Scientific American.

GREAT ECONOMY IN WATER POWER.

EFFEL'S DOUBLE TURBINE WATER WHEEL--Best Wheel in Existence. --Manufactured JAS, LEFFEL & CO., at Springfield, Ohio, and New ven, Conn. New Illustrated Pamphlet sent free on ap-

naven, Conn. New Illustrated Pamphlet sent iree on ap-plication. Our wheels are as well adapted to low as high falls. Some of them are running successfully under three feet fall.

Some of them are running successfully under three feet fall. Danville, Vermillion Co., Ill, Aug. 16, 1867, Mesrs. Jas. Leffel & Co., Springfield, Ohio,-Gents:-In answer to your inquiries of the 13th inst., we would say, your wheel, that we are now running in our factory (In the place of the overshot wheels), is only six inches in diameter, and one inch wide, and draws two and a quarter square inches of water. We have never used over one-third of a gate, or about three-quarters of a square inch, to erive all our machinery, our fall being forty (40) feet. Our overshots were each tweatyfeet in diameter, placed on eabove the other, and conneted by a plnion between them. Your wheel runs one set of cards. one jack of one hundred and eighty-four spindles, two looms, etc., with scant one-third gate. We can do double the amount of work with your wheel that we could with the two overshots it displace, and we believe that there per minute, and as the quantity has never varied scarcely one cubic foot per day for years, and as we have known our overshots, it is clear that we have the best means of judgring of the comparative merits of your wbeel that be they made in the the about the duantity has never waried actreely one router four months constantly, although the wheel makes near fourteen hundred revolutions per minute, there has not been the least perceptibe wear in any of its parts. We think that the workmanship cannot be sur-you the above to do as yon think proper with. Yours Truly. West Milton, Mismi counts, Ohto, } Sent. 4th. 187.

Yours Truly, "HOBSON & AYLSWORTH. West Milton, Miami county, Ohio, } Sept. 4th. 187. Messrs. James Leffel & Co., Springfield, Ohio,-Gentlemen.:-We have now been running the little ten inch wheel we got of you about one year, and have run from one to three pairs of large burrs at once. We have never drawn over eight square inches of water on the wheel to run three pairs of large burrs at once. We have ne ver drawn over eight square inches of water on the wheel to run three pairs of large burrs at once. We have ne ver drawn over eight entry. Our fall is fity: six feet, we have ground eighteen thousand bushels of wheat and inc thousand bushels of corn and feed in a little over leven months. The wheel makes over one thousand infor years without any protection. We have tried the wheel with gates one-third open, using two and three-quarters square inches of water, and that withou tany perceptible decrease in economical use of water. The stream we are on is a very small one, furnisbing only sity cubic feet of water per minute, and in dry times, only forty. We esn do almost double the work we could with the overshot wheels, although they were well geared, and we could not be induced to change your wheel for the sto over-snot wheel that could be built. Respectfully ours, D, & J. W EIMER.

SNOW'S PATENT

SAFETY GOVERNOR AND VALVE COMBINED.

GLEN & HALL, Rochester, N. Y.,

GLEN & HALL, Rochester, N. Y., Sole Manufacturers. See engraving and descriptionin Scientific American Set. 23, 187. This Governor has been in general use upon Engines, and is admitted, by all who have seen it operate, to be unsurpassed as an engine regulator. Yielding, as it does, to the slightest change in the speed of the piston, it pro-duces an easy and elastic movement of the engine. and bas been used in many Cases requiring great accuracy, where other leading governors have failed. In addition to its value as a regulator, it has the safety reature, whereby it cannot fail to shut of the stee m and stop the engine the moment it is deprived of its rotary motion by parting or slipping off of the belt, or other ac-cident. It thus prevents thein jury to engine and destruc-tion of machinery attached which often follows accidents of this character. They are very ornamental in their model, simple in construction and action, thoroughly mished, and durable. We make them of all sizes, adapt-ed to engines of the largest and Machinist, unacquainted with its merits, to furnish them one or more at our low-erotre benice Builders and Machinist, unacquainted with its merits, to furnish them one or more at our low-erotrade price, and f. after thorough relation. Descrip-tion of machinery attached while be returned and the money paid, with the feight, will be returned and the money paid, with the feight, will be returned and the money paid, with the feight, will be returned and the money paid, with the feight, will be returned and the money paid, with the returned the that. Madress GLEN & HALL, A GENTS WANTED—\$10 to \$20 a day

OCTOBER 5, 1867

TURBINE WATER WHEELS.



ATER WHEELS. The RETNOLDS PATENT embodies the progress-ive spirit of the age. Sim-phicity, Economy, Durabili-ty, Accessibility all combin-ed. The only Turbine that excels Overshots. Award-ed the Gold Medal by Amer-ican Institute. Shathing, Gearing and Puil-beys furnished for all kinds of Mills, made on Mechani-cal Principles, under my per-sonal supervision, baving had long experience. Circu-lars sent free.

GEORGE TALLCOT, 4 13*-H-ti) No. 96 LIBERTY STREET, NEWYORK.

E UROPEAN AGENCY for the Exhibition

L and sale of American Patents and Manufactures. BLANCHARD & MCKEAN, No. 3 Rue Scribe, Paris, France, Will attend personally and promptly to all business re-lating to the interests of American Inventors and Manu-facturers in Europe. Corresponce solicited. GEO. A. BLANCHARD.] 213°08 [J. A. MCKEAN,

WORKS ON MAN !"-For New Illus trated Catalogne of best books on Physiology, Anatomy. Gymnastics, Dietetics Physiognomy, Short-hand Writing, Memory, and Self improvement, send two stamps to S. R. WELLS, 389 Broadway, New York. Agents wanted. 10 408

GUN AND SEWING MACHINE Screws the LAMB KNITTING MACHINE MFG CO., Successors to the 7 os tf J Mass. Arms Co., Chicopee Falls, Mass

MPORTANT TO ALL.

MITORIANT TO ADD. Persons wishing to buy state or county rights of Baringer's Patent Smoke Furnace, for smoking meats, fish, etc., should apply soon, so as to have the choice of territory. For prices and circular with cut, address[135 JOHN I. BARINGER, German town, Columbia Co., N. Y.

AMESSIEURS LES INVENTEURS-Avis important. Les inventeurs non fam liers avec la langue Anglaise, et qui préféreraient nous communi-nuer leurs inventions en Français peuvent nous addres-ser dans leur langue natale. Envoyez nous un dessin et ane description concise pour notre examen. Toutes communicationsserons reçus en confidence. MUNN & CO, MUNN & CO,

MUNN & CO., Scientific American Office, No. 37 Park Row, New York.

Zur Beachtung für deutsche Erfinder.

Nach bem nenen Patent-Gefetse ber Bereinigten Staaten, können Deutsche, sowie Birger aller Län-ber, mit einer einzigen Ausnahme, Patente zu ben-selben Bedingungen erlangen, wie Bilrger ber Ber. Staaten.

Erfundigungen liber bie, zur Erlangung von Batenten nötbigen Schritte, fönnen in beutscher Sprache schriftlich an nus gerichtet werden und Er finder, welche perfonlich nach unferer Office tommen is rben von Deutschen prompt bedient werden.

Die Patentgesetze der Vereinigten Staaten,

nebft ben Regeln und ber Geschäftsorbnung ber Patentoffice, und Anteitungen für die Erfinder um fich Patente zu sichern, sind in Buch-Format von uns in beutscher Sprache herausgegeben, und werben gratis an alle versandt, welche barum mündlich ober idyriftlich einkommen.



Published 'Iwenty-Two Years.

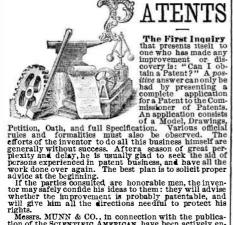
This paper differs materially from other publications being an Illustrated weekly paper containing 16 large pages, devoted to the promulgation of information relating to the various Mechanical and Chemical Arts, Pho-tography, Manufactures, Agriculture, Patents, Inventions, Engineering, Mill Work, etc.

Every number contains several beautiful engravings of new machines.

All the most valuable discoveries are delineated and described in its issues, so that, as respects inventions, it may be justly regarded as an Illustrated Repertory, where the Inventor may learn what has been done before him in the same field which he is exploring, and where he may bring to the world a knowledge of his own achievements.

The contributors to the SCIENTIFIC AMERICAN are among the most eminent scientific practical men of the times

Mechanics, Inventors, Engineers, Chemists, Manufactu-



will give him all the arcoaction incoment the publica-rights. Messra, MUNN & CO., in connection with the publica-tion of the SCIENTIFIC AMERICAN, have been actively en-gaged in the business of obtaining patents for over twenty en-years-nearly a quarter of a century. Over Fifty thou-sands inventors have had ben eff from our counsels. More than one third of all patents granted are obtained by this firm.

Those who have made inventions and desire to consult with us, are consilally invited to do so. We shall be happy to so e them in person, at our office, or to advise them by letter. In all cases they may expect from us an honest opinion. For such consultations, opinion, and advice, we make no charge. A pen-and-ink skotch, and a description of the invention should be sent, together with stamps for return postage. Write plainly, do not use pencil nor pale ink; be brief.

All business committed to our care, and all consulta-tions, are kept by us secret and strictly confidential. Ad-dress MUNN & CO., 37 Park Row, New York.

Preliminary Examination. -- In order to obtain Preliminary Examination, make out a written descrip Freiminary Examination, make out a written descrip-tion of the invention in your own words, and a rough pencil or pen-and-ink sketch. Send these with the fee of \$5 by mail, addressed to MUNN & CO., 37 Park Row, and in due time you will receive an acknowledgment there-of, followed by a written report in recard to the patentabil-ity of your in provement. The Preliminary Examination consists of a special search, which we make with great Care, among the models and patents at Washington to ascertain whether the improvement presented is patent-able. able

consists of a special search, which we make with great Care, among the models and patents at Washington to ascertain whether the improvement presented is patent able.
In Order to Apply for a Patent, the law requires that a model shall be furnished, not over a foot in any dimensions,—smaller, if possible. Send the model by express, addressed to Mann & Co., 37 Park Row, N.Y. together with a desoripsion of its operation and merits. On receipt thereof we will axamine the invention carefully and advise the parcy as to its patentability, free of charge.
The model shall be neasly made of any suitable materials, strongly fastened, without glue, and neaty painted upon it. When the invention consists of an improvement upon some other machine, a full working model of the whole machines or medical compounds, and useful mixtures of all kinds, are patentable.
When the invention consists of an improvement is undoen and operation of the improvement.
New medicines or medical compounds, and useful mixtures of all kinds, are patentable.
When the invention consists of a medicine or compsund, and useful matter and operation, uses, and merits.
Relagense.-A reissue us granted to the original patents invalid, provided the error has arisen from inadvertene, cacident, or mistake, without on y reason of an insufficient or detective specifics, when by reason of an insufficient or detective specifics without be reason of a reissue on spring the re- quired feel near distinct part of the invention comprehended in his original application, yoing the recuired the investion comprehended in his original application, when the invention comprehended in his original application, by reason of a reissue onstitutes.
A ratentee may, at his option, have in his relssue a separate patent for each distinct part of the and the receiptive of the part or parts of the invention classe, and complying with the other rediments of the law, with rule resciptive o

The courts and the public
Cavents.--A Caveat gives a limited but immediate protection, and is particularly useful where the invention is not fully completed, or the model is not ready, or further the live is wanted to experiment or study. After a Caveat has been filed, the Patent Office will not issue a patent for the same invention to any other person, without giving netice to the Caveator, who is then allowed three months time to file in an application for a patent. A Caveat, to be of any value, should contain a clear and concise description of the invention, so far as it has been completed, litustated by drawings when the object admits, morder to file a Caveat the invention, with a description in his own words. Address MUNN & Co., 37 Park Row, N. Y.
Additions can be made to Caveats at any time. A Caveat runs one year, and can be renewed on payment of \$10 a year for a sion a period as desired.
Quick Applications...

Quick Applications. When, from any reason, parties are desirons of applying for Patents or Caveats, in GREAT HASTE, without a moment's loss of time, they have only to write or relegraph us specially to that effect, and we will make special exertions for them. We can an hour's notice, if required.

repare and mail the necessary papers at less than an hour's notice, if required. Foreign Patents.- American Inventors should bear in mind that, as a general rule, any invention that is val-uable to the patentee in this country is worth equally as as much in England and some other foreign countries. Five Patents-American, English, French, Belgian, and Prussian-will accure an inventor exclusive monopoly to his discovery among oxs HUNDRED AND THERY MILLIONS of the most intelligent people in the world. The tacil-ties of business and steam communication are such that patents can be obtained by our citizens almost as asaly as a thome. The majority of all patents taken out by Americans inforeign countries are obtained through the SCREWTFIC AMERICAN PATENT AGENOV. A Circular containing further information and a Synopsis of the Pat-ent Laws of various countries will be furnished on appli-cation to Messers. MUNN & Co. For Instructions concerning Foreign Patents, Reissues, Interferences, Hints on Selling Patents, Rules and Pro-cedings at the Patent Office, the Patent Laws, etc., see our Instruction Book. Sent free by mail on application. Those who receive more than one copy thereof will oblige by presenting them to their friends. MUNN & CO.,

RECEIPTS .- When money is paid at the office for subscriptions, a receipt for it will be given; but when subscribers remit their money by mail, they may con-"ider the arrival of the first paper a bona-fide acknowl edgment of their funds.

CITY SUBSCRIBERS.-The SCIENTIFIC AMER-ICAN will be delivered in every part of the city at \$4 a year. Single copies for sale at all the News Stands in this city, Brooklyn, Jersey City, and Williamsburg, and by most of the News Dealers in the United States.

Advertisements.

A limited number of advertisements will be ad mitted in this page on the following terms. Seventy-five cents a line, each insertion, for solid matter; one dollar a line for space occupied by

engravings.

S COTCH GLASS TUBES, ASHCROFT D and Bourdon Steam Gages. Also, Indicators and Counters. E. BROWN, 311 Walnut st., Philadelphia, Pa.

NEW PATENT FOR SALE. The "Monstacthe Guard," made of thin metal, at-tached instantaneously to, or removed irom cup or glass, earried in the vest pocket when not in use. Rights for Europe and America for sale. CHAS. E. MITCHELL, At Astor House after Sept. 20.

FOR SALE—A CYLINDRICAL MILL— was made for grinding Charcoal, Cvlinder 4 feet 9 inches long. Steet diameter, with gearing, connter shart, and pulley; weight 3068 lbs.; entirely-new. Price, deliv-ered at the cars, \$200. ROBERT ROSS, Middlebury, Vt.

WHEATON'S OINTMENT cures the Itch WHEATON'S OINTMENT will cure Sait Rheum. WHEATON'S OINTMENT sures Old Sores. WHEATON'S OINTMENT cures all diseases of the Skin. Price 50 cents:--by mail 60 cents. All Druggists sell it. WEEKS & POTTER, Boston, Proprietors. 14 520s-N

DRAWING INSTRUMENTS

OF EVERY DESCRIPTION-Swiss, German Silver, and French.separate and in cases-DRAWING BOARDS, DRAWING FAPER. WATER COLORS, TRANSITS, LEVELS, COMPASSES, etc. And all supplies for Engineers, Architecrs, or Machinists. A Priced and Illustrated Catalogue sent free on applica-tion. WILLIAM Y MOALLISTER, 14 120s] 728 Chestnut street, Philadelphia, Pa.

PEIRCE'S STONE SURFACE,— AN ANTI-OXIDIZER, For Coating Iron Railings, Boilers, and Iron Work of all descriptions; Also, Oil Tanks, Acid Tanks, etc. This surface has been put to the most severe Chemical tests, and has been proved to resist all change or decom-position. As an Anti-Oxidizerit has no equal; never cracks or scales off. Iron coated with this surface will not cor-rode, even in salt water. Manufactured by I. NEWYON PIERCE & CO., 14 4eow²] 427 North Eleventh st., Pinladelphia, Fa.

SOUTHERN AGENCY FOR Exhi-of Patent Rights and Manufactured Articles. Recom-mended to Inventors by the Mechanics' and Agricultural rair Association of Louisnana.

The Only Southern Agency or Exchange. BACON & JERVEY. Send Stamp for Circular. 18 tf] 16 Commercial Place, New Orleans.

PECK'S PATENT DROP PRESS-Is manufactured solely by MILO PECK & CO., 13 S] 294 Elm street, New Haven, Conn.

 Both and the money paid, with the freight, will be refunded. Description of the money paid, with the freight, will be refunded. Description of the money paid, with the freight, will be refunded. Description of the money paid, with the freight, will be refunded. Description of the money paid, with the freight, will be refunded. Description of the money paid, with the freight, will be refunded. Description of the money paid, with the freight, will be refunded. Description of the money paid, with the freight, will be refunded. Description of the money paid, with the freight, will be refunded. Description of the money paid, with the freight, will be refunded. Description of the money paid, with the freight, will be refunded. Description of the money paid, with the freight, will be refunded. Description of the money paid, with the freight, will be refunded. Description of the money paid, with the freight, will be refunded. Description of the money paid, with the freight, will be refunded. Description of the money paid, with the freight, will be refunded. Description of the money paid, with the freight, will be refunded. Description of the money paid, with the freight, will be refunded. Description of the money paid, with the freight, will be refunded. Description of the money paid, with the freight, will be refunded. Description of the money paid, with the freight, will be refunded. Description of the money paid, with the freight, will be refunded. Description of the money paid, with the freight, will be refunded. Description of the money paid, with the freight, will be refunded. Description of the money paid, with the freight, will be refunded. Description of the money paid, with the freight, will be refunded. Description of the money paid, with the freight, will be refunded. Description of the money paid, with the freight, will be refunded. Description of the money paid, with the freight, will be refunded. Description of the money paid, with the freight, will be refunded.

CIRCULAR SAWS,

EMERSON'S PARENA AND AUC.28 1866 • () • MANUFACTURED

MUNN & CO., No. 37 Park Row, New York City. Office in Washington, Cor. F and 7th streets.

Patents are Granted for Seventeen Years, the following being a schedule of fees:- \$10 On filing each Cayeat
On appeal to Commissioner of Patents
taxes. Residents of Canada and Nova Scotia pay \$500 on application

PATENT CLAIMS .- Persons desiring the claim of any invention, patented within thirty years. can obtain a copy by addressing a note to this office, giving name of patentee and date of patent, when known, and inclosing \$1 as a fee for copying. We can also furnish a sketch of any patented machine to accompany the claim, at a reasonable additional cost. Address MUNN & CO. Patent Solicitors, No. 37 Park Row, New York.



WITH

EMERSON'S PATENT MOVABLE TEETH.

These saws are nowin use in every State in the Union. More than one thousand, of sizes from 8 inches to 72 inches in diameter, are in operation, sawing timber of all kinds, and cutting, in some cases, 30,000 feet of inch lumber per day. Also

EMERSON'S PATENT ADJUSTABLE SWAGE,

For Spreading, Sharpening, and Shaping the Teeth. Price \$5. Manufactured by

AMERICAN SAW COMPANY,

Office No. 2 Jacob street near Ferry street, New York Send for New Descriptive Pamphlet, and Price List, 10 td

rers, Agriculturists, and people in every walk of life, will find the SciENTIFIC AMERICAN to be of greatvalue in their respective callings. Its counsels and suggestions will save them hundreds of dollars annually, beside affording them a continual source of knowledge.

An official list of all Patents granted, together with the claimsthereof, is published weekly.

The form of the SCIENTIFIC AMERICAN is adapted for binding and preservation; and the yearly numbers make two splendid volumes of nearly one thousand quarto

pages. Published Weekly, \$3 a year, \$1.50 half-year, 10 copies for 1 year, \$25. Specimen copies sent gratis. Address

MUNN & CO., No. 37 Park Row, New York.

JUST PUBLISHED-THE INVENTOR'S AND ME-CHANIC'S GUIDE.-A new book upon Mechanics.Pat-ents, and New Inventions. Containing the U. S. Patent Laws, Rules and directions for doing business at the Pat-ent office; 112 diagrams of the best mechanical move-ments, with descriptions; the Condensing steam Engine, with engraving and description; How to Obtain Patents; Hints upon the Value of Patents; How to Sell Patents; Forms for Assignmeents; Information upon the Rights of Inventors; Assignees and Joint Owners; U. S. Census by Counties, together with a great variet yof useful informa-tion in regard to patents, new inventions and scientific subjects, with scientific tables, and many Illustrations. 108 pages: This is a most valuable work. Price only 25 cents. Address MUNN & CO, 37 Park Row, New York.