Hat wires, machine for applying clasps to, J.

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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 This is for our information, and not for publication.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.

In quiries 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.

Special Written Information on matters of

or in this department, each must take his turn.

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

Scientific American Supplements referred to many be held at the office. Price 10 cents each.

Minerals sent for examination should be distinctly marked or labeled.

(1) J. D. asks how to make carbon paper or transfer paper. A. Mix lard to a paste with lampblack, rub this upon the paper, remove the excess with a rag, and dry the paper, which should be thin post

(2) I. M. G. asks: 1. In Fig. 2, in your description of electric motor, in issue of March 17, is the iron wire which is wrapped on the spool insulated? A It is partially insulated with shellac varnish. 2. Will it matter if more than one piece of wire is used, if they are twisted or joined together, and what is done with the ends of the wire? A. You may use several pieces, but the ends should be allowed to abut without being twisted. The outer end of the wire is held temporarily by shellac. 3. Will cotton cloth do to wrap the iron wirering? A. One thickness of thin cotton cloth applied with shellac varnish or thin glue will answer. 4. What will be the result if the coils of the armaturedo not have the same number of convolutions? A. The machine will have an irregular action. 5. Will any other screws work as well as brass wood screws? Will ordinary telegraph wire do instead of Stubs' wire? A. Yes. 6. What is the rule of thumb? A. Virtually no rule at all. The meaning of the expression is that you should construct your machine by adapting one part to another as you proceed, without any special calcula tion. 7. In the field magnet, are the strips lapped over each other, or just brought up against each other? A The ends of the strips should abut. 8. Will lead answer the same purpose as Babbitt or type metal? A No. 9. What is to prevent the metal from filling up the entire opening and leaving no oil hole? A. Nothing; the oil hole is to be drilled. 10. How much space should be left between the field magnet and the armature? A. The smaller the space between the armature and the field magnet, the better, 11. Can the motor be run either way by reversing the current? A. No; it can be done only by shifting the commutator brushes

(3) G. G. asks if there is any particular way to lace a quarter turn belt so as to have an equa strain on both edges of the belt. A. Begin on the out side of the belt at the middle, pass one end of the lacing through one end of the belt and bring it ou through the corresponding hole of the other end o the belt, laying it diagonally off to the left. Now pas the other end of the lacing through the hol last used, and carry it over the first strand of the lacing on the inside of the belt, passing it through the first hole used, and lay it diagonally off to the right. Now proceed to pass the lacing through th holes of the belt in a zigzag course, leaving all the strands inside the belt parallel with the belt, and al the strands outside the belt oblique. Pass the lactwice through the holes nearest the edge of the belt then return the lace in the reverse order toward the center of the belt, so as to cross all the oblique strands and make all the inside strands double. Finally pass the end of the lacing through the first hole used, the outward through an awl hole, then hammering it down to cause it to hold. The left side is to be laced in similar way.

(4) J. M. C. writes: 1. I have just made six cells, 1 zinc 11/2 inches by 31/2 inches, 2 carbons 11/2 inches by 31/4 inches. . I want to know if they will turn or more than turn, the motor described in March 1 issue? A. Your batteries will turn the motor, bu will give very little power. 2. Can I construct a smalle one on the same principle? A. Yes: follow out the same general proportions. 3. Can I make the field magnet solid, either wrought or cast, and, if built up

they happen to come. 4. How is induction coil made to suit as many of my cells as would be proper to use in an ordinary medical battery? I would like to have working directions. A. For induction coils and very full directions for making, see SUPPLEMENT, Nos. 160, 166, and 569,

(5) E. H. L. writes: I am much interested in your admirable description of a small dynamo as furnished in Scientific American Supplement. No. 600. I want such a one for running a single arc lamp, such as requires 50 Bunsen cells. This dynamo does not furnish E. M. F. high enough for such. I fear. Can it be wound with finer wire, and so made suitable for ourneeds without otherwise altering the dimensions? Perhaps you can also tell me where I could get such a one made complete, for a reasonable price, or of any other pattern that will answer. We want an experimental dynamo for general purposes as well as for the arc lamp of our projector. How high candle power does dynamo furnish in an arc lamp? How will the light compare with an ordinary lime light? A. The dynamo, when made as described in the SUPPLEMENT, No. 600, will answer your purpose perfectly. To adapt it to an arc light, all you need to do is to connect all of the wires of the field magnet in series, then arrange the dynamo as a shunt machine, and add some resistance to that of the field magnet in the shunt, the amount to be determined by experiment. Then have the winding of the armature secured by a sufficient number of bands of brass wire to prevent its destruction by centrifugal action, also wrap the wires leading to the commutator cylinder with adhesive tape, and finally increase the electromotive force by increasing the speed to say 3,000 revolutions per minute. The light will be ample for projection. With a parabolic reflector it will be superior to the calcium light.

(6) G. R. F. asks the process of taking and using glue moulds. A. A good gelatine mould may be made in the following manner: Soak the best white glue in cold water for 24 hours, then drain off all the water. Melt the soaked glue in a water-jacketed kettle, then pour the glue upon the object, the latter being incased in a lead or pasteboard box. Let it cool for 12 hours, then separate the cast from the object. If the object be a statuette, a thread should be attached to the back, and extended out of the mould at both ends, so that it may be used for cutting open the mould after to may be had at the office. Price 10 cents each.

Books referred to promptly supplied on receipt of it is cooled, to permit of taking out the statuette. A good material for a mould is made in the following way: Dissolve 20 parts of fine gelatine in 100 parts of hot water, and a d 1/2 part of tannin and the same amount of rock candy. It is said that a mould made of gelatine or glue alone may be made more durable by pouring over it a solution of bichromate of potash in water, 1 part of bichromate to 10 of water, and afterward exposing it to sunlight. Most objects require oiling slightly before being covered with glue or gelatine.

TO INVENTORS.

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L i i i i i i i i i i i i i i i i i i i	Musical instruments, repeating check for musical sheets of mechanical, J. Crannell. Nail machines, die holder and straightening device for wire, M. M. Smith. Nut lock, J. B. Crossley. Oil Can, J. H. Sutphen. Oil feeder, N. Seibert. Oiler, automatic, Griswold & Bradbury. Ores, reduction of, H. Hirsching (r). Packing box, A. T. Linderman. Pad. See Color or ink pad. Pail cover fastening, C. F. Loomis. Paper cutters, means for operating, W. F. Hill. Paper folding machine, W. Hill. Paper for carpet linings, etc., folded, A. Gibb. Percils, rubber tip attachment for, L. S. Bacon. Pen holder, J. A. Kimbail. Pipe. See Sheet metal pipe. Tobacco pipe. Pipe coupling, D. W. Magee. Pipe coupling, flexible, P. M. Askren. Pipes, die for threading and cutting, G. Williams. Piston, A. M. Morrill. Pitcher, water, T. Shaw.	379,867 379,735 379,686 379,738 379,643 10,912 379,662 379,784 379,686 379,5784 379,789 379,584 379,789 379,626 379,626 379,626 379,624 379,523
	Musical instruments, repeating check for musical sheets of mechanical, J. Crannell. Nall machines, die holder and straightening device for wire, M. M. Smith. Nut lock, J. B. Crossley. Oil Can, J. H. Sutphen. Oil feeder, N. Seibert. Oiler, automatic, Griswold & Bradbury. Ores, reduction of, H. Hirsching (r). Packing box, A. T. Linderman. Pad. See Color or ink pad. Pail cover fastening, C. F. Loomis. Paper cutters, means for operating, W. F. Hill. Paper folding machine, W. Hill. Paper for carpet linings, etc., folded, A. Gibb. Percils, rubber tip attachment for, L. S. Bacon. Pen holder, J. A. Kimbail. Pipe. See Sheet metal pipe. Tobacco pipe. Pipe coupling, flexible, P. M. Askren. Pipes, die for threading and cutting, G. Williams. Piston, A. M. Morrill. Pitcher, water, T. Shaw. Planer, road, J. C. Steele.	379,867 379,735 379,686 379,783 379,783 379,643 10,912 379,662 379,794 379,686 379,571 379,898 379,571 379,799 379,798 379,798 379,624 379,624 379,523
L .	Musical instruments, repeating check for musical sheets of mechanical, J. Crannell. Nall machines, die holder and straightening device for wire, M. M. Smith. Nut lock, J. B. Crossley. Oil Can, J. H. Sutphen. Oil feeder, N. Seibert. Oiler, automatic, Griswold & Bradbury. Ores, reduction of, H. Hirsching (r). Packing box, A. T. Linderman. Pad. See Color or ink pad. Pail cover fastening, C. F. Loomis. Paper cutters, means for operating, W. F. Hill. Paper folding machine, W. Hill. Paper for carpet linings, etc., folded, A. Gibb. Percils, rubber tip attachment for, L. S. Bacon. Pen holder, J. A. Kimball. Pipe. See Sheet metal pipe. Tobacco pipe. Pipe coupling, D. W. Magee. Pipe coupling, fexible, P. M. Askren. Pipes, die for threading and cutting, G. Williams. Piston, A. M. Morrill. Pitcher, water, T. Shaw. Planter, oad, J. C. Steele. Plauter, D. B. N. Turner.	379,867 379,735 379,686 379,783 379,783 379,643 10,912 379,692 379,784 379,686 379,571 379,789 379,624 379,624 379,523 379,523 379,523 379,523 379,523
	Musical instruments, repeating check for musical sheets of mechanical, J. Crannell. Nail machines, die holder and straightening device for wire, M. M. Smith. Nut lock, J. B. Crossley. Oil Can, J. H. Sutphen. Oil feeder, N. Seibert. Oiler, automatic, Griswold & Bradbury. Ores, reduction of, H. Hirsching (r). Packing box, A. T. Linderman. Pad. See Color or ink pad. Pail cover fastening, C. F. Loomis. Paper cutters, means for operating, W. F. Hill. Paper folding machine, W. Hill. Paper for carpet linings, etc., folded, A. Gibb. Percils, rubber tip attachment for, L. S. Bacon. Pen holder, J. A. Kimbail. Pipe. See Sheet metal pipe. Tobacco pipe. Pipe coupling, D. W. Magee. Pipe coupling, flexible, P. M. Askren. Pipes, die for threading and cutting, G. Williams. Piston, A. M. Morrill. Pitcher, water, T. Shaw. Planer, road, J. C. Steele. Planter, orn, C. E. White.	379,867 379,735 379,686 379,788 379,788 379,643 10,912 379,662 379,794 379,784 379,784 379,789 379,789 379,789 379,789 379,789 379,624 379,624 379,634 379,634 379,634 379,634 379,634 379,634 379,634 379,638
1	Musical instruments, repeating check for musical sheets of mechanical, J. Crannell. Nail machines, die holder and straightening device for wire, M. M. Smith. Nut lock, J. B. Crossley. Oil Can, J. H. Sutphen. Oil feeder, N. Seibert. Oiler, automatic, Griswold & Bradbury. Ores, reduction of, H. Hirsching (r). Packing box, A. T. Linderman. Pad. See Color or ink pad. Pail cover fastening, C. F. Loomis. Paper cutters, means for operating, W. F. Hill. Paper folding machine, W. Hill. Paper for carpet linings, etc., folded, A. Gibb Percils, rubber tip attachment for, L. S. Bacon. Pen holder, J. A. Kimbail. Pipe. See Sheet metal pipe. Tobacco pipe. Pipe coupling, flexible, P. M. Askren. Pipes, die for threading and cutting, G. Williams. Piston, A. M. Morrill. Pitcher, water, T. Shaw. Planer, road, J. C. Steele. Planter, automatic check row corn, E. C. Culver. Planter, check row corn, J. E. Bering.	379,867 379,735 379,686 379,783 379,783 379,643 10,912 379,696 379,784 379,686 379,571 379,789 379,624 379,624 379,624 379,624 379,624 379,624 379,624 379,624 379,624 379,623 379,623 379,839 379,839 379,839 379,839 379,838
	Musical instruments, repeating check for musical sheets of mechanical, J. Crannell. Nail machines, die holder and straightening device for wire, M. M. Smith. Nut lock, J. B. Crossley. Oil Can, J. H. Sutphen. Oil feeder, N. Seibert. Oiler, automatic, Griswold & Bradbury. Ores, reduction of, H. Hirsching (r). Packing box, A. T. Linderman. Pad. See Color or ink pad. Pail cover fastening, C. F. Loomis. Paper cutters, means for operating, W. F. Hill. Paper folding machine, W. Hill. Paper for carpet linings, etc., folded, A. Gibb Percils, rubber tip attachment for, L. S. Bacon. Pen holder, J. A. Kimbail. Pipe. See Sheet metal pipe. Tobacco pipe. Pipe coupling, Bexible, P. M. Askren. Pipes, die for threading and cutting, G. Williams. Piston, A. M. Morrill. Pitcher, water, T. Shaw. Planer, road, J. C. Steele. Planter, oorn, C. E. White. Planter, corn, C. E. White. Planters, attachment for corn, M. Schmucker. Planting attachment, corn, F. L. Aten.	379,867 379,735 379,686 379,783 379,783 379,662 379,764 379,662 379,794 379,688 379,571 379,789 379,789 379,789 379,624 379,624 379,634 379,634 379,634 379,634 379,838 379,838 379,838 379,838 379,838 379,838 379,838 379,838
	Musical instruments, repeating check for musical sheets of mechanical, J. Crannell. Nail machines, die holder and straightening device for wire, M. M. Smith. Nut lock, J. B. Crossley. Oil Can, J. H. Sutphen. Oil feeder, N. Seibert. Oiler, automatic, Griswold & Bradbury. Ores, reduction of, H. Hirsching (r). Packing box, A. T. Linderman. Pad. See Color or ink pad. Pail cover fastening, C. F. Loomis. Paper cutters, means for operating, W. F. Hill. Paper folding machine, W. Hill. Paper for carpet linings, etc., folded, A. Gibb. Percils, rubber tip attachment for, L. S. Bacon. Pen holder, J. A. Kimbail. Pipe. See Sheet metal pipe. Tobacco pipe. Pipe coupling, flexible, P. M. Askren. Pipes, die for threading and cutting, G. Williams. Piston, A. M. Morrill. Pitcher, water, T. Shaw. Planer, road, J. C. Steele. Planter, automatic check row corn, E. C. Culver. Planter, check row corn, J. E. Bering. Planters, attachment for corn, M. Schmucker. Planters, attachment for corn, M. Schmucker. Planting attachment, corn, F. L. Aten. Plow, J. McArthur. Plow, E. Hixson.	379,867 379,735 379,686 379,783 379,783 379,643 10,912 379,696 379,571 379,696 379,571 379,784 379,624 379,624 379,529 379,834 379,834 379,838 379,838 379,838 379,838 379,850 379,838 379,850 379,838 379,850 379,838 379,850 379,838
	Musical instruments, repeating check for musical sheets of mechanical, J. Crannell. Nail machines, die holder and straightening device for wire, M. M. Smith. Nut lock, J. B. Crossley. Oil Can, J. H. Sutphen. Oil feeder, N. Seibert. Oiler, automatic, Griswold & Bradbury. Ores, reduction of, H. Hirsching (r). Packing box, A. T. Linderman. Pad. See Color or ink pad. Pail cover fastening, C. F. Loomis. Paper cutters, means for operating, W. F. Hill. Paper folding machine, W. Hill. Paper for carpet linings, etc., folded, A. Gibb Percils, rubber tip attachment for, L. S. Bacon. Pen holder, J. A. Kimbail. Pipe. See Sheet metal pipe. Tobacco pipe. Pipe coupling, Bexible, P. M. Askren. Pipes, die for threading and cutting, G. Williams. Piston, A. M. Morrill. Pitcher, water, T. Shaw. Planer, road, J. C. Steele. Planter, orn, C. E. White. Planter, corn, C. E. White. Planters, attachment for corn, M. Schmucker. Planting attachment, corn, F. L. Aten. Plow, J. McArthur. Plow, E. Hixson. Plow and Planter, combined, W. F. Leslee.	379,867 379,785 379,686 379,783 379,662 379,764 379,662 379,794 379,686 379,571 379,844 379,789 379,685 379,624 379,791 379,523 379,634 379,834 379,838 379,834 379,838 379,834 379,836 379,836 379,836 379,836 379,837 379,838
	Musical instruments, repeating check for musical sheets of mechanical, J. Crannell. Nall machines, die holder and straightening device for wire, M. M. Smith. Nut lock, J. B. Crossley. Oil Can, J. H. Sutphen. Oil feeder, N. Seibert. Oiler, automatic, Griswold & Bradbury. Ores, reduction of, H. Hirsching (r). Packing box, A. T. Linderman. Pad. See Color or ink pad. Pail cover fastening, C. F. Loomis. Paper cutters, means for operating, W. F. Hill. Paper folding machine, W. Hill. Paper for carpet linings, etc., folded, A. Gibb. Percils, rubber tip attachment for, L. S. Bacon. Pen holder, J. A. Kimball. Pipe. See Sheet metal pipe. Tobacco pipe. Pipe coupling, D. W. Magee. Pipe coupling, flexible, P. M. Askren. Pipes, die for threading and cutting, G. Williams. Piston, A. M. Morrill. Pitcher, water, T. Shaw. Planter, orad, J. C. Steele. Plauter, D. B. N. Turner. Planter, automatic check row corn, E. C. Culver. Planter, check row corn, J. E. Bering. Planter, corn, C. E. White. Planting attachment, corn, F. L. Aten. Plow, J. McArthur. Plow, J. McArthur. Plow and Planter, combined, W. F. Leslee. Plow cultivator, listing, J. S. Crum. Plow, sulky, M. T. Hancock. Pocketbook clasp, D. M. Read.	379,867 379,735 379,686 379,783 379,783 379,643 10,912 379,764 379,698 379,774 379,698 379,711 379,789 379,789 379,625 379,624 379,829 379,834 379,830 379,838
	Musical instruments, repeating check for musical sheets of mechanical, J. Crannell. Nail machines, die holder and straightening device for wire, M. M. Smith. Nut lock, J. B. Crossley. Oil Can, J. H. Sutphen. Oil feeder, N. Seibert. Oiler, automatic, Griswold & Bradbury. Ores, reduction of, H. Hirsching (r). Packing box, A. T. Linderman. Pad. See Color or ink pad. Pail cover fastening, C. F. Loomis. Paper cutters, means for operating, W. F. Hill. Paper folding machine, W. Hill. Paper for carpet linings, etc., folded, A. Gibb Percils, rubber tip attachment for, L. S. Bacon. Pen holder, J. A. Kimbail. Pipe. See Sheet metal pipe. Tobacco pipe. Pipe coupling, flexible, P. M. Askren. Pipes, die for threading and cutting, G. Williams. Piston, A. M. Morrill. Pitcher, water, T. Shaw. Planter, toad, J. C. Steele. Planter, odd, J. C. Steele. Planter, corn, C. E. White. Planters, attachment for corn, M. Schmucker. Planting attachment, corn, F. L. Aten. Plow, E. Hixson. Plow and planter, combined, W. F. Leslee. Plow or cultivator, listing, J. S. Crum. Plow, sulky, M. T. Hancock. Pocketbook clasp, D. M. Read.	379,867 379,735 379,636 379,738 379,783 379,643 10,912 379,696 379,784 379,696 379,781 379,898 379,784 379,624 379,783 379,829 379,834 379,834 379,836 379,836 379,837 379,838 379,838 379,838 379,838 379,838 379,838 379,838 379,838 379,838 379,838 379,838 379,838 379,838 379,838 379,838 379,838 379,838 379,838
	Musical instruments, repeating check for musical sheets of mechanical, J. Crannell. Nall machines, die holder and straightening device for wire, M. M. Smith. Nut lock, J. B. Crossley. Oil Can, J. H. Sutphen. Oil feeder, N. Seibert. Oiler, automatic, Griswold & Bradbury. Ores, reduction of, H. Hirsching (r). Packing box, A. T. Linderman. Pad. See Color or ink pad. Pail cover fastening, C. F. Loomis. Paper cutters, means for operating, W. F. Hill. Paper folding machine, W. Hill. Paper for carpet linings, etc., folded, A. Gibb. Percils, rubber tip attachment for, L. S. Bacon. Pen holder, J. A. Kimball. Pipe. See Sheet metal pipe. Tobacco pipe. Pipe coupling, flexible, P. M. Askren. Pipes, die for threading and cutting, G. Williams. Piston, A. M. Morrill. Pitcher, water, T. Shaw. Planter, oad, J. C. Steele. Planter, automatic check row corn, E. C. Culver. Planter, check row corn, J. E. Bering. Planters, attachment for corn, M. Schmucker. Planters, attachment for corn, F. L. Aten. Plow, J. McArthur. Plow, E. Hixson. Plow and Planter, combined, W. F. Leslee. Plow cultivator, listing, J. S. Crum. Plow, sulky, M. T. Hancock. Pocketbook clasp, D. M. Read. Potato digger, P. A. Chippendale.	379,867 379,735 379,636 379,738 379,783 379,643 10,912 379,696 379,784 379,696 379,781 379,898 379,784 379,624 379,783 379,829 379,834 379,834 379,836 379,836 379,837 379,838 379,838 379,838 379,838 379,838 379,838 379,838 379,838 379,838 379,838 379,838 379,838 379,838 379,838 379,838 379,838 379,838 379,838
	Musical instruments, repeating check for musical sheets of mechanical, J. Crannell. Nail machines, die holder and straightening device for wire, M. M. Smith. Nut lock, J. B. Crossley. Oil Can, J. H. Sutphen. Oil feeder, N. Seibert. Oiler, automatic, Griswold & Bradbury. Ores, reduction of, H. Hirsching (r). Packing box, A. T. Linderman. Pad. See Color or ink pad. Pail cover fastening, C. F. Loomis. Paper cutters, means for operating, W. F. Hill. Paper folding machine, W. Hill. Paper for carpet linings, etc., folded, A. Gibb Percils, rubber tip attachment for, L. S. Bacon. Pen holder, J. A. Kimbail. Pipe. See Sheet metal pipe. Tobacco pipe. Pipe coupling, flexible, P. M. Askren. Pipes, die for threading and cutting, G. Williams. Piston, A. M. Morrill. Pitcher, water, T. Shaw. Planter, toad, J. C. Steele. Planter, odd, J. C. Steele. Planter, corn, C. E. White. Planters, attachment for corn, M. Schmucker. Planting attachment, corn, F. L. Aten. Plow, E. Hixson. Plow and planter, combined, W. F. Leslee. Plow or cultivator, listing, J. S. Crum. Plow, sulky, M. T. Hancock. Pocketbook clasp, D. M. Read. Potato drill, J. L. Ulsh. Press. See Baling press. Pressure, 'apparatus for regulating fluid, J. B. Stobaeus.	379,867 379,735 379,686 379,783 379,783 379,643 10,912 379,696 379,571 379,696 379,571 379,696 379,571 379,624 379,525 379,824 379,834 379,836 379,836 379,850 379,853 379,854 379,856 379,857 379,858 379,858 379,858 379,858 379,858 379,858 379,858 379,858 379,858 379,858 379,858 379,858 379,858 379,858 379,858 379,858 379,858 379,858 379,858 379,868 379,868 379,882 379,745
	Musical instruments, repeating check for musical sheets of mechanical, J. Crannell. Nall machines, die holder and straightening device for wire, M. M. Smith. Nut lock, J. B. Crossley. Oil Can, J. H. Sutphen. Oil feeder, N. Seibert. Oiler, automatic, Griswold & Bradbury. Ores, reduction of, H. Hirsching (r). Packing box, A. T. Linderman. Pad. See Color or ink pad. Pail cover fastening, C. F. Loomis. Paper cutters, means for operating, W. F. Hill. Paper folding machine, W. Hill. Paper for carpet linings, etc., folded, A. Gibb. Percils, rubber tip attachment for, L. S. Bacon. Pen holder, J. A. Kimbail. Pipe. See Sheet metal pipe. Tobacco pipe. Pipe coupling, flexible, P. M. Askren. Pipes, die for threading and cutting, G. Williams. Piston, A. M. Morrill. Pitcher, water, T. Shaw. Planter, cod, J. C. Steele. Planter, automatic check row corn, E. C. Culver. Planter, check row corn, J. E. Bering. Planters, attachment for corn, M. Schmucker. Planters, attachment, corn, F. L. Aten. Plow, J. McArthur. Plow, E. Hixson. Plow and Planter, combined, W. F. Leslee. Plow or cultivator, listing, J. S. Crum. Plow, sulky, M. T. Hancock. Pocketbook clasp, D. M. Read. Potato digger, P. A. Chippendale. Press. See Baling press. Pressure, 'apparatus for regulating fluid, J. B. Stobaeus. Pressure, regulator, automatic fluid, W. D. Sheldon.	379,867 379,735 379,686 379,783 379,783 379,643 10,912 379,696 379,571 379,696 379,571 379,698 379,784 379,624 379,789 379,824 379,834 379,850 379,834 379,850 379,851 379,853 379,854 379,853 379,854 379,853 379,854 379,853 379,854 379,853 379,854 379,853 379,854 379,856 379,852 379,852 379,852 379,852 379,868
	Musical instruments, repeating check for musical sheets of mechanical, J. Crannell. Nall machines, die holder and straightening device for wire, M. M. Smith. Nut lock, J. B. Crossley. Oil can, J. H. Sutphen. Oil feeder, N. Seibert. Oiler, automatic, Griswold & Bradbury. Ores, reduction of, H. Hirsching (r). Packing box, A. T. Linderman. Pad. See Color or ink pad. Pail cover fastening, C. F. Loomis. Paper cutters, means for operating, W. F. Hill. Paper folding machine, W. Hill. Paper for carpet linings, etc., folded, A. Gibb. Percils, rubber tip attachment for, L. S. Bacon. Pen holder, J. A. Kimbail. Pipe. See Sheet metal pipe. Tobacco pipe. Pipe coupling, D. W. Magee. Pipe coupling, flexible, P. M. Askren. Pipes, die for threading and cutting, G. Williams. Piston, A. M. Morrill. Pitcher, water, T. Shaw. Planter, oad, J. C. Steele. Plauter, D. B. N. Turner. Planter, automatic check row corn, E. C. Culver. Planter, check row corn, J. E. Bering. Planter, corn, C. E. White. Planting attachment for corn, M. Schmucker. Planting attachment for corn, M. Schmucker. Planting attachment for corn, M. Schmucker. Planting attachment for corn, J. E. Leslee. Plow, E. Hixson. Plow, E. Hixson. Plow and Planter, combined, W. F. Leslee. Plow or cultivator, listing, J. S. Crum. Plow, E. Hixson. Plow and Planter, combined, W. F. Leslee. Pototo drill, J. L. Ulsh. Pressure, 'apparatus for regulating fluid, J. B. Stobaeus. Pressure regulator, automatic fluid, W. D. Sheldon. Pressure regulator, fluid, W. B. Mason. Printers' rules, machine for cutting, W. H. Gold-	379,867 379,785 379,686 379,783 379,783 379,643 10,912 379,797 379,764 379,686 379,571 379,686 379,571 379,625 379,625 379,624 379,823 379,824 379,667
	Musical instruments, repeating check for musical sheets of mechanical, J. Crannell. Nall machines, die holder and straightening device for wire, M. M. Smith. Nut lock, J. B. Crossley. Oil Can, J. H. Sutphen. Oil feeder, N. Seibert. Oiler, automatic, Griswold & Bradbury. Ores, reduction of, H. Hirsching (f). Packing box, A. T. Linderman. Pad. See Color or ink pad. Pail cover fastening, C. F. Loomis. Paper cutters, means for operating, W. F. Hill. Paper folding machine, W. Hill. Paper folding machine, W. Hill. Paper for carpet linings, etc., folded, A. Gibb. Percils, rubber tip attachment for, L. S. Bacon. Pen holder, J. A. Kimbail. Pipe. See Sheet metal pipe. Tobacco pipe. Pipe coupling, flexible, P. M. Askren. Pipes, die for threading and cutting, G. Williams. Piston, A. M. Morrill. Pitcher, water, T. Shaw. Planter, oad, J. C. Steele. Planter, automatic check row corn, E. C. Culver. Planter, check row corn, J. E. Bering. Planters, attachment for corn, M. Schmucker. Planters, attachment, corn, F. L. Aten. Plow, J. McArthur. Plow, J. McArthur. Plow, B. Hixson. Plow and planter, combined, W. F. Leslee. Plow or cultivator, listing, J. S. Crum. Plow, sulky, M. T. Hancock. Pocketbook clasp, D. M. Read. Potato digger, P. A. Chippendale. Potato drill, J. L. Ulsh Press. See Baling press. Pressure regulator, automatic fluid, W. D. Sheldon. Pressure regulator, fluid, W. B. Mason. Printers' rules, machine for cutting, W. H.	379,867 379,686 379,783 379,783 379,643 10,912 379,692 379,764 379,696 379,571 379,898 379,571 379,898 379,624 379,798 379,834 379,834 379,836 379,836 379,837 379,838
	Musical instruments, repeating check for musical sheets of mechanical, J. Crannell. Nall machines, die holder and straightening device for wire, M. M. Smith. Nut lock, J. B. Crossley. Oil Can, J. H. Sutphen. Oil feeder, N. Seibert. Oiler, automatic, Griswold & Bradbury. Ores, reduction of, H. Hirsching (r). Packing box, A. T. Linderman. Pad. See Color or ink pad. Pail cover fastening, C. F. Loomis. Paper cutters, means for operating, W. F. Hill. Paper folding machine, W. Hill. Paper for carpet linings, etc., folded, A. Gibb. Percils, rubber tip attachment for, L. S. Bacon. Pen holder, J. A. Kimbail. Pipe. See Sheet metal pipe. Tobacco pipe. Pipe coupling, D. W. Magee. Pipe coupling, flexible, P. M. Askren. Pipes, die for threading and cutting, G. Williams. Piston, A. M. Morrill. Pitcher, water, T. Shaw. Planter, oad, J. C. Steele. Planter, D. B. N. Turner. Planter, automatic check row corn, E. C. Culver. Planter, check row corn, J. E. Bering. Planting attachment for corn, M. Schmucker. Planting attachment for corn, M. Schmucker. Planting attachment, corn, F. L. Aten. Plow, B. Hixson. Plow, B. Hixson. Plow and Planter, combined, W. F. Leslee. Plow or cultivator, listing, J. S. Crum. Plow, B. Hixson. Plow and Planter, combined, W. F. Leslee. Plow or sulty M. T. Hancock. Pocketbook clasp, D. M. Read. Potato digger, P. A. Chippendale. Pressure, apparatus for regulating fluid, J. B. Stobaeus. Pressure regulator, automatic fluid, W. D. Sheldon. Printers' rules, machine for cutting, W. H. Golding. Printers' rules, machine for cutting, W. H. Golding.	379,867 379,785 379,686 379,783 379,783 379,643 10,912 379,797 379,764 379,768 379,779 379,768 379,571 379,628 379,628 379,624 379,624 379,634 379,634 379,830 379,735 379,830 379,735
	Musical instruments, repeating check for musical sheets of mechanical, J. Crannell. Nall machines, die holder and straightening device for wire, M. M. Smith. Nut lock, J. B. Crossley. Oil Can, J. H. Sutphen. Oil feeder, N. Seibert. Oiler, automatic, Griswold & Bradbury. Ores, reduction of, H. Hirsching (r). Packing box, A. T. Linderman. Pad. See Color or ink pad. Pail cover fastening, C. F. Loomis. Paper cutters, means for operating, W. F. Hill. Paper folding machine, W. Hill. Paper folding machine, W. Hill. Paper for carpet linings, etc., folded, A. Gibb. Percils, rubber tip attachment for, L. S. Bacon. Pen holder, J. A. Kimbail. Pipe. See Sheet metal pipe. Tobacco pipe. Pipe coupling, flexible, P. M. Askren. Pipes, die for threading and cutting, G. Williams. Piston, A. M. Morrill. Pitcher, water, T. Shaw. Planter, automatic check row corn, E. C. Culver. Planter, automatic check row corn, E. C. Culver. Planter, corn, C. E. White. Planters, attachment for corn, M. Schmucker. Plew, J. McArthur. Plow, J. McArthur. Plow, J. McArthur. Plow, E. Hixson. Plow and Planter, combined, W. F. Leslee. Plow or cultivator, listing, J. S. Crum. Plow, sulky, M. T. Hancock. Pocketbook clasp, D. M. Read. Potato digger, P. A. Chippendale. Potato drill, J. L. Ulsh. Press. See Baling press. Pressure regulator, automatic fluid, W. D. Sheldon. Pressure regulator, fluid, W. B. Mason. Printers' rules, machine for cutting, W. H. Golding. Printers' rules, machine for ditering, W. H. Golding. Printers' rules, machine for mitering, W. H. Golding. Printers rules, machine for mitering, W. H. Golding. Printing device, Adams & Seymour, Jr. Quilting frame, B. W. Raines.	379,867 379,785 379,686 379,783 379,783 379,692 379,784 379,696 379,571 379,789 379,624 379,624 379,523 379,829 379,834 379,834 379,850 379,853 379,854 379,853 379,854 379,856 379,857 379,858
	Musical instruments, repeating check for musical sheets of mechanical, J. Crannell. Nall machines, die holder and straightening device for wire, M. M. Smith. Nut lock, J. B. Crossley. Oil Can, J. H. Sutphen. Oil feeder, N. Seibert. Oiler, automatic, Griswold & Bradbury. Ores, reduction of, H. Hirsching (r). Packing box, A. T. Linderman. Pad. See Color or ink pad. Pail cover fastening, C. F. Loomis. Paper cutters, means for operating, W. F. Hill. Paper folding machine, W. Hill. Paper for carpet linings, etc., folded, A. Gibb. Percils, rubber tip attachment for, L. S. Bacon. Pen holder, J. A. Kimball. Pipe. See Sheet metal pipe. Tobacco pipe. Pipe coupling, D. W. Magee. Pipe coupling, flexible, P. M. Askren. Pipes, die for threading and cutting, G. Williams. Piston, A. M. Morrill. Pitcher, water, T. Shaw. Planter, oad, J. C. Steele. Plauter, D. B. N. Turner. Planter, automatic check row corn, E. C. Culver. Planter, automatic check row corn, Schmucker. Planter, corn, C. E. White. Planter, attachment for corn, M. Schmucker. Planting attachment, corn, F. L. Aten. Plow, J. McArthur. Plow, J. McArthur. Plow, B. Hixson. Plow and planter, combined, W. F. Leslee. Plow or cultivator, listing, J. S. Crum. Plow, See Baling press. Pressure regulator, fluid, W. B. Mason. Pressure regulator, fluid, W. B. Mason. Pressure regulator, fluid, W. B. Mason. Printers' rules, machine for cutting, W. H. Golding. Printing device, Adams & Seymour, Jr. Quilting frame, B. W. Raines. Rack elevator, W. R. Fitchit. Railway and car, 'elevated, J. L. Chapman.	379,867 379,686 379,785 379,686 379,783 379,643 10,912 379,698 379,571 379,698 379,571 379,698 379,571 379,625 379,625 379,624 379,523 379,667 379,777
	Musical instruments, repeating check for musical sheets of mechanical, J. Crannell. Nall machines, die holder and straightening device for wire, M. M. Smith. Nut lock, J. B. Crossley. Oil Can, J. H. Sutphen. Oil feeder, N. Seibert. Oiler, automatic, Griswold & Bradbury. Ores, reduction of, H. Hirsching (r). Packing box, A. T. Linderman. Pad. See Color or ink pad. Pail cover fastening, C. F. Loomis. Paper cutters, means for operating, W. F. Hill. Paper folding machine, W. Hill. Paper for carpet linings, etc., folded, A. Gibb. Percils, rubber tip attachment for, L. S. Bacon. Pen holder, J. A. Kimbail. Pipe. See Sheet metal pipe. Tobacco pipe. Pipe coupling, D. W. Magee. Pipe coupling, flexible, P. M. Askren. Pipes, die for threading and cutting, G. Williams. Piston, A. M. Morrill. Pitcher, water, T. Shaw. Planter, road, J. C. Steele. Planter, oad, J. C. Steele. Planter, check row corn, J. E. Bering. Planter, check row corn, J. E. Bering. Planter, sattachment for corn, M. Schmucker. Planting attachment for corn, K. L. Aten. Plow, J. McArthur. Plow, J. McArthur. Plow, B. Hixson. Plow and Planter, combined, W. F. Leslee. Plow or cultivator, listing, J. S. Crum. Plow, B. Hixson. Plow and Planter, combined, W. F. Leslee. Plow or sulky, M. T. Hancock. Pocketbook clasp, D. M. Read. Potato digger, P. A. Chippendale. Potato digger, P	379,867 379,686 379,783 379,783 379,686 379,783 379,693 379,784 379,696 379,571 379,789 379,624 379,624 379,523 379,829 379,834 379,850 379,853 379,854 379,856 379,857 379,858
	Musical instruments, repeating check for musical sheets of mechanical, J. Crannell. Nall machines, die holder and straightening device for wire, M. M. Smith. Nut lock, J. B. Crossley. Oil Can, J. H. Sutphen. Oil feeder, N. Seibert. Oiler, automatic, Griswold & Bradbury. Ores, reduction of, H. Hirsching (r). Packing box, A. T. Linderman. Pad. See Color or ink pad. Pail cover fastening, C. F. Loomis. Paper cutters, means for operating, W. F. Hill. Paper folding machine, W. Hill. Paper folding machine, W. Hill. Paper for carpet linings, etc., folded, A. Gibb. Percils, rubber tip attachment for, L. S. Bacon. Pen holder, J. A. Kimball. Pipe. See Sheet metal pipe. Tobacco pipe. Pipe coupling, D. W. Magee. Pipe coupling, flexible, P. M. Askren. Pipes, die for threading and cutting, G. Williams. Piston, A. M. Morrill. Pitcher, water, T. Shaw. Planter, ord, J. C. Steele. Planter, automatic check row corn, E. C. Culver. Planter, automatic check row corn, E. C. Culver. Planter, attachment for corn, M. Schmucker. Planter, etck row corn, J. E. Bering. Planter, attachment for corn, M. Schmucker. Planting attachment, corn, F. L. Aten. Plow, J. McArthur. Plow, B. Hixson. Plow and planter, combined, W. F. Leslee. Plow or cultivator, listing, J. S. Crum. Plow, sulky, M. T. Hancock. Pocketbook clasp, D. M. Read. Potato drill, J. L. Ulsh. Pressure regulator, automatic fluid, W. D. Sheldon. Pressure regulator, fluid, W. B. Mason. Printers' rules, machine for mitering, W. H. Golding. Printers' rules, machine for mitering, W. H. Golding. Printing device, Adams & Seymour, Jr. Quilting frame, B. W. Raines. Rack elevator, W. R. Fitchit. Railway and car, elevated, J. L. Chapman. Railway and gonduit for electric wires, etc., elevated, A. C. Ochrie.	379,867 379,686 379,783 379,783 379,784 379,784 379,789 379,789 379,789 379,624 379,624 379,634 379,634 379,634 379,634 379,839
	Musical instruments, repeating check for musical sheets of mechanical, J. Crannell. Nall machines, die holder and straightening device for wire, M. M. Smith. Nut lock, J. B. Crossley. Oil Can, J. H. Sutphen. Oil feeder, N. Seibert. Oiler, automatic, Griswold & Bradbury. Ores, reduction of, H. Hirsching (f). Packing box, A. T. Linderman. Pad. See Color or ink pad. Pail cover fastening, C. F. Loomis. Paper cutters, means for operating, W. F. Hill. Paper folding machine, W. Hill. Paper folding machine, W. Hill. Paper for carpet linings, etc., folded, A. Gibb. Percils, rubber tip attachment for, L. S. Bacon. Pen holder, J. A. Kimbail. Pipe. See Sheet metal pipe. Tobacco pipe. Pipe coupling, D. W. Magee. Pipe coupling, fiexible, P. M. Askren. Pipes, die for threading and cutting, G. Williams. Piston, A. M. Morrill. Pitcher, water, T. Shaw. Planter, oad, J. C. Steele. Planter, automatic check row corn, E. C. Culver. Planter, corn, C. E. White. Planters, attachment for corn, M. Schmucker. Planter, deck row corn, J. E. Bering. Planters, attachment, corn, F. L. Aten. Plow, J. McArthur. Plow, B. Hixson. Plow and planter, combined, W. F. Leslee. Plow or cultivator, listing, J. S. Crum. Plow, sulky, M. T. Hancock. Pocketbook clasp, D. M. Read. Poctato drill, J. L. Ulsh. Press. See Baling press. Pressure regulator, automatic fluid, W. D. Sheldon. Orn. Printers' rules, machine for mitering, W. H. Golding. Printers' rules, machine for electric wires, etc., elevated, A. C. Oehrle. Railway and car, elevated, J. L. Chapman. Railway and car, elevated, J. L. Chapman. Railway graditing and excavating machine, M. E. Puch.	379,867 379,686 379,783 379,783 379,662 379,764 379,662 379,7764 379,696 379,778 379,784 379,696 379,571 379,784 379,625 379,624 379,626 379,624 379,636 379,834 379,830 379,831 379,836 379,837 379,836 379,837 379,836 379,837 379,836 379,837 379,836 379,837 379,838 379,837 379,838 379,841 379,643 379,643 379,643 379,643 379,643 379,643 379,643 379,643 379,643 379,643 379,643 379,643
	Musical instruments, repeating check for musical sheets of mechanical, J. Crannell. Nall machines, die holder and straightening device for wire, M. M. Smith. Nut lock, J. B. Crossley. Oil Can, J. H. Sutphen. Oil feeder, N. Seibert. Oiler, automatic, Griswold & Bradbury. Ores, reduction of, H. Hirsching (r). Packing box, A. T. Linderman. Pad. See Color or ink pad. Pail cover fastening, C. F. Loomis. Paper cutters, means for operating, W. F. Hill. Paper folding machine, W. Hill. Paper for carpet linings, etc., folded, A. Gibb. Percils, rubber tip attachment for, L. S. Bacon. Pen holder, J. A. Kimbail. Pipe. See Sheet metal pipe. Tobacco pipe. Pipe coupling, D. W. Magee. Pipe coupling, flexible, P. M. Askren. Pipes, die for threading and cutting, G. Williams. Piston, A. M. Morrill. Pitcher, water, T. Shaw. Planter, orad, J. C. Steele. Plauter, D. B. N. Turner. Planter, automatic check row corn, E. C. Culver. Planter, check row corn, J. E. Bering. Planter, corn, C. E. White. Planters, attachment for corn, M. Schmucker. Planting attachment, corn, F. L. Aten. Plow, E. Hixson. Plow and planter, combined, W. F. Leslee. Plow or cultivator, listing, J. S. Crum. Plow, E. Hixson. Plow and planter, combined, W. F. Leslee. Plow or cultivator, listing, J. S. Crum. Plow, E. Hixson. Plow and planter, combined, W. F. Leslee. Potato drill, J. L. Uish. Pressure regulator, automatic fluid, W. D. Sheldon. Pressure regulator, fluid, W. B. Mason. Printers' rules, machine for cutting, W. H. Golding. Printers' rules, machine for electric wires, etc., elevated, A. C. Oehrle. Railway and 'car, 'elevated, J. L. Chapman. Railway	379,867 379,785 379,686 379,783 379,783 379,643 10,912 379,784 379,789 379,686 379,571 379,686 379,571 379,625 379,625 379,624 379,625 379,623 379,833 379,833 379,833 379,833 379,833 379,836 379,837 379,836 379,837 379,836 379,837 379,836 379,837 379,836 379,745 379,836 379,745 379,836 379,777 379,786 379,777 379,788 379,838 379,838 379,838 379,838 379,838 379,838 379,838 379,838 379,838 379,838 379,838 379,838 379,838 379,838 379,838 379,838 379,838 379,838 379,838
	Musical instruments, repeating check for music sheets of mechanical, J. Crannell. Nall machines, die holder and straightening device for wire, M. M. Smith. Nut lock, J. B. Crossley. Oil Can, J. H. Sutphen. Oil feeder, N. Seibert. Oiler, automatic, Griswold & Bradbury. Ores, reduction of, H. Hirsching (r). Packing box, A. T. Linderman. Pad. See Color or ink pad. Pail cover fastening, C. F. Loomis. Paper cutters, means for operating, W. F. Hill. Paper folding machine, W. Hill. Paper folding machine, W. Hill. Paper for carpet linings, etc., folded, A. Gibb. Percils, rubber tip attachment for, L. S. Bacon. Pen holder, J. A. Kimbail. Pipe. See Sheet metal pipe. Tobacco pipe. Pipe coupling, flexible, P. M. Askren. Pipes, die for threading and cutting, G. Williams. Piston, A. M. Morrill. Pitcher, water, T. Shaw. Planter, automatic check row corn, E. C. Culver. Planter, check row corn, J. E. Bering. Planter, automatic check row corn, E. C. Culver. Planter, check row corn, F. L. Aten. Plow, J. McArthur. Plow, J. McArthur. Plow, E. Hixson. Plow and Planter, combined, W. F. Leslee. Plow or cultivator, listing, J. S. Crum. Plow, sulky, M. T. Hancock. Pocketbook clasp, D. M. Read. Potato digger, P. A. Chippendale. Potato drill, J. L. Ulsh. Press. See Baling press. Pressure regulator, automatic fluid, W. D. Sheldon. Pressure regulator, automatic fluid, W. D. Sheldon. Pressure regulator, automatic fluid, W. D. Sheldon. Printers' rules, machine for cutting, W. H. Golding. Printers' rules, machine for mitering, W. H. Golding. Printers' rules, machine for dutting, W. H. Golding. Printers' rules, machine for electric wires, etc., elevated, A. C. Oehrle. Railway and car, elevated, J. L. Chapman. Railway and jeonduit for electric wires, etc., elevated, A. C. Oehrle. Railway switch lock, W. T. Manning. Railway tie, C. P. Hawley. Railway tie, C. P. Hawley. Railway tie and chair, metallic, C. C. Singer.	379,867 379,686 379,735 379,686 379,783 379,683 379,784 379,698 379,571 379,698 379,571 379,698 379,571 379,698 379,511 379,698 379,624 379,625 379,829 379,834 379,834 379,834 379,837 379,838 379,837 379,838 379,837 379,838 379,837 379,838 379,837 379,838
	Musical instruments, repeating check for musical sheets of mechanical, J. Crannell. Nall machines, die holder and straightening device for wire, M. M. Smith. Nut lock, J. B. Crossley. Oil Can, J. H. Sutphen. Oil feeder, N. Seibert. Oiler, automatic, Griswold & Bradbury. Ores, reduction of, H. Hirsching (r). Packing box, A. T. Linderman. Pad. See Color or ink pad. Pall cover fastening, C. F. Loomis. Paper cutters, means for operating, W. F. Hill. Paper folding machine, W. Hill. Paper folding machine, W. Hill. Paper for carpet linings, etc., folded, A. Gibb. Percils, rubber tip attachment for, L. S. Bacon. Pen holder, J. A. Kimball. Pipe. See Sheet metal pipe. Tobacco pipe. Pipe coupling, flexible, P. M. Askren. Pipes, die for threading and cutting, G. Williams. Piston, A. M. Morrill. Pitcher, water, T. Shaw. Planter, Ord, J. C. Steele. Planter, Ota, B. N. Turner. Planter, automatic check row corn, E. C. Culver. Planter, actomatic check row corn, E. C. Culver. Planter, check row corn, J. E. Bering. Planter, corn, C. E. White. Planter, attachment for corn, M. Schmucker. Planting attachment, corn, F'. L. Aten. Plow, J. McArthur. Plow, B. Hixson. Plow and planter, combined, W. F. Leslee. Plow or cultivator, listing, J. S. Crum. Plow, sulky, M. T. Hancock. Pocketbook clasp, D. M. Read. Potato drill, J. L. Ulsh. Pressure regulator, automatic fluid, W. B. Mason. Printers' rules, machine for cutting, W. H. Golding. Printers' rules, machine for mitering, W. H. Golding. Printers' rules, machine for electric wires, etc., elevated, A. C. Ochrle Railway and car, elevated, J. L. Chapman Railway and conduit for electric wires, etc., elevated, A. C. Ochrle Railway switch lock, W. T. Manning. Railway tie, C. P. Hawley. Railway tie, C. P. Hawley. Railway tie, Combined wood and metal, C. P. Hawley.	379,867 379,686 379,735 379,686 379,783 379,683 379,784 379,698 379,781 379,698 379,781 379,698 379,781 379,698 379,811 379,698 379,811 379,829 379,834 379,850 379,838 379,851 379,854 379,856 379,857 379,868 379,858 379,858 379,858 379,858 379,858 379,858 379,858 379,858 379,858 379,858 379,858 379,868 379,777 379,878 379,884 379,862 379,777 379,778 379,884 379,687 379,898 379,777 379,778 379,898 379,777 379,778 379,898 379,611 379,612 379,712
	Musical instruments, repeating check for musical sheets of mechanical, J. Crannell. Nall machines, die holder and straightening device for wire, M. M. Smith. Nut lock, J. B. Crossley. Oil Can, J. H. Sutphen. Oil feeder, N. Seibert. Oiler, automatic, Griswold & Bradbury. Ores, reduction of, H. Hirsching (r). Packing box, A. T. Linderman. Pad. See Color or ink pad. Pail cover fastening, C. F. Loomis. Paper cutters, means for operating, W. F. Hill. Paper for carpet linings, etc., folded, A. Gibb. Percils, rubber tip attachment for, L. S. Bacon. Pen holder, J. A. Kimbail. Pipe. See Sheet metal pipe. Tobacco pipe. Pipe coupling, D. W. Magee. Pipe coupling, flexible, P. M. Askren. Pipes, die for threading and cutting, G. Williams. Piston, A. M. Morrill. Pitcher, water, T. Shaw. Planter, orad, J. C. Steele. Planter, D. B. N. Turner. Planter, automatic check row corn, E. C. Culver. Planter, check row corn, J. E. Bering. Planter, check row corn, J. E. Bering. Planting attachment for corn, M. Schmucker. Planting attachment for corn, M. Schmucker. Planting attachment, corn, F. L. Aten. Plow, E. Hixson. Plow and Planter, combined, W. F. Leslee. Plow or cultivator, listing, J. S. Crum. Plow, E. Hixson. Plow sulky, M. T. Hancock. Pocketbook clasp, D. M. Read. Potato digger, P. A. Chippendale. Prossure regulator, fluid, W. B. Mason. Printers' rules, machine for cutting, W. H. Golding. Printers' rules, machine for mitering, W. H. Golding. Printers' rules, machine for electric wires, etc., elevated, A. C. Ochrie. Railway and 'car, elevated, J. L. Chapman. Railway tie,	379,867 379,686 379,783 379,783 379,686 379,783 379,662 379,764 379,696 379,571 379,789 379,624 379,624 379,523 379,829 379,834 379,850 379,834 379,850 379,851 379,852 379,852 379,852 379,852 379,852 379,853 379,856
	Musical instruments, repeating check for music sheets of mechanical, J. Crannell. Nall machines, die holder and straightening device for wire, M. M. Smith. Nut lock, J. B. Crossley. Oil Can, J. H. Sutphen. Oil feeder, N. Seibert. Oiler, automatic, Griswold & Bradbury. Ores, reduction of, H. Hirsching (r). Packing box, A. T. Linderman. Pad. See Color or ink pad. Pail cover fastening, C. F. Loomis. Paper cutters, means for operating, W. F. Hill. Paper folding machine, W. Hill. Paper folding machine, W. Hill. Paper for carpet linings, etc., folded, A. Gibb. Percils, rubber tip attachment for, L. S. Bacon. Pen holder, J. A. Kimball. Pipe. See Sheet metal pipe. Tobacco pipe. Pipe coupling, D. W. Magee. Pipe coupling, flexible, P. M. Askren. Pipes, die for threading and cutting, G. Williams. Piston, A. M. Morrill. Pitcher, water, T. Shaw. Planter, ord, J. C. Steele. Plauter, D. B. N. Turner. Planter, automatic check row corn, E. C. Culver. Planter, corn, C. E. White. Planter, corn, C. E. White. Planter, attachment for corn, M. Schmucker. Planting attachment, corn, F. L. Aten. Plow, J. McArthur. Plow, J. McArthur. Plow, B. Hixson. Plow and planter, combined, W. F. Leslee. Plow or cultivator, listing, J. S. Crum. Plow, B. Hixson. Plow and planter, combined, W. F. Leslee. Potato drill, J. L. Ulsh. Press. See Baling press. Pressure regulator, automatic fluid, W. D. Sheldon. Pressure regulator, fluid, W. B. Mason. Printers' rules, machine for cutting, W. H. Golding. Printers' rules, machine for mitering, W. H. Golding. Printers' rules, machine for mitering, W. H. Golding. Printers' rules, machine for electric wires, etc., elevated, A. C. Oehrle. Railway and car, elevated, J. L. Chapman. Railway and car, elevated, J. L. Chapman. Railway tie, combined wood and metal, C. P. Hawley. Railway tie, combined wood and metal, C. P. Hawley. Railway	379,867 379,686 379,735 379,686 379,783 379,683 379,784 379,686 379,571 379,686 379,571 379,686 379,571 379,624 379,625 379,624 379,830 379,831 379,832 379,833 379,831 379,933 379,831 379,961 379,778 379,861 379,783 379,861 379,783 379,861 379,783 379,861 379,783 379,861 379,783 379,861 379,783 379,861 379,783 379,861 379,783 379,861 379,783 379,874 379,785
	Musical instruments, repeating check for music sheets of mechanical, J. Crannell. Nall machines, die holder and straightening device for wire, M. M. Smith. Nut lock, J. B. Crossley. Oil Can, J. H. Sutphen. Oil feeder, N. Seibert. Oiler, automatic, Griswold & Bradbury. Ores, reduction of, H. Hirsching (r). Packing box, A. T. Linderman. Pad. See Color or ink pad. Pail cover fastening, C. F. Loomis. Paper cutters, means for operating, W. F. Hill. Paper for carpet linings, etc., folded, A. Gibb. Percils, rubber tip attachment for, L. S. Bacon. Pen holder, J. A. Kimbail. Pipe. See Sheet metal pipe. Tobacco pipe. Pipe coupling, D. W. Magee. Pipe coupling, flexible, P. M. Askren. Pipes, die for threading and cutting, G. Williams. Piston, A. M. Morrill. Pitcher, water, T. Shaw. Planter, oad, J. C. Steele. Planter, D. B. N. Turner. Planter, automatic check row corn, E. C. Culver. Planter, check row corn, J. E. Bering. Planter, check row corn, J. E. Bering. Planting attachment for corn, M. Schmucker. Planting attachment, corn, F. L. Aten. Plow, J. McArthur. Plow, J. McArthur. Plow, B. Hixson. Plow and Planter, combined, W. F. Leslee. Plow or cultivator, listing, J. S. Crum. Plow, B. Hixson. Plow and Planter, combined, W. F. Leslee. Plow or sultivator, listing, J. S. Crum. Plow, See Baling press. Pressure, apparatus for regulating fluid, J. B. Stobaeus. Pressure regulator, automatic fluid, W. D. Sheldon. Printers' rules, machine for cutting, W. H. Golding. Printers' rules, machine for cutting, W. H. Golding. Printers' rules, machine for lectric wires, etc., elevated, A. C. Oehrle. Railway and car, elevated, J. L. Chapman. Railway tie and chair, metallic, C. C. Singer. Railway tie and chair, metallic, C. C. Singer. Railway tie, combined wood and metal, C. P. Hawley. Railway tie, combined wood and metal, C. P. Hawley. Railway tie, combined wood and metal, C. P. Hawley. Railway tie, combined wood and metal, C. P. Hawley. Railway tie, combined wood and metal, C. P. Hawley. Rail	379,867 379,686 379,735 379,686 379,783 379,784 379,784 379,789 379,789 379,628 379,628 379,628 379,628 379,628 379,634 379,638 379,634 379,634 379,634 379,839 379,634 379,839 379,839 379,839 379,839 379,839 379,839 379,839 379,839 379,839 379,839 379,839 379,839 379,839 379,839 379,839 379,839 379,838 379,838 379,838 379,838 379,838 379,838 379,838 379,838 379,638 379,745 379,777 379,778 379,788 379,861 379,613 379,613 379,613 379,613 379,613 379,613 379,613 379,613 379,613 379,613 379,613 379,613 379,613
	Musical instruments, repeating check for music sheets of mechanical, J. Crannell. Nall machines, die holder and straightening device for wire, M. M. Smith. Nut lock, J. B. Crossley	379,867 379,686 379,735 379,686 379,783 379,683 379,784 379,698 379,571 379,698 379,571 379,698 379,571 379,698 379,571 379,898 379,624 379,523 379,829 379,834 379,850 379,838 379,851 379,853 379,853 379,853 379,853 379,853 379,853 379,863 379,873 379,868 379,745 379,878 379,868 379,777 379,778 379,884 379,685 379,777 379,778 379,884 379,681 379,693 379,778 379,894 379,613 379,778 379,878 379,878 379,613 379,778 379,878 379,613 379,778 379,778 379,778 379,874 379,613 379,778
	Musical instruments, repeating check for music sheets of mechanical, J. Crannell. Nall machines, die holder and straightening device for wire, M. M. Smith. Nut lock, J. B. Crossley. Oil Can, J. H. Sutphen. Oil feeder, N. Seibert. Oiler, automatic, Griswold & Bradbury. Ores, reduction of, H. Hirsching (r). Packing box, A. T. Linderman. Pad. See Color or ink pad. Pail cover fastening, C. F. Loomis. Paper cutters, means for operating, W. F. Hill. Paper folding machine, W. Hill. Paper folding machine, W. Hill. Paper for carpet linings, etc., folded, A. Gibb. Percils, rubber tip attachment for, L. S. Bacon. Pen holder, J. A. Kimball. Pipe. See Sheet metal pipe. Tobacco pipe. Pipe coupling, D. W. Magee. Pipe coupling, G. W. Magee. Pipe coupling, flexible, P. M. Askren. Pipes, die for threading and cutting, G. Williams. Piston, A. M. Morrill. Pitcher, water, T. Shaw. Planter, cord, J. C. Steele. Plauter, D. B. N. Turner. Planter, automatic check row corn, E. C. Culver. Planter, corn, C. E. White. Planter, corn, C. E. White. Planter, corn, C. E. White. Planter, orn, C. E. White. Plow, J. McArthur. Plow, J. McArthur. Plow, J. McArthur. Plow, J. McArthur. Plow, B. Hixson. Plow and planter, combined, W. F. Leslee. Plow or cultivator, listing, J. S. Crum. Plow and planter, combined, W. F. Leslee. Plow and planter, combined, W. F. Leslee. Plow or cultivator, listing, J. S. Crum. Plow, alky, M. T. Hancock. Pocketbook clasp, D. M. Read. Potato drill, J. L. Ulsh. Pressure regulator, automatic fluid, W. D. Sheldon. Pressure regulator, fluid, W. B. Mason. Printers' rules, machine for cutting, W. H. Golding. Printers' rules, machine for mitering, W. H. Golding. Printers' rules, machine for cutting, W. H. Golding. Printers' rules, machine for mitering, W. H. Golding. Printers' rules, machine for lectric wires, etc., elevated, A. C. Oehrle. Railway and car, elevated, J. L. Chapman. Railway tie, C. P. Hawley. Railway tie, C. P. Hawley. Railway tie, C. P. Hawley. Railway tie, C. P	379,867 379,686 379,735 379,686 379,783 379,683 379,784 379,698 379,571 379,698 379,571 379,698 379,571 379,698 379,571 379,898 379,624 379,523 379,829 379,834 379,850 379,838 379,851 379,853 379,853 379,853 379,853 379,853 379,853 379,863 379,873 379,868 379,745 379,878 379,868 379,777 379,778 379,884 379,685 379,777 379,778 379,884 379,681 379,693 379,778 379,894 379,613 379,778 379,878 379,878 379,613 379,778 379,878 379,613 379,778 379,778 379,778 379,874 379,613 379,778