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Names and Address must accompany all letters, or no attention will be paid thereto. This is for our or no attention will be paid thereto. This is for our information and not for publication.

References to former articles or answers should

give date of paper and page or number of question.

Inquiries not answered in reasonable time should Inquiries not answered in reasonable time should be repeated; correspondents will bear in mind that some answers require not a little research, and, though we endeavor to reply to all either by letter or in this department, each must take his turn.

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

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to may be had at the office. Price 10 cents each.

Books referred to promptly supplied on receipt of

Minerals sent for examination should be distinctly marked or labeled.

INDEX TO NOTES AND QUERIES.	No.
Electrical	4568 4563 4564 4566 4562

(4559) T. R. asks: How can I make a machine to demagnetize watches? A. Make a sling like a small scale that will hold the watch in a horizontal position; to this attach a string, twist the string and allow it to untwist. While the watch is whirling rapidly, gradually lower it toward the poles of a strong permanent magnet; then while it is still whirling, gradually remove it from the sling. If the first treatment does not thoroughly demagnetize the watch, you will be obliged to try it the second orthird time.

(4560) C. T. McM.—The plant popularly known as ragweed is Ambrosia trifida L. It is a plant with a rough hairy stout stem from 3 to 12 feet in height. The leaves are large and deeply three-lobed. The plant is common on moist river banks and has no medicinal properties.

(4561) F. P.-What you send is the seed of some species of milkweed (Asclepias) with their tufts of long silk hairs (coma). The material has been for stuffing pillows, but is worthless for any other pur-

(4562) P. J. H. asks: How do you find the theoretical value of a pound of coal in pounds water evaporated. A. The value of the combustion of coal is found from the known value of its chemical elements in their combination with the oxygen of the atmosphere in terms of the value of the amount of heat required to raise I pound of pure water at the temperature of greatest density one degree on the thermometric scale. This value is called a heat unit or thermal unit. The heat units of the various substances found in coal have been the subject of experiment by various chemists who do not exactly agree. The process is by burning a given amount of any element of combustion and ascertaining the number of pounds of water it will heat to some observed degree, and from these observations assign the heat units for each element. In this way coal is assigned an average of about 14,200 heat units per pound. In an experimental way it was also found that to evap orat 1 pound of water at, atmospheric pressure at its boiling point (212°) required as much heat as would raise 966 pounds of water 1 degree on the thermometer, which is called the latent heat of steam at atmospheric pressure. Then the total heats units in 1 pound of

coal divided by the heat units of evaporation gives the number of pounds of water evaporated by one pound 14200

In the practical operations of steam testing, the figures must be varied to suit the real combustion value of the coal and the amount of heat imparted to the water to raise its temperature from the normal temperature to the atmospheric boiling point, or to the temperature of evaporation. These points are illustrated in works on combustion and the generation of steam,

(4563) D. L., Jr., writes: In answer to query No. 4519 you state that the longest working electric railway is some five or six miles. Three have been running constantly here for a year past that exceed that length. The San Francisco and San Mateo Electric Railway has been running between San Francisco and Baden, a distance of 12 miles, from one central station, and over exceedingly heavy grades. The road is rapidly being pushed, 8 miles further, but whether or not it will be run from the same supply station I do not know. Another road runs between Oakland and Haywards, a distance of 10 miles; and another between Oakland and Berkeley, a distance of 8 miles. The extraordinary grades on the San Francisco and San Mateo road make it of peculiar interest. I think the Chomson-Houston system is used.

(4564) W. M. K. asks how to make

A.	Best yellow wax	50 j	parts.
	Veniceturpentine	7	**
	Lard	31/4	44
	Bole, elutriated	.36	**
Mi	and knowd thoroughly		

(4565) C. H. asks: 1. What would be the result if a 50 volt lamp was placed on a 75 volt circuit? A. The 50 volt lamp would absorb 116 times the current and would not last long. 2 What is the amperage of each, a 50 volt, and a 110 volt, 16 candle power lamp? A. The 50 volt lamp requires 1 ampere and the 110 volt lamp 1/2 an ampere. 3. What is the amperage of the Edison dynamo, described in SUPPLEMENT of March 5? A. When running 9 lamps, 41/2 amperes.

(4566) Engineer says: I am a locomotive engineer, 38 years of age, no family. I am out of work at present, with ample means to support me five years if necessary. Now I want to change my business. Do you think, by taking a couple of years course in mechanical eugineering and draughting, that I could improve my prospects much? What pay does a draughtsman get? Is the business crowded? Am I too old to begin? A. If you have a mind that you can control for studyand business, you can do much to forward your position in life. You must be your own judge as to the drift of your mind toward mechanical work and construction. With this propensity you can get along quite fast, but remember there should be no idle hours at your time of life, although it is never too late to learn. We advise you to take a position in some machine shop near home at any kind of work or price, and go to work with your eyes open to all that is going on around you. Use all your evenings for study and draughting. Select from our catalogue such books on mechanics as you may need from time to time, and start in draughting with the SCIENTIFIC AMERICAN series, then take up a more advanced work. With perseverance and a love for your work you cannot fail. Salaries for draughtsmen, like engineers, depend upon talent and experience, say \$1,000 to \$2,000 per year.

(4567) G. F. H. writes: 1. Will the pieces of carbons that have been used in electric lights (coppered) do for making small bichromate tumbler battery without removing copper plating? A. The carbons will do, provided you remove the copper. This may be done by placing them in nitric acid for a few minutes. 2. Will you give numbers of any back issues of Supplement giving instructions how to make a small motor sufficient for propelling small hunting and fishing boat? A. We think SUPPLEMENT No. 641 contains the information desired. 3. Would plunge battery, Fig. 394, p. 401, in "Experimental Science," answer the purpose for the running of same? A. Yez. 4. Is liquid ammonia ever used as a fertilizer for fruits or flowers? A. Yes; when diluted with ten volumes of water.

(4568) J. C. writes: By placing a disk of wire netting in the bottom of a dmner plate sprinkled with sugar, and covering the plate with another wire netting and running a wire from each disk to an induction coil or shocking machine, flies and other insects and small animals can be effectually shocked. The holes in the netting should be only large enough to allow the insects to reach the sugar through its meshes, By lighting upon the upper disk and reaching to the sugar or lower disk, the electric circuit is completed through the body of the insect.

TO INVENTORS

An experience of forty years, and the preparation of more than one hundred thousand applications for patents at home and abroad, enable us to understand the laws and practice on both continents, and to possess uequaled facilities for procuring patents everywhere. A synopsis of the patent laws of the United States and all foreign countries may be had on application, and persons contemplating the securing of patents, either at home or abroad, are invited to write to this office for prices which are low, in accordance with the times and our extensive facilities for conducting the business. Address MUNN & CO, office Scientific American, 381 Broadway, New York.

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	Lamp holder, incandescent. E. P. Allam	483,857 483,974 483,967
	Letter box, G. E. Becket	483,525 483,776
	Lamp hiling tank or can, A. K. Murray. Lamp holder, incandescent. E. P. Allam. Lamp lighter, W. Palmer. Letter box, G. E. Becket. Lever power engine, A. Annibale. Life at sea, apparatus for saving, J. D'Arcy- Iryine. Lifter. See Cual lifter. Transom lifter. Lact. See Natled Scal legs.	483,667
	Lifter. See Coal lifter. Transom lifter. Lock. See Nut lock. Seal lock. Locomotive electric, T. L. Willson. Loom let-offmotion, W. Begg. Loop fastener, H. Green. Lubricator. See Axle lubricator.	483,822
	Loom let-offmotion, W. Begg. Loop fastener, H. Green. Lubricator. See Axle lubricator.	483,626 483,672
	Lubricator, A. Obermever	483,860
	Malt making apparatus, W. A. Peters	402 701
		483,860 483,781 483,748 483,565
	Mat. See Stove mat. Match safe, feeding. H. Croggon	485,000
	Match splint cutting machine, T. A. Cook Measures, rack for holding and draining liquid,	483,543 483,541
	Match splint cutting machine, T. A. Cook Measures, rack for holding and draining liquid,	483,543 483,541 483,664
	Match splint cutting machine, T. A. Cook Measures, rack for holding and draining liquid,	483,543 483,541 483,664 483,642 483,881 483,574
	Match splint cutting machine, T. A. Cook Measures, rack for holding and draining liquid,	483,543 483,541 483,664 483,642 483,881 483,574 483,714
	Match sale, reeding, H. Croggon, Match splint cutting machine, T. A. Cook. Measures, rack for holding and draining liquid, A. R. Aborn. Measuring band, R. Behmer. Mechanical moving power, C. B. Van Coughnet Medicine stand, automatic, C. A. Moriarty. Metal planing and shaping machines, key seating attachment for, F. J. Feldt. Metal wheel, H. E. West. Metallurgical furnace, G. W. Bierer.	483,543 483,541 483,664 483,642 483,881 483,574
	Match sale, reeding, H. Croggon, Match splint cutting machine, T. A. Cook. Measures, rack for holding and draining liquid, A. R. Aborn. Measuring band, R. Behmer. Mechanical moving power, C. B. Van Coughnet Medicine stand, automatic, C. A. Moriarty. Metal planing and shaping machines, key seating attachment for, F. J. Feldt. Metal wheel, H. E. West. Metallurgical furnace, G. W. Bierer.	483,543 483,541 483,664 483,642 483,881 483,574 483,714 483,703 483,985 483,982 483,888
	Match sale, feeting, H. Croggoin, Match splint cutting machine, T. A. Cook Measures, rack for holding and draining liquid, A. R. Aborn. Measuring band, R. Behmer. Mechanical moving power, C. B. Van Coughnet Medicine stand, automatic, C. A. Moriarty Metal planing and shaping machines, key seating attactiment for, F. J. Feldt. Metal wheel, H. E. West. Metallurgical furnace, G. W. Bierer Mitcan bolt, N. P. Rutter Mill. See Water meter. Mill. See Rolling mill. Milling machine, W. R. Fox Mine door, G. D. Warren	483,543 483,541 483,664 483,642 483,881 483,714 483,703 483,985 483,888 483,888 483,888
	Match sale, feeting, H. Croggoin, Match sale, feeting, H. Croggoin, Match splint cutting machine, T. A. Cook, Measures, rack for holding and draining liquid, A. R. Aborn. Measuring band, R. Behmer. Mechanical moving power, C. B. Van Coughnet. Medicine stand, automatic, C. A. Moriarty. Metal planing and shaping machines, key seating attachment for, F. J. Feldt. Metal unvical furnace, G. W. Bierer. Mitcan bolt, N. P. Rutter. Mill. See Water meter. Mill. See Wolling mil. Milling machine, W. R. Fox Mine door, G. D. Warren. Mining drills and stamps, operating mechanism for, G. M. Gross Bank.	483,543 483,543 483,642 483,642 483,681 483,714 483,703 483,985 483,985 483,883 483,883 483,883
	Match sale, feeting, H. Croggoin, Match sale, feeting, H. Croggoin, Match splint cutting machine, T. A. Cook, Measures, rack for holding and draining liquid, A. R. Aborn. Measuring band, R. Behmer. Mechanical moving power, C. B. Van Coughnet. Medicine stand, automatic, C. A. Moriarty. Metal planing and shaping machines, key seating attachment for, F. J. Feldt. Metal unvical furnace, G. W. Bierer. Mitcan bolt, N. P. Rutter. Mill. See Water meter. Mill. See Wolling mil. Milling machine, W. R. Fox Mine door, G. D. Warren. Mining drills and stamps, operating mechanism for, G. M. Gross Bank.	483,543 483,543 483,642 483,642 483,681 483,714 483,703 483,985 483,985 483,883 483,883 483,883
	Match sale, reeting, H. Croggoin, Match sale, reeting, H. Croggoin, Match splint cutting machine, T. A. Cook Measures, rack for holding and draining liquid, A. R. Aborn. Measuring band, R. Behmer. Mechanical moving power, C. B. Van Coughnet. Medicine stand, automatic, C. A. Moriarty. Metal planing and shaping machines, key seating attachment for, F. J. Feldt. Metal unrical furnace, G. W. Bierer. Mitcan bolt, N. P. Rutter. Mill. See Water meter. Mill. See Water meter. Mill. See Kolling mil. Milling machine, W. R. Fox Mine door, G. D. Warren. Mining drills and stamps, operating mechanism for, G. M. Gross and Morels and Stamps, Mortising deve, A. E. Randle. Mortising deven, A. E. Randle. Mortising deven, A. E. Randle.	483,543 483,543 483,642 483,642 483,681 483,714 483,703 483,985 483,985 483,883 483,883 483,883
	Match sale, reeting, H. Croggoin, Match sale, reeting, H. Croggoin, Match splint cutting machine, T. A. Cook Measures, rack for holding and draining liquid, A. R. Aborn. Measuring band, R. Behmer. Mechanical moving power, C. B. Van Coughnet. Medicine stand, automatic, C. A. Moriarty. Metal planing and shaping machines, key seating attachment for, F. J. Feldt. Metal unrical furnace, G. W. Bierer. Mitcan bolt, N. P. Rutter. Mill. See Water meter. Mill. See Water meter. Mill. See Kolling mil. Milling machine, W. R. Fox Mine door, G. D. Warren. Mining drills and stamps, operating mechanism for, G. M. Gross and Morels and Stamps, Mortising deve, A. E. Randle. Mortising deven, A. E. Randle. Mortising deven, A. E. Randle.	483,543 483,541 483,644 483,642 483,684 483,771 483,771 483,783 483,985 483,985 483,983 483,983 483,983 483,983 483,596 483,573 483,596 483,573 483,573 483,573 483,573
	Match sale, reeting, H. Croggoin Match splint cutting machine, T. A. Cook Measures, rack for holding and draining liquid, A. R. Aborn. Measuring band, R. Behmer Mechanical moving power, C. B. Van Coughnet. Medicine stand, automatic, C. A. Moriarty. Medicine stand, automatic, C. A. Moriarty Metal planing and shaping machines, key seating attachment for, F. J. Feldt Metal wheel, H. E. West. Metallurgical furnace, G. W. Bierer Mills can bolt, N. P. Rutter Mill See Water meter, Mill See Wolfing mil. Milling machine, W. R. Fox Mine door, G. D. Warren, Mining drills and stamps, operating mechanism for, G. M. Gross Moretsing device, A. E. Randle Motor, See Current motor, Gravity motor, Mower, lawn, W. L. Frisble Nail machane, F. B. Houghton Nail puller A. F. Stoughton Necktle fastener, F. R. Scoffeld	483,543 483,543 483,642 483,642 483,881 483,713 483,703 483,985 483,985 483,985 483,985 483,985 483,983 483,883 483,883 483,883 483,985 483,985 483,985 483,983 483,98
	Match sale, reeting, H. Croggoin Match splint cutting machine, T. A. Cook Measures, rack for holding and draining liquid, A. R. Aborn. Measuring band, R. Behmer Mechanical moving power, C. B. Van Coughnet. Medicine stand, automatic, C. A. Moriarty. Medicine stand, automatic, C. A. Moriarty Metal planing and shaping machines, key seating attachment for, F. J. Feldt Metal wheel, H. E. West. Metallurgical furnace, G. W. Bierer Mills can bolt, N. P. Rutter Mill See Water meter, Mill See Wolfing mil. Milling machine, W. R. Fox Mine door, G. D. Warren, Mining drills and stamps, operating mechanism for, G. M. Gross Moretsing device, A. E. Randle Motor, See Current motor, Gravity motor, Mower, lawn, W. L. Frisble Nail machane, F. B. Houghton Nail puller A. F. Stoughton Necktle fastener, F. R. Scoffeld	483,543 483,644 483,642 483,642 483,881 483,713 483,703 483,982 483,883 483,883 483,883 483,883 483,883 483,883 483,883 483,883 483,883 483,883 483,883 483,883 483,883 483,883
	Match sale, reeting, H. Croggoin Match splint cutting machine, T. A. Cook Measures, rack for holding and draining liquid, A. R. Aborn. Measuring band, R. Behmer Mechanical moving power, C. B. Van Coughnet. Medicine stand, automatic, C. A. Moriarty. Medicine stand, automatic, C. A. Moriarty Metal planing and shaping machines, key seating attachment for, F. J. Feldt Metal wheel, H. E. West. Metallurgical furnace, G. W. Bierer Mills can bolt, N. P. Rutter Mill See Water meter, Mill See Wolfing mil. Milling machine, W. R. Fox Mine door, G. D. Warren, Mining drills and stamps, operating mechanism for, G. M. Gross Moretsing device, A. E. Randle Motor, See Current motor, Gravity motor, Mower, lawn, W. L. Frisble Nail machane, F. B. Houghton Nail puller A. F. Stoughton Necktle fastener, F. R. Scoffeld	483,543 483,642 483,642 483,642 483,574 483,703 483,703 483,962 483,962 483,963 483,973 483,973 483,973 483,973 483,973 483,973 483,973 483,973 483,973 483,973 483,973 483,973 483,973 483,973
	Match sale, teeting, H. Croggoin, Match splint cutting machine, T. A. Cook. Measures, rack for holding and draining liquid, A. R. Aborn. Measuring band, R. Behmer. Mechanical moving power, C. B. Van Coughnet Medicine stand, automatic, C. A. Moriarty. Metal planing and shaping machines, key seating attactiment for, F. J. Feldt. Metal wheel, H. E. West. Metallurgical furnace, G. W. Bierer. Mitcer. See Water meter. Mill. See Rolling mill. Milling machine, W. R. Fox. Mine door, G. D. Warren. Mining drills and stamps, operating mechanism for, G. M. Gross. Moulder's flassk, F. Baugh. Montor. See Current motor. Gravity motor. Mower, lawn, H. L. Freeman. Mower, lawn, W. L. Frisble. Nail machine, C. E. Houghton. Nail puller, A. F. Street. Necktief astemer, F. R. Scofield. Needle swaging machine, I. T. Smith. Nut lock, T. Hibbs Nut, self-locking, W. S. Neil. Office door indicator, J. Drew. Oiler, force feed, H. Jones. Opera glass receptacle, coin-operated, J. J. McDade.	483,643 483,643 483,642 483,642 483,642 483,642 483,853 483,962 483,963 483,963 483,86
	Match sale, reeming. H. Croggon Match splint cutting machine, T. A. Cook Measures, rack for holding and draining liquid, A. R. Aborn. Measuring band, R. Behmer Mechanical moving power, C. B. Van Coughnet. Medicine stand, automatic, C. A. Moriarty. Metal planing and shaping machines, key seating attachment for, F. J. Feldt Metal wheel, H. E. West. Metallurgical furnace, G. W. Bierer. Mitcan bolt, N. P. Rutter. Mill. See Rolling mil. Milling machine, W. R. Fox Mine door, G. D. Warren. Mining drills and stamps, operating mechanism for, G. M. Gross. Moulder's flass, F. Baugh. Monder's flass, F. Baugh. Montor. See Current motor Gravity motor. Mower, lawn, H. L. Freeman. Mower, lawn, W. L. Frisbie Nail machine, C. E. Houghton. Nail puller, A. F. Street. Neckscarf, J. O. Nightingale. Necktief astener, F. R. Scofield. Needle swaging machine, I. T. Smith. Nut. lock, T. Hibbs. Nut. self-locking, W. S. Neil. Office door indicator, J. Drew Oller, force feed, H. Jones. Opera glass receptacle, coin-operated, J. J. McDade. Package, A. Baker, Pad, See Hoof pad. Saddle pad.	483,643 483,643 483,644 483,642 483,642 483,642 483,853 483,962 483,983 483,86
	Match sale, teeting, H. Croggoin Match splint cutting machine, T. A. Cook Measures, rack for holding and draining liquid, A. R. Aborn. Measuring band, R. Behmer Mechanical moving power, C. B. Van Coughnet. Medicine stand, automatic, C. A. Moriarty. Metal planing and shaping machines, key seating attactiment for, F. J. Feldt. Metal wheel, H. E. West. Metallurgical furnace, G. W. Bierer. Mitcan bolt, N. P. Rutter. Mill. See Rolling mill. Milling machine, W. R. Fox Mine door, G. D. Warren. Mining drills and stamps, operating mechanism for, G. M. Gross. Moulder's nask, F. Baugh. Monder's nask, F. Baugh. Montor. See Current motor Gravity motor. Mower, lawn, H. L. Freeman. Mower, lawn, W. L. Frisble. Nail machine, C. E. Houghton. Nail puller, A. F. Street. Neckscarf, J. O. Nightingale. Necktief astener, F. R. Scofield. Needle swaging machine, I. T. Smith. Nut. lock, T. Hibbs. Nut., self-locking, W. S. Neil. Office door indicator, J. Drew. Oiler, force feed, H. Jones. Opera glass receptacle, coin-operated, J. J. McDade. Package, A. Baker. Pad, See Hoof pad. Saddle pad. Padper boxes, machine for making, J. Godfrey.	483,643 483,643 483,642 483,642 483,642 483,642 483,642 483,642 483,762 483,762 483,963 483,86
	Match sale, teeting, H. Croggoin Match splint cutting machine, T. A. Cook Measures, rack for holding and draining liquid, A. R. Aborn. Measuring band, R. Behmer Mechanical moving power, C. B. Van Coughnet. Medicine stand, automatic, C. A. Moriarty. Metal planing and shaping machines, key seating attactiment for, F. J. Feldt. Metal wheel, H. E. West. Metallurgical furnace, G. W. Bierer. Mitcan bolt, N. P. Rutter. Mill. See Rolling mill. Milling machine, W. R. Fox Mine door, G. D. Warren. Mining drills and stamps, operating mechanism for, G. M. Gross. Moulder's nask, F. Baugh. Monder's nask, F. Baugh. Montor. See Current motor Gravity motor. Mower, lawn, H. L. Freeman. Mower, lawn, W. L. Frisble. Nail machine, C. E. Houghton. Nail puller, A. F. Street. Neckscarf, J. O. Nightingale. Necktief astener, F. R. Scofield. Needle swaging machine, I. T. Smith. Nut. lock, T. Hibbs. Nut., self-locking, W. S. Neil. Office door indicator, J. Drew. Oiler, force feed, H. Jones. Opera glass receptacle, coin-operated, J. J. McDade. Package, A. Baker. Pad, See Hoof pad. Saddle pad. Padper boxes, machine for making, J. Godfrey.	483,643 483,643 483,642 483,642 483,642 483,642 483,642 483,743 483,74
	Match sale, reeting, H. Croggoin Match splint cutting machine, T. A. Cook Masures, rack for holding and draining liquid, A. R. Aborn. Measuring band, R. Behmer. Mechanical moving power, C. B. Van Coughnet. Medicine stand, automatic, C. A. Moriarty. Metal planing and shaping machines, key seating attachment for, K. J. Feldt. Metal stand stands and stands and stack well. Metal hele, H. E. West. Metallurgical furnace, G. W. Bierer. Mitcan bolt, N. P. Rutter. Mill. See Water meter. Mill. See Water meter. Mill. See Rolling mil. Milling machine, W. R. Fox Mine door, G. D. Warren. Mining drills and stamps, operating mechanism for, G. M. Gross. Money changer, J. Adams. Mortising devel, A. E. Randle. Motor See Current moor Gravity motor. Mower, lawn, H. L. Fresbe. Mower, lawn, H. L. Frisble. New Leyn, A. E. Randle. New Lawn, A. F. Street. New Lawn, A. F. Street. New Lawn, A. F. Street. Neckscarf, J. O. Nighthngale. Necktie fastener, F. R. Scoffeld. Necktie fastener, F. R. Scoffeld. Necktie fastener, F. R. Scoffeld. Nettle fas	483,643 483,643 483,642 483,642 483,642 483,642 483,642 483,642 483,762 483,762 483,963 483,86
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	Match sale, teeting, H. Croggoin, Match splint cutting machine, T. A. Cook. Measures, rack for holding and draining liquid, A. R. Aborn. Measuring band, R. Behmer. Mechanical moving power, C. B. Van Coughnet Medicine stand, automatic, C. A. Moriarty. Metal planing and shaping machine, key seating attactiment for, F. J. Feldt. Metal wheel, H. E. West. Metallurgical furnace, G. W. Bierer. Mitter. See Water meter. Mill. See Rolling mill. Milling machine, W. R. Fox. Mine door, G. D. Warren. Mining drills and stamps, operating mechanism for, G. M. Gross. Moulder's nask, F. Baugh. Montor. See Current motor. Gravity motor. Mower, lawn, H. L. Freeman. Mower, lawn, W. L. Frisbie. Nail machine, C. E. Houghton. Nail puller, A. F. Street. Necktef astener, F. R. Scofeld. Needle swaging machine, I. T. Smith. Nut lock, T. Hibbs. Nut, self-locking, W. S. Neil. Office door indicator, J. Drew. Oiler, force feed, H. Jones. Opera glass receptacle, coin-operated, J. J. McDade. Package, A. Baker. Pad. See Hoof pad. Saddle pad. Pade dampening machine, A. Maim. Paper dampening machine, A. Maim. Paper dampening machine, E. T. Fisher. Paper poxes. machine for making, J. Godfrey. Paper boxes, machine for making, J. Godfrey. Paper poxes. Paper prames for slates, etc., manufacture of, J. F. Fischer. Paper plu, apparatus for the manufacture of, R. N. Redmayne. Pen and letter rack, S. E. Moore. Photographic purposes, device for modifying and	483,543 483,543 483,642 483,642 483,642 483,642 483,642 483,733 483,853 483
Company of the Compan	Match sale, teeting, H. Croggoin, Match splint cutting machine, T. A. Cook. Measures, rack for holding and draining liquid, A. R. Aborn. Measuring band, R. Behmer. Mechanical moving power, C. B. Van Coughnet Medicine stand, automatic, C. A. Moriarty. Metal planing and shaping machine, key seating attactiment for, F. J. Feldt. Metal wheel, H. E. West. Metallurgical furnace, G. W. Bierer. Mitter. See Water meter. Mill. See Rolling mill. Milling machine, W. R. Fox. Mine door, G. D. Warren. Mining drills and stamps, operating mechanism for, G. M. Gross. Moulder's nask, F. Baugh. Montor. See Current motor. Gravity motor. Mower, lawn, H. L. Freeman. Mower, lawn, W. L. Frisbie. Nail machine, C. E. Houghton. Nail puller, A. F. Street. Necktef astener, F. R. Scofeld. Needle swaging machine, I. T. Smith. Nut lock, T. Hibbs. Nut, self-locking, W. S. Neil. Office door indicator, J. Drew. Oiler, force feed, H. Jones. Opera glass receptacle, coin-operated, J. J. McDade. Package, A. Baker. Pad. See Hoof pad. Saddle pad. Pade dampening machine, A. Maim. Paper dampening machine, A. Maim. Paper dampening machine, E. T. Fisher. Paper poxes. machine for making, J. Godfrey. Paper boxes, machine for making, J. Godfrey. Paper poxes. Paper prames for slates, etc., manufacture of, J. F. Fischer. Paper plu, apparatus for the manufacture of, R. N. Redmayne. Pen and letter rack, S. E. Moore. Photographic purposes, device for modifying and	483,543 483,543 483,642 483,642 483,642 483,642 483,642 483,733 483,853 483
	Match sale, teeting, H. Croggoin Match splint cutting machine, T. A. Cook Measures, rack for holding and draining liquid, A. R. Aborn. Measuring band, R. Behmer Mechanical moving power, C. B. Van Coughnet. Medicine stand, automatic, C. A. Moriarty. Metal planing and shaping machines, key seating attachment for, F. J. Feldt. Metal wheel, H. E. West. Metallurgical furnace, G. W. Bierer. Mitch See Water meter. Mitcan bolt, N. P. Rutter. Mill. See Rolling mill Milling machine, W. R. Fox Mine door, G. D. Warren. Mining drills and stamps, operating mechanism for, G. M. Gross. Moulder's flask, F. Baugh Monory changer, J. Adams Mortising device, A. E. Randle. Motor. See Current motor Gravity motor. Mower, lawn, W. L. Friesbie. Nail machine, C. E. Houghton Nail puller, A. F. Street. Neckscarf, J. O. Nightingale. Necktief fastener, F. R. Scofield. Needle swaging machine, I. T. Smith. Nut lock, T. Hibbs. Nut, self-locking, W. S. Neil. Office door indicator, J. Drew. Oil burner, fuel, C. Ball. Oller, force feed, H. Jones. Note, A. Baker. Pade See Hoof pad. Saddle pad. Paddade. Package, A. Baker. Paper boxes. machine, A. Maim. Paper glass receptacle, coin-operated, J. J. McDade. Paper boxes. machine, A. Maim. Paper glass receptacle, E. T. Fisher. Paper frames for slates, etc., manufacture of, J. F. Fischer. Paper rhaires for slates, etc., manufacture of, R. N. Redmayne. N. Redmayne. Paper pulp, apparatus for the manufacture of, R. N. Redmayne. N. Redmayne. Pen and letter rack, S. E. Moore. Photographic camera, F. A. Hetherington. Photographic camera, F. A. Hetherington. Photographic camera, F. A. Hetherington.	483,643 483,643 483,644 483,642 483,642 483,642 483,642 483,643 483,642 483,643 483,85
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