402	&
Package covering, J. W. Marsh         258,660           Packer, oil well, S. R. Dresser         258,565	Tongs, carpenter's flooring, W. R. Forester
Packing case, R. S. Jennings (r)	
Paint compound, W. J. McDonald	Toy picture, dissected, G. H. Ireland
Pan. See Dust pan.  Paper box machine, A. Stearns	. Traction engine, E. J. Taylor
ends of, E. Cary	Truck for moving harvesters, W. II. Turner
Paper, manufacture of, C. M. Burnett	Universal joint, J. J. Greenough
Pianofortes, sounding board for upright, F. Pitt. 258,670 Pianos, repetition action for, J. Hardman 258,751	Valve, safety, J. R. Mitchell
Pin. See Clothes pin.         258.599	Vault, burial, J. F. Winchell 25 Vehicle brake, W. Claypool. 25
Plane, edge, L. D. Busell       258,628         Planter, Byers & Knight       258,554         Planter, Byers & Rought       258,638	Vehicle cushion, K. W. Holmes
Planter, seed, L. E. Porter	Vehicle wheel, Whitehall & Newlin
Plow wheel, sulky, T. M. Bissell.         258,698           Plumber's pipe hanger, E. C. Ford.         258,638	Vessels, construction of, T. W. Phinney
Pot. See Coffee pot. Potatoes, apparatus for separating the skins from	Wagon running gear, I. E. Bennett
the pulp of, G. H. Edwards	covering for, R. Von Petersen
Power wheel, cable, E. D. Haven	Watch charm, W. W. Dodge
Protector. See ●il tank protector. Tree protector.	Watering animals, I. Welty
Quartz crushing and pulverizing machine. J. B. Sweetland	wheel. Power wheel. Toy musical wheel. Vehicle wheel.
Railway clutches, guide rail for rope, C. S. Drake. 258.562 Railway frog, Eccles & ●'Melveney	Whiffletree hook, J. H. Huntress
Railway signal, electric, T. A. B. Putnam	Window screen, permanent, J. H. Bradford 25
Railway switches, etc electric safety appliance for. T. A. B. Putnam	Wire stretchers, windlass for, R. Eastabrooks 25 Work box, H. S. Dickson
Railway trains, electrical connection for, J. B.  Low	Wrench, J. E. Preston
Railways. apparatus for covering slots in cable, C. S. Drake	Yoke adjuster, neck, J. A. Barnes
Railways. attachment for wire rope, C. S. Drake.       258,563         Reflector, C. W. Jenks       258,652         Refrierating bottle safe P. Kearins       258,765	DESIGNS.
Refrigerating bottle safe, P. Kearins	Cloth, hap surface of, E. Emstein
packer register. Regulator. See Damper regulator.	Type, music, J. J. Hood
Rein holder, R. E. Shannon       258,679         Rock drill. E. A. Armstrong       258,623	TRADE MARKS.
Roller mill, Wescott & Karns	Chocolate, vanilla, H. L. Pierce
Rope clamp, T. Samson	Cigarettes, S. Jacoby & Co
Sadele pad F. A. Hake	Hammers, Hartford Hammer Company
Safety pin catch, S. Moore       258,792         Sample exhibiting case, J. C. Scott       258,814	Milk, condensed, Anglo-Swiss Condensed Milk Com- pany
Sandpapering wheel rims or fellies and other articles; machine for, Brown & Holt	Oil, illuminating, Scoffeld, Shurmer & Teagle Oiled clothing, A. J. Tower
Sash holder. H. A. Stone       258,611         Saucepan handle, C. Ezard       258,733         Saw jointing machine, E. Holderman       258,755	Periodical, J. Leffel & Co
Scale, automatic B. C. Meyer	Tobacco, cigars, and cigarettes. Plug, twist, and smoking, T. C. Williams & Co
Seeding machine and cultivator, Thomas & Lud- low	Advertisements.
Self-opening gate, W. R. Hambleton	Inside Page, each insertion 75 cents a l
Sewing machine, A. J. Hurtu	Back Page, each insertion \$1.00 a line (About eight words to a line.)
Sewing machine needle blanks, mechanism for grooving, P. M. Beers	Engravings may head advertisements at the same per line, by measurement. as the letter press. As tisements must be received at publication office as e
Sewing machines. automatic presser-foot lifter for, C. G. Stratton	as Thursday morning to appear in next issue.
Shade holder, C. Maschmeyer	THE ONLY PERFECT 26
A. Newell 258,797 Shearing attachment for heading machines, T. J.	SEWING MACHINE.
Bray	SIMPLEST, LATEST IMPROVED MOST DURABLE & 197
Shirt, reversible, D. Lubin	ALLA BEST
Signal. See Railway signal.  Skate, Tracy & Hart	
men of prairie. C. L. Fleischmann	
Spoke tenoning and chamfering machine, Doane & Bugbee	IF THERE IS NO AGENT NEAR YOU
Spooling machine bobbin holder T. C. Entwistle 258,567 Spring. See Door spring. Vehicle spring.	NEW HOME SEWING
Springs and rings, machine for making, E. F. Lan- dis	30 Union Square NY CHICAGO ILL,
Stamp cabinet, rubber, J. Murdock, Jr	
Steam boiler, fire tube, D. Renshaw	REFRIGERATING APPARATUS Steamships Strathleven and Dunedin.—Description the refrigerating apparatus fitted on board the o
Steam engine, Vallotton & Leguay         258,617           Steam motor, S. W. Hudson         258,580	steamers strathleven and Dunedin by the Bell-Cole Refrigeration Company, and by means of which t vessels have very successfully transported large car
Steam pipes drainage apparatus for, A. B. Seward, 258,816 Steam table, J. W. Hyatt	of frozen meat to England from the Antipodes. It wise, a description of a new form of refrigerating
Steering mechanism, N. Richardson	chine for cooling ships' provisions. Illustrated four engravings showing details of apparatus and of arrangement on the vessels, and perspective vie the machine for cooling ships' provisions. Containe
Stove and range grate, T. Kearns.       258,769         Stove, car, W. H. Baldwin       258,542         Stove, oil, • E. Clark       258,630	the machine for cooling ships' provisions. Containe SCIENTIFIC AMERICAN SUPPLEMENT, No. 314. I 10 cents. To be had at this office and from all nealers.
Stove, oil-gas, T. E. Dudley	MOULDS for LASS to C
Stove platform, tile, E. W. L. Rice	All Glass Manufacturers use my Moulds
Superheating steam or heating air, apparatus for, S. N. Carvalho (r)	
Suspender end, J. C. Hyde	This Tool will be appreciated by every machinist
Tannin extracts, manufacturing, P. Gondolo 258,573  Tannin extracts, process of and apparatus for the manufacture of, P. Gondolo	This Tool will be appreciated by every machinist is accurately made, of the Best Steel, and is of the approved form. PRICE 50 CENT'S.  WILEY & RUSSELL MFG. CO.,
Telegraph, duplex, J. E. Fenn	GREENFIELD, MASS.
man	Makers Lightning Screw Plates, B Cutters, etc.
Telephone exchange switch board, Ross & Twiss. 258,868 Telephone exchanges, signaling apparatus for, J.	PATID. 79 The Cheapest Air Pu
G. Smith	Cvl 18/x3 in.: wheels, 10 in: we
Telephone transmitter, G. M. Hopkins.       258,757         Thill coupling, I. G. Bower.       258,760	18 lb.; 8 to 9 gallons air per min.; 55 lb. pressure. Sent as sample \$4.50 to private addresses out Philadelphia, and within 60 days genge for full on order for an
Tile machine, drain, G. S. Tiffany	gas, for hand or small power, by
Tinman's furnace, J. F. Lockwood	H. WEINDEL,

	Zukunuk g	Q
0	Tongs, carpenter's flooring, W. R. Forester 258,738	Ï.
5	Toy chariot, Kyser & Rex	
6	Toy, mechanical, J. L. Given 258.743	
	Toy musical wheel, Kyser & Rex 258,771	ļ
3	Toy picture, dissected, G. H. Ireland	
8	Toy pistol, C. F. Ritchel	l
9		ļ
	Tree protector, T. Bower	
1	Truck for moving harvestors W II Turner 258 616	
2	Truss, J. Fry.       258,854         Universal joint, J. J. Greenough.       258,576         Valve, J. ●'Meara       258,592	
10 54	Universal Joint, J. J. Greenough	
0	Valve, safety, J. R. Mitchell	ŀ
51	Vapor burner, J. F. Daniels	!
	Vault, burial, J. F. Winchell 258,869	i
	Vehicle brake, W. Claypool	l
8 54	Vehicle spring, C. L. Thomas	l
11	Vehicle wheel, J. A. Schuler	!
-	Vehicle wheel, Whitehall & Newlin 258,834	
6	Velocipede, railway, G. A. Mosher	
8	Vessels, construction of, T. W. Phinney. 258,803 Wagon, dumping, J. Mills 258,790	
8	Wagon running gear, I. E. Bennett	
	Walls, floors, etc., moisture-proof coating and	
0	covering for, R. Von Petersen 258,829	
5	Washing machine, B. F. Fuchs	
5	Washing machine, J. W. Kennon, Sr	
0	Watch escapement, A. Heberle	
υ	Watering animals, I. Welty	
	Wheel. See Grinding or polishing wheel. Plow	
	wheel. Power wheel. Toy musical wheel.	
22	Vehicle wheel.	
9	Whiffletree hook, J. H. Huntress	
เข )0	Wind engine, E. Howland	
	Windmill, W. N. Trumble	
12	Window screen, permanent, J. H. Bradford 258,551	
	Wire stretchers, windlass for, R. Eastabrooks 258,634 Work box, H. S. Dickson	
11	Wrench, J. E. Preston	
59	Yeast, making brewer's, F. Meyer 258,664	
	Yoke adjuster, neck, J. A. Barnes 258,692	
64	<del></del> -	
3	DESIGNS.	
2 55		
52	Chain, ornamental, W. W. Briggs12,950, 12,951	
	Cloth, nap surface of, E. Einstein	
	1, po, 22,000, 0101, 22,000	
79		
23	TRADE MARKS.	
32	Chocolate, vanilla, H. L. Pierce	
13	Cigarette paper, W. Demuth	
8	Cigarettes, S. Jacoby & Co	
12 12	Grain machinery, Edmands Manufacturing Company	١
8		١
7		١
12	Milk, condensed, Anglo-Swiss Condensed Milk Com-	l
4	pany	١
	Oil, illuminating, Scoffeld, Shurmer & Teagle	١
3 1	Periodical, J. Leffel & Co	١
33	Ring travelers, N. P. Hicks	l
	C1 1-1- 35- 1- 35 611 C 0.497	1

## Advertisements.

Inside Page, each insertion - - - 75 cents a line. Back Page, each insertion - - - \$1.00 a line.
(About eight words to a line.)

Engravings may head advertisements at the same rate per line, by measurement, as the letter press. Advertisements must be received at publication effice as early as Thursday morning to appear in nextissue.



REFRIGERATING APPARATUS ON Steamships Strathleven and Dunedin.—Description of the refrigerating apparatus fitted on board the ocean steamers Strathleven and Dunedin by the Bell-Coleman Refrigeration Company, and by means of which these vessels have very successfully transported large cargoes of frozen meat to Empland from the Antipodes. Likewise, a description of a new form of refrigerating machine for cooling ships' provisions. Hustrated with four engravings showing details of apparatus and plan of arrangement on the vessels, and perspective view of the machine for cooling ships' provisions. Contained in SCIENTIFIC AMELICAN SUPPLEMENT, No. 314. Price 10 cents. To be had at this office and from all newsdealers.

MOULDS for LASS to order 39 Dey St., New York.
All Glass Manufacturers use my Moulds.



This Tool will be appreciated by every machinist. It saccurately made, of the Best Steel, and is of the most pproved form. PRICE 50 CENTS.

WILEY & RUSSELL MFG. CO., GREENFIELD, MASS. Makers Lightning Screw Plates, Bolt Cutters, etc.



The Cheapest Air Pump EVER OFFERED.

Cyl. 134x3 in.: wheels, 10 in.; weight, 18 lb.; 8 to 9 gallons air per min.; 30 to 45 lb. pressure. Sent as sample for \$4.50 to private addresses outside Philadelphia, and within 60 days redeemed for full on order for any on 18 to f most powerful pumps, for air or gas, for hand or small power, by

H. WEINDEL, 405 & 407 N. 4th St., Phila., Pa.



FOR SALE BY ALL NEWS DEALERS. NOTABLE ATTRACTIONS.

1. Julian Hawthorne's striking serial story, "Dust."
2. Judge Tourgee's new and greatest story, "Hot Plowshares."
3. Serial Stories by E. P. Roy.
E. S. Phelds, W. M. Baker, and others of national reputation.
4. Short Stories, Poems, Articles on Science, Art, Literature, and Politics, by the first writers of the land. 5. The regular departments of The Household, Art of Ado nment, Our Society, The Still Hour, Foreign Thought, Book Reviews, etc. 6. Editorial and contributed discussions of all current social, literary, and political topics, without regard to sect or party. 7 The Illustrations are drawn and engraved by the best talent in the country, under the competent direction of

### Miss Emily Sartain. PARTIAL LIST OF CONTRIBUTORS.

J. T. Trowbridge, Donald G. Mitchell (Ik Marvel), Mrs. Alexander, G. P. Lathrop, George H. Boker, Rebecca Harding Davis, President Noah Porter, E. P. Roe, Louise Chandler Moulton, Celia Thaxter, Frank R. Stockton, H. H. Boyesen, President C. W. Eliot, Juian Hawthorne, E. E. Hale, Harriet Prescott Spofford, Dr. Wm. A. Hammond, President E. H. Magill, President Magoun, Benj. J. Lossing, Louise Stockton, Uncle Remus, Rose Hawthome Lathrop, Prof. H. W. Elliott, Marion Harland, Julis C. R. Dorr, Robert J. Burdette, Prof. Henry Cupice, Hon. B. G. Northrop, Chas. G. Leland (Plans Breitmann), Mary A. Barr, Josephine Pollard, President, D. C. Gilman, Margaret J. Preston, Sarah C. Jewett, Edgar Fawcett.

## Judge Tourgee's New Story, "HOT PLOWSHARES,"

treats of a most interesting and exciting period of American history, and while extirely dissimilar is yet happily germane to his previous works.

Special Terms for Immediate Subsc iption.

If ordered at once we will send OUR CONTI-NENT, beginning with Judge Tourgee's Story, until the end of the year (Feb. 15, 1853) for \$2.00; or with all the back numbers from the beginning (Feb. 15, 1882) for \$3.00. This offer may be withdrawn at any time when the back

numbers are exhausted.

OUR CONTINENT contains annually one-third more matter than any Monthly Magazine—an excess equal to four monthly numbers.

Subscribe at once and begin with Judge Tourgee's Story. Back numbers cannot be promised after "Hot Plowshares" begins. Address

OUR CONTINENT, PHILADELPHIA, PA.



# TO ARCHITECTS and BUILDERS.

Your attention is invited to our large and varied stock of Hardwood Lumber and Veneers,

Choice Shaded and Figured Address, for circular, HEALD & MORRIS, formerly HEALD, Sisco & Co., Baldwinsville, N. Y. MAHOGANY,

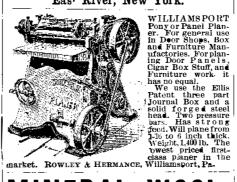
In Veneers, Panel Stock, etc. Figured and Plain White Oak, Walnut, Ash, Cherry, Maple, Poplar, etc., etc.

# CUT AND PRESS-DRIED THIN LUMBER

A SPECIALTY. Reasonable Prices. Sample orders solicited.

# GEO. W. READ & CO.

186 to 200 Lewis St. (5th to 6th Sts.), East River, New York.



rtitions, floors of dwellings. 25 cts. per cubic foot. U. S. MINERAL WOOL CO., 16 Cortlandt St., N. Y.



An engine that works without
Boiler. Always ready to be started and to give at once full power.
SAFETY. ECONOMY,
Burns common Gas and Air. No steam, no coal, no ashes, no fires, no danger, no extra insurance.

Burns to attendance.

GAPETY. The common danger in the preparation the preparation than the preparation that the preparation than the preparation than the preparation that the p

THE NEW OTTO SILENT GAS ENGINE. Munn & Co. also attend to the preparation of Caveats, Useful for all work of small stationary steam engine. Built in sizes of 2, 4, and 7 H. P. by SCHLEICHER, SCHUMM & CO., N. E. cor. 33d & Walnut Sts., Phila., Pa. A. C. Mauning, 38 Dey St., New York, Agent.



ELECTRIC EXPLODING APPARATUS for Mining Purposes.—Description of the most approved apparatus of this nature exhibited at the Paris Exhibition of Electricity, with their mode of operation and their applications. Illustrated with five figures. Contained in SCIENTIFIC AMERICAN SUPPLEMENT, No. 319. Price 10 cents. To be had at this office and from all newsdealers.



# 10th Cincinnati 10th

Sept. 6. **1882.** Oct. 7. In the Grandest Exposition Buildings in the United States.

Exhibitors From Every State in the Union.

THE GREAT NATIONAL EXHIBI TION OF ART AND INDUSTRY.

Admission, 25 Cents.

No charges for Space or Steam Power. Special arrangements made for transportation of Exhibits and Visitors. For full particulars address WM. H. STEWART. Sec'y



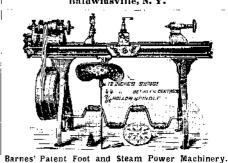
\$66 a week in your own town. Terms and \$5 outfit free. Address H. HALLETT & Co., Portland, Me.

DAMPER REGULATORS and Gage Cocks. Murrill & Keizer, Baltimore.



# RELIABLE"

Engines a complete success. Prices still 40 per cent below those of other makers. Unequaled for efficiency, simplicity, and durability. Prices from \$250 for 10 H. P., to \$550 for 50 H. P. All complete, with Governor, Pump and Heater.



Complete outfits for actual Workshop business. Lathes for Wood or Metal, Circular Saws, Scroll Saws, Formers, Mortisers, Tenoners, etc. Machines or Trial if desired. Descriptive Cara orucan Frice List free. W.F. & JOHN BARNES, No. 1399 Main St., Rockford, Ill.





MESSRS. MUNN & CO., in connection with the publication of the Scientific American, continue to examine Improvements, and to act as Solicitors of Patents

In this line of business they have had thirty-five years' experience, and now have unequaled facilities for the preparation of Patent Drawings, Specifications, and the prosecution of Applications for Patents in the United States, Canada, and Foreign Countries. Messrs. Copyrights for Books, Labels, Reissues, Assignments, and Reports on Infringements of Patents. All business intrusted to them is done with special care and promptness, on very reasonable terms.

A pamphlet sent free of charge, on application, containing full information about Patents and how to pro cure them: directions concerning Labels. Copyrights. Designs, Patents, Appeals, Reissues, Infringements, Assignments, Rejected Cases, Hints on the Sale of Patents, etc.

We also send. free of charge, a Synopsis of Foreign Patent Laws, showing the cost and method of securing patents in all the principal countries of the world.

# MUNN & CO., Solicitors of Patents,

261 Broadway, New York.
BRANCH OFFICE -Corner of F and 7th Streets. Washington, D. C.