Mrs. O. asks: How can I take the colors out of my *organdie* muslin without injuring the fabric? Answer: We have found, by a series of experiments, that, although green resists the action of chlorine and other powerful bleaching agents, Castile soap and elbow grease will remove it, if you only persevere. Wash a few times with Castile soap, and bleach in the sun.

C. B. S. asks: What are barytes, what are they used, for and where are they sold? Answer: Barytes is chiefly employed for adulterating white lead. It sells for a low price, depending on the demand in a given section. Write to some dishonest paint manufacturer for his price. It is sometimes employed on wall papers and in dressing cotton goods.

J. H. P. asks for a freezing compound. Answer: We present several, from which he can select the one adapted to his use. 1. Pour muriatic acid upon pulverized Glauber salt. 2. Take 5 parts by weight of sal ammoniac, 5 parts saltpeter, 19 parts water. 3. Take 1 part common salt and 3 parts snow. 4. Take 3 parts chloride of calcium, and 2 parts snow or powdered ice.

T. asks: 1. Can paint brushes which have been dried hard with paint, or linseed oil in them be softened in any manner so as to fit them for use again? 2. Where can I procure a small quantity of the paper used for making stereotype molds? Answers: 1. If not too far gone, they can be restored by soaking in benzine or turpentine. 2. The process is not simple enough in practice for an amateur. It will be cheaper for you to buy more type than to get all the machinery necessary for any sort of stereotyping.

C. P. A. asks: Is there danger in using certain fluids in lamps, among which may be mentioned gasoline, benzine, and naphtha, combined with small parts of salt, sal soda, alum, etc. Answer: Our advice is against risking life and property by the use of any burning oil or fluid which is more explosive than gunpowder. General Van Bokkelen slept safely for a while over a mine of nitro-glycerin, and so you may burn naphtha and gasoline in safety for a while; but the explosion will come at some time in spite of alum or salt, and the damage will quite compensate for any saving of expense. Use good oil, or a tallow dip.

F. W. C. asks: 1. How can I determine the transverse strength of a bar of wrought iron, ¾ of an inch thick and 8 inches wide, supported at each end and built in masonry, so that it cannot move except in the direction of the pressure? The load is distributed over the whole length, which is 11 feet between supports. It is to support the thrust of an arch. 2. I have a turbine wheel of 25 inches diameter placed 21 feet above the water in the tail race. A tight iron tube, 30 inches diameter, leads to the tail race. The whole head and fall is 42 feet. Am I not losing much of my power? The wheelmakers say not, but I am 9,000 feet above sea level; does not that make a difference? Answers: 1. The breaking load in pounds = 12 × coefficient for transverse strength × breadth in inches × square of the depth in inches ÷ length of clear span in feet. An average value for the coefficient of transverse strength is 2,400 pounds. Use from ⅛ to ¼ of the breaking strain for a safe working load. 2. Yes.

W. R. B. says: The principle of the caloric or hot air engine puzzles me. I cannot understand how the engine can force air into the heater against the same pressure which is applied to drive the piston of the engine. At the same time the area of the air pump is equal to that of the piston. For instance, in Wenham's air engine (illustrated in the SCIENTIFIC AMERICAN, page 370, vol. XXVIII) the same piston with an equal area forces air into the heater. Is not the resistance on the pump side of the piston, when the valves are open to communicate with the heater, equal to the power which is being applied on the under side of piston to drive the same? Why is there not an equilibrium (equal pressure on both sides), and why does not the machine come to rest? Answer: In the engine alluded to, the resistance on pump side, when the valves are open to communicate with the heater, is precisely the same as the pressure on the other side of the piston; and if this state of things were continuous throughout the stroke, the engine would stop. But as the volume of air on the working side of the piston, being highly heated, is greater than the volume of cool air that must be forced into the heater at each stroke, the engine, by means of the accumulated work in its fly wheel, is enabled to overcome the resistance.

F. B. says: I have a new engine, 24 x 48, high pressure, which gives excellent results; there are 3 tubular boilers, 4 feet diameter, with 42 four inch flues, 15 feet long, with good draft; we carry 80 to 85 lbs. steam, and make with this machine about 500 barrels flour per day easily. I have thrown out an old engine; it is a Babcock cut-off (built in Brooklyn, N. Y.) of 23 inches bore, 48 inches stroke; the cut-off is a nuisance. How much power would I gain if I were to attach the latter engine to the same shaft, carrying 70 lbs. or from 80 to 85 lbs. steam? I think, if I put this engine on, I would throw away the cut-off and make a plain slide valve engine. Answer: With the data furnished, we must give you an answer based on ifs and ands. If you work the old engine under the same conditions as the new (same piston speed, steam pressure, and point of cut-off), and if the old engine is in as good order as the new one, you should increase your power about 90 per cent.

A. D. W. asks how to deposit a thin film of lead on iron, either by galvanic or other process. Answer: We know of no such process. You might try dipping the iron when perfectly clean, or by the aid of a flux.

F. H. says, in reply to J. N. H., who asked if a turbine will give as good results for power as an overshot wheel: I run a 10 inch turbine, and it does as much work as an overshot wheel; the fall is 24 feet and about 50 cubic feet of water runs per minute. I generally run with ¾ gate, and I find that it works nearly as well with partial as with full gate.

MINERALS.—Specimens have been received from the following correspondents, and examined with the results stated:

B. F. B.—Iron pyrites, of no value, except for making sulphuric acid.

J. B. B.—Dark and light colored clays.

H. M. C. sends two specimens of micaceous hematite iron ore. We give a few of the characteristics which distinguish this valuable ore. Hardness, 5·5 to 6·5, scratches glass, not easily scratched by the knife. Specific gravity, 4·5 to 5·3; color, steel gray to iron black, streak, cherry red or reddish brown. When heated on charcoal in reducing flame, becomes magnetic. Soluble in muriatic acid.

G. F. H.—Crystals of magnetic iron ore, which attract iron filings. Its composition is 72 per cent iron, 28 per cent oxygen. When rubbed on unglazed porcelain, it leaves a black streak.

S. M. P. and J. H. S.—Iron pyrites.

W. R. S.—Corundum, of little value.

S. C. and J. M. B.—The clays sent contain no silver.

J. L. M.—Asilicate of alumina. It might be of use as a polishing material.

F. M. C.—The specimen has a few crystals of sulphide of iron on one side. The mass is also pyrites, of no value.

W. C. C.—Contains a little iron and manganese.

## COMMUNICATIONS RECEIVED.

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

On Patent Rights. By J. E. T., J. W. H., T. W., and J. E. W.

On Easterly Air Currents. By W. L. W.

On Car Ventilators. By F. S. C.

On Psychic Force. By J. M. C.

On the Truths of Nature. By J. M. B.

On Water Witching. By A. B.

On Soldering Irons. By J. A. F.

On Work. By H. E. P.

On the SCIENTIFIC AMERICAN. By J. E. E.

On the Cable Triumph. By H. C.

Also enquiries from the following:

A. O. W.—H. W. P.—M. G. R.—C.

Correspondents who write to ask the address of certain manufacturers, or where specified articles are to be had, also those having goods for sale, or who want to find partners, should send with their communications an amount sufficient to cover the cost of publication under the head of "Business and Personal," which is specially devoted to such enquiries.

[OFFICIAL.]

# Index of Inventions

FOR WHICH

## Letters Patent of the United States

WERE GRANTED FOR THE WEEK ENDING

## July 1, 1873,

AND EACH BEARING THAT DATE.

[Those marked (r) are reissued patents.]

| | |
|---|---|
| Acid proof compound, R. Newell | 140,530 |
| Air, apparatus for cooling, F. D. Kingan | 140,375 |
| Air compresser, hydraulic, C. Moore | 140,524 |
| Anemometer, electrical, F. S. Baldwin | 140,340 |
| Atmosphere, moistening the, J. G. Garland | 140,410 |
| Bag machine, N. Biedinger | 140,342 |
| Bale tie, W. C. Stiff | 140,556 |
| Bark extracts, etc., leaching, P. M. Church | 140,469 |
| Barrel hoops, securing, H. Ogborn | 140,430 |
| Barrel transporter, J. Griffing | 140,364 |
| Beams and columns, connection for, A. Bonzano | 140,455 |
| Bed bottom, D. Frankfoder | 140,492 |
| Bed bottom, E. W. Quincy | 140,387 |
| Bed bottom, C. V. B. Reeder | 140,540 |
| Bedstead, sofa, J. Beiersdorf | 140,453 |
| Bee hive, D. L. Grover | 140,497 |
| Bee keepers, mask for, L. C. Huff | 140,417 |
| Belt fastener, A. Hyde | 140,419 |
| Belting, etc., vulcanizing rubber, T. J. Mayall | 140,519 |
| Belting, etc., vulcanizing, D. C. Gately | 140,494 |
| Bench, joiner's work, H. White | 140,394 |
| Blower, rotary, R. F. Knox | 140,509 |
| Boiler attachment, wash, I. C. Schramm | 140,546 |
| Boiler, wash, A. Becker | 140,398 |
| Boiler, wash, M. J. Clapper | 140,470 |
| Boiler, wash, W. J. Thomas | 140,444 |
| Boilers, water feeder for, H. C. Bristol | 140,462 |
| Bolt and rivet cutter, Cone & Polder | 140,405 |
| Book support, R. B. Hindle | 140,369 |
| Boot blacking kit, S. Van Gilder | 140,447 |
| Boot tree, O. V. Elliott | 140,490 |
| Boot and shoe nailer, Blake & Libby | 140,400 |
| Boots, nailer for lasting, W. E. Fischer, (r) | 5,475 |
| Boring bit, S. Hipkins | 140,370 |
| Bottle, caster, A. Weber | 140,564 |
| Bottle, nursing, T. J. Mayall | 140,518 |
| Bottle stopper, T. J. Mayall | 140,517 |
| Bottles, cap for, J. G. Chillingworth | 140,346 |
| Bridge, truss, Clarke, Bonzano & Griffen | 140,471 |
| Brush, tooth, T. D. & W. O'Donoghue | 140,429 |
| Bucket, well, C. F. Stites | 140,439 |
| Buckle, trace, T. Brownlee | 140,463 |
| Buggies, shifting top for, R. C. Diehl | 140,351 |
| Burner, tar and petroleum, J. Burns | 140,465 |
| Cane juice, treating, G. C. Taylor | 140,443 |
| Car basket, railroad, J. F. Hudson | 140,504 |
| Car brake, railroad, G. W. Crowe | 140,349 |
| Car coupling, S. Rogers | 140,545 |
| Car, dumping, J. G. Payson | 140,534 |
| Car wheel, A. Atwood | 140,339 |
| Car ventilator and guard, O. C. Rife | 140,541 |
| Card grinding machine, T. C. Kirkham | 140,376 |
| Carpet beater, Mowry & Pulis | 140,525 |
| Carpet stretcher, Michael & Duncan | 140,522 |
| Chair and step ladder, B. F. Green | 140,363 |
| Chandelier drop light, R. Cornelius | 140,347 |
| Chandelier drop light, R. Cornelius | 140,348 |
| Chandelier drop light, N. W. Williams | 140,565 |
| Chandelier, sliding or extension, J. Brannen | 140,459 |
| Churn, reciprocating, Thompson & Mahurin | 140,445 |
| Cigar machine, J. T. Hennaman | 140,501 |
| Clothes wringer, Brooks & Hartzell | 140,344 |
| Cock, compression, E. Allt | 140,337 |
| Coffin plate, G. Brabrook | 140,457 |
| Cooler, liquid, J. R. Neil | 140,529 |
| Cotton gin, B. D. Gullett | 140,365 |
| Cultivator, J. W. Doud | 140,484 |
| Cultivator, Elwood & Pitcher | 140,353 |
| Cultivator, Simpson & Ellacott | 140,437 |
| Dash board bag, S. Hipkins | 140,416 |
| Drawers, locking, W. F. Daly | 140,481 |
| Dress protector, A. Herrmann | 140,415 |
| Dress shield, I. M. Post | 140,538 |
| Drill and bit stock, C. H. Amidon | 140,451 |
| Drill guide and core barrel, G. Frisbee | 140,357 |
| Edge tools, hardening, L. W. Stuart | 140,390 |
| Elevating machine, G. A. Dupuis | 140,485 |
| Elevator, C. W. Collyer | 140,473 |
| Engine governor, E. Buss | 140,467 |
| Engine governor, J. Hendy | 140,414 |
| Engine, rotary steam, Leaver & Wock | 140,378 |
| Envelope, L. Giebrick | 140,496 |
| Fire arm, revolving, J. M. Marlin | 140,516 |
| Fire extinguisher, Lippincott & Patterson | 140,512 |
| Fire place, W. R. Robb | 140,543 |
| Floor, fireproof tile, W. I. Drake | 140,352 |
| Fruit packer, M. E. Lewis | 140,511 |
| Fuel, artificial, D. Barker | 140,452 |
| Funnel, W. B. Crother | 140,350 |
| Furnace, hot air, G. H. Miller | 140,523 |
| Gas cut off and cock, C. E. Seal | 140,549 |
| Gas engine blower, J. H. Bean | 140,397 |
| Gate, automatic, G. C. Crum | 140,479 |
| Glazier's tool, S. G. Monce | 140,426 |
| Gun barrels, attaching stock to, Deeley & Edge | 140,482 |
| Hame fastening, E. Covert | 140,475 |
| Harness fastening, E. Covert | 140,474 |
| Harness pad, M. W. Pond | 140,384 |
| Harness pad, M. W. Pond | 140,385 |
| Harrow, A. C. Carnes | 140,408 |
| Harrow, G. Watt | 140,563 |
| Harvester and thrasher, J. H. Adamson | 140,396 |
| Hat steaming apparatus, C. W. Banta | 140,341 |
| Hatchways, closing, E. M. Hackett | 140,499 |
| Heating compressed air, H. Bushnell | 140,066 |
| Heel trimming machine, E. U. Jones | 140,420 |
| Hinge, J. W. Wood | 140,449 |
| Hoisting apparatus, D. Knowles | 140,421 |
| Hoisting apparatus, hydraulic, P. Hinkle | 140,502 |
| Hoisting apparatus, G, A. Myers | 140,427 |
| Hook, check, A. V. M. Sprague | 140,555 |
| Hook, snap, O. B. North | 140,531 |
| Horses from carts, releasing, G. H. Meier | 140,521 |
| Hose coupling, J. W. Kennedy | 140,374 |
| Hubs to axles, attaching, O. F. Shepard | 140,389 |
| India rubber rings, Collins & Longden | 140,472 |
| Iron chips, etc., for remelting, A. Pevey | 140,383 |
| Iron, sheet, W. D. Wood (r) | 5,474 |
| Jar, fruit, A. T. Jones | 140,508 |
| Kiln, brick, D. Blocher | 140,343 |
| Ladder, step, C. Frizell | 140,359 |
| Lamp, J. J. Walton | 140,448 |
| Lead, die for making sheet, N. York | 140,567 |
| Leather working tool, J. S. Alexander | 140,336 |
| Levees, inclined way for, J. Bradford | 140,458 |
| Lever escapement, S. B. Terry | 140,560 |
| Lime, superphosphate of, M. Tanner | 140,559 |
| Lock, combination, P. W. Hall | 140,500 |
| Lock for doors, etc., T. Kromer | 140,377 |
| Lock, seal, G. R. Dunn | 140,486 |
| Log turner, L. W. Pool | 140,386 |
| Loom shedding mechanism, G. Crompton | 140,496 |
| Mallet, S. M. Willis | 140,395 |
| Mask for bee keepers, protecting, L. C. Huff | 140,417 |
| Medical compound, A. Fuqua | 140,408 |
| Mop, wringer and scrubber, W. R. Winter | 140,566 |
| Motion, transmitting, A. H. Kennedy (r) | 5,476 |
| Motor, rotary fluid, H. Q. Hawley | 140,367 |
| Music stand, O. Schulze | 140,547 |
| Neck tie fastener, J. A. Hard | 140,412 |
| Offal and manufacturing gas, treating, J. Turner | 140,391 |
| Oil tool extractor, Buckley & Lawrence | 140,345 |
| Ore crushing stamp, J. M. McFarland | 140,425 |
| Ore, jigger for separating, W. H. Plumb | 140,535 |
| Organ stop action, reed, I. T. Packard | 140,381 |
| Paper machines, belt guide for, R. Hutton | 140,418 |
| Paper, preparing wall, A. W. Paull | 140,533 |
| Pasteboard, H. L. Palmer (r) | 5,471 |
| Penholder, A. T. Cross | 140,478 |
| Pencil case, A. T. Cross | 140,477 |
| Pencil case, ornamented, E. S. Johnson (r) | 5,469 |
| Photographs, polishing, N. S. Bowdish | 140,456 |
| Piano action, Newman & Anderson | 140,428 |
| Pianofortes, etc., key for, E. P. Needham | 140,528 |
| Piano tuning key, A. H. Affleck | 140,450 |
| Piano, upright, G. C. Manner (r) | 5,470 |
| Pitcher, molasses, E, B. Manning | 140,515 |
| Planter, corn, Fulghum & Lawrence | 140,493 |
| Planter, corn, E. Parmentier | 140,432 |
| Planter, corn, Z. D. Waters | 140,562 |
| Plow, L. B. Richardson | 140,434 |
| Plow gang, M. S. Curtiss | 140,480 |
| Plow handles, making, A. B. Farquhar | 140,355 |
| Plow, subsoil, G. B. Brimingham | 140,460 |
| Plow, sulky, D. W. Hughes | 140,505 |
| Plow, wheel, H. M. Skinner | 140,551 |
| Printers' galley, side stick for, R. B. Hendle | 140,368 |
| Printing plate, typographical, J. L. Ringwalt | 140,542 |
| Propeller for vessels, chain, T. W. Carter | 140,488 |
| Pruning shears, J. G. Rogers | 140,388 |
| Railroad frog, J. Wood (r) | 5,473 |
| Railroad signal, circuit for electric, F. L. Pope | 140,536 |
| Railroad switch, street, J. E. Pattison | 140,433 |
| Railroad tie, iron, C. W. Gulick | 140,411 |
| Rake, horse hay, Litchfield & Corbin | 140,513 |
| Range, cooking, M. M. Simons | 140,550 |
| Ribbon case, J. K. Landis | 140,510 |
| Rings, etc., die for enlarging finger, G. Krementz | 140,422 |
| Rings, making finger, G. Krementz | 140,423 |
| Roofing composition, Haight & Gladding | 140,366 |
| Rope skipper, automatic, J. Hoffman | 140,503 |
| Sad iron, W. P. Dodson | 140,483 |
| Saw attachment, J. Giblin | 140,495 |
| Saw filing machine, W. B. Bizzell | 140,399 |
| Saw mills, dog for circular, J. Taber | 140,442 |
| Saw set, G. Swenson | 140,441 |
| Scraper, rotary hog, R. Fyfe | 140,409 |
| Screw machine, wood, C. B. F. Tingley (r) | 5,472 |
| Sewing machine, E. D. Smith | 140,438 |
| Sewing machine cloth holder, L. A. Dupré | 140,406 |
| Sewing machine ruffler, M. J. Stoll | 140,557 |
| Sewing machine table and chair, L. N. B. Gray | 140,362 |
| Shearing machine, sheep, A. H. Kennedy (r) | 5,477 |
| Shirt bosom, J. Pagan | 140,431 |
| Shirt bosom support and brace, S. F. Long | 140,379 |
| Shirt bosom supporter, G. F. Johnson | 140,373 |
| Shirt bosom supporter, I. M. Post | 140,537 |
| Shutter, iron window, S. B. Munson, Jr | 140,526 |
| Smoking tube, A. Geddes | 140,360 |
| Speaking tube, A. Rankin | 140,539 |
| Spike extractor, A. F. Jackson | 140,371 |
| Spring, door, A. Tittman | 140,446 |
| Stalk cutter, B. R. Harness | 140,413 |
| Stove pipe shelf and drum, T. Bladen | 140,454 |
| Stove pipe thimble, H. Smith | 140,553 |
| Stove platform, W. Westlake | 140,393 |
| Stove, reservoir cooking, Fales & Seabury | 140,354 |
| Sugar from cane, extracting, M. S. Bringier | 140,461 |
| Sugar into blocks, cutting, Brunjes *et al.* | 140,464 |
| Sugar stirrer, maple, F. B. Graves | 140,361 |
| Table, extension, W. Valentin | 140,392 |
| Table, ironing, Frankenfield *et al.* | 140,356 |
| Tailor's measure, J. A. Johnston | 140,507 |
| Tassel, G. E. Jenkins | 140,372 |
| Telegraph, printing, T. A. Edison | 140,487 |
| Telegraph, printing, T. A. Edison | 140,488 |
| Telegraph circuit, printing, T. A. Edison | 140,489 |
| Thill coupling, A. J. Patterson | 140,382 |
| Thrashing machine, Ellis, Hoffman, & Lee | 140,491 |
| Thrashing machine, F. R. & W. O. Sutton | 140,440 |
| Tiles, dressing, G. & V. G. Barney (r) | 5,468 |
| Toy, L. Bryan | 140,402 |
| Toy money box, R. Frisbie | 140,358 |
| Trap, pigeon, W. F. Parker | 140,532 |
| Trunk and hat box, hand, Q. A. Scott | 140,548 |
| Trunk fastener, J. Arnold | 140,338 |
| Tub, garbage, S. B. Munson, Jr | 140,527 |
| Tunnels, etc, metallic arch for, J. Groves | 140,498 |
| Type, W. Shaw | 140,436 |
| Umbrella runner, O. M. Smith (r) | 5,478 |
| Valve, stop, G. W. Eddy | 140,407 |
| Vehicle wheel, G. W. Smith | 140,552 |
| Vise, D. S. Coe | 140,404 |
| Vulcanizing rubber belting, etc., T. J. Mayall | 140,519 |
| Wall protector and towel rack, J. F. Hummel | 140,506 |
| Washing machine, S. Martin | 140,380 |
| Washing machine, W. M. Rowland | 140,435 |
| Washing machine, L. H. Strobridge | 140,558 |
| Watch cap die, etc, S. C. Lewis | 140,424 |
| Water wheel, O. J. Bollinger | 140,401 |
| Water wheel, N. C. Roberts | 140,544 |
| Windmill, G. Mabie | 140,514 |
| Wire cage, H. Smith | 140,554 |
| Wood, preserving, H. G. McGonegal | 140,520 |
| Wrench, pipe, G. Warsop | 140,561 |

## EXTENSIONS GRANTED.

24,598.—HARVESTER RAKE.—McC. Young, Jr.
24,700.—HARVESTER.—L. and J. Miller.
24,664.—RAILROAD FROG.—G. P. Sanborn, *et al.*
24,654.—PIN STICKING MACHINE.—J. W. Naramore.
24,688.—BLIND STILE BORING MACHINE.—L. Worcester.
24,685.—TILL ALARM.—E. B. White.
24,665.—PROTECTING IRON SURFACES.—T. Selleck.
24,668.—LOOM PICKER MOTION.—W. Stearns.
24,689.—CORRUGATING METAL.—W. E. Worthen *et al.*
24,635.—SHEET METAL COFFIN.—I. C. Shuler.

## DISCLAIMERS.

24,668.—W. STEARNS.—Loom Picker Motion.
24,598.—McC. YOUNG, JR.—Harvesting Machine.
24,588.—J. C. STODDARD.—Hay Spreader.

## DESIGNS PATENTED.

6,735.—PRINTING TYPE.—A. Little, New York city.
6,736.—PRINTING TYPE.—R. Smith, Philadelphia, Pa.
6,737.—COOKING STOVE.—W. S. Stephenson, Phil'a, Pa.
6,738 to 6,740.—CARPETS.—J. T. Webster, Philadelphia, Pa.
6,741.—PLASTER CAST.—F. S. Batcheller, Providence, R. I.
6,742.—FRAME MOLDING.—S. Garrison, Baltimore, Md.
6,743.—FLOWER STAND.—J. E. Morris, Minneapolis, Minn.
6,744.—TOY BANK.—F. W. Smith, Bridgeport, Conn.
6,745.—COOKING RANGE.—S. S. Utter, Brooklyn, N. Y.

## TRADE MARKS REGISTERED.

1,340.—LIQUORS, ETC.—W. S. Dunham, New York city.
1,341.—PLAYING CARDS.—C. K. Pevey, Worcester, Mass.
1,342.—FORKS, ETC.—C. B. Rogers *et al.*, Meriden, Conn.
1,343.—SOAP.—Sherwood & Genin, Buffalo, N. Y.
1,344.—SPOOLS.—J. H. Bullard, Chicopee Falls, Mass.
1,345.—FERTILIZER.—Hunt, Rankin & Lamar, Macon, Ga.
1,346.—HAMS.—Oakford & Co., Baltimore, Md.
1,347.—ROOF SLATE.—T. W. Parry, Lehigh Township, Pa.
1,348 & 1,349.—PLAYING CARDS.—C. K. Pevey, Worcester Mass.
1,350.—FILES, ETC.—Sheffield Works, Albany, N. Y.
1,351.—TOOTHACHE REMEDY.—A. Tracy, Brooklyn, N. Y.

## SCHEDULE OF PATENT FEES:

| | |
|---|---|
| On each Caveat | $10 |
| On each Trade-Mark | $25 |
| On filing each application for a Patent (17 years) | $15 |
| On issuing each original Patent | $20 |
| On appeal to Examiners-in-Chief | $10 |
| On appeal to Commissioner of Patents | $20 |
| On application for Reissue | $30 |
| On application for Extension of Patent | $50 |
| On granting the Extension | $50 |
| On filing a Disclaimer | $10 |
| On an application for Design (3½ years) | $10 |
| On an application for Design (7 years) | $15 |
| On an application for Design (14 years) | $30 |