Fence, L. D. Cather...... 285,570

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HINTS TO CORRESPONDENTS.

No attention will be paid to communications unless writer.

Names and addresses of correspondents will not be given to inquirers.

We renewour request that correspondents, in referring to former answers or articles, will be kind enough to name the date of the paper and the page, or the number of the question.

Correspondents whose inquiries do not appear after a reasonable time should repeat them. If not then published, they may conclude that, for good reasons, the

Persons desiring special information which is purely of a personal character, and not of general interest, as we cannot be expected to spend time and labor to paper which may be kept for use without curling, and obtain such information without remuneration.

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Correspondents sending samples of minerals, etc. for examination, should be careful to distinctly mark a label their specimens so as to avoid error in their ident? fication.

- (1) H. W. writes: I have some gutta percha chips: how cau I soften them and then make them hard again, like gutta percha buttons? A. Soak the fragments in hot water. It will quickly soften them, and they will become hard on cooling.
- (2) J. R. H.—The ordinary solid bluing consists of indigo and starch, or of artificial ultramarine. To make liquid bluing the following is a good receipt: Powder one ounce Prussian blue very fine. add it to one quart of very pure water, to which add one-fourth of an ounce of oxalic acid. This is very powerful. The oxalic scid is poison.
- (3) O. T. asks: Can you give me a formula or two for brilliant, quick drying furniture polish? A. The following will dry in a moderate time: 4 ounces shellac is dissolved in 2 pints strong alcohol; to this is added pints linseed oil and 1 pint spirits of turpentine. When mixed, add 4 ounces common ether and 8 ounces ammonia water. Apply with a sponge. For French polishing, shellac varnishes are often used. The followlon. Make in the cold in a stoppered can or demijohn, and do not filter. This is for use in French polishing, which involves rubbing in with a rubber.
- (4) W. L. T. asks for a receipt for gilding and silvering on wood. A. The wood must be coated with size. To make this boil half a pound parchment shavings with three quarts of water, constantly stirring. This gives a clear solntion of gelatine, which must be passed through a sieve. Paint over the wood with this, and while it is still moist apply gold or silver leaf or Dutch metal. Much manual skill is necessary, and you should see the exact details practiced by a gilder. You may also gild wood by mixing bronze powder with articles for ornament. Some method by which the ink copal varnish and painting it with the mixture. Finalgold paint may be bought all ready for use and this will probably give you the most satisfaction.
- (5) E. G. H.—To prevent the rotting of seines, we would suggest the use of raw linseed oil, applied to the seine while it was perfectly dry.
- (6) A. R. J. writes: How can I remove pressed in one-sixteenth of an inch? Can the indentation to renew the muslin or leather covers of old books? Or porcelain surface. This must then be revarnished. Also can the stains of dampness, mould, or other discolorations be removed from the cover and leaves? A. The impressions on the outside of the book cannot be removed. It would also be very difficult or impo-
- (7) D. J. P. asks: 1. Is there any solvent It depends on what kind of ink the bottles held. of coal tar other than heat or "dead oil"? A. Turpenlar liquids will dissolve coal tar. 2. How may the odor of coal tar be destroyed or disgnised? A. It is extremely hard to remove or disguise its odor, as we have found by experience.
- (8) T. F. asks (1) what two colorless or nearly colorless liquids when mixed will become black. A. Mix a dilute solution of copperas with an infusion of nut galls. 2. What colorless or nearly colorless vegetable or mineral solution will become dark by contact with a metallic solid, and what metal will effect the change? A. Mix a dilute solution of nickel sulphate with a very little hydrochloric acid and add sulphide of ammonium. A piece of metallic zinc will neutralize the acid and cause a black precipitate of sulphide of nickel which will color the solution before settling out
- (9) E. C. S. writes: 1. I have a lot of surgeon's isinglass adhesive plaster which is not very proof against water or moisture. What should I apply

to the silk side to render it entirely waterproof, so it won't wash off when slightly wet? A. After applying it give it a coat of shellac dissolved in alcohol, or it and the skin surrounding it with collodion. 2. What is the liquid used on muslin drilling, or cotton duck to make it waterproof, and fit for coats, horse and wagon covers, etc.? It gives the material a slightly yellowish tint. A. Linseed oil.

- (10) H. C. W. writes: 1. Please give us in "Notes and Queries" the formula for a good liquid shoe dressing; one that will not injure the leather and C. B. Rogers & Co., Norwich, Conn., Wood Working which will give a luster without rubbing, and which will also answer for harness? A. Many receipts are given. We give the following, as it contains no oil of vitriol, and can be tried cheaply. Ivory black, 1 pound; molasses, 34 pound; sweet oil, 2 ounces. Mix well and rub together, then add beer, 1 pint, vinegar, 1 pint. Also see SCIENTIFIC AMERICAN, Vol. 48, No. 10. 2. Can you also give the formula for Day's liquid blacking, an English preparation? A. The formula for Day & Martin's English blacking is thus given: Fine hone black is mixed with sperm oil until a thorough mixture is effected. Sugar and motasses is mixed with a little vinegar, and added to the mass. Oil of vitriol is next added, and when effervescence has ceased vinegar is poured in unaccompanied with the full name and address of the til a proper consistence is attained. The quantities are not given; they probably run about as follows: Bone black, 1 pound; sperm oil, 1/4 pound, or enough to mix; molasses, 1 pound; oil of vitriol, 1 pound; vinegar enough to secure proper consistency.
 - (11) C. F. S. asks: Is there any way we can keep glue from getting thick after reducing down very thin? What can we put in it to destroy the offensive odor while cooking? A. Add acetic acid to the glue. This will keep it liquid and tend to overcome the odor. Try also muriatic acid or acetate of lead; both are gøod.
- (12) E. Bros. ask if this is intended to should remit from \$1 to \$5, according to the subject, make a first class mucilage for gumming large sheets of stick well on glass or other substances when wet, viz. paste or glue for paper labels:

Starca	2 drachms.
White sugar	1 ounce.
Gum arabic	2 drachms.
Water	q.s.

Dissolve the gum, add the sugar, and boil until the starch is cooked. A. This seems to be a good paste. Try the following, said to be that used on postage stamps: Gum dextrine, 2 parts; acetic acid, 1 part; Water, 5 parts. Dissolve in a water bath and add alco hol, 1 part.

- (13) J. W. R. asks how to make green japan for tin, such as is used on toy cups, bird cages, etc. Say what ingredients to use, and how to mix? A. Color the japan green by adding a mixture of King's yellow (or other good yellow) and Prussian blue: also try aniline greens.
- (14) F. W. writes: 1. Will you please answer the following questions, and oblige: At what degree of heat will platinum melt? A. 4,5910 Fahr. 2. Has it a clear ring like silver? A. It is not nearly so sonorous as silver. 3. What is it worth per pound? A. A bout \$155.00.
- (15) L. R. G. writes: I forward you with this a sample of white quartz sand from a deposit in this State. Would you inform me whether the sample is of a kind suitable for fine glass manufacture, and also is good: Shellac 2 pounds, mastic and sandarach, of if it is likely that the sand would find a market as a each 1 ounce, copal varnish 12 ounces. Alcohol 1 gal- commercial article if suitably prepared? Would you also acquaint me through the Scientific American what are the requirements of manufacturers in their choice of sand for different classes of articles, and wherethe most suitable are found in this country? A. The value of sand for manufacturers in general consists especially in its freedom from iron. The sample you end seems very pureand well adapted for glass making. Correspond with some of the large glass factories, and send them samples if they ask for them.
- (16) G. W. H. writes: Will you please inform me in your answers to correspondents how steel plate engravings can be transferred to vases and other can be softened and transferred to any kind of hare surface? A. Varnish the surface to which the engraving is to be transferred with copal or dammar varnish. After it has dried for six hours and is still sticky, wet or soak (if necessary) the engraving, using soft water for the purpose. Then press the engraving well npon the varnished surface, carefully avoiding the formation of bubbles. Let the whole dry perfectly (which will the gold gilt and name from the cover of a book that is take a day more). Then with a wet sponge and the fingers and soft rubber wash off the paper in pieces, tion be entirely taken out? Also, is there any prepara- and the lines of the engraving will be left upon the glass
 - (17) A. A. R. asks: Can you give a process whereby empty ink bottles can be sufficiently cleaned, so that they may be used without injury to health in
- (18) A. G. asks: Are the colors used in maktine, naphtha, kerosene, benzine, and many other simi-ing pastel pictures durable, or will they fade after a time? A. Most of the colors are very permanent.

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September 25, 1883,

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	Cooling water, apparatus for, R. M. Downie Corn and other grain, implement for shocking Indian, T. G. Conkling	285.395 285.512 285,704 285,765 285,403 285,724 285,424 285,469 285,500 285,478 285,478 285,448 285,448	Heel nailing machine, M. V. Ethridge. Hoe, H. H. & C. Finn. Holder. See Bag holder. Paper holder. Pen holder. Rein holder. Stovepipe holder. twine holder. Hook. See Ladder hook. Suspension hook. Hoop cutting machine, J. A. Grant. Horse-boot, E. Barnard. Horseshoe, J. N. Clarke. Horseshoe, soft ground, L. Brigham	285,696 285,604 285,612 285,552 285,563 285,561 285,615 285,753 285,498 285,619 285,672
	Cooling water, apparatus for, R. M. Downie Corn and other grain, implement for shocking Indian, T. G. Conkling	285.395 285.704 285,704 285,765 285,403 285,724 285,424 285,424 285,421 285,4721 285,4721 285,575 285,577	Heel nailing machine, M. V. Ethridge. Hoe, H. H. & C. Finn. Holder. See Bag holder. Paper holder. Pen holder. Rein holder. Stovepipe holder. twine holder. Hook. See Ladder hook. Suspension hook. Hoop cutting machine, J. A. Grant. Horse-boot, E. Barnard. Horseshoe, J. N. Clarke. Horseshoe, soft ground, L. Brigham	285,696 285,604 285,612 285,552 285,563 285,615 285,615 285,619 285,619 285,672 285,672
	Cooling water, apparatus for, R. M. Downie Corn and other grain, implement for shocking Indian, T. G. Conkling	285.395 285.704 285,704 285,765 285,403 285,724 285,424 285,424 285,421 285,4721 285,4721 285,575 285,577	Heel nailing machine, M. V. Ethridge. Hoe, H. H. & C. Finn. Holder. See Bag holder. Paper holder. Pen holder. Rein holder. Stovepipe holder. twine holder. Hook. See Ladder hook. Suspension hook. Hoop cutting machine, J. A. Grant. Horse-boot, E. Barnard. Horseshoe, J. N. Clarke. Horseshoe, soft ground, L. Brigham. 285,562, Ice and salt mixing apparatus, A. J. Stoll. Ice machine, W. B. Bushnell. Incrustation preventive, J. B. Hannay. Index, J. H. Wagstaff. Indicator. See Station indicator, Inhaler and irrigator, nasal, J. Keck. Injector. J. H. McPhail Inlaid articles, manufacturing, G. Hirst Insulating electric conductors, H. O. Phillips. Insulating electrical conductors, H. O. Phillips.	285,596 285,612 285,612 285,552 285,573 285,563 285,513 285,753 285,460 285,615 285,753 285,498 285,619 285,672 285,672 285,672
	Cooling water, apparatus for, R. M. Downie Corn and other grain, implement for shocking Indian, T. G. Conkling Cornerushing and splitting machine, E. A. Porter Corset, nursing, I. Strouse Cotton press. self-packing, Rummel & Fiedler Counters, foot railing for, J. Gaetje Coupling. See Car coupling. Pipe or hose coupling. Thill coupling. Cream and milk transporter, J. E. Baggott Crimping, machine for radial, McCreary & Smith. Crusher. See Ore crusher. Cultivator, Day & Gregory Cut-off valve gear, H. H. Meyer. Damper regulator, steam, G. M. Githens Derrick, I. H. Yeaw Doll, M. L. Wellington Door hanger, B. J. Cloes Draught bar for sleighs, D. N. Barker Downing and design, movable outline, M. J. Sweeney	285,395 285,512 285,704 285,765 285,403 285,403 285,424 285,469 285,478 285,4721 285,4721 285,575 285,577 285,577	Heel nailing machine, M. V. Ethridge Hoe, H. H. & C. Finn Holder. See Bag holder. Paper holder. Pen holder. Rein holder. Stovepipe holder. twine holder. Hook. See Ladder hook. Suspension hook. Hoop cutting machine, J. A. Grant	285,596 285,604 285,612 285,552 285,561 285,615 285,615 285,753 285,619 285,619 285,619 285,619 285,619 285,619
	Cooling water, apparatus for, R. M. Downie Corn and other grain, implement for shocking Indian, T. G. Conkling Cornerushing and splitting machine, E. A. Porter. Corset, nursing, I. Strouse Cotton press. self-packing, Rummel & Fiedler Counters, foot railing for, J. Gaetje Coupling. See Car coupling. Pipe or hose coupling. Thill coupling. Cream and milk transporter, J. E. Baggott Crimping, machine for radial, McCreary & Smith. Crusher. See Ore crusher. Cultivator, Day & Gregory Cut-off valve gear, H. H. Meyer. Damper regulator, steam, G. M. Githens Derrick, I. H. Yeaw Doll, M. L. Wellington Door hanger, B. J. Cloes Draught bar for sleighs, D. N. Barker Drawing and design, movable outline, M. J. Sweeney Dredges, head block for A-frames of, R. R. Osgood	285,395 285,512 285,704 285,765 285,403 285,724 285,424 285,469 285,478 285,4721 285,4721 285,472 285,472 285,472 285,472 285,473	Heel nailing machine, M. V. Ethridge. Hoe, H. H. & C. Finn. Holder, See Bag holder. Paper holder. Pen holder. Rein holder. Stovepipe holder. twine holder. Hook. See Ladder hook. Suspension hook. Hoop cutting machine, J. A. Grant. Horse-boot, E. Barnard. Horseshoe, J. N. Clarke. Horseshoe, soft ground, L. Brigham	285,594 285,612 285,612 285,532 285,532 285,532 285,531 285,531 285,753 285,400 285,615 285,619 285,619 285,619 285,619 285,619 285,619 285,619 285,619 285,619 285,619 285,619 285,619 285,619 285,619 285,619 285,619 285,619
	Cooling water, apparatus for, R. M. Downie Corn and other grain, implement for shocking Indian, T. G. Conkling	285,395 285,512 285,704 285,704 285,403 285,403 285,424 285,469 285,500 285,478 285,572 285,478 285,575 285,377 285,442 285,658 285,658	Heel nailing machine, M. V. Ethridge. Hoe, H. H. & C. Finn. Holder. See Bag holder. Paper holder. Pen holder. Rein holder. Stovepipe holder. twine holder. Hook. See Ladder hook. Suspension hook. Hoop cutting machine, J. A. Grant. Horse-boot, E. Barnard. Horseshoe, J. N. Clarke. Horseshoe, soft ground, L. Brigham	285,596 285,604 285,612 285,52 285,57 285,57 285,57 285,56 285,56 285,56 285,56 285,56 285,66 285,69 285,69 285,67
	Cooling water, apparatus for, R. M. Downie Corn and other grain, implement for shocking Indian, T. G. Conkling Corn crushing and splitting machine, E. A. Porter. Corset, nursing, I. Strouse Cotton press. self-packing, Rummel & Fiedler Counters, foot railing for, J. Gaetje Coupling. See Car coupling. Pipe or hose coupling. Thill coupling. Cream and milk transporter, J. E. Baggott Crimping, machine for radial, McCreary & Smith. Crusher. See Ore crusher. Cultivator, Day & Gregory Cut-off valve gear, H. H. Meyer. Damper regulator, steam, G. M. Githens Derrick, I. H. Yeaw Doll, M. L. Wellington Door hanger, B. J. Cloes Drawing and design, movable outline, M. J. Sweeney Drawing and design, movable outline, M. J. Sweeney Dredges, head block for A-frames of, R. R. Osgood. Drier. See Glue drier. Drill. See Ratchet drill. Rock drill. Drilling machine, W. F. & J. Barnes Drinking flask J. P. Eustis. Ear jewel fastening, G. W. Washburn Easel, B. Smiley	285,395 285,512 285,704 285,704 285,403 285,403 285,424 285,469 285,500 285,478 285,572 285,448 285,575 285,442 285,658 285,726 285,726 285,726 285,726 285,726 285,597 285,432 285,432 285,432 285,432 285,432	Heel nailing machine, M. V. Ethridge. Hoe, H. H. & C. Finn. Holder. See Bag holder. Paper holder. Pen holder. Rein holder. Stovepipe holder. twine holder. Hook. See Ladder hook. Suspension hook. Hoop cutting machine, J. A. Grant. Horse-boot, E. Barnard. Horseshoe, J. N. Clarke. Horseshoe, soft ground, L. Brigham. 285,562, Ice and salt mixing apparatus, A. J. Stoll. Ice machine, W. B. Bushnell. Incrustation preventive, J. R. Hannay. Index, J. H. Wagstaff. Indicator. See Station indicator, Inhaler and irrigator, nasal, J. Keck. Injector. J. H. McPhail Inlaid articles, manufacturing, G. Hirst. Insulating electric conductors, H. O. Phillips. Intrenching tool, G. F. Elliott. Joint. See Railway rail joint. Joint or coupling for rods, etc., J. E. Langdon. Kin for burning tiles, earthenware. etc., D. Laemmle	285,596 285,604 285,612 285,5573 285,5573 285,5573 285,615 285,615 285,615 285,615 285,653 285,619 285,673 285,649 285,673 285,673 285,673 285,673 285,673 285,673 285,673 285,673 285,673 285,673 285,673
	Cooling water, apparatus for, R. M. Downie Corn and other grain, implement for shocking Indian, T. G. Conkling Cornerushing and splitting machine, E. A. Porter. Corset, nursing, I. Strouse. Cotton press, self-packing, Rummel & Fiedler Counters, foot railing for, J. Gaetje Coupling. See Car coupling. Pipe or hose coupling. Thill coupling. Cream and milk transporter, J. E. Baggott Crimping, machine for radial, McCreary & Smith. Crusher. See Ore crusher. Cultivator, Day & Gregory Cut-off valve gear, H. H. Meyer. Damper regulator, steam, G. M. Githens Derrick, I. H. Yeaw Doll, M. L. Wellington Door hanger, B. J. Cloes Draught bar for sleighs, D. N. Barker Drawing and design, movable outline, M. J. Sweeney Dredges, head block for A-frames of, R. R. Osgood Drier. See Glue drier. Drill. See Ratchet drill. Rock drill. Drinking flask, J. P. Eustis Ear jewel fastening, G. W. Washburn Eaves trough hanger, J. P. Abbott Eaves trough hanger, J. P. Abbott Egg carrier, J. W. Palmer	285,395 285,512 285,704 285,705 285,403 285,724 285,424 285,489 285,575 285,577 285,422 285,658 285,772 285,438 285,726 285,532 285,438	Heel nailing machine, M. V. Ethridge. Hoe, H. H. & C. Finn. Holder. See Bag holder. Paper holder. Pen holder. Rein holder. Stovepipe holder. twine holder. Hook. See Ladderhook. Suspension hook. Hoop cutting machine, J. A. Grant. Horse-boot, E. Barnard. Horseshoe, J. N. Clarke. Horseshoe, soft ground, L. Brigham	285,596 285,612 285,612 285,562 285,573 285,573 285,574 285,619 285,613 285,613 285,619 285,619 285,619 285,619 285,619 285,63 2
	Cooling water, apparatus for, R. M. Downie Corn and other grain, implement for shocking Indian, T. G. Conkling	285,395 285,512 285,704 285,705 285,403 285,424 285,424 285,469 285,500 285,478 285,577 285,442 285,658 285,772 285,488 285,577 285,442 285,658	Heel nailing machine, M. V. Ethridge. Hoe, H. H. & C. Finn. Holder. See Bag holder. Paper holder. Pen holder. Rein holder. Stovepipe holder. twine holder. Hook. See Ladder hook. Suspension hook. Hoop cutting machine, J. A. Grant. Horse-boot, E. Barnard. Horse-boot, E. Barnard. Horseshoe, J. N. Clarke. Horseshoe, soft ground, L. Brigham. 285,562, Ice and salt mixing apparatus, A. J. Stoll. Ice machine, W. B. Bushnell. Incrustation preventive, J. B. Hannay. Index, J. H. Wagstaff. Indicator. See Station indicator, Inhaler and irrigator, nasal, J. Keck. Injector. J. H. McPhail Inlaid articles, manufacturing, G. Hirst Insulating electric conductors, machine for, H. O. Phillips. Insulating electrical conductors, H. O. Phillips. Intrenching tool, G. F. Elliott. Joint or coupling for rods, etc J. E. Langdon. Kiln for burning tiles, earthenware. etc., D. Laemmle. Kitchen utensil, W. H. H. Smith. Ladder hook, J. F. Manahan. Lamp, C. F. Chew. Lamp electric arc, J. B. Tibbits.	285,596 285,604 285,612 285,522 285,557 285,576 285,576 285,517 285,610 285,610 285,610 285,610 285,617 285,617 285,618 285,637 285,63
	Cooling water, apparatus for, R. M. Downie Corn and other grain, implement for shocking Indian, T. G. Conkling	285,395 285,512 285,704 285,765 285,403 285,724 285,424 285,469 285,500 285,478 285,575 285,477 285,442 285,658 285,772 285,438 285,575 285,438 285,532 285,438 285,532 285,438 285,532 285,438 285,532 285,438 285,532 285,438	Heel nailing machine, M. V. Ethridge. Hoe, H. H. & C. Finn. Holder. See Bag holder. Paper holder. Pen holder. Rein holder. Stovepipe holder. twine holder. Hook. See Ladder hook. Suspension hook. Hoop cutting machine, J. A. Grant. Horse-boot, E. Barnard. Horseshoe, J. N. Clarke. Horseshoe, soft ground, L. Brigham	285,596 285,612 285,652 285,562 285,573 285,563 285,613 285,613 285,613 285,613 285,614 285,615
	Cooling water, apparatus for, R. M. Downie Corn and other grain, implement for shocking Indian, T. G. Conkling	285,395 285,512 285,704 285,765 285,403 285,724 285,424 285,469 285,572 285,478 285,575 285,477 285,442 285,658 285,772 285,482 285,658 285,782 285,482 285,658 285,782 285,658 285,783 285,482 285,658 285,783 285,658 285,658	Heel nailing machine, M. V. Ethridge. Hoe, H. H. & C. Finn. Holder, See Bag holder. Paper holder. Pen holder. Rein holder. Stovepipe holder. twine holder. Hook. See Ladder hook. Suspension hook. Hoop cutting machine, J. A. Grant. Horse-boot, E. Barnard. Horseshoe, J. N. Clarke. Horseshoe, soft ground, L. Brigham	285,596 285,612 285,612 285,522 285,573 285,521 285,531 285,613 285,61
	Cooling water, apparatus for, R. M. Downie Corn and other grain, implement for shocking Indian, T. G. Conkling	285,395 285,512 285,704 285,705 285,403 285,424 285,469 285,572 285,478 285,575 285,577 285,442 285,658 285,726 285,572 285,488 285,575 285,488 285,572 285,488 285,572 285,488 285,572 285,488 285,572 285,488 285,658	Heel nailing machine, M. V. Ethridge. Hoe, H. H. & C. Finn. Holder. See Bag holder. Paper holder. Pen holder. Rein holder. Stovepipe holder. twine holder. Rein holder. Stovepipe holder. Hook. See Ladder hook. Suspension hook. Hoop cutting machine, J. A. Grant. Horseshoe, J. N. Clarke Horseshoe, soft ground, L. Brigham. 285,562, Ice and salt mixing apparatus, A. J. Stoll. Ice machine, W. B. Bushnell. Incrustation preventive, J. B. Hannay. Index, J. H. Wagstaff. Indicator. See Station indicator, Inhaler and irrigator, nasal, J. Keck. Injector. J. H. McPhail Inlaid articles, manufacturing, G. Hirst Insulating electric conductors, machine for, H. O. Phillips. Insulating electrical conductors, H. O. Phillips. Intrenching tool, G. F. Elliott. Joint. See Railway rail joint. Joint or coupling for rods, etc J. E. Langdon. Kitchen utensil, W. H. H. Smith. Ladder. O. V. Flora Ladder hook, J. F. Manahan. Lamp, C. F. Chew. Lamp, electric arc, J. B. Tibbits. Lamp, electric arc, J. B. Tibbits. Lamp, extension, G. & J. E. Bohner. Lantern, S. B. Pangborn. Lantern, S. B. Pangborn. Lantern, tubular, C. T. Ham	285,596 285,612 285,652 285,562 285,573 285,561 285,613 285,713 285,71
	Cooling water, apparatus for, R. M. Downie Corn and other grain, implement for shocking Indian, T. G. Conkling	285,395 285,512 285,704 285,765 285,403 285,724 285,424 285,469 285,500 285,478 285,575 285,488 285,575 285,482 285,658 285,726 255,597 285,532 285,488 285,638	Heel nailing machine, M. V. Ethridge. Hoe, H. H. & C. Finn. Holder, See Bag holder. Paper holder. Pen holder. Rein holder. Stovepipe holder. twine holder. Hook. See Bag holder. Stovepipe holder. twine holder. Hook. See Ladder hook. Suspension hook. Hoop cutting machine, J. A. Grant. Horseshoe, J. N. Clarke. Horseshoe, soft ground, L. Brigham	285,596 285,612 285,622 285,573 285,522 285,573 285,531 285,619 285,719 285,71
	Cooling water, apparatus for, R. M. Downie Corn and other grain, implement for shocking Indian, T. G. Conkling	285,395 285,512 285,704 285,403 285,403 285,424 285,469 285,459 285,478 285,481 285,575 285,442 285,658 285,726 285,572 285,482 285,602 285,483 285,602 25,597 285,492 285,602 25,549 285,602 25,549 285,457 285,457 285,457	Heel nailing machine, M. V. Ethridge. Hoe, H. H. & C. Finn. Holder. See Bag holder. Paper holder. Pen holder. Rein holder. Stovepipe holder. twine holder. Hook. See Ladder hook. Suspension hook. Hoop cutting machine, J. A. Grant. Horse-boot, E. Barnard. Horseshoe, J. N. Clarke. Horseshoe, soft ground, L. Brigham. 285,562, Ice and salt mixing apparatus, A. J. Stoll. Ice machine, W. B. Bushnell. Incrustation preventive, J. B. Hannay. Index, J. H. Wagstaff. Indicator. See Station indicator, Inhaler and irrigator, nasal, J. Keck. Injector. J. H. McPhail Inlaid articles, manufacturing, G. Hirst. Insulating electric conductors, H. O. Phillips. Intrenching tool, G. F. Elliott. Joint. See Railway rail joint. Joint or coupling for rods, etc., J. E. Langdon. Kith for burning tiles, earthenware. etc., D. Laemmle	285,596 285,612 285,652 285,563 285,553 285,5613 285,743 285,613 285,743

 Extractor.
 285,732

 Fare box, T. W. Fowler.
 285,742
 Metal, producing particular.
 285,656

 Faucet, beer, A. O'Reilly.
 285,656
 Milk cooler, D. B. Wooster.
 285,773

 Feed rack, W. W. White.
 285,716
 Mill. See Grinding mill. Stamp mill.

 Feed water, purifying, C. B. Dudley.
 285,591
 Millstone driver, W. C. Hale.
 285,513

 land
 285,486

 Match, friction, F. Gerken
 285,610

 Metal, producing Babbitt, A. C. Mann
 285,638