# Scientistic American.

ESTABLISHED 1845.

MUNN & CO., Editors and Proprietors. PUBLISHED WEEKLY AT

No. 361 BROADWAY, NEW YORK.

O. D. MUNN.

A. E. BEACH.

#### TERMS FOR THE SCIENTIFIC AMERICAN.

Clubs.-One extra copy of THE SCIENTIFIC AMERICAN will be supplied gratis for every club of five subscribers at \$3.20 each; additional copies at same proportionate rate. Postage prepaid. Remit by postal order. Address

 $M\,U\,N\,N$  & CO , 361 Broadway, corner of Franklin street, New York

#### The Scientific American Supplement

is a distinct paper from the SCIENTIFIC AMERICAN. THE SUPPLEMENT is issued weekly. Every number contains 16 octavo pages, uniform in size with SCIENTIFIC AMERICAN. Terms of subscription for SUPPLEMENT, \$5 00 a year, postage paid, to subscribers Single copies, 19 cents. Sold by

all news dealers throughout the country.

Combined Rates. - The Scientific American and Supplement is now refused. will be sent for one year postage free, on receipt of seven dollars. Both papers to one address or different addresses as desired,

The safest way to remit is by draft, postal order, or registered letter. Address MUNN&CO., 361 Broadway, corner of Franklin street, New York

#### Scientific American Export Edition

The SCIENTIFIC AMERICAN Export Edition is a large and splendid periodical, issued once a month. Each number contains about one hundred large quarto pages, profusely illustrated, embracing: (1.) Most of the plates and pages of the four preceding weekly issues of the SCIENTIFIC AMERICAN, with its splendid engravings and valuable information: (2.) Commercial, trade, and manufacturing announcements of leading houses Terms for Export Edition, \$5.00 a year, sent prepaid to any part of the world. Single copies 50 cents. \*\* Manufacturers and others who desire to secure foreign trade may have large, and handsomely displayed announcements published in this edition at a very moderate cost.

The SCIENTIFIC AMERICAN Export Edition has a large guaranteed circu

lation in all commercial places throughout the world Address MUNN & CO., 361 Broadway, corner of Franklin street, New York

NEW YORK, SATURDAY, OCTOBER 18, 1884.

## Contents,

## (Illustrated articles are marked with an asterisk.)

Army, the, reorganization of,	New books and publications	250
project for		
Botanizing upon a coin* 2	47 Observatory. McCormick, the	
Business and personal 2	Oxygen and nitrogen, industrial	~+1
Chimpanzees. young*	production of *	243
Claims, combination, infringe-	Paper weight and pencil sharp-	<b>C4</b> 0
		o. ~
ment of		
Comet, new, the 2	44 Patents, decisions relating to	
Copper for roofing 2	45 Poisoning from galva nized iron	
Correspondence 2	5 Press, improved, De Nobili's*	242
Diamonds. setting in tools* 2		249
Disinfectants 2	Property, physician's, exemption	010
Dyeing, progress in		248
Electrical exhibition, Philadel-	Raft, life. Adams'*	242
phia, Edison exhibit* 20		
Electrical exhibition, U S. Elec-	tains, N. J., curious	242
tric Lighting Co.'s exhibit* 24		246
Filter, oil, an effective and	Shafts and belts	241
easily made 24	5 Shop savings	240
Floors concrete vs brick 24		244
Gun, mach., Maxim 24	4 influence of	244
Guns, machine, rifle caliber 24		
Hydrophobia, prevention of 24	5 Trade marks, the value of	242
Inventions, agricu tural 2	Trade marks and labels, decisions of Com. of Patents concerning	
Inventions, index of 2	of Com. of l'atents concerning	
Inventions, mechanical 2	50 Tubing, rubber, gas tight	247
Inventions miscellaneous 2		247
Meter, the, length of 2	47 Vermition manufacture in China	
Molecular dynamics, lectures on	Vise, improved, Whiting's*	248
by Sir William Thomson 2	42 Wells and cholera	241

## TABLE OF CONTENTS OF

## THE SCIENTIFIC AMERICAN SUPPLEMENT

## No. 459.

# For the Week ending October 18, 1884.

Price 10 cents For sale by all newsdealers	
I. CHEMISTRY. ETC.—Purification of Water	
II ENGINEERING AND MECHANICS.—Automatic Freight Car Couplers.—Couplers selected by the Master Car Builders' Association.—With full page of illustrations.  Car Couplers on Massachusetts Railways.  The Severn Tunnel Railway.—By J.CLARKE HAWKSHAW.—Paper read before the British Association at Montreal.—With map and sectional elevation of tunnel.  The Darlington Forge.—Full page of illustrations.  Light Traction Engine.—With engraving.	7324 7326 7327 7327
III. ELECTRICITY, ETC.—The National Electrical Conference.— Work of the U. S. Signal Service in relation to earth currents and atmospheric electricity.—International electric standards.—Formation of a unit of power.—Theory of the dynamo-electricmachine.— Transmission of energy.—Underground wires.—Lightning rods Apparatus for Testing the Resistance of Lightning Rods.—2 figures  Ball Lightning.—By GASTON PLANTE.—2 figures Messrs. Renard and Krebs' Electric Balloon	7320 7323 7323
IV. ARCHÆOLOGY.—Astonishing Discovery.—Deified Mayas that lived in America thousands of years ago found among the gods and goddesses of Japan.—By ALICE D. LE PLONGEON	
V. NATURAL HISTORY.—Electric Fishes, Physiological, Chemical, Magnetic. and Inductive Effects.—Action upon the magnetic needle.—Relative immunity of electric fishes with respect to their own discharge	7331
VI. MISCELLANEOUS.—The Industrial Exhibition at Turin —With engraving.  Grand Bicycle Tournament at Leipzig.—With engraving.  The Nile Expedition.—With engraving of the Cataract of Ambigole  The Nile Expedition.—With map.	7319 7320
Quint-	

## RECENT DECISIONS OF THE COMMISSIONER OF PATENTS CONCERNING TRADE MARKS AND LABELS.

22, 1884, on the vexed label and trade mark question by the somewhat minor importance of this class of privileges, such Commissioner of Patents. In rendering his decision the proceedings will not often be inaugurated. Commissioner gives very lengthy reasons, the text filling nearly two full pages of the Gazette. The question is the affecting labels are derived from these words of the statute: old one whether the Commissioner cause fuse to register as can be registered as a label. Whoever as an applicant has bad labels subjected to Patent Office rulings on the above sion. Had the latter method been adopted, and not the more question, will know what the decision was. The Commissioner held that the words "not a trade mark" occurring in the statute gave him full power to refuse label registration to a label containing subject matter for a trade mark.

We take decided issue with this decision. In former artibave fortified them by appropriate quotations from authorities. The great court decision in these matters was rendered September 30, 1881; it is in the case entitled the Willcox and Gibbs Sewing Machine Company against E. M. Marble, Commissioner. This was a case before the Supreme Court of the District of Columbia, and in it a peremptory mandamus was issued, enforcing just such a registration as

In his decision Mr. Butterworth disposes rather briefly agree with it, and so concludes that it was not fully argued, value of a trade mark consists. and asserts that it was practically an exparte case. Now the truth is that the case in question did not go by default in any sense. In Mackey's Reports, vol. i., page 285 et seq., cision, published also in the Official Gazette of October 17, 1882, be examined, it will be found unusually long and full. Congress under the copyright laws, and by deducing therefrom the powers of the Commissioner of Patents. But this opinion of so high a court is disposed of as given in "practically an ex parte proceeding,". . . . and as one rendered in a case that "did not have careful consideration" from the court. Now, no one can impartially examine the outlet to the sink had been been closed, and the large drain decision so shortly disposed of, without forming exactly the pipes had to be removed and cleansed. The result of that opposite opinion. It is certainly a hold criticism on the cleaning was a surprise to the proprietors, although it was methods of so high a court to say that it decided a case and not so to at least some of the workmen. If a list of the arissued a peremptory mandamus without "careful consideration."

The Supreme Court of the District of Columbia is the successor of the old Circuit Court of the District. By the ment. There were hundreds of pieces of broken files, taps, act of February 27, 1801, the original tribunal was estab-reamers, drills, parts of machines and tools spoiled in the lished, one of whose functions was to issue writs of man- working, and a wagon load of cotton waste. The water damus to compel public officers to do acts required of closets had been used as convenient "catchalls," "scrap them by law in performance of their duties. The Supreme beaps," and "glory holes." How much the establishment Court of the District was established by the act of March bad lost in this way could not readily be estimated, as much 3, 1863, whereby the old Circuit Court was abolished, and of it must have been swept away by the stream and much the new court made its successor. Cases from the Supreme Court of the District may be appealed to the Supreme Court of the United States. Thus the court we are consider judicious attention to little things and by bandy appliances ering possesses very high powers, exceeding in some respects for saving. An establishment that works up brass and iron those of the circuit courts. It is, to all intents and pur- in about equal proportions for more than a year, mixed the poses, in the mandamus proceedings a United States Court. drillings, turnings, and filings of both metals indiscrimi-Several judges, one chief and five associates, compose it. Yet a carefully rendered decision of such a court, given to be got rid of. A separating machine was suggested, and afterfull deliberation, is disposed of by the Commissioner of Patents in a single sentence.

subject matter for a trade mark, but not in the prescribed under side, and are brushed off by fixed brushes into another the last the Commissioner decides is non-registrable. All this worthless; after being separated the iron chips had a mardistinction is purely a Patent Office creation. The old registra-ketable value, and the brass chips a value ten times as great. Webster. He does not take the point that the greater in- chips are cleaned so nearly that they barely soil the bands. <sup>9</sup> cludes the less, and that the term label includes trade marks. In a certain machine shop worn out and broken files are in the Patent Office.

The misfortune of the whole business is, that these cases VII. BIOGRAPHY.-Prof. ROBERT E. ROGERS.-Chemist.............. 7319 smoothness and satisfaction. It is a great pity that any solid brass to be reused.

change has been inaugurated. The status of affairs now is that the Supreme Court decision is set aside, and that rulings The Official Gazette of the United States Patent Office, of are made that would unquestionably incur a mandamus September 30, 1884, contains a decision rendered September from that tribunal were one applied for. But owing to the

The Commissioner's arguments in the case in question as "not a trade-mark," and from Worcester's dictionary. This a label what in his judgment constitutes a trade mark, and is but a small basis for a decision. The true way to treat whether, if not a trade mark in all characteristics, it then such a case is to go to the root of the matter, and examine the origin of the powers whose limitations are under discussuperficial plan, a different result would probably have been reached. But taking the issue as presented, we find that the Commissioner quotes Upton's definition of a trade mark, and Worcester's of a label. The trade mark according to Upton is "the name-symbol," etc. . . . adopted by a manufacturer cles we have stated pretty fully what our views are, and or merchant "to designate the goods that be manufactures or sells." . . . Worcester says a label is "a small piece of paper or other material containing a name, title, or description, and affixed to anything to indicate its nature or contents." Certainly these two definitions quoted by the Commissioner in his decision come very close to each other, considering that they describe things that he considers so radically different. Even in Worcester's definition of a label absolute descriptiveness is not insisted on, as nature and contents may be indicated arbitrarily as well as descripof the opinion in the sewing machine case. He does not tively. It is in such arbitrary indication that the commercial

We can only hope for the satisfaction as well of the Commissioner as of the public that some of these cases will again be brought before the Supreme Court of the District of Co-Mr. Marble's answer in the case will be found. If the de lumbia. Mr. Butterworth, we are convinced, desires such an issue no less than the prospective registrants of labels and trade marks. When such a case does arise, the Commission-The court strikes at the root of the matter by going back er, to borrow his own expressions, will have a good chance to to the original registration of labels with the Librarian of fully argue the case and see that it receives careful consideration from the judges of the court.

## SHOP SAVINGS.

A very suggestive sight was witnessed a short time ago in a visit to a large manufactory of machinery and tools. The ticles found in the drain pipes and at their outlet into the tail race was made it would be almost like an inventory of the small parts used in the manufactures of the establishof it buried out of sight.

It is surprising how much may be saved in the shop by nately, and dumped them out of doors as useless rubbish now one of the proprietors declares that it paid for its cost within three weeks. It is self-operating, requiring only the Three divisions of label and trade mark matter are created occasional supply of the chips and the removal of those alby the Commissioner's decision. There is, first, the label, ready separated. The mixed chips pass through a trough in which must be descriptive; secondly, the trade mark, which a thin stream before a revolving cylinder composed of horsemust be arbitrary or non-descriptive, and in use in commerce shoe magnets; the brass chips drop in front into a box, and with some foreign nation or Iudian tribe; and thirdly, the the iron and steel chips are carried on the magnets to the commercial use. Of these three the first two are registrable, box. Before being separated, these mixed chips were

tion under the Copyright Laws with the Librarian of Congress In a large manufactory of machine screws, where two barwas subject to no such rulings. The inherited power of rels of oil a day is not an uncommon amount to use, if all registration belonging to the Commissioner of Patents should the machines were supplied afresh, three-fifths of this not be either. The point overlooked by this official is that amount—sometimes more—is saved for further use. This is he registers labels under one clause of the Constitution and done by a small centrifugal machine. The chips, soaking trade marks under another. To define trade marks in ad- in oil, are dipped into the little cup shaped receiver, the dition to the special act of March 8, 1881, he has a multitude cover closed, the belt started, and the oil comes in an alof court decisions. To define labels he is obliged to have most invisible horizontal sheet against the sides of the enrecourse to Worcester's dictionary. His predecessor used veloping pan and runs into a tank ready for use. The

2 Labels are registered under the copyright law. Can any one placed in a transverse holder on the grindstone frame, held conceive of an engraving being refused registration by the against the face of the stone by springs, given a traverse by Librarian of Congress because it is arbitrary? Yet this is a belt and a spiral cam, and the result is hits of smooth steel precisely what the Commissioner upholds as proper practice just adapted for forging to boring bar cutters and keys, with a further result of keeping the stone trued.

In brass manufactories there is unavoidable waste of the are usually not of sufficient importance to be brought before metals in the scorize of the melting furnaces, in the rolling the court. The applicant, on finding registration refused mill department, and the wire drawing. Whatever of this him, usually prefers to submit to the loss so unjustly incur red waste, with the sweepings, can be gathered is put into large rather than go to the expense of an application for a manda-mortars and subjected to the impact of pivoted pestles until mus. The predecessor of the present Commissioner of the whole is pounded to a dust. Then it is floated in a run-Patents incurred such a proceeding, however, in the case we ning stream of water through a chute over riffles, which bave cited. It served to change the practice of the office catch the heavy metallic particles and allow the lighter during his term. Under such amended ruling the business trash to pass off. The metallic residuum, packed in cruci-