high merit of the work. The Roman type is used

ANGEWANDTE ELEKTROCHEMIE. Erster Band. Die Primär und Secundar Elements. Von Dr. Franz Peters. Wien, Pest. Leipzig: A. Hartleben's Verlag. 1897. Pp. xiv, 338. Price \$1.20.

This book is one of the attractive German monographs of which so many have appeared from this publishing house. It is devoted to batteries, primary and secondary, and in its three hundred-odd pages the subject of batteries, wet, dry, thermo and secondary, is really most excellently treated, with numerous and quite satisfactory illustrations. The thoroughness of the treatment is testifled to by nearly a six page registry of names of the batteries mentioned in the text.

CORPORATION BOOKKEEPING IN A NUT-SHELL. With an appendix contain-ing a chapter on the Treatment of Manufacturing Accounts, the Latest and Most Approved Rules for Averaging Accounts, the Shortest and Best Rules for Computing T st Rules for Computing Interest, Rules for Locating Errors in Trial Balances, Short Cuts in Figures, etc. By P. H. Grover. Detroit, Mich.: The Bookkeeper Company, Limited. 1897. 8vo. Pp. 94, tables. Price \$2.

Strange to say, the science of accounting is still in a transitory state, so that there are constant demands for shorter, clearer and more intelligent methods of recording the transactions. The present work is devoted to proba bly the most complicated form of bookkeeping that is in use by large corporations, requiring summaries, tabula-tions, statement sheets, etc. It gives a clear exposition of the modern methods which are employed. The author shows a familiarity with the most complicated forms of trial balances, involving one-half dozen different corpora-

EMBALMING AND EMBALMING FLUIDS. With the bibliography of embalming. By Charles W. McCurdy. Wooster, Ohio: The Herald Printing Company. 1896. Pp. 84. Price \$1.

The thesis of Prof. McCurdy is unique. It is in no sense of the word a practical guide to the professional embalmer, but is a scientific treatise upon embalming and embalming finids. A large part of the work is devoted to a bibliography of embalming. It is one of the most complete special bibliographies which has ever come under our notice.

THE POLARIZING PHOTO-CHRONOGRAPH. By Albert Cushing Crehore, Ph.D., and George Owen Squire, Ph.D. New York: John Wiley & Sons. Pp. 150, with numerous plates. Price \$3.

A Dartmouth College professor and an army lieutenant attached to the United States Artillery School give an account in this book of experiments made in developing the perfected instrument now principally used in determining the velocities of projectiles. The unit of time to be dealt with in such experiments is so very small that the work of designing and constructing a practically efficient instrument has been participated in by numerous experimenters, whose labors have extended through several years. In trials inside the bore of a three inch field gun, the recorded times bore about the same relation to a second as a second does to a third of an hour. The basis of the chronograph is the influence of the magnetic field as generated by the electric field upon light, the use of light as an agent being greatly facilitated by the recent development of rapid photographic plates, some records on sensitive plates having been made by exposures of only 1-100,000 of a second. The new instrument, with which the more recent experiments were conducted, was made by J. A. Brashear, of Allegheny, Pa., and the measuring instrument for it was made by Warner & Swasey, of Cleveland, Ohio.

MAINTENANCE OF WAY STANDARDS ON AMERICAN RAILWAYS. Roadmaster and Foreman. Pp. 557. Price \$2.

This book contains a great amount of technical in formation and rules and instructions governing roadway departments of the leading railways of the United States. The forms of reports required from roadmasters, section foremen, and all who have supervisory duties relative to the construction and repairs of the different roads, together with minute specifications of important details, are here given in a way to facilitate comparison, and be of assistance to the practical railroad man.

SANITARY HOUSE DRAINAGE. By T. E. Coleman. New York: Spon & Chamberlain. Pp. 186. Price \$2.

huilders is here presented, with the matter and illustrations so arranged as to place the subject well within the comprehension of any nontechnical individual who wishes to supervise or plan such work for his own dwell-A good deal of attention is given to the ventilation, flushing, and cleansing of drains, a thorough, safe construction of good capacity being strongly recommended.

PRACTICAL GAS FITTING. New York: David Williams. Pp. 116. Price \$1.

This book is a reprint of two illustrated articles originally appearing in the Metal Worker, and written by J. W. Hughes and W. B. Gray, both practical gas fitters. The different manner in which these two workmen treat their subject cannot but be of interest to plumbers and others interested in this class of work

HOT WATER MANUAL. By Walter Jones. Chicago: The American Artisan Press. Pp. 220. Price \$3.

This book contains information and suggestions on the best methods of heating public, private, and horticultural buildings, treating on the high and low pressure system duplicate boilers, radiators, swimming baths. Turkish baths, etc.

Business and Personal.

The charge for insertion under this head is One Dollar of 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 follow-

Marine Iron Works. Chicago. Catalogue free,

For mining engines. J. S. Mundy, Newark, N. J. "U. S." Metal Polish. Indianapolis. Samples free.

Yankee Notions. Waterbury Button Co., Waterb'y, Ct. Folding Umbrellas. Write Grove & Stover, Luray, Va

Handle & Spoke Mchy. Ober Lathe Co., Chagrin Falls,O. Improved Bicycle Machinery of every description. The Garvin Machine Co., Spring and Varick Sts., N. Y.

Concrete Houses - cheaper than brick, superior to tone. "Ransome," 757 Monadnock Block, Chicago.

Order pattern letters & figures from the largest varie ty. H. W. Knight & Son, Seneca Falls, N. Y., drawer 1115. For static machines for all purposes, and X ray apparatus, write Reedsburg Electric Mfg. Co., Reedsburg

Machinery manufacturers, attention! Concrete and mortar mixing mills. Exclusive rights for sale. "Ransome," 757 Monadnock Block, 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. The Temperly Transporter.

See illustration, front page of SCIENTIFIC AMERICAN April 24. It is manufactured by the Lidgerwood Mfg. Co., 96 Liberty Street, New York. Write for particulars

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



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 mannfacturing or carrying the same.

Special Written Information on matters of personal rather than general interest cannot be expected without remuneration.

Scientific American Supplements referred

Scientific American Supplements referred to may be had at the office. Price 10 cents each.

Books referred to promptly supplied on receipt of

minerals sent for examination should be distinctly marked or labeled.

(7166) S. G. says: Can you tell me how I can mount photographs and other pictures on glass the ame as to be seen in the picture store windows? A. To mount prints on glass, take 4 ounces of gelatine; soak one half hour in cold water, then place in a glass jar, adding 16 ounces of water; put the jar in a large dish of warm water and dissolve the gelatine. When dissolved pour in a shallow tray; have the prints rolled on a roller. albumen side up; take the print by the corners and pass rapidlythrough the gelatine, taking great care to avoid air bubbles. Squeeze carefully onto the glass. The better the quality of glass, the finer the effect.

INDEX OF INVENTIONS

For which Letters Patent of the United States were Granted

JUNE 8, 1897,

AND EACH BEARING THAT DATE.

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

| | ,circs.j |
|--|------------------------|
| Advertising device or toy, M. F. Price | 584,272 584,227 |
| Advertising device or toy, M. F. Price | 584,227 |
| for, H. Deininger | 584 050 |
| Alarm. See Bicycle alarm. Burglar alarm. | . 001,000 |
| Alarm. See Bicycle alarm. Burglar alarm. Ammeter, shunt, W. B. Potter. Animal trap, S. A. Lewis. | . 583,934 |
| Animal trap, S. A. Lewis | 584,776 |
| Animal trap, J. G. McCoy Animal trap, A. T. Sullivan (reissue) Annealing box, J. H. Orwig Annealing metallic tubes, wire, etc., plant for, S. | 11,605 |
| Annealing box, J. H. Orwig | 584,165 |
| Annealing metallic tubes, wire, etc., plant for, S. | FO4 100 |
| A. Sague | . 584,166 . 583,991 |
| Auger handle: G. J. Knapp | . 583.910 |
| Awning, C. P. Fogh. Axle, ball hearing, A. C. Farnsworth | . 584,075 |
| Axle, vehicle, G. Greenlee, Jr | . 583,988 . 584,129 |
| Bale tie. P. K. Dederick | 583.895 |
| Bale tie, P. K. Dederick Band cutter and feeder, A. Kleinstiver | 584,042 |
| Banks against robbery, apparatus for securing | 584,309 |
| funds of, P. F. King | 584.052 |
| Bath apparatus, O. Eisenlohr | • |
| Hooper | . 584,265 |
| Battery. See Secondary or storage battery. | 593 011 |
| Bearing, ball, H. Schuppisser. | 584,296 |
| hattery. See Secondary of storage battery. Bearing, ball, H. Schuppisser. Bearing roller, W. H. Woodcock. Bed, folding, L. W. Welch. Bed, folding, L. W. Welch. Bedl, bicycle, J. R. Moore. Bell, bicycle, J. R. Moore. | . 583,961 |
| Bed, folding, L. W. Welch | . 584,107 |
| Bell, bieycle, A. B. Burns. | . 584,032 |
| Bell, bicycle, J. R. Moore | . 584,312 |
| Bell, bicycle, J. K. Moore. Bellows, hand, C. W. Dunn, Sr. Bending or forming machine, A. Dolge. Bicycle, J. Wheatley Bicycle alarm, Leavitt & Bibo. Bicycle attachment, S. W. Wardwell, Jr. Bicycle brake, J. Murphy, Jr. Bicycle chain cleaning device, J. T. Reagan. Bicycle lock, J. Davidson. | . 584,154 |
| Bicycle. J. Wheatley | . 584.200 |
| Bicycle alarm, Leavitt & Bibo | . 584,179 |
| Bicycle attachment, S. W. Wardwell, Jr | . 584,100 |
| Ricycle chain cleaning device J. T. Reagan | 584 23 |
| | |
| Bicycle lock, A. R. Sewell | . 584,017 |
| Bicycle support, D. Rancour | . 584,207 . 583,943 |
| Bicycletrainer, L. de Montgomery, nee Ditte | . 583.520 |
| Bicycles, dust guard for sprockets and chains of | |
| H. Hill. Bit brace with right angled V guide frame, S. Mc | 583,904 |
| Clellan. | . 583,92 |
| Clellan. Bit handle, A. Van Lenten. | . 584,09 |
| Blower, rotary, W. W. Wainwright. Boiler furnace, W. H. Pearce Bolt, A. Adams (reissue) | . 584,067 |
| Bolt. A. Adams (reissue) | . 11,60 |
| Bolt clipper, H. K. Porter | . 584.191 |
| Book support, T. A. Owen. Bookbinding, E. M. Wallen. | . 583,925 |
| Bottle, J. E. Barclay | . 583.970 |
| 200010, D. 2. 201010, | . 555,011 |

Mdvertisements.

ORDINARY RATES.

Inside Page, each insertion - - 75 cents a line Buck Page, each insertion - - - - \$1.00 a line 13 For some classes of Advertisements, Special and Higher rates are required.

The above are charges per agate line—about eight words per line. This notice shows the width of the line, and is set in agate type. Engravings may bead advertisements at the same rate per agate line, by measurement, as the letter press. Advertisements must be received at Publication Office as early as Thursday morning to appear in the fullowing week's issue.



AMERICAN PATENTS - AN INTER. AMDINICAN FATENTS.—AN INTER-esting and valuable rable showing the number of patents granted for the various subjects upon which petitions have been filed from the beginning down to December 31. 1894. Contained in SCIENTIFIC AMERICAN SUP-PLEMENT, No. 1002. Price 10 cents. To be had at this office and from all newsdenlers

POWER & FOOT SHAPERS, PLANERS, DR. LATHES, MACHINE SHOP OUTFITS TO SEBASTIAN LATHE CO. 120 CULVERTST, CINCINNAT

THE HALL BRASS PIPE WRENCH.

A PERFECT TOOL WITH FRICTION GRIP. Bus'lings for all sizes and shapes

Highly polished pipes made up without scar or injury. For Circulars and Price

WALWORTH MFG. CO., 16 Oliver Sf., BOSTON, MASS.



GATES ROCK & ORE BREAKER, Steam Ore Stamp, Mining Machinery,

50 years experience as builders.
GATES IRON WORKS,
Oept. C, 650 Elston Ave., Chicago.

BARNES'

W. F. & JOHN BARNES CO.

1999 Ruby Street, ROCKFORD, ILL.

ARMSTRONG'S * PIPE * THREADING CUTTING-OFF MACHINES



Both Hand and Power.
Sizes I to 6 inches.
Water, Gas, and Steam Fitters' Tools, Hinged Pipe Vises,
Pipe Cutters. Stocis and Dress
universally acknowledged to be
THE BEST. LET Send for catalog. THE BEST. Prena 101 CO.
Bridgeport, Conn.

Drop Forging Plants for BICYCLE work.

Will quote on complete Plants, Dies, and Tools. IF Send for catalogue D. F.

The Billings & Spencer Co. HARTFORD CONN. U. S. A.

NICKEL ELECTRIC LEVELS

TRANSITS AND LEVELING INSTRUMENTS.

Sizes, 2 and 3 inches.

For Book on \ C. F. RICHARDSON & SON, the Level. \ P. O. Box 977, Athol, Mass., U. S. A. QUEEN" ARCHITECT LEVEL \$50



Improved Transits & Levels
Graduated entirely Improved Iransits & Levels
Graduated entirely on our
large dividing engines. Special award at the World's
Fair. All kinds of Engineering, Surveying and Drafting
Instruments and Materials.
220 p. illustrated catalogue
mailed free only if this ad.
is mentioned.

QUEEN & CO., Inc., 1011 Chestant & Philadelphi

making sooe eyelets and special eyelets of all riptions. We are also builders and designers pecial Wireworking Machinery. Send for Circular.

BLAKE & JOHNSON, P. O. Box 7, WATERBURY, CONN., U. S. A

'It - Cells - About - Cools''



Every Mechanic, Metal Worker, or person interested in Machinery Supplies should have our new 1897 Tool Catalogue. It contains 710 pages, size 10%x7%, and is an exhaustive and instructive list of all tools that may be required. Mailed free to anyone mentioning this paper and sending us 35 cents. Discount sheet forwarded with every copy of the book. Send stamps or money order.

MONTGOMERY & CO. MAKERS AND JOBBERS IN FINE TOOLS,

105 Fulton Street, New York City.

| | 397 |
|---|--|
| Bottle, J. F. Inglis. | 584.225 |
| Bottle, J. F. Inglis. Bottle cleaner, H. H. Freeman. Bottle, muellage, G. C. Koester. Bottle, non-redilable, W. A. Papoun. Bottle or jar stopper, O. Selg. Bottle stopper, Wupper & Becker. Bouquet holder, M. Bolsinger. Box, T. F. Krueger. Box and blotter, combination, T. C. Keeler. Brake mechanism, fluid pressure, J. Soucek. Brick, J. Quigley. | 584,225 584,215 584,043 |
| Bottle or jar stopper, O. Selg | 584,048 583,949 583,966 |
| Bouquet holder, M. Bolsinger. Box, T. F. Krueger. Box and blotter combination, T. C. Keeler | 584,170 584,267 584,040 |
| Brake mechanism, fluid pressure, J. Soucek Brick, J. Quigley. Buckle, tongueless, Skiles & Boll | 584,065 584,293 584,098 |
| Buckle, tongueless, Skiles & Boll | 584,098 584,116 583,952 584,202 |
| Buffer and coupling, central, G. Johnston Burglar alarm, T. J. Sutton. Burglar alarm system, W. T. Arnold. Butter moulding and cutting machine, Flynn | 584,202 |
| Button, separable, P. A. Eklund | 584,036 |
| Can opener, W. W. Hurd | 583,999 |
| Canceling and registering letters, machine for, W. Thayer. | F. 583,964 |
| Can opener, E. Sanders. Canceling and registering letters, machine for, W. Thayer. Cane and pistol barrel, combined, J. H. Hamm Cane crusher, A. L. Marshall. Cap or closure, A. J. Robinson. Cape, I. Cohen. Car, air storage motor. R. Hardie. Car, combination stock or freight, P. H. Beenc Car coupling, H. T. Moore. Car detachable support, street, J. I. Hammer. Car door operating and locking mechanism, N | er. 583,954 er. 584,222 584,183 |
| Cape, I. Cohen Car, air storage motor. R. Hardie | 584,015 583,890 584,146 |
| Car, combination stock or freight, P. H. Beenc Car coupling, H. T. Moore | 584,146 k 584,261 584,045 584,223 |
| Car detachable support, street, J. I.I. Hammer. Car door operating and locking mechanism, W. Rhodes. Car fender, W. Patterson | V. 584,240 583,931 |
| Car heater, R. M. Dixon | 584,211 584,288 583,964 |
| Car, mine, J. S. Woodcock. Car wheel, railway roller bearing, J. J. A. Mille Cars deel, railway roller bearing, J. J. A. Mille Cars deel, railway roller bearing, J. J. A. Mille | 583,964 er 583,917 |
| steady themselves, etc., in street, J. N. b. | ic- 584,133 |
| Cardboard box, folding, E. C. Church | 584,072 107, 584,308 583,998 |
| Cash recorder and indicator, W. J. Busse | 584,303 583,888 |
| Cantrifugal machine, W. C. Moore | 584,046 |
| Char revivifying apparatus, J. V. V. Booraem. | 584,071 |
| steady themselves, etc., in street, J. N. Intire | 584,237 584,112 |
| Cockeye, detachable, E. A. Hardy Coffin handle gage, E. A. Yocum | 584,159 584,030 584,070 |
| Combination wrench, R. H. Daniels. Combing machine, Edwards & Longmore | 583,892 |
| Conduit, J. T. McRoy | 563,920 |
| Controller, pneumatic, E. D. Priest, & M. Controller, pneumatically actuated, Priest & M. Tick. Controller, series parallel, Potter & Case. Converter, rotary, E. W. Rice, Jr. Cooking apparatus, W. E. Baxter. Cork cutting machine, H. Weinz. Corset steel, M. E. McCloskey (now by marris M. E. M. Playter). Cover of file for recepts, etc., P. Hano et al. Covered box, S. Palmer. Crane, derrick, McCabe & Anderson. Crusher. See Cane crusher. Stone crusher. Cultivator, T. Andrews. Cultivator, T. Andrews. Cultivator, M. J. Todd. Currents of high frequency, apparatus for p. ducing, N. Tesla. Curtain holder, G. F. Robinson. Curtain roller, L. Schuck. Cutout switch, G. L. Moyer. Cutting edges of paths, machine for, B. B. Kel Cycle wheel, Collins & Wallis. Cyclometer, C. C. Higginbotham. Detonator, G. W. Dennis. Disper, I. Bowles. Disher and mould, H. R. Hageman. Detonator, G. W. Dennis. Disper, I. Bowles. Disher and mould, H. R. Hageman. Detonator asmple fastener, M. Mayer. Door check and spring, F. T. Russell. Drawing instrument, A. K. Cross. Dye, rhodamin, C. O. Muller. Electric furnace, E. F. Price. Electric inght for vehicles, A. M. Rodriguez. Electric motor, E. S. Pilisbury. | 583,939 583,935 |
| Cooking apparatus, W. E. Baxter | 584,259 584,258 |
| Cover or file for recents at a P Hand at all | ige 583,923 584,923 |
| Covered box, S. Palmer | 584,270 584,187 |
| Crusher. See Cane crusher. Stone crusher. Cultivator, T. Andrews | 584,254 |
| Currents of high frequency, apparatus for p ducing, N. Tesla | ro- 583,953 |
| Curtain holder, G. F. Robinson. Curtain roller, L. Schuck. Cutout switch, G. L. Mover. | 584,148 584,049 584,185 |
| Cutting edges of paths, machine for, B. B. Kel Cycle wheel, Collins & Wallis. | y 584,041 583,891 |
| Damper, G. C. Higginootnam. Detonator, G. W. Demnis. | 584,286 583,979 583,984 |
| Diaper, I. Bowles | 204, 584,205 584,221 |
| Display and sample fastener, M. Mayer Door check aud spring, F. T. Russell | 584,229 584,273 |
| Drawing instrument, A. K. Cross | 584,139 584,119 583,936 |
| Electric light for vehicles, A. M. Rodriguez Electric meter, J. Harris. | 583,945 583,900 |
| Electric regulator, C. C. Garuanu | 001,100 |
| Electric switch, G. Winckler. Electrical conductor connection, B. F. Weldon Electrical distribution system, J. L. Woodbrid Electrostatic influence machine, E. Thomson. | 584,299 ge. 584,029 |
| Enectrostatic innuence machine, E. Thomson. Enameling metal, J. Boston Envelope machine, A. A. Rheutan | 583,957 583,974 584,064 |
| Enameling metal, J. Boston. Envelope machine, A. A. Rheutan. Envelope, photograph, A. A. Rheutan. Evacuating device, A. A keson. | 584,063 584,253 |
| Envelope, photograph, A. A. Kheutan. Evacuating device, A. Akeson. Excelsior cutting machine, F. Abel. Excelsior cutting machine, J. R. Bate. Fabrics, machine for uniting looped, S. Hensh Fastening for iron and ornamental wirew. stands. Reers & Eherhardt. | 584,037 583,882 583,884 |
| Fabrics, machine for uniting looped, S. Hensh Fastening for iron and ornamental wirewo | all. 584,224 Ork 584,069 |
| Faucet, W. A. Hull. Felly for vehicle wheels, wooden, G. Tyler | 583,906 584,277 584,175 |
| Fastening for iron and ornamental wirew stands, Beers & Eberhardt. Faucet, W. A. Hull. Felly for vehicle wheels, wooden, G. Tyler. Fence, wire, B. H. Haley. Flerarm, recoil operated, H. Carr. Fishing reel, R. C. Kruschke. Flower stand, J. Lemon. Fluid pressure regulator, P. Albertine, Jr. Floiding machines, anti-offset mechanism for. | 584,175 584,153 583,913 |
| Flower stand, J. Lemon. Fluid pressure regulator, P. Albertine, Jr | 584,057 584,201 |
| L. Firm | 584,140 |
| Food products, apparatus for treating, W. Wright. | |
| Food products, apparatus for treating, W. Wright Food warmer, baby, A. Langerfeld Foot and ankle, artificial, J. I. Lyons Fruit box, H. O. Little Fruit grading machine, Cunningham & Smith Fuel, artificial, H. R. Brissett Fuel, artificial, H. R. Brissett et al Kurnace. See Boiler furnace. Electric furnace Furnace draught regulator, I. J. Bretz Furnaces, machine for charging open hearth. P. Eck | 584, 0 04 584,044 |
| Fruit grading machine, Cunningham & Smith. Fuel, artificial, H. R. Brissett | 583,981 584,104 |
| Furnace. See Boiler furnace. Electric furnac Furnace draught regulator, L. J. Bretz | ce. 583,975 |
| Furnaces, machine for charging open hearth, P. Eck. Furniture base, W. F. Woodruff | J. 584,051 584,124 |
| P. Eck. Furniture base, W. F. Woodruff. Game apparatus. R. F. de Grain. Game apparatus. W. P. Wetzler. Garment holder, spring, J. Davis. Gas engine, Burger & Williams. Gas engine, F. C. Griswold. Gas generating apparatus, B. Loomis. Gas or vapor engine, P. B. & S. D. McLelland Gasolene and gas engine, W. F. Davis. Gate. See Self-opening gate. Gate, C. W. Burrington, | 584,219 584,199 |
| Gas engine, Burger & Williams. Gas engine, F. C. Griswold. | 584,282 584,130 |
| Gas or vapor engine, P. B. & S. D. McLelland Gasolene and gas engine. W. F. Davia | 583,915 584,188 583,089 |
| Gate. See Self-opening gate. Gate. C. W. Burrington, Gate. B. Chardler | 583,977 |
| Gate, C. W. Burrington, Gate, E. W. Burrington, Gate, E. B. Chandler. Gate, P. Markley. Gate, W. R. White Glass. See Looking glass. Glass, colored flashed ornamental, A. L. Brow Glass, machine for automatically gathering, F. Altenbaugh. | 584,978 584,092 584,280 |
| Glass. See Looking glass. Glass, colored flashed ornamental, A. L. Brow. Glass, machine for automatically acthorized | n 584,107 |
| Glass, machine for automatically gathering, F. Altenbaugh. Governing velocity of springdriving mechanisidevice for, P. Lochmann. Governor, automatic fluid, G. W. Browne | 584,13S ms, |
| device for, P. Lochmann | 584,003 584,172 om. |
| Grain, apparatus for separating moisture from Robinson & Birks. Grain binder bundle carrier, H. E. Pridmore. Grinding machine, tool. M. B. Hill. Gun, magazine, J. L. Hepburn. Harrow, disk, P. E. Little. Harvesting machine, corn, J. W. Pridmore. Hat fastener, Schruben & Beck. Hat pin guide and fastener, Rankin & Spicer. Hay press, W. T. Young. Hay rake and loading and stacking machine. Concamon. | om, 584,195 584,014 |
| Gun, magazine, L. L. Hepburn. Harrow, disk. P. E. Little | 584,114 584,177 583,914 |
| Harvesting machine, corn, J. W. Pridmore Hat fastener, Schruben & Beck | 583,937 584,243 584,147 |
| Hay press, W. T. Young | 584,147 584,300 S. |
| Heater. See Car heater. Portable heater. Wa | 584,210 ter |
| neater. | |
| Heating apparatus for use with liquid hydrocons, A. Quentin. Hides and leather, machine for treating, W. Turner. Hinge I H Pineo | B 584,123 |
| Hinge, J. H. Pineo. Hinge, lock, G. L. Reenstierna. Hoisting apparatus, W. C. Baxter | 584,036 584,239 584,301 |
| Horseshoe nail machine, Capewell & Jones Hose coupling, E. E. Gold | 584,304 584,144 583,969 |
| Horseshoe nail machine, Capewell & Jones Hose coupling, E. E. Gold. Hose nozzle, J. Askins. Hose splice, C. F. Munson. Hub. wheel, J. B. Garand. Hydrocarbon motor, M. H. Rumpf. Igniting device, R. Jolles. | 584,008 584,141 584,097 |
| Hydrocarbon motor, M. H. Rumpf. Igniting device, B. Jolles. Indicator. See Ship speed indicator. In well supporting attachment for deaks. R. | 584, 0 97 584,056 |
| Rayman | 583 043 |
| Inking apparatus, mechanical, M. B. Templin. Insect capturing and destroying device, J. Str hal | ou- |
| Insect capturing and destroying machine, | J 584,246 |
| Joint. See Rail joint. | 584,235 |
| Knife. See Lock blade knife. (Continued on page 398) | |

(Continued on page \$98)