry, Chicago, Ill. This is a simple device to be conveniently worn on the thumb, to facilitate the rapid and efficient moistening of stamps and envelopes.

CLAMP JOINT.—Frances Higbie, Brooklyn, N. Y. This is an extremely simple device, comprising a vertical standard or support, in the form of a rod, on which a bracket is conveniently adjustable up or down, while a base piece in horse-shoe pattern has at one edge a neck with an opening adapted to receive the lower end of the vertical standard, with which it is engaged by a clamping arm.

FAN.—Edward Ross, Brooklyn, N. Y. This is an improvement in fans having a folding web adapted to open in circular form, and the invention describes a simple and durable fan, which can be readily opened and closed and locked in either position.

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 LATIN LETTER OF COLUMBUS. Printed in 1493, and announcing the discovery of America, reproduced in facsimile, with a preface. London: Bernard Quaritch. 1893. Pp. vi, 8. Price 30 cents.

HARIOT'S NARRATIVE OF THE FIRST PLANTATION OF VIRGINIA IN 1585. Printed in 1588 and 1590, reprinted from the edition of 1590 with De Bry's engravings. London: Bernard Quaritch. 1893. Pp. vi, 46, 25 plates. Price 60 cents.

THE SPANISH LETTER OF COLUMBUS WRITTEN BY HIM ON FEBRUARY 15, 1493. To announce the discovery of America. Reproduced in facsimile from the unique copy of the original edition. (Barcelona, April, 1493.) With a translation and introduction. London: Bernard Quaritch. 1893. Pp. xiv, 18. Price 40 cents.

EXPERIMENTS ON AIR. PAPERS PUBLISHED IN THE PHILOSOPHICAL TRANSACTIONS. By the Hon. Henry Cavendish. Edinburgh: William F. Clay. London: Simpkin, Marshall, Hamilton, Kent & Co., Limited. 1893. Pp. 52. No contents, no index.

LES MERVEILLES DE L'EXPOSITION DE CHICAGO. By N. Melnikoff. Odessa, Russia: 32 Rue Catherine. 8vo. Pp. 96, illustrated.

SCIENTIFIC AMERICAN BUILDING EDITION. DECEMBER, 1893.—(No. 98.) TABLE OF CONTENTS. 1. Elegant plate in colors showing a colonial residence at Stamford, Conn., recently erected for C. Cooper Clark, Esq., at a cost of \$9,500 complete.

Business and Personal. The charge for insertion under this head is One Dollar a line for each insertion; about eight words to a line. Advertisements must be received at publication office as early as Thursday morning to appear in the following week's issue.

Notes & Queries

HINTS TO CORRESPONDENTS. Names and Address must accompany all letters, or no attention will be paid thereto. This is for our information and not for publication. References to former articles or answers should give date of paper and page or number of question. Inquiries not answered in reasonable time should be repeated; correspondents will bear in mind that some answers require not a little research, and, though we endeavor to reply to all either by letter or in this department, each must take his turn.