

thus be hermetically coupled, even though they be of different diameters.

PACKAGE FOR PERCOLATING COFFEE.—HENRY M. HUMPHREY, Plainfield, N. J. This invention provides an improvement upon the Humphrey percolator-package which has been described in our columns. The improvements embody a metallic seal for the mouth of the coffee-containing bag, which seal can be partially bent over so as to open the mouth and provide a hook for suspending the bag from the edge of the coffee-pot. Hot water is then poured into the bag and permitted to percolate through the coffee and into the pot.

GATE.—OLAUS B. JACOBS, Roland, Iowa. The invention provides a barrier for gateways in stock-fences or other inclosures that will permit the larger stock to pass through, but will effectually retain hogs, sheep, and other short-legged animals. The gate or barrier comprises a frame and palings in series in the frame, the frame having passage-ways between them and spaced and arranged to permit the passage of animals having long legs and to constitute a barrier for animals having short legs.

MEDICAMENT-CARRIER.—CHARLES M. JONES and ALEXANDER LE ROY HARVEY, Baxter Springs, Kan. This surgical appliance consists of a flexible band between the ends of which a connecting elastic strip extends. Cover-straps are secured over the outer faces of the ends of the band and over the flexible strip to secure the flexible strip to the band.

CHURN.—WILLIAM F. FRIBLEY, Bourbon, Ind. The cover portion of the churn is provided with a funnel portion having a top comprising two segmental frames pivotally connected at one side to swing relatively to each other. Each of the sections has a strainer; and through openings formed in the sections a dasher rod is movable, having connection with a mechanism, the operation of which requires but little muscular power.

CHURN-DASHER.—WILLIAM H. SWAN, Kankakee, Ill. The churn-handle is provided with a set of rotary dashers so constructed that in churning, the dashers will rotate in opposite directions and their motion will be automatically reversed by the up-and-down movement of the handle. The churn can be filled nearly to the top since the dasher does not splash the cream.

SKIRT AND BELT SUPPORTER.—ALICE M. TULLY, Manhattan, New York city. The supporter consists of a safety-pin adapted for engagement with a waist and provided with a hook, and a second safety-pin adapted for engagement with a skirt-band and having an eye arranged for insertion over the hook whereby to hold the waist and skirt detachably connected. The point of the hook is adapted to enter the inside of a belt whereby the belt is held in place and the eye is prevented from coming off the hook so long as the belt is in place.

SHOE-DISPLAYING DEVICE.—DONALD S. BET-CONE, Indianapolis, Ind. The device is particularly adapted for the use of traveling salesmen and is inclosed in a trunk for shipment. The invention consists of a wheel having shelves to which shoes may be fastened and which may be secured to the wheel either in tangential or radial positions, according as it is desired to display the shoes or prepare the device for shipment.

BUNG.—JACOB CONRAD, Chicago, Ill. This improved barrel-bung can be readily applied and used with or without a bushing, and is designed to prevent the opening of the barrel during transit. The bung has a cylindrical casing loosely fitting in the hole and having internal threads receiving a hollow screw with inwardly-extended ribs running longitudinally therewith and adapted to be engaged by a key. Beyond the casing the inner end of a screw projects, which end loosely receives a rivet carrying a presser-plate. A yielding gasket loosely surrounds the inner portion of the screw and casing and is engaged by the presser-plate, so that as the screw is drawn into the casing the gasket is expanded to close the bung-hole. The bung-hole can be opened only by the key.

WATER-HEATER.—MICHAEL E. HERBERT, Jr., 240 to 252 Root Street, Chicago, Ill. The device is a water-heater for baths and domestic purposes. It employs a water-jacketed feeding-magazine and comprises a boiler made in two main parts, the upper of which has a pendant annular water-chamber and the lower of which incloses or forms the fire-box. These two parts are connected by a series of vertical pipes.

WAGON-BODY LIFTER.—HON. ORLO H. DRINK-WATER, Cottonwood Falls, Kan. The wagon-body lifter comprises sills and a toggle-arm having its side bars pivoted at their upper ends to the pivoted toggle-arm. Rollers operate on the sills. Great power can be exerted to lift the body from the running gear, the running-gear itself being caused, to transmit the power. The lifter is adapted for bodies of different sizes.

CALCULATOR.—WILLIAM D. CONKLIN, Rutherford, N. J. The calculator is designed to reckon wages, the wage per hour, day, or week, and the number of hours of service given. The calculator comprises a base-plate provided with sets of guideways arranged one above the other and at right angles to each other. Imperforate plates slide in the lower set of the guideways; and each bears numbers representing the amounts of pay due for a certain number of hours and indexed to indicate the hours served. Perforated plates slide in the upper set of guideways, each indicating the amount of wages for a given time. A perforated face-plate is placed above the sliding plates.

Designs.

BOX.—LEOPOLD AUERBACH, Manhattan, New York city. The box is designed to contain candy, is cylindrical in shape, and is covered by a medallion on which the head of Columbus is produced.

HINGE FOR DOOR-HANGERS.—JOHN C. GABEL, Jr., Oarg, Ill. The hinge is of novel construction and provides a means for suspending the carriages of sliding-doors, especially freight car doors. The hanger is designed to be used in connection with a sliding-door devised by the same inventor.

NOTE.—Copies of any of these patents will be furnished by Munn & Co. for ten cents each. Please state the name of the patentee, title of the invention, and date of this paper.

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.

Marine Iron Works. Chicago. Catalogue free. For logging engines. J. S. Mundy, Newark, N. J. "U. S." Metal Polish. Indianapolis. Samples free. Gasoline Brazing Forge, Turner Brass Works, Chicago. Yankee Notions. Waterbury Button Co., Waterbury, Ct. Handle & Spoke Mch. Ober Mfg. Co., Chagrin Falls, O.

Gear Cutting of every description accurately done. The Garvin Machine Co., Spring and Varick Sts., N. Y. Wanted—Capitalist to invest in Patent Pliers. A. Hesterbagen, 226 Communipaw Ave., Jersey City, N. J. Ferracut Machine Co., Bridgeton, N. J., U. S. A. Full line of Presses, Dies, and other Sheet Metal Machinery.

Machinery for R.R. contractors, mines, and quarries, for hoisting, pumping, crushing, excavating, etc., new or 2d-hand. Write for list. Wilhs Shaw, Chicago.

The celebrated "Hornsby-Akroyd" Patent Safety Oil Engine is built by the De La Vergne Refrigerating Machine Company. Foot of East 138th Street, New York.

The best book for electricians and beginners in electricity is "Experimental Science," by Geo. M. Hopkins. By mail, \$4. Munn & Co., publishers, 361 Broadway, N. Y.

Send for new and complete catalogue of Scientific and other Books for sale by Munn & Co., 361 Broadway, New York. Free on application.

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. Buyers wishing to purchase any article not advertised in our columns will be furnished with addresses of houses manufacturing or carrying the same. Special Written Information on matters of personal rather than general interest cannot be expected without remuneration. Scientific American Supplements referred to may be had at the office. Price 10 cents each. Books referred to promptly supplied on receipt of price. Minerals sent for examination should be distinctly marked or labeled.

(7734) H. E. B. asks for a list of the twenty-four inventions and discoveries of highest rank made during this century, alluded to in Horace C. Hovery's article on the American Association for the Advancement of Science, in our issue of September 2. A. The list, as enumerated by Prof. Edward Orton, in his address before the association, is stated to be as follows:

- 1.—Railroads, 15.—Molecular Theory of Gases, 2.—Steamships, 16.— 3.—The Telegraph, 17.— 4.—The Telephone, 18.—The Periodic Law in Chemistry, 5.— 19.— 6.— 20.—The Glacial Epoch, 7.— 19.— 21.—The Antiquity of Man, 8.— 20.— 22.—Organic Evolution, 9.—The Phonograph, 21.— 10.—The Roentgen Rays, 22.— 11.—The Spectroscope, 23.—Cell Theory and Embryology, 12.—Anesthetics, 24.— Germ Theory of Disease, 13.—Antiseptic Surgery, 24.— 14.—Conservation of Force, ease.

He remarked that he had quoted from Alfred R. Wallace's classification. Wallace's numbers 5, 6, 7 and 8 are thus filled:

- 5.—Lucifer Matches, 7.—Electric Lighting, 6.—Gas Illumination, 8.—Photography.
- Prof. Orton added Lord Kelvin's "Vortex Theory of Matter" and the "Nebular Theory." The latter, as in the same range with Wallace's No. 19, "The Meteoritic Theory." His No. 16 is "The Velocity of Light Directly Measured," and his No. 17 is "The Uses of Dust." He called attention to the obvious fact that the personal equation of the author of such a list would appear in the selection of the great advances.

(7735) J. K. L. asks: If a person wishes to become an electrician and knows nothing of the subject, what book should he start with? A. If a person knows nothing of electricity, the best book to study first is probably Thompson's "Elementary Lessons in Electricity and Magnetism," price \$1.40 by mail. This book employs no mathematics beyond algebra. We are inclined to think that the best course for one who wishes to gain a working knowledge of electricity in order to be an electrician is to take the course in one of the best correspondence schools. He will there be taught practically rather than theoretically. This is almost the only course open to one living remote from colleges, or one so situated that he cannot stop working and earning while he is learning his new subject.

(7736) J. S. writes: I wish to get a chemical in powder or liquid form, that will absorb heat quickly, and when heated, to retain a high temperature for say twenty-four hours or so when confined. Will you kindly send me the best formula? A. We do not know any substance which will heat quickly and also retain heat for a very long time. The two requirements are antagonistic to each other. Sodium nitrate fused will give off a great deal of heat in cooling, but it will corrode the vessel in which it is contained. Air slaked lime may be raised to a very high temperature.

(7737) H. B. asks: Which is the best iron to use on transformers and alternating current motors? A. Any good soft wrought iron is suitable for the core of a transformer.

NEW BOOKS, ETC.

CHRISTIAN SCIENCE AND OTHER SUPERSTITIONS. Being selected from "Faith-Healing, Christian Science, and Kindred Phenomena." By J. M. Buckley, LL.D. New York: The Century Company. 1899. Pp. 128.

METRIC TABLES. By Sir Guilford L. Molesworth. London and New York: Spies & Chamberlain. 1899. 24mo. Pp. 86. Price 80 cents.

This is the third edition of a handy little book on metric tables. The equivalents are arranged so that they can be readily handled by those who have to convert measures.

THE TEACHING BOTANIST. A Manual of Information upon Botanical Instruction. By William F. Ganong, Ph.D. New York: The Macmillan Company. 1899. 12mo. Pp. 270. Price \$1.10.

As its title implies this work is addressed to the teaching botanist and serves as a manual of information upon botanical instruction and deals with its elementary presentation as a science. The work will certainly prove of great value to all teachers of botany, giving as it does clear instruction as to scientific drawing and description, laboratories and their equipment, botanical collections, botanical books and their use and many other interesting things which it would be difficult for the teacher to find in convenient form.

PHYSICAL NATURE OF CHILDREN AND HOW TO STUDY IT. By Stuart H. Rowe, Ph.D. New York: The Macmillan Company. 1899. 12mo. Pp. 206. Price \$1.

The tests which the author outlines may be made in a comparatively short time and will be a great help in solving some of the individual problems which present themselves to every teacher. The book deals with sight, hearing, manner, ability, enunciation, nervousness, fatigue, diseases, habits of posture, movement, etc. When we examine a modern book on pedagogy like the present volume, it is a revelation of modern methods of instruction, and we can but feel that the older methods must have had a great deal of cruelty connected with them, because the teachers themselves were unfamiliar with the physical nature of children. The book is a most admirable contribution to the literature of teaching.

TO INVENTORS.

An experience of fifty years, and the preparation of more than one hundred thousand applications for patents at home and abroad, enable us to understand the laws and practice on both continents, and to possess unequalled facilities for procuring patents everywhere. A synopsis of the patent laws of the United States and all foreign countries may be had on application, and persons contemplating the securing of patents, either at home or abroad, are invited to write to this office for prices, which are low, in accordance with the times and our extensive facilities for conducting the business, Address MUNN & CO., office SCIENTIFIC AMERICAN, 361 Broadway, New York.

INDEX OF INVENTIONS

For which Letters Patent of the United States were Issued for the Week Ending OCTOBER 10, 1899.

AND EACH BEARING THAT DATE.

[See note at end of list about copies of these patents.]

- Accumulator plates, tool for making, W. Majert 634,469
- Air brake, C. N. Dutton 634,723
- Air goods, A. A. Young 634,724
- Alarm. See Burglar alarm.
- Animal trap, Bowen & Twitchell 634,844
- Animal trap, E. H. Walker 634,488
- Asphalt, T. F. Burke 634,551
- Asphalt from petroleum residue, manufacturing, W. J. Hayward 634,818
- Awning, M. G. Ryan 634,478
- Axle and bearing, E. E. Stuver 634,774
- Axle lubricator, wiper, and dust guard, J. S. Paten 634,475
- Back pedaling brake, W. H. Penseyres 634,780
- Barrel cover, M. Hochmies 634,723
- Basket, E. A. Polsey 634,753
- Bathing appliance, W. Vanderman 634,487
- Bayonet, sliding, W. C. Laird 634,466
- Bearing, J. A. Jamieson 634,822
- Bearing, crank shaft, W. A. Hance 634,525
- Bed bottom tightening device, spring, A. C. Lottman 634,531
- Bell alarm, F. Hein 634,727
- Bench. See Wash bench.
- Berry picking machine, Lane & Comeau 634,773
- Bicycle, R. P. Ambler 634,737
- Bicycle, frame, L. Sturges 634,717
- Bicycle frame, L. R. Johnson 634,823
- Bicycle guard, W. J. Chapman 634,520
- Bicycle pedal attachment, H. R. Sieverkrupp 634,591
- Bicycle stand lock, Capen & Cheney 634,441
- Bicycle support, A. Brown 634,438
- Bicycle wheel, P. L. Smith 634,557
- Binder, loose leaf, F. K. Welsh 634,510
- Binder, temporary, F. J. Schleede 634,630
- Bit, W. E. Sell 634,769
- Block signal system, electric, S. H. Hall 634,816
- Blotter holding device, J. M. Rix 634,753
- Bobbin latch, H. C. Fowler 634,692
- Boiler cleaner, M. M. Cram 634,521
- Boiler burner heater, T. Kruse 634,734
- Boiler furnace, steam, J. O. Morris 634,829
- Bolt. See Pedestal brace bolt.
- Book leaf, or music holder, P. A. Veilox 634,781
- Book, manufacturing sales, A. Abraham 634,435
- Books, reference or page marker for, S. J. Sawyer 634,768
- Boot or shoe, E. Roche 634,588
- Bottle filling apparatus, W. Bachner 634,791
- Bottle stopper attachment, F. Morrison 634,807
- Bottles, etc., means for closing, P. Kirschen 634,522
- Bouquet holder, N. M. Worley 634,517
- Box, F. Knobloch 634,645
- Bracket. See Lamp bracket. Seat post bracket.
- Brake. See Air brake. Brake pedaling brake.
- Brake appliance, W. T. Shryock 634,704
- Brick, F. Pagnon 634,562
- Bridge gate, H. Chesman 634,717
- Broom handle, A. S. Allen 634,637
- Brush, C. H. Hansen 634,617
- Brush, C. H. Hansen 634,527
- Brush, C. E. Thompson 634,546
- Brush bridle, L. W. Briggs 634,570
- Brush, liquid blacking, W. H. Beeching 634,606
- Brush, scrubbing, J. J. Gans 634,813
- Burglar alarm, J. W. Wigner 634,635
- Burner. See Gas burner. Hydrocarbon burner. Stump burner. Vapor burner.
- Cab. hansom, Paradis & Desrosiers 634,651
- Cabinet for faces, etc., J. E. Russell 634,589
- Cabinet for sales accounts, store, Yorger & West 634,713
- Cam or pulley fastening, W. C. Davis 634,660
- Can. See Ash can. Garbage can.
- Car coupling, M. I. Welch 634,783
- Car, dumping, M. G. Bunnell 634,682
- Car dust guard railway, J. S. McKenzie 634,473
- Car fender, street, Smyth & Dieterich 634,508
- Car life guard, street, R. F. Preusser 634,854
- Car, railway, J. Dunn 634,749
- Car step, supplemental, A. Heilprin 634,618
- Car window dust guard, H. B. Shotts 634,770
- Cars, electric lighting apparatus for railway, W. F. Richards 634,542
- Carpet, J. Birney 634,737
- Carpet stretcher, E. R. Moser 634,471
- Cartridge for multiple cannon, L. Masini 634,526
- Case. See Show case.
- Case or box for matches, etc., B. Rosenband 634,543
- Cash register, G. H. Gledhill 634,726
- Caster, adjustable, J. H. Chase 634,805
- Cheese curd aerator, C. J. Moore 634,761
- Churn, J. E. Clark 634,847
- Churn, F. V. Kouike 634,553
- Churn and butter worker, combined, E. F. Moenke 634,534
- Churn gate valve, T. J. Howe et al. 634,730
- Cigar ash receptor, P. L. Cole 634,746
- Cigar rolling machine cutting device, C. B. Schultz 634,481
- Clamp. See Pole or column clamp. Tooth clamp.
- Clasp. See Corset clasp.
- Cleaner. See Roller cleaner.
- Cloth shearing machine cloth rest, Amback & Hollingworth 634,602
- Cloth shearing machine rest, Amback & Hollingworth 634,603
- Clothes line and clothes pin holder, combined, S. Burman 634,519
- Coaster, gravity, H. O. & A. W. Moritz 634,669
- Cock, blow off, L. E. Butler 634,640
- Coin assorting and counting apparatus, F. S. D. Scott 634,506
- Comb. See Currycomb.
- Computer brush holder, W. Cooper et al. 634,804
- Confectionery coating machine, W. H. Weeks 634,633
- Cooling beer, etc., apparatus for, W. Bachner 634,792
- Corset clasp, A. Herr 634,576
- Cot, knockdown, D. Howe 634,665
- Cotton press filling box, Thorsen & Shutt 634,839
- Coupling. See Car coupling. Pipe coupling. Thill coupling.
- Crate, folding, G. A. Jones 634,733
- Cross tie, metallic, J. D. Wilson 634,656
- Culinary vessel, C. Halstead 634,557
- Cultivator, J. Mallon 634,825
- Cultivator spring clip, C. R. Harless 634,538
- Cupric sulfate solutions, refining, O. Hofmann 634,751
- Currycomb, O. S. Hopkins et al. 634,458
- Cutter. See Vegetable cutter.
- Cycle, M. Pedersen 634,885
- Cyclometer, G. T. Brown 634,610
- Decorations, etc., for making free hand relief, W. A. Willower 634,786
- Dental instrument fastener, J. W. Ivory 634,832
- Dental mirror attachment, W. I. Brigham 634,638
- Detonator composition, G. P. Bickford-Smith 634,716
- Developing tray rocker, J. H. Clarke 634,639
- Disinfectant, water closets, cisterns, etc., apparatus for automatically feeding, A. C. Monfort 634,469
- Disinfecting apparatus, R. S. West 634,600
- Disinfectant for automatically delivering disinfectant to charges of flush water, J. L. Wade 634,515
- Display and lighting appliance, D. E. Heming 634,838
- Display cabinet for window shades, H. McGinnis 634,472
- Display rack, revolving, M. F. Xander 634,636
- Door attachment, G. J. Winter 634,491
- Door check, G. W. Warner 634,596
- Dock, dry, W. H. Gartz 634,534
- Drawing outfit, mechanical, G. K. Ryck 634,836
- Drawer pull, D. W. Tower 634,778
- Drier, Bishop & Jerguson 634,798
- Drill. See Ratchet drill.
- Drill, M. Moore 634,592
- Driving mechanism, S. P. Pierson 634,833
- Dumping apparatus, G. M. Kennedy 634,643
- Dyeing wool fast black, Julius & Iablin 634,824
- Egg holder, B. Keys 634,500
- Electric brake, G. H. B. Hooper 634,666
- Electric meter, F. Eibig 634,811
- Electrical binding post, W. Roeder 634,766
- Electrical conductors, crossing for underground conduits for, V. Koch 634,759
- Electrical indicator, M. Waddell 634,487
- Electrical indicator, Waddell & Lextrand 634,488
- Electrical influence machine, K. S. Lemstrom 634,467
- Electromagnetic cylinder engine, G. H. B. Hooper 634,667
- Elevator. See Revolving elevator.
- Elevator, H. R. Tracy 634,513
- End gate, wagon, W. F. Gatewood 634,555
- Engine. See Electromagnetic cylinder engine. Gas engine. Gasolene engine. Rotary engine.
- Engines, electric starting device for gas, J. W. Raymond 634,541
- Entrenching tool, J. C. Michie 634,696
- Evaporator, T. Kuzel 634,485
- Eye-glass guard, W. H. Chap. R. Kabus 634,638
- Eyelet, E. L. Sibley 634,564
- Fence post base, W. Perry 634,672
- Fender. See Car fender.
- Figure, jointed, C. B. Morrow 634,503
- File, letter, Stable & Mills 634,545
- Film, apparatus for developing roll, Smithers & Kelly 634,631
- Filter, N. Lanser 634,691
- Filter, water, Armstrong & Mulconroy 634,714
- Filter, water, W. G. Tousey 634,512
- Filtering device, portable, A. Marks 634,470
- Fire extinguisher, automatic, O. Hoffmann 634,457
- Fire resisting construction, interior, A. T. Stearns 634,737
- Fish globe or tank, A. J. Park 634,424
- Flask top, F. De Gordy 634,441
- Flax breaking and reducing machine, J. T. Smith 634,675
- Flood gate, W. F. Good 634,638
- Floor setting tool, L. A. Manwarink 634,561
- Foot rest, adjustable, J. A. Moore 634,882
- Fortune telling device, Long & Capron 634,579
- Fountain, E. D. Brainard 634,669
- Fuel preparing and feeding apparatus, A. A. Day 634,562
- Furnace for heating fur 634,562
- Furnaces, charring device for heating, J. Hundley 634,499
- Garbage can, C. J. Vaughn 634,677
- Gas apparatus, acetylene, G. Harden 634,817
- Gas burner, acetylene, H. E. Shaffer 634,538
- Gas engine, O. F. Good 634,638
- Gas engine, A. Lee 634,529
- Gas engine, T. J. Sturtevant 634,609
- Gas engine, G. A. Whitcomb 634,554
- Gas fixture safety connection, McDermott & Bennett 634,537
- Gas generator, acetylene, F. Dillon 634,732
- Gas leak indicator, P. Hartenfels 634,687
- Gas lighting or extinguishing mechanism, time, A. B. Shaw 634,856
- Gas machine, acetylene, J. E. Landrum et al. 634,690
- Gas machine pump, gasolene, E. J. Crawford 634,612
- Gasolene engine, C. O. White 634,679
- Gate. See Bridge gate. End gate. Flood gate.
- Gate, N. Early, Jr. 634,810
- Gelatin tubes, apparatus for forming, P. J. Foulton 634,449
- Gelatinous substances, apparatus for manufacturing, C. Dyer 634,685
- Gem setting, Ballou & Burdett 634,567
- Generator. See Gas generator. Steam pressure generator.
- Gin driving mechanism, C. W. Brown 634,800
- Glass articles, machine for grinding, E. F. Genet 634,452
- Glove, J. Comrie 634,443
- Governor, engine, C. D. Palmeter 634,650
- Grain shovels, brush attachment for power, F. Kaucher 634,578
- Grate, G. A. Long 634,694
- Grate, C. Blackader 634,743
- Hay loader, J. Wilson 634,599
- Hay press, E. J. Shirley 634,544
- Heater. See Vehicle heater.
- Heating apparatus and device for controlling action thereof, steam, C. E. Van Auken 634,547
- Heli, C. Blackader 634,743
- Hinge, spring, W. F. McKee 634,554
- Hoisting machine, A. P. Peterson 634,586
- Hook. See Whiffletree hook.
- Hoop. See Metal hoop.
- Hydraulic rocking press, H. M. Crowell 634,719
- Hydrocarbon burner, H. Howard 634,642
- Hydrocarbon oil burning apparatus, W. J. Jackman 634,463
- Indicator. See Electrical indicator. Gas leak indicator. Office indicator.
- Indicator, T. A. Tribble 634,485
- Ink well case, W. H. Barten 634,793
- Insulating support for electric wires, C. N. Beal 634,568
- Ironing board, D. B. Wallace 634,741
- Jack. See Lifting jack.
- Jar, W. S. Bayless 634,742
- Joint. See Mechanical joint. Universal joint.
- Journal, gas generator, automatic, J. G. Smith 634,820
- Kiln, W. Davis-Douglas 634,721
- Knife, S. H. Jones 634,621
- Knitting machine, H. A. Betney 634,843

(Continued on page 270.)