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- H. M.D. will find directions for making fireproof artificial stone on p. 113, vol. 24,-M. H. can fasten emery to wood by the method for emery and iron, described on p. 363, vol. 33.—H. J. will find directions for making nitro-glycerin, dualin, dynamite, etc., on p. 212, vol. 33.-H. F. S. can brown his gun barrels by using the recipe given on p. 11, vol. 32.—F. F. will find a recipe for stove blacking on p. 57, vol. 25.—T. should French polish his pianoforte work. See p. 11, vol. 22.—M. H. K. will find a recipe for white fusible metal on p. 374, vol. 32. The process of repairing desilvered mirrors is described on p. 346, vol. 25,-8. N. will find directions for staining glass on p. 390, vol. 30; foretching glass, on p. 379, vol. 33.-H. A. S. will find directions for making clarified eider on p.204, vol. 33; for preserving eider, on p. 139, vol. 33.-S. & B. will find on p. 139, vol. 32, directions for ma king paste that will probably answer their purpose As to State laws regulating the sale of patents, see p. 187, vol. 33. -S. T. S. can mold rubber by following the directions on p. 283, vol. 29.-W. T. can clean shells by the method described on p. 122, vol. 27.-H. D. M. will find a recipe for Babbitt metal on p. 26, vol. 33.-C. B. will find directions for silvering glass on p. 340, vol. 33. Full directions for nickel plating have frequently been published in these columns. See pp. 155, 235, vol. 33. This also answers E. J. C.-R. R. M. can make a mold, for use on type, of plaster of Paris. The metal that is lightest in water is the lightest out of water.-B.H. C. will find full directions for putting a white enamel on iron on p. 362, vol. 32. This also answers A. F.-C. S. F. will find an account of the oleomargarin process on p. 23, vol. 32.-P. D. R. can fasten rubber to iron by the method given on p. 42, vol. 26, for leather. A good recipe for paste that will keep is published on p. 219, vol. 30.—D. G. F. will find a description of the phosphorus lamp on p. 10, vol. 27.—V. can read the inscriptions on coins by following the directions on p. 246, vol 26.-H. G. W. will find directions for making spongy platinum on p. 330, vol. 25.—H. N. M. can cement glass to brass by the method described on p. 1, vol. 33.
- (1) N. S. asks: How can I unite the mercury in a thermometer which has become separated by agitation? A. Fasten a string 3 or 4 feet long to the instrument, and swing it round your head. The centrifugal force will cause the mercury to unite.
- (2) R. F. L. asks: How can I stick leather on the face of iron and wood pulleys? A. Glue the leather to the wooden pulley. Paint the iron pulley with a good coat of white lead in oil, and letit dry; then glue the leather on.
- (3) L. B. asks: What is black rosin, and is it known by any other name? A. Black rosin is also called colophony, and is the residue left after the distillation of turpentine.
- (4) H. L. M. asks: How can I get a white metal that will flow perfectly into an iron or brass mold, and which, when turned out, will stay bright? A. Melttogether 4½ lbs. of tin, ½ lb. hismuth, ½ lb. antimony, and ½ lb. lead. This alloy uses at a low temperature and does not tarnish.

Can the color be taken out of horsehair, so as to make it white? A. Wash in weak lye, and fumigate with the vapor of burning sulphur (sulphurous acid).

- (5) G. G. B. asks: What do pattern makersuse to blacken their patterns with? A. Lamp black mixed with copal varnish and alcohol.
- (6) J. N. J. asks: Why do iron and steel weld with less heat with than without borax? A. The use of borax is as a flux, to make the steel heat evenly, and to prevent the corners or edges from burning before the rest of the metal is of the proper heat.
- (7) M. D. F. asks: How can chilled iron instead of water.
- (8) C. R. asks: What pressure per square inch is required to crush pieces of ice together so as to form one clear homogeneous mass? A.Consult Professor Tyndall on "Forms of Water."
- (9) J. H. asks: In what quantity, and at what intervals, should quinine be taken as a remedy for chills and fever? A. In many cases two grain doses are recommended to be taken before each meal, whenever an attack of chills is antici-
- (10) E. C. & Co. ask: Would it be beneficial to soft maple lumber, for building a large friction pulley, to boil it in olive oil? A. Yes. 2. Would it harden the timber, and make it less liable to split? A. Yes. 3. Would the gear slip more after such treatment? A. Yes.
- (11) H. A. S. asks: How is bromide of camphor made? A. Triturate the camphor first with a drop or two of dilute spirits of wine, and then digest with bromine water. The bromine unites with the camphor to form an unstable bromide of camphor, which is crystalline, and is decomposed by heat, by contact with air, and by action of am-

- (12) D. C. G. asks: Is there any preparation Also inquiries and answers from the following: of phosphorus, either fluid or dry, that is luminous in the dark when hermetically sealed? A. A full description of the phosphorus lamp will be found on p. 289, vol. 33. It consists of a strong solution of phosphorus in olive oil. The solution is kept in a smail, glass, stoppered bottle, and when required for use the cork is removed and the solu tion agitated.
- (13) W. J. H. asks: What would be the difference between suspending a weight (that works such machinery as clockwork) direct, and hanging the same weight around a pulley attached to weight? Would there be any difference in effeet upon the train of wheels, providing the amount of pressure on drum (not the weights) were same in both cases? A. Neglecting friction and rigidity of cordage, if the weight required in the second arrangement were 100 lbs., that in the first need only be 50 lbs.
- (14) T. D. W. If two persons are in a top wagon, about 500 lbs. weight rests upon the two axles, which are as stiff as they are usually made. Now if the axles can be made 21/2 times as stiff, how many lbs. will the change take away from the load drawn by the horse? A. The question is rather indefinite, but we do not imagine that there would be much difference in the two cases.
- (15) C. P. asks: How many lbs. strain will there be on a rope which has a horse at each end pulling in opposite directions, supposing each horse to be pulling 1,000 lbs.? A. One thousand lbs. This question is anything but new. See p. 186,
- (16) M. B. asks: Is centrifugal force of a wheel in motion a radial or a tangential one A. Radial, as we understand your question, that is, in the direction of a radius.
- (17) J. G. says, in answer to N. K. B's query as to the area of a polygon: If A be the area of the circle and P the perimeter of the reg ular polygon, the area of the latter is

 $\sqrt{\frac{4n}{31416}} - \frac{r^2}{4n^2}n$ being the number of sides which P A' P4 must be given. If these be given, A and P, as be fore, and B, the area of the regular polygon, the number of mdes=-

 $2\sqrt{\frac{A}{3.1416} - \frac{4B^2}{P^2}}$

(18) S. says, in reply to W. J. E., who is troubled with dreams: If you abstain from sleeping on your back you will not dream. It is very rare that a person who is not laying on his back dreams.

(19) L. C. Jr. says, in reply to H. J. E. who asked how to apply wax to stove patterns: As the stove plates of to-day are more or less ornemented with designs, having well defined de pressions or elevations, the casting must be heated till it is hot enough to melt the beeswax and not burn it. Then apply the wax by rubbing it here and there over the surface of the plate; a small quantity only is required. After which, and hile the wax is in a liquid form, give the casting a thorough brushing with a new shoe brush; this will spread the wax uniformly over the entire surface and at the same time remove all the surplus wax. Then allow the casting to cool, and, with a second shoe brush, give it a thorough brushing, and you will have a surface to your pattern that will give you a mold with as sharp corners as your pattern.

(20) W. J. R. says, in answer to T. D.'s inquiries asto compound gears: I judge from T.D.'s list of gears and pitch of lead screwthat be has got a Pratt & Whitney lathe, which, unlike most other lathes, has, on the inside gear on the stud double the number of teeth that the cone gear has. Therefore, with gears on stud and screws having the same number, the revolutions of cone and screw will be as 2 to 1, and the pitch of lead screw is made practically 16 instead of 8. The SCIENTIFIC AMERICAN'S rule will work by counting thescrew as 16. The following index is useful for T. D.'s lathe:

Thread.	Stud.	Screw,	Thread.	Stud.	Screw.
2) Co			4	112	28
Cannot be cut with			5	66	35
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			7	66	49
8	"	56	9	66	63
10	66	70	11	"	77
12	"	84	13	66	91
14	"	98	15	"	105
16	"	112	18	56	68
2C	56	70	22	56	84
24	56	77	28	56	98
32	56	112	36	28	63
40	28	70	44	28	77
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COMMUNICATIONS RECEIVED.

The Editor of the SCIENTIFIC AMERICAN acknowledges, with much pleasure, the receipt of original papers and contributions upon the following subjects:

- On Screw Cutting Gears. By R. H. B. On the New Force. By H. M. P. On Solar Heat. By W. L. S.
- On the Contraction Policy. By F. A. L. On Reissues of Patents. By G. E. B.
- On the Hydro-Pneumatic Puzzle. By M. P., by C. M., and by N. B. J.
- On Spiritualism. By E. P. M., and by F. G. F. On the Orbit of the Sun. By J. S.
- On Making Rifles. By B.
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- On Carbonic Acid Gas. By C. W. S. On Oceanic Currents. By T. L.
- On Electric Whistles. By L. S. W.

.-G. W. P., Jr.-T. B.-J. M.-A. J. B.-A. C. -G. E. C. S.—S. H.—S. R. H.—C. S. D.—S. E. H.—F. S.B.—A. R.—H. A.—J. G. S.—C. A. P.—C. L.—A. C. R.— J. A. W.-E. E. E.-R. B.-J. Q. R. B.

HINTS TO CORRESPONDENTS.

Correspondents whose inquiries fail to appear should repeat them. If not then published, they may conclude that, for good reasons, the Editor declines them. The address of the writer should always be given.

Enquiries relating to patents, or to the patentability of inventions, assignments, etc., will not be published here. All such questions, when initials only are given, are thrown into the waste basket, as it would fill half of our paper to print them all; but we generally take pleasure in answering briefly by mail, if the writer's address is given.

Hundreds of inquiries analogous to the following are sent: "Who sells alligator leather? Who makes an engine run by burning crude oil in the cylinder? Who makes the best gas meter? Whose is the best process for preserving shingles? Who sells papier mache cornices and centerpieces for ceilings? Who makes reflecting drawing boards and other drawing apparatus? Who sells phosphorbronze? Who sells haircloth for pressing eider?" All such personal inquiries are printed, as will be observed, in the column of "Business and Personal," which is specially set apart for that purpose, subject to the charge mentioned at the head of that column. Almost any desired information can in this way be expeditiously obtained.

[OFFICIAL.]

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Lamp chimneys, finishing, J. Lowery	8,804.—INESTANDS.—H. Lee, New York city. 8,805 to 8,807.—FLOOR OIL CLOTHS.—C. T. Meyer et al. Bergen, N. J.
Lamp chimneys, finishing, J. Lowery. 170,283 Lamps, manufacture of, T. B. Atterbury. 170,218 Lamps, wick raiser for, A. Albertson. 170,428 Latch, locking, J. Drucklieb. 170,353	8,804.—INESTANDS.—H. Lee, New York city. 8,805 to 8,807.—FLOOR OIL CLOTHS.—C. T. Meyer et al. Bergen, N. J. 8,808.—PAPER WEIGHTS.—C. Rowland, New York city. 8,609.—COFFIN HINGES.—J. W. Vaughn, Peabody, Mass
Lamp chimneys, finishing, J. Lowery. 170,283 Lamps, manufacture of, T. B. Atterbury. 170,219 Lamps, wick raiser for, A. Albertson. 170,428 Latch, locking, J. Drucklieb. 170,353 Latch, reversible, H. S. Pomeroy. 170,393 Leather, vat for tanning, O. W. Bean. 170,330 Lightning rod, I. Johnson. 170,877	8,804.—INESTANDS.—H. Lee, New York city. 8,805 to 8,807.—FLOOR OIL CLOTHS.—C. T. Meyer et al. Bergen, N. J. 8,808.—PAPER WEIGHTS.—C. Rowland. New York city. 8,609.—COFFIN HINGES.—J. W. Vaughn, Peabody, Mass 8,810.—OVERSHOES.—G. Watkinson, New Haven, Conn. SCHEDULE 444 PATERT WEER.
Lamp chimneys, finishing, J. Lowery. 170,283 Lamps, manufacture of, T. B. Atterbury. 170,218 Lamps, wick raiser for, A. Albertson. 170,428 Latch, locking, J. Drucklieb. 170,353 Latch, reversible, H. S. Pomeroy. 170,393 Leather, vat for tanning, O. W. Bean. 170,393 Lightning rod, I. Johnson. 170,737 Limb receiver, H. R. Allen. 170,217 Loom shattle, etc J. Wolfenden. 170,214	8,804.—INESTANDS.—H. Lee, New York city. 8,805 to 8,807.—FLOOR OIL CLOTHS.—C. T. Meyer et al. Bergen, N. J. 8,808.—PAPER WEIGHTS.—C. Rowland. New York city. 8,609.—COFFIN HINGES.—J. W. Vaughn, Peabody, Mass 8,810.—OVERSHOES.—G. Watkinson, New Haven, Conn. SCHEDULB 41P PATENT WEEP. On each Cavest
Lamp chimneys, finishing, J. Lowery. 170,238 Lamps, manufacture of, T. B. Atterbury. 170,218 Lamps, wick raiser for, A. Albertson. 170,428 Latch, locking, J. Drucklieb. 170,353 Latch, reversible, H. S. Pomeroy. 170,393 Leather, vat for tanning, O. W. Bean. 170,330 Lightning rod, I. Johnson. 170,977 Limb receiver, H. R. Allen. 170,217 Loom shattle, etc. J. Wolfenden. 170,217 Loom weft stop, Isherwood and Nuttall (r) 6,761 Lounges, attach'ng framesto, W. Seng. 170,406	8,804.—INESTANDS.—H. Lee, New York city. 8,805 to 8,807.—FLOOR OIL CLOTHS.—C. T. Meyer et al. Bergen, N. J. 8,808.—PAPER WEIGHTS.—C. Rowland, New York city. 8,808.—PAPER WEIGHTS.—J. W. Vaughn, Peabody, Mass 8,810.—OVERSHOES.—G. Watkinson, New Haven, Conn. SCHEDULB 484 PATENT WEEP. On each Caveat
Lamp chimneys, finishing, J. Lowery	8,804.—INESTANDS.—H. Lee, New York city. 8,805 to 8,807.—FLOOR OIL CLOTHS.—C. T. Meyer et al. Bergen, N. J. 8,808.—PAPER WEIGHTS.—C. Rowland, New York city. 8,809.—COFFIN HINGES.—J. W. Vaughn, Peabody, Mass 8,810.—OVERSHOES.—G. Watkinson, New Haven, Conn. **CHEDULE** **P PATENT** **WEF*** On each Caveat
Lamp chimneys, finishing, J. Lowery. 170,283 Lamps, manufacture of, T. B. Atterbury. 170,219 Lamps, wick raiser for, A. Albertson. 170,428 Latch, locking, J. Druckileb. 170,353 Latch, reversible, H. S. Pomeroy. 170,398 Leather, vat for tanning, O. W. Bean. 170,398 Lightning rod. I. Johnson. 170,877 Limb receiver, H. R. Allen. 170,217 Loom shattle, etc. J. Wolfenden. 170,214 Loom weft stop, Isherwood and Nuttall (r) 6,761 Lounges, attaching framesto, W. Seng. 170,406 Lubricators, C. H. Parshall 170,296, 170,297 Macaroons, preserve for. Helde and Wirtz. 170,368 Mail bag fastening, H. M. Smith. 170,195 Mattress, wire, A. Z. Boda. 170,334 Mattresses, frame for wire, W. J. Boda. 170,333	8,804.—INESTANDS.—H. Lee, New York city. 8,805 to 8,807.—FLOOR OIL CLOTHS.—C. T. Meyer et al. Bergen, N. J. 8,808.—PAPER WEIGHTS.—C. Rowland. New York city. 8,609.—COFFIN HINGES.—J. W. Vaughn, Peabody, Mass 8,810.—OVERSHOES.—G. Watkinson, New Haven, Conn. **SCHEDULB** PATERT** WKK** On each Caveat
Lamp chimneys, finishing, J. Lowery. 170,238 Lamps, manufacture of, T. B. Atterbury. 170,218 Lamps, wick raiser for, A. Albertson. 170,428 Latch, locking, J. Drucklieb. 170,353 Latch, reversible, H. S. Pomeroy. 170,353 Leather, vat for tanning, O. W. Bean. 170,330 Lightning rod, I. Johnson. 170,377 Limb receiver, H. R. Allen. 170,217 Loom shattle, etc. J. Wolfenden. 170,217 Loom weft stop, Isherwood and Nuttail (r) 6,761 Lounges, attaching frames to, W. Seng. 170,406 Lubricators, C. H. Parshall 170,296, 170,297 Macaroons, preserve for. Heide and Wirtz 170,368 Mail bag fastening, H. M. Smith. 170,334 Mattresses, frame for wire, W. J. Boda 170,334 Measure, graduated, Young and Davis 170,216 Meat mangle, C. C. Kerr. 170,378	8,804.—INESTANDS.—H. Lee, New York city. 8,805 to 8,807.—FLOOR OIL CLOTHS.—C. T. Meyer et al. Bergen, N. J. 8,808.—PAPER WEIGHTS.—C. Rowland, New York city. 8,609.—COFFIN HINGES.—J. W. Vaughn, Peabody, Mass 8,810.—OVERSHOES.—G. Watkinson, New Haven, Conn. SCHEDULS 48P PATENT WEEP. On each Caveat
Lamp chimneys, finishing, J. Lowery. 170,238 Lamps, manufacture of, T. B. Atterbury. 170,219 Lamps, wick raiser for, A. Albertson. 170,428 Latch, locking, J. Drucklieb. 170,353 Latch, reversible, H. S. Pomeroy. 170,393 Leather, vat for tanning, O. W. Bean. 170,330 Lightning rod, I. Johnson. 170,577 Limb receiver, H. R. Allen. 170,217 Loom shattle, etc. J. Wolfenden. 170,217 Loom shattle, etc. J. Wolfenden. 170,216 Lounges, attaching frames to, W. Seng. 170,406 Lubricators, C. H. Parshall 170,296, 170,297 Macaroons, preserve for. Heide and Wirtz. 170,368 Mail bag fastening, H. M. Smith. 170,195 Mattresses, frame for wire, W. J. Boda. 170,334 Mattresses, frame for wire, W. J. Boda. 170,334 Measure, graduated, Young and Davis. 170,216 Meat mangle, C. C. Kerr. 170,378 Mechanical movement, E. Leslie. 170,386 Mill, I. A. Hedges. 170,367 Mill, I. A. Hedges. 170,375	8,804.—INESTANDS.—H. Lee, New York city. 8,805 to 8,807.—FLOOR OIL CLOTHS.—C. T. Meyer et al. Bergen, N. J. 8,808.—PAPER WEIGHTS.—C. Rowland, New York city. 8,609.—COFFIN HINGES.—J. W. Vaughn, Peabody, Mass 8,810.—OVERSHOES.—G. Watkinson, New Haven, Conn. **SCHEDULB** PATENT** **KEP** On each Caveat. On each Trade mark. On each Trade mark. On fling each application for a Patent 0.7 years). 10 appeal to Commissioner of Patents. 310 On application for Design (3 years). 311 On application for Design (3 years). 312 On application for Design (7 years). 313 On application for Design (7 years). 314 On application for Design (7 years). 315 On application for Design (7 years). 316 On application for Design (7 years). 317
Lamp chimneys, finishing, J. Lowery. 170,238 Lamps, manufacture of, T. B. Atterbury. 170,219 Lamps, wick raiser for, A. Albertson. 170,428 Latch, locking, J. Drucklieb. 170,353 Latch, reversible, H. S. Pomeroy. 170,393 Leather, vat for tanning, O. W. Bean. 170,330 Lightning rod, I. Johnson. 170,377 Limb receiver, H. R. Allen. 170,217 Loom shattle, etc. J. Wolfenden. 170,214 Loom wett stop, Isherwood and Nuttall (r) 6,761 Lounges, attaching framesto, W. Seng. 170,296 Lubricators, C. H. Parshall 170,296, 170,297 Macaroons, preserve for. Heide and Wirtz. 170,368 Mail bag fastening, H. M. Smith. 170,195 Mattress, wire, A. Z. Boda. 170,333 Measure, graduated, Young and Davis. 170,236 Meat mangle, C. C. Kerr. 170,378 Mechanical movement, E. Leslie. 170,280 Mill, I. A. Hedges. 170,285 Mills concentrating tailings from, F. E. Mills. 170,285 Mills concentrating tailings from, F. E. Mills. 170,286 Mills concentrating tailings from, F. E. Mills. 170,286 Mills concentrating for, C. Custer. 170,3746	8,804.—INESTANDS.—H. Lee, New York city. 8,805 to 8,807.—FLOOR OIL CLOTHS.—C. T. Meyer et al. Bergen, N. J. 8,808.—PAPER WEIGHTS.—C. Rowland. New York city. 8,609.—COFFIN HINGES.—J. W. Vaughn, Peabody, Mass 8,810.—OVERSHOES.—G. Watkinson, New Haven, Conn. SCHEDULE 484 PATENT WEET. On each Cavest. On each Crade mark. On each Trade mark. On speel to Reminers-in-Chief. On appeal to Reminers-in-Chief. On appeal to Commissioner of Patents. 324 On application for Reissue. 336 On application for Design (3% years). SILON application for Design (7 years).
Lamp chimneys, finishing, J. Lowery. 170,238 Lamps, manufacture of, T. B. Atterbury. 170,218 Lamps, wick raiser for, A. Albertson. 170,428 Latch, locking, J. Drucklieb. 170,353 Latch, reversible, H. S. Pomeroy. 170,393 Leather, vat for tanning, O. W. Bean. 170,330 Lightning rod, I. Johnson. 170,577 Limb receiver, H. R. Allen. 170,217 Loom shattle, etc. J. Wolfenden. 170,217 Loom shattle, etc. J. Wolfenden. 170,217 Loom static, etc. J. Wolfenden. 170,216 Lounges, attach'ng frames to, W. Seng. 170,406 Lubricators, C. H. Parshall 170,296, 170,297 Macaroons, preserve for. Heide and Wirtz. 170,368 Mail bag fastening, H. M. Smith. 170,195 Mattresses, frame for wire, W. J. Boda. 170,334 Mattresses, frame for wire, W. J. Boda. 170,334 Mattresses, frame for wire, W. J. Boda. 170,338 Measure, graduated, Young and Davis. 170,216 Meat mangle, C. C. Kerr. 170,378 Meetamangle, C. C. Kerr. 170,378 Meetamangle, C. C. Kerr. 170,367 Mill, I. A. Hedges. 170,280 Mill, I. A. Hedges. 170,285 Mill and press, cider, H. Krumsick. 170,275 Mills, concentrating tallings from, F. E. Mills 170,289 Millstones, bearing for, C. Custer. 170,367 Mitten, A. P. Smith (r) 6,764 Motion, converting, M. Crossman. 170,427	8,804.—INESTANDS.—H. Lee, New York city. 8,805 to 8,807.—FLOOR OIL CLOTHS.—C. T. Meyer et al. Bergen, N. J. 8,808.—PAPER WEIGHTS.—C. Rowland, New York city. 8,609.—COFFIN HINGES.—J. W. Vaughn, Peabody, Mass 8,810.—OVERSHOES.—G. Watkinson, New Haven, Conn. **SCHEDULB** PATENT** **KEP** On each Caveat. On each Trade mark. On each Trade mark. On fling each application for a Patent 0.7 years). 10 appeal to Commissioner of Patents. 310 On application for Design (3 years). 311 On application for Design (3 years). 312 On application for Design (7 years). 313 On application for Design (7 years). 314 On application for Design (7 years). 315 On application for Design (7 years). 316 On application for Design (7 years). 317
Lamp chimneys, finishing, J. Lowery. 170,283 Lamps, manufacture of, T. B. Atterbury. 170,218 Lamps, wick raiser for, A. Albertson. 170,428 Latch, locking, J. Druckileb. 170,353 Latch, reversible, H. S. Pomeroy. 170,393 Leather, vat for tanning, O. W. Bean. 170,330 Lightning rod, I. Johnson. 170,577 Limb receiver, H. R. Allen. 170,217 Loom shattle, etc J. Wolfenden. 170,214 Loom weft stop, Isherwood and Nuttail (r) 6,761 Lounges, attaching frames to, W. Seng. 170,296 Lubricators, C. H. Parshall 170,296, 170,297 Macaroons, preserve for. Heide and Wirtz. 170,368 Mail bag fastening, H. M. Smith. 170,358 Maitbag fastening, H. M. Smith. 170,333 Measure, graduated, Young and Davis 170,334 Mattresses, frame for wire. W. J. Boda. 170,333 Measure, graduated, Young and Davis 170,216 Meat mangle, C. C. Kerr. 170,358 Mechanical movement, E. Leslie. 170,280 Mill, I. A. Hedges. 170,368 Mill and press, cider, H. Krumsick. 170,285 Mills, concentrating tailings from, F. E. Mills, 170,368 Millstones, bearing for, C. Custer. 170,368 Mitten, A. P. Smith (r). 6,764	8,804.—INESTANDS.—H. Lee, New York city. 8,805 to 8,807.—FLOOR OIL CLOTHS.—C. T. Meyer et al. Bergen, N. J. 8,808.—PAPER WEIGHTS.—C. Rowland, New York city. 8,609.—COFFIN HINGES.—J. W. Vaughn, Peabody, Mass 8,810.—OVERSHOES.—G. Watkinson, New Haven, Conn. **SCHEDULS** 484** PATENT** WKK**.* On each Caveat
Lamp chimneys, finishing, J. Lowery. 170,238 Lamps, manufacture of, T. B. Atterbury. 170,219 Lamps, wick raiser for, A. Albertson. 170,428 Latch, locking, J. Drucklieb. 170,353 Latch, reversible, H. S. Pomeroy. 170,393 Leather, vat for tanning, O. W. Bean. 170,330 Lightning rod, I. Johnson. 170,877 Limb receiver, H. R. Allen. 170,217 Loom shattle, etc. J. Wolfenden. 170,214 Loom weft stop, Isherwood and Nuttall (r) 6,761 Lounges, attaching framesto, W. Seng. 170,296 Lubricators, C. H. Parshall 170,296, 170,297 Macaroons, preserve for Heide and Wirtz. 170,368 Mail bag fastening, H. M. Smith. 170,336 Maitress, wire, A. Z. Boda. 170,333 Measure, graduated, Young and Davis. 170,374 Mattresses, frame for wire, W. J. Boda. 170,333 Measure, graduated, Young and Davis. 170,276 Meat mangle, C. C. Kerr. 170,378 Mechanical movement, E. Leslie. 170,280 Mill, I. A. Hedges. 170,367 Mill and press, cider, H. Krumsick. 170,275 Mills, concentrating tallings from, F. E. Mills. 170,288 Millstones, bearing for, C. Custer. 170,364 Mitten, A. P. Smith (r). 6,764 Mottion, converting, M. Crossman. 170,427 Motor, volute spring, W. S. Shoemaker. 170,300 Needle threader, P. E. Lambert. 170,236 Ore, classifying, R. M. Wengler. 170,422 Paper collar, E. F. Branford. 170,336	8,804.—INESTANDS.—H. Lee, New York city. 8,805 to 8,807.—FLOOR OIL CLOTHS.—C. T. Meyer et al. Bergen, N. J. 8,808.—PAPER WEIGHTS.—C. Rowland. New York city. 8,609.—COFFIN HINGES.—J. W. Vaughn, Peabody, Mass 8,810.—OVERSHOES.—G. Watkinson, New Haven, Conn. SCHEDULE GIV PATRIT WEET. On each Cavest. On each Crade mark. On each Trade mark. On appeal to Examiners-in-Chief. On appeal to Examiners-in-Chief. On application for Reissue. On application for Design (3½ years). SIGNO application for Design (7 years).
Lamp chimneys, finishing, J. Lowery. 170,283 Lamps, manufacture of, T. B. Atterbury. 170,218 Lamps, wick raiser for, A. Albertson. 170,428 Latch, locking, J. Drucklieb. 170,353 Latch, reversible, H. S. Pomeroy. 170,393 Leather, vat for tanning, O. W. Bean. 170,330 Lightning rod, I. Johnson. 170,577 Limb receiver, H. R. Allen. 170,217 Loom shattle, etc. J. Wolfenden. 170,216 Lounges, attaching framesto, W. Seng. 170,406 Lubricators, C. H. Parshall 170,296, 170,297 Macaroons, preserve for. Heide and Wirtz. 170,368 Mail bag fastening, H. M. Smith. 170,195 Mattresse, wire, A. Z. Boda. 170,334 Mattresses, frame for wire, W. J. Boda. 170,334 Mattresses, frame for wire, W. J. Boda. 170,334 Measure, graduated, Young and Davis. 170,216 Meat mangle, C. C. Kerr. 170,368 Mill, A. Hedges. 170,286 Mill, A. Hedges. 170,286 Mill and press, cider, H. Krumsick. 170,275 Mills, concentrating tailings from, F. E. Mills. 170,288 Millstones, bearing for, C. Custer. 170,348 Mitten, A. P. Smith (r) 6,764 Motion, converting, M. Crossman. 170,427 Motor, volute spring, W. S. Shoemaker. 170,300 Music sheet, electric, W. F. and H. Schmoel, Jr. 170,402 Needle threader, P. E. Lambert. 170,278 Ore, classifying, R. M. Wengler. 170,238 Paper collar, E. F. Bradford. 170,334	8,804.—INESTANDS.—H. Lee, New York city. 8,805 to 8,807.—FLOOR OIL CLOTHS.—C. T. Meyer et al. Bergen, N. J. 8,808.—PAPER WEIGHTS.—C. Rowland, New York city. 8,609.—COPFIN HINGES.—J. W. Vaughn, Peabody, Mass 8,810.—OVERSHOES.—G. Watkinson, New Haven, Conn. **SCHEDULB** PATENT** **KEP**. On each Caveat
Lamp chimneys, finishing, J. Lowery. 170,283 Lamps, manufacture of, T. B. Atterbury. 170,218 Lamps, wick raiser for, A. Albertson. 170,428 Latch, locking, J. Druckileb. 170,353 Latch, reversible, H. S. Pomeroy. 170,393 Leather, vat for tanning, O. W. Bean. 170,330 Lightning rod, I. Johnson. 170,577 Limb receiver, H. R. Allen. 170,217 Loom shattle, etc. J. Wolfenden. 170,214 Loom weft stop, Isherwood and Nuttail (r) 6,761 Lounges, attaching framesto, W. Seng. 170,406 Lubricators, C. H. Parshall 170,296, 170,297 Macaroons, preserve for. Heide and Wirtz. 170,358 Mail bag fastening, H. M. Smith. 170,396 Maitresses, wire, A. Z. Boda. 170,334 Mattresses, frame for wire, W. J. Boda. 170,334 Mattresses, frame for wire, W. J. Boda. 170,338 Measure, graduated, Young and Davis. 170,216 Meat mangle, C. C. Kerr. 170,357 Mills, concentrating tallings from, F. E. Mills. 170,286 Mills, I. A. Hedges. 170,368 Mitten, A. P. Smith (r) 6,764 Motton, converting, M. Crossman. 170,427 Motor, volute spring, W. S. Shoemaker. 170,308 Nusic sheet, electric, W. F. and H. Schmoel, Jr. 170,402 Needle threader, P. E. Lambert. 170,328 Paper collar, E. F. Bradford. 170,336 Paper fastener, Pack and Vanhorn. 170,324	8,804.—INESTANDS.—H. Lee, New York city. 8,805 to 8,807.—FLOOR OIL CLOTHS.—C. T. Meyer et al. Bergen, N. J. 8,808.—PAPER WEIGHTS.—C. Rowland, New York city. 8,609.—COFFIN HINGES.—J. W. Vaughn, Peabody, Mass 8,810.—OVERSHOES.—G. Watkinson, New Haven, Conn. SCHEDULS 484 PATENT WERF. On each Caveat
Lamp chimneys, finishing, J. Lowery. 170,283 Lamps, manufacture of, T. B. Atterbury. 170,218 Lamps, wick raiser for, A. Albertson. 170,428 Latch, locking, J. Druckileb. 170,353 Latch, reversible, H. S. Pomeroy. 170,393 Leather, vat for tanning, O. W. Bean. 170,330 Lightning rod, I. Johnson. 170,877 Limb receiver, H. R. Allen. 170,217 Loom shattle, etc J. Wolfenden. 170,217 Loom shattle, etc J. Wolfenden. 170,216 Lounges, attaching frames to, W. Seng. 170,296 Lubricators, C. H. Parshall 170,296, 170,297 Macaroons, preserve for. Heide and Wirtz. 170,368 Mail bag fastening, H. M. Smith. 170,195 Mattresse, wire, A. Z. Boda. 170,333 Measure, graduated, Young and Davis. 170,374 Mattresses, frame for wire, W. J. Boda. 170,333 Measure, graduated, Young and Davis. 170,216 Meat mangle, C. C. Kerr. 170,378 Mill, I. A. Hedges. 170,387 Mill, I. A. Hedges. 170,387 Mill and press, cider, H. Krumsick. 170,275 Mills, concentrating tailings from, F. E. Mills. 170,288 Miltsones, bearing for, C. Custer. 170,346 Mitten, A. P. Smith (r). 6,764 Motion, converting, M. Crossman. 170,427 Motor, volute spring, W. S. Shoemaker. 170,300 Needle threader, P. E. Lambert. 170,232 Ore, classifying, R. M. Wengler. 170,333 Paper weight, E. Dressler. 170,336 Paper fastener, Pack and Vanhorn. 170,292 Parchment, vegetable, A. G. Fell 170,360 Peat cutter, Newton and Zoliner. 170,193 Photometer, P. Munzinger. 170,293	8,804.—INESTANDS.—H. Lee, New York city. 8,805 to 8,807.—FLOOR OIL CLOTHS.—C. T. Meyer et al. Bergen, N. J. 9,808.—PAPER WEIGHTS.—C. Rowland, New York city. 8,609.—COPFIN HINGES.—J. W. Vaughn, Peabody, Mass 8,810.—OVERSHOES.—G. Watkinson, New Haven, Conn. **CCHEDULE 4114 PATENT** WELT.** On each Cavest
Lamp chimneys, finishing, J. Lowery. 170,283 Lamps, manufacture of, T. B. Atterbury. 170,218 Lamps, wick raiser for, A. Albertson. 170,428 Latch, locking, J. Drucklieb. 170,353 Latch, reversible, H. S. Pomeroy. 170,393 Leather, vat for tanning, O. W. Bean. 170,330 Lightning rod, I. Johnson. 170,577 Limb receiver, H. R. Allen. 170,217 Loom shattle, etc. J. Wolfenden. 170,217 Loom shattle, etc. J. Wolfenden. 170,217 Loom shattle, etc. J. Wolfenden. 170,216 Lounges, attaching framesto, W. Seng. 170,406 Lubricators, C. H. Parshall 170,296, 170,297 Macaroons, preserve for. Heide and Wirtz. 170,368 Mail bag fastening, H. M. Smith. 170,195 Mattresses, frame for wire, W. J. Boda. 170,334 Mattresses, frame for wire, W. J. Boda. 170,334 Mattresses, frame for wire, W. J. Boda. 170,334 Measure, graduated, Young and Davis. 170,216 Meat mangle, C. C. Kerr. 170,378 Mechanical movement, E. Leslie. 170,286 Mill, I. A. Hedges. 170,286 Mill and press, cider, H. Krumsick. 170,275 Mills, concentrating tallings from, F. E. Mills. 170,285 Millstones, bearing for, C. Custer. 170,367 Motion, converting, M. Crossman. 170,427 Motor, volute spring, W. S. Shoemaker. 170,309 Music sheet, electric, W. F. and H. Schmoel, Jr. 170,402 Needle threader, P. E. Lambert. 170,278 Ore, classifying, R. M. Wengler. 170,284 Paper collar, E. F. Branford. 170,337 Paper weight, E. Dressler. 170,239 Paper, perforating, W. Braidwood. 170,337 Paper weight, E. Dressler. 170,294 Paper, perforating, W. Braidwood. 170,337 Paper weight, E. Dressler. 170,294 Paper, perforating, W. Braidwood. 170,337 Paper weight, E. Dressler. 170,294 Paper, perforating, W. Braidwood. 170,337 Paper weight, E. Dressler. 170,294 Paper perforating, W. Braidwood. 170,339 Pilcture frame clamp, etc., C. P. Polnier. 170,392 Pilcture frame clamp, etc., C. P. Polnier. 170,392 Pilcture frame clamp, etc., C. P. Polnier. 170,392 Pilcture frame clamp, etc., C. P. Polnier. 170,184	8,804.—INESTANDS.—H. Lee, New York city. 8,805 to 8,807.—FLOOR OIL CLOTHS.—C. T. Meyer et al. Bergen, N. J. 9,808.—PAPER WEIGHTS.—C. Rowland, New York city. 8,609.—COPFIN HINGES.—J. W. Vaughn, Peabody, Mass 8,810.—OVERSHOES.—G. Watkinson, New Haven, Conn. **CCHEDULE 48P PATENT WEEP.** On each Cavest
Lamp chimneys, finishing, J. Lowery. 170,283 Lamps, manufacture of, T. B. Atterbury. 170,218 Lamps, wick raiser for, A. Albertson. 170,428 Latch, locking, J. Druckileb. 170,353 Latch, reversible, H. S. Pomeroy. 170,393 Leather, vat for tanning, O. W. Bean. 170,330 Lightning rod, I. Johnson. 170,577 Limb receiver, H. R. Allen. 170,217 Loom shattle, etc J. Wolfenden. 170,217 Loom shattle, etc J. Wolfenden. 170,244 Loom weft stop, Isherwood and Nuttail (r) 6,761 Lounges, attaching frames to, W. Seng. 170,496 Lubricators, C. H. Parshall 170,296, 170,297 Macaroons, preserve for. Heide and Wirtz. 170,368 Mail bag fastening, H. M. Smith. 170,368 Mail bag fastening, H. M. Smith. 170,373 Mattresses, frame for wire. W. J. Boda. 170,333 Measure, graduated, Young and Davis. 170,378 Mechanical movement, E. Leslie. 170,280 Mill, I. A. Hedges. 170,367 Mill and press, cider, H. Krumsick. 170,280 Mills, concentrating tallings from, F. E. Mills. 170,280 Mills, concentrating tallings from, F. E. Mills. 170,280 Miltten, A. P. Smith (r). 6,764 Motion, converting, M. Crossman. 170,427 Motor, volute spring, W. S. Shoemaker. 170,300 Needle threader, P. E. Lambert. 170,378 Daper fastener, Pack and Vanhorn. 170,284 Paper collar, E. F. Braaford. 170,336 Paper fastener, Pack and Vanhorn. 170,284 Parchment, vegetable, A. G. Fell 170,380 Parchment, vegetable, A. G. Fell 170,382 Pille, coating, A. F. W. and W. F. A. Neynaber. 170,392 Picture frame clamp, etc., C. P. Poinier. 170,392 Pills, coating, A. F. W. and W. F. A. Neynaber. 170,392 Pille, blow, C. Rum'ey. 170,373	8,804.—INESTANDS.—H. Lee, New York city. 8,805 to 8,807.—FLOOR OIL CLOTHS.—C. T. Meyer et al. Bergen, N. J. 9,808.—PAPER WEIGHTS.—C. Rowland, New York city. 8,609.—COPFIN HINGES.—J. W. Vaughn, Peabody, Mass 8,810.—OVERSHOES.—G. Watkinson, New Haven, Conn. **CCHEDULE 48P PATENT WEEP.** On each Cavest
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Lamp chimneys, finishing, J. Lowery. 170,283 Lamps, manufacture of, T. B. Atterbury. 170,219 Lamps, wick raiser for, A. Albertson. 170,428 Latch, locking, J. Drucklieb. 170,353 Latch, reversible, H. S. Pomeroy. 170,393 Leather, vat for tanning, O. W. Bean. 170,330 Lightning rod, I. Johnson. 170,377 Limb receiver, H. R. Allen. 170,217 Loom shattle, etc. J. Wolfenden. 170,214 Loom wett stop, Isherwood and Nuttall (r) 6,761 Lounges, attaching framesto, W. Seng. 170,296 Lubricators, C. H. Parshall 170,296, 170,297 Macaroons, preserve for. Heide and Wirtz. 170,368 Mail bag fastening, H. M. Smith. 170,195 Mattress, wire, A. Z. Boda. 170,334 Mattresses, frame for wire, W. J. Boda. 170,334 Mattresses, frame for wire, W. J. Boda. 170,334 Mattresses, frame for wire, W. J. Boda. 170,336 Mill, I. A. Hedges. 170,366 Mill, I. A. Hedges. 170,367 Mill and press, cider, H. Krumsick. 170,275 Mills, concentrating tailings from, F. E. Mills. 170,286 Mills on the shearing for, C. Custer. 170,364 Mitten, A. P. Smith (r) 6,764 Motion, converting, M. Crossman. 170,427 Motor, volute spring, W. S. Shoemaker. 170,330 Music sheet, electric, W. F. and H. Schmoel, Jr. 170,402 Needle threader, P. E. Lambert. 170,238 Paper collar, E. F. Brauford. 170,336 Paper weight, E. Dressler. 170,336 Paper weight, E. Dressler. 170,337 Paper weight, E. Dressler. 170,338 Paper fastener, Pack and Vanhorn 170,294 Parchment, vegetable, A. G. Fell 170,360 Peat cutter, Newton and Zollner. 170,392 Pitture frame clamp, etc., C. P. Poinier. 170,392 Pitture frame clamp, etc., C. P. Poinier. 170,392 Pitture frame clamp, etc., C. P. Poinier. 170,393 Pipe trap. waste, T. Hudson. 170,288 Pipe, blow, C. Rum'ey. 170,305 Planing machine, land, Doane and Passel. 170,349 Planter, corn and seed, H. P. Sullivan. 170,412	8,804.—INESTANDS.—H. Lee, New York city. 8,805 to 8,807.—FLOOR OIL CLOTES.—C. T. Meyer et al. Bergen, N. J. 8,808.—PAPER WEIGHTS.—C. Rowland, New York city. 8,609.—COFFIN HINGES.—J. W. Vaughn, Peabody, Mass 8,810.—OVERSHOES.—G. Watkinson, New Haven, Conn. **SCHEDULB 48D PATENT WEEP.** On each Caveat
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Scales, Weighing, W. W. Reynolds...... 170,191

119		
3	Scoop, sifting, W. S. Boon	170,152
7	Screw cutting machine, G. Emig	170,160
7	Screwtap, E. Reynolds	170,398
)	Screw tap. E. Reynolds	170,309
9	Separating substances, A. B. Stanberrie	170.312
7	Separator, grain. W. W. Johnston	170,376
5	Sewing machine, F. Chase	170,345
7	Sewing machine, F. Chase	170,284
3	Sewing machine, overstitch, W. A. Polmateer	170,390
5	Sewing machine table, H. R. Tracy	
3	Sewing machine tuck marker, A. Johnston	
•	Ship's births, swinging, E. P. S. Andrews,	170.324
6	Ship's births, swinging, E. P. S. Andrews Shirt front, W. J. & M. A. Duke	170,244
3	Shoe and stocking, rubber, J. M. Bibbins	170.332
7	Shutter fastener, S. C. Tuckerman	170.210
)	Shutter worker, H. A. House	170,171
3	Shutter fastener, S. C. Tuckerman	170,352
)	Skate, E. Murray (r)	6,763
9	Slate-cleaning block, A. H. Bryant	
1	Sofa and table, convertible, C. C. Harris	
;	Solvents, etc., recovery of vaporized. Whiting et al.	170.424
1	Spike machine, W. Haddock	170.255
)	Spike machine, W. Haddock Spikes, machine for making split, A. Whittemore.	170.322
ı	Spinning, adjusting spindles, F. A. Sterry (r) Spirits, P. Griffin Stage plank and carrier, W. S. Booth Sown whistle, King & McKingron	6,705
3	Spirits, P. Griffin	170,254
9	Stage plank and carrier, W. S. Booth	170,335
3	S eam whistle, King & McKiernan	170,274
)	Steel, manufacturing, F. Berchtold	
1	Stove, cooking, R. Thomss	170,206
1	Stove, cooking, R. Thomss Syringe, W. Molesworth	170,182
3	Table, extension, G. Heyl	170,369
5	Table, ironing, J. S. Hays	170,366
3	Tailor's coat measure. J. S. Charch	170,157
1	Tailor's coat measure. J. S. Charch Telegraph. facsimile, J. C. Ludwig	170,385
1	Tenoning machine, E. H. Rees	170.396
	Tide and current wheel, J. J. Heil	170,263
1	Tires, clip for broken, J. W. Hoddinott	170,371
1	Toilet case and towelroller, D. Miller	170,288
3	Trap, fly, H. B. Earing	170,355
;	Truss, H. A. Kimball	
١	Tubes, bending metallic, J. M. Reid	
,	Tuck marker, R. G. Bush	170,154
1	Tweer, H. J. Chandler	170,234
;	Tweer, P. H. Standish	170,313
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