grade of solder is the best for fastening lead pipe? A. For wiping, equal parts tin and lead.

- (10) D. A. H.-We know of no compositions cheaper than the metals they are composed of. Common yellow brass is the cheapest that can be made with copper. Cast iron is the cheapest metal.
- (11) E. T. S. asks the best polish for the brass on steam engines. A. Whiting or chalk mixed with engine oil is the best to keep the brass work bright. When the brass work gets black or stained, use oxalic acid mixed with tripoli. Rub in all cases with a
- it has very little more elasticity than iron; has a little spring when rolled or hammered hard; will not harden but may be casehardened.
- (13) D. E. S. asks how deep it is practicable to go down in diving bells, and with submarine armor. A. 75 to 100 feet is about the working limit, thing practical to use in the way you propose. Water though divers have thus been down over 200 feet.
- (14) O. M. C. asks the process for writing or making objects on glass that can only be seen when you breathe upon it. A. The drawings are made with pencils of talc or soapstone. They are sometimes very lightly etched with hydrofluoric acid.
- (15) W. F. asks: 1. What is the cause of blue vitriol turning into powder? A. It is due to efflorescence, or the giving up of its water of crystallization. 2. Does it have any strength when it is so turned? A. It is stronger.
- (16) H. M. E. asks: At a given temperaments being taken at 0° C., one volume of the liquid much injury. willigive 480 4 of the gas. These are approximate, but
- impurity is floated on to the mercury by sliding, so as loading it with weights, in order to press out all the outer circuit. This would make it flow from the earth ready to frame
- (18) B. J. A. asks what temper steel Tool temper; draw to about a straw color.
- poorest conductors of heat? A. Silk is the poorest conductor, and the resins, glass, and wood are all poor mastic varnish; or, 12 parts sandarac, 6 parts shellac, 6 of average steam coal, under conditions the same as in parts mastic, 150 parts 95 per cent alcohol, 6 parts Venice turpentine; mix and dissolve warm.
- evaporate so that the boiling point will continually
- (21) R., D. & Co.—For etching on cutlery you will require a ground wax composed of equal parts as phaltum, Burgundy pitch, and beeswax, melted together and thoroughly incorporated. In applying it, use a dabber, or ball of cotton covered with silk. Warm the piece of cutlery so that a stick of the wax will readily melt by touching. Smear a small quantity of the wax on the blade or articles, and dab it evenly all over the surface. When cold, scratch the rethe parts with acid (nitric acid 1 part, water 4 to 6 parts), bring the acid into contact with all the lines. In a few to make it tacky. Have a rubber stamp made of the redrawing the bubbles together with it. When they actop off the surrounding parts; or surround the design above
- (22) Reader asks: 1. What will remove warts from the hand with little or no pain? A. Get a piece of sal ammoniac about the size of a walnut; it anywhere and everywhere, without paying license or with me and deliver them as I secure orders without paying license or tax? A. You must pay license for some kinds of business in certain localities, but the differ ent laws for taxing drummers in several of the States green walnuts, to which a little rectified spirit is coma few bruised cloves, and the whole digested together with occasional agitation for a week or fortnight, when the clear portion is decanted, and if necessary, filtered. saving is not very great.

- black mixed with thin glue or mucilage. 2. Of what 4. A SUPPLEMENT containing receipts for making cosmaterial is the wrapper made that is used for spreading | metics, cements, blackings, etc.? A. See Cements, in the solder? A. Very generally of bed ticking. 3. What Scientific American Supplement, No. 158; for cosmetics and blackings, see "Techno-Chemical Receipt Book," which we can send for \$2. For special treat ment of freckles, moles, etc., see Supplement, 507.
- (23) T. G. C. asks: 1. Why does churning make butter? A. Agitating the milk causes the rupture of the coating of the butter globules contained in the milk, and their fatty contents then collect together. 2. What can I use to clean carpets. A. Use about 3 gills of ox gall in a pailful of water; rub with a soft scrubbing brush some of the ox gall water on the carpet, which will raise a lather. When a convenient sized portion is done, wash the lather off with a clean linen cloth dipped in clean water. Let this water be (12) A. R. asks if Bessemer steel has, changed frequently, and when all the lather has disapwhen rolled, any more spring than iron. A. It depends peared, rub the part with a clean dry cloth. Mixtures on the amount of carbon contained. As usually made, of magnesia and fuller's earth made into a paste are used to remove grease spots.
 - vater for fire extinguishing purposes, to be used with attraction between the sheets. I run a cylinder pres a common pump. What will be the advantage over ordinary water? A. We doubt whether there is anysaturated with alum or sulphate of soda or various other salts has superior value in extinguishing fires, due to the coating it gives to objects wet with it, which prevents contact with the oxygen of the air, and thus diminishes the rapidity of the combustion
- (25) H. B. H. asks: If we take say 100 or 1,000 Winchester regular cartridges, take out the bullet methods. A. In Scientific American, May 22, 188 and leave the powder in, or say part of the powder, and put them in a crucible to melt the metal, do you think that when the cartridges begin to get heated they will cause an explosion capable of injuring the building or the crucible? We maintain that it will not do so, but that the cartridges will discharge gradually ture-20° C.-how many volumes of gas will agiven with the heat, as it is impossible that they should all get volume of liquefled CO2 yield when the pressure is re- heated at the same time. A. You will have a number moved? How much at 0°? A. All measurements of explosions, which on account of the fulminate of being taken at 20° C, one volume of liquefied carbon mercury in the shells will be almost instantaneous, or dioxide will give 450 volumes of the gas; all measure- | equivalent to a single great explosion, capable of doing more buoyant under water than of simple atmospher
- (26) R. S. writes: 1. The velocity of electricity is said to be 288,000 miles per second. What (17) $R.\ B.\ asks$: What is the receipt for kind of electricity has that velocity, and what kind of putting quicksilver on the back of a looking glass? A. a conductor should it have? A. This is the velocity of This is usually done by coating the glass with an amala current of dynamic electricity on the best possigam. For this purpose a large, perfectly flat stone ble conductor, suspended in air so as to avoid all ditable is provided: upon it is evenly spread a sheet of electric action. 2. Does the entire current on a wire tin foil without crack or flaw; this is covered uniformly flow in one direction, viz., from the copper pole to to the depth of one-eighth inch with clean mercury. the zinc pole? I think that electricity flows from the The plate of glass perfectly cleaned from all grease and earth through the negative pole. Am I right? A. The term current is purely conventional. It is assumed to to exclude all air bubbles. It is then pressed down by flow from carbon to zinc (or equivalently) on the mercury which remains fluid, which is received in a to the zinc pole. 3. If light is admitted through glass gutter around the stone. After about 24 hours, it is of any color, the rays appear of the same color as the raised gently upon its edge, and in a few weeks it is substance through which they have passed. They are not separated in a prismatic way. How is it that light passing through red glass will appear red? A. The should be to make a strong permanent magnet. A. complement of the light it transmits. A colored glass true color of a body that transmits colored light is the acts like a screen or sieve, and sifts out and absorbs or (19) W. M. H. asks: What bodies are the reflects all rays except those that pass through it.
- (27) H. P. P. R. asks: 1. How many units of heat are given out in the burning of one ton heating the boiler of a ship's engine? How many units of heat are given out in the combination of 2,000 cubic feet of hydrogen with 1,000 cubic feet of oxygen to sistency of milk. (20) J. B. B. asks: What can I put in formwater? A. One part of carbon in burning gives water to lower the boiling point to 185° Fah.. so that the off heat enough to raise 7,273 parts of water one degree temperature will not rise any higher, whatever fire is C. in temperature; one part of hydrogen enough to under the copper? A. The addition of alcohol will raise 34.462 parts of water one degree C.: 2.000 cubic lower the boiling point of the mixture; but will feet of hydrogen weigh 73.958 grains, or 10.565 pounds, at standard barometer and thermometer readings. Taking coal as representing 95 per cent carbon, one ton of 2,240 pounds would raise 15,476,944 pounds of water one degree C., and 2,000 cubic feet of hydrogen would raise 364,091 pounds of water one degree C. From these factors you can deduce heat units of any desired system. As long as the coal is completely burned, the conditions have no influence on the hear evolved. They only affect the heat collected.
- (28) G. M. asks how to prepare the mercury for a barometer? Also how expel the air from the quired design or name on the surface and touch tube after it is filled? A. If the mercury is not free from other metals, it should be distilled. This is best using a camel's hair pencil to cover the surface and done in an iron retort. If contaminated with dirt, it can be purified by passing through an inverted cone minutes the biting is done. Dip in hot water to wash made of a sheet of paper containing a very small hole off the acid, and the surface may be cleaned by wiping at its apex. Your best plan is to buy pure mercury, with benzine. Another way is to make a varnish of and not attempt to distill it yourself. The air bubbles asphalt and turpeutine, with a few drops of linseed oil may be gathered by introducing a clean iron wire and quired design, with a border, so as to stop off around quire a sufficient size, they will rise and escape. The the design. Stampthe goods, and with some of the air may be much better expelled by boiling in the varnish thinned down with turpentine and a brush tube, but unless experienced you will probably break the tube. The mercury for this operation should be added with a small rim of beeswax, and apply the acid as three or four inches at a time, and each addition boiled.
- (29) H. N. B. writes: I am about mak ing an induction coil, but would like to ask a few questions: When the core of an induction coil is magnetized by a current passing through the primary coil, moisten the warts, and rub the sal ammoniac well on the core is rendered magnetic only at the poles, and them every night and morning for a fortnight. 2. If I not in the middle. When the current is broken, and the AND EACH BEARING THAT DATE. manufacture an article or compound have I a right to sell soft iron core discharges its magnetism do the magnetic lines pass from the poles only, or do they come from tax? If I take orders for a book which is sold by sub- the middle of the core as thick as from the poles? If scription only, have I a right to take the books along the middle is neutral when magnetized, I think no magnetic lines would come from the middle when dis charged. Why do they wind the secondary wire all across the spool? When they come to the center, why don't they skip over that part of the core where there have been decided unconstitutional. 3. A recipe for would be no magnetic lines, and resume the winding making hair dye from walnut juice? A. This consists after they pass little beyond the middle, thus saving simply of the expressed juice of the bark or shell of wire and resistance? A. The magnetic lines of force that radiate from the core of an induction coil are monly added for the purpose of preserving it, with most numerous at the ends. Coils have often been constructed without wire in the center as you describe, but just how much is gained by this is not known. The

- (30) F. N. R. writes: 1. You gave formula for a freezing mixture, viz., 5 parts nitrate ammonia, 6 parts sulphate of soda, and 4 parts dilut-nitric acid. Will such a mixture preserve the freezing properties indefinitely or for any length of time if kep inclosed in an airtight space? A. It will reach a love temperature, and maintain it for a varying length of time, according to the non-conducting power of the ma terials surrounding it. It cannot in your sense be proserved for future use, but must be mixed at the me ment of application. 2. Will the liquid stove polis receipt given by you some time ago in your paper, viz. pulverized black lead, turpentine, water, and suga keep its consistency as when first made, or will have a tendency to settle after standing a while A. There will be a natural tendency in the black lea to settle out, and we would advise it to be shaken b fore use.
- (31) J. P. S. says: In your issue o 26th of March, in answer to No. 17, J. W. P., you sa (24) E. M. D. asks how he can prepare wet the edges of the paper to overcome electric and was troubled the same way. The jobs were suc that I could not wet the edges. I took a large type "galley" and laid it on the delivery table, where the sheets would fall on it. A copper wire from it toth steam pipes just behind it carried off all electricity, s the sheets could be straightened easily.
 - (32) T. H. N. asks where he can find full account of the composition and manufacture aluminum bronze alloys produced by electric and November 13, 1886. Also in Richards on Alum num, very recently published, which we can mail for \$2.50. [Such replies as the foregoing we usually pr fer to send by mail, or at least to exercise the private lege of so doing, but there are those, whom we much regret to disoblige, who are continually forgetting send their names and full address.-ED.]
 - (33) G. H. W. asks: 1. Will a cubic foo of air under pressure of say five hundred pounds pressure? A. Air at a pressure of 500 pounds to the square inch will be less buoyant than air at norm pressure. 2. Can water be compressed to any percep ble amount? A. Water is compressed 0.0005 vol. p atmosphere of pressure (15 pounds to square inch) which it may be subjected.
 - (34) A. B. asks (1) how to glue or cemen German silver on to wood. A. Use the marine ceme recommended in Scientific American Supplement No. 158, undertitle of "Cements." 2. How to poli German silver by hand. A. Use a mixture of 1 pa olive oil, 1 of spirit of sal ammoniac, 2 of lime, and 1 water as a thick paste.
 - (35) D. H. asks: What fluid can b used in card writing, that will retain gold dust bronze? A. Use gold size or albumen.
 - (36) W. H. B., Greenville, Tenn., asks Can you give me a recipe for making wax to polis hickory handles with? A. Take of seed lac 1 ounc gum guaiacum 2 drachms, dragon's blood 2 drachm gum mastic 2 drachms, put into a bottle with one pi spirits of wine, cork close, expose to a moderate he till the gums are dissolved; strain into a bottle for a with χ gill linseed oil; shake together.
 - (37) J. A. H. asks if there is any flu for brazing cast iron. A. We know of nothing bett than borax ground in water until it assumes the co

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

B. D. B .- The yellow substance sent is a clay, a might be available for earthenware, terra cotta, brick making. Lignite or brown coal can be used fuel if of sufficient purity. It cannot be accepted an indication of better coal underneath, except in the sense that better lignite may exist below it.

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 unequaled facilities for procuring patents everywhere. 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, 361 Broadway, New York.

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April 5, 1887,

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Buckle, A. J. Stewart. Burner. See Gas burner. Bustle, P. M. & A. Randall. Button, S. R. Grover. Button, Seeve, C. A. Fautz. 360,673 Cable grip, R. P. Walsh. Cake, mould for ornamenting, C. A. Bailey. 360,755 Cane and umbrella, combined, Verrier & Bonnevaux. Cane handle, G. Muller. 360,545 Cane handle, G. Muller. 360,546 Car coupling, M. Burt. 360,657 Car coupling, M. Burt. 360,658 Car coupling, M. Hartz. 360,687 Car coupling, M. Hartz. 360,688 Car coupling, M. J. Hewlett. 360,688 Car coupling, M. J. Hewlett. 360,688 Car coupling, S. & E. H. Traux. 360,888 Car coupling, S. & E. H. Traux. 360,888 Car coupling, S. & E. H. Traux. 360,588 Car seat attachment, M. Russack. 360,548 Car seat attachment, M. Russack. 360,548 Cars, draught rigging for railway, J. P. Levan. 360,758 Cars, head rest for railway, J. f. Wiseman. 360,758 Carpet lining, B. S. Bryant. 360,689 Carpet, producing design and color effects in ingrain, Read & Knight. 360,689 Carpets, producing design and color effects in ingrain, Read & Knight. 360,689 Carpet lining, B. S. Bryant. 360,689 Carpet lining, B. S. Bryant. 360,689 Carpet lining, B. S. Bryant. 360,690 Card, playing, S. A. Cohen. 360,690 Card, playing, S. A. Olson. 360,690 Card, playing, S. A. Olson. 360,690 Clair back, adjustable, ■ J. Shults. 360,690 Clock, calendar, H. S. Prentiss. 360,702 Clock, calendar, H. S. Prentiss. 360,702 Clock, calendar, H. S. Prentiss. 360,702 Clod crusher, D. Lubin. 360,703 Color or rock drill support, H. B. Dierdorff. 360,603 Good or rock drill support, H. B. Dierdorff. 360,603 Good or rock drill support,	٠.		
Burner. See Gas burner. Bustle, P. M. & A. Randall. Bustle, P. M. & A. Randall. Button, S. R. Grover. Button fastening for garments, I. Newman. Cable grip, R. P. Walsh. Cake, mould for ornamenting, C. A. Bailey. Care and umbrella, combined, Verrier & Bonnevaux. Cane bandle, G. Muller. Cane and umbrella, Combined, Verrier & Bonnevaux. Car coupling, M. Burt. S60,81 Car brake. J. W. Greer. S60,81 Car coupling, R. Clark. Car coupling, M. Hartz. Car coupling, M. Hartz. Car coupling, M. Hartz. Car coupling, S. Truax. Car coupling, S. & E. H. Traux. Car seat attachment, M. Russack. Car wheel mould, E. Amundson. Cars, draught rigging for railway, J. P. Levan. Cars, draught rigging for street, J. W. Livingston. Cars, draught rigging for street, J. W. Livingston. Cars, draught rigging design and color effects in ingrain, Read & Knight. Carrier. See Sawdust carrier. Case. See Pigeonholecase. Watch case. Cattle guard, Linder & Bryant. Carrier. See Sawdust carrier. Case. See Pigeonholecase. Watch case. Cattle guard, Linder & Bryant. Carrier. See Invalid chair. Reclining chair. Rocking chair. Chair. J. Harrington. Chair. See Invalid chair. Reclining chair. Rocking chair. Chair. See Invalid chair. Reclining chair. Rocking chair. Chair. See Door clamp. Cleaner. See Boiler cleaner. Clip. See Axle clip. Clock, calendar. H. S. Prentiss Clock mechanism. auto-pneumatic, P. G. Puttemans. Clock calendar. H. S. Prentiss Clock of calendar. H. S. Prentiss Clod or rock drill support, H. B. Dierdorfff. Soon of Ca			
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t Cars, draught rigging for railway, J. P. Levan	-		
t Cars, head rest for railway, J. L. Wiseman		Car wheel mould, E. Amundson	360,403
Cars, sanding apparatus for street, J. W. Livingston		Cars, draught rigging for railway, J. P. Levan	360,700
ston			
Card, playing, S. A. Cohen			
Carpet lining. B. S. Bryant		Card, playing, S. A. Cohen	360,659
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Cattle guard, Linder & Bryant	9		
Cellulose, apparatus for manufacturing sulphite, Schnurmann & Closs	r		360.599
Schnurmann & Closs			
Chair. See Invalid chair. Reclining chair. Rocking chair. Chair J. Harrington	:	Schnurmann & Closs	300.484
Chair J. Harrington. 360,58			•
Chair back, adjustable, ■. J. Shults			200 =
t Check hook, J. A. Olson			
t Churn, E. A. Smith			
Churn, E. Wayland			
Cigar bunching machine, S. Henry		Churn, E. Wayland	360.630
Cleaner. See Boiler cleaner. r Clip. See Axle clip. Clock, calendar. H. S. Prentiss		Cigar bunching machine, S. Henry	
Clip. See Axle clip. Clock, calendar, H. S. Prentiss 360,72			
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r Coasters, turntable for, J. A. Priaulx		Coach, dining, J. H. Elliott	360,42
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Scythe-snath coupling. Thill coupling.
Cotton and wool waste, machine for cleaning, W.
 Dearborn
 360,566

 Crank, engine, J. E. McIntosh
 360,711

 Creamer, W. S. Mummery
 360,459
 Rogers..... 360,730 Crusher. See Clod crusher. Cuff and making the same, J. K. P. Pine...... 360,471 Cup. See Dope cup. Curry comb, C. & J. Knopp...... Cutter. See Box blank cutter. Hay and straw cutter. Rotary cutter. Tube cutter.

Dental regulating device, T. S. Holmes........... 360,695

Compressor, fluid. W. II. Tappey...... 360,542

Cork extracting machine, F. E. Schmitt....... 360,734

Comb. See Curry comb.

Cooler. See Milk cooler.

Diaphragm motor, C. W. Boluss................................ 360,651 Door clamp, d. W. Immel. 380,638
Door spring and lock, J. Walzer. 380,632 Dope cup, A. T. Ballantine..... Drawer and cash account recorder, money, C. B.

Drawers supporter and gatherer. B. M. Fish...... 360,676 Drier. See Clother drier. Steam drier. Drill. See Well boring drill.

 Dust pan, A. B. Austin
 360,643

 Dust pan, Levy & Decker
 360,453

 Dust pan, Levy & Decker
 300,438

 Ear wire and catch, W. C. Edge
 360,428

 Easel, H. A. Simsrott
 360,737

 Elastic fabric, Green, Jr., & Moore
 360,431, 300,432

 Elastic or corded fabric, W. Lapworth
 360,449, 360,450

 Electric instrument protector, L. H. Farnham
 360,570

 Electric lighting system, J. A. Powers...... Electrical distribution, system of, F. Van Ryssel-.... 360.492

Electrotyping apparatus, connection hanger for, O. S. Fertig. 360,672
Elevator. See Hay elevator. Hod elevator.
Elevator, H. Albert. 860,504

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Elevator indicator, Q. N. Evans	860,776	Oiling apparatus for vertical engines, J. H. Wil-	360,747	Supporter. See Drawers supporter. Garment supporter.	
Elevator safety stop, F. C. Roberts	300,483	Ordnance, breech-loading, W. H. Driggs Ore pulverizer, E. C. Griffin Overshoe, H. W. Burr	360,682	Surgery, electro cautery instrument for use in, D. H. Goodwillie	:
Excavating and grading machine, E. Remillard Excavating device, A. M. Woolfolk		Package holder, N. E. Frost	360,769	Table. See Turntable. Table, J. W. McLain	1
Fabric. See Elastic fabric. Elastic or corded fabric. Metal fabric. Fare boxes, locking and delivering device for,		Pan. See Bed pan. Dust pan. Paper box covering machine, G. W. Glazier, 300,582,	360.583	Table, H. Massmann	
Herzberg & Almqvist	360,740	Paring machine, apple, C. E. Hudson	360.527	M. Williams	i
Feed roll, L. Garrigues	360,455	for making, M. V. Steinmetz		Tanks, screen bottom for charcoal washing and filtering, A. Gaukroger	
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Files, apparatus for recutting. J. E. Emley	360,441	Pin. See Clothes pin. Lambrequin pin. Piano tuning pin. Pipes, covering for steam, O. Ober	360,782	Testing rotating parts, machine for, W. W. Hunt- ley	
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Fire escape, J. C. Lund	360,418	Kaufholz Planter, M. F. Myers Planter check rower, corn, J. D. Smith Planter check rower, corn P	360.815	Thill coupling, R. McLaughlin 360,610 Tile, furring, T. W. Snell 360,625 Tile machine, Brose & Baumgartner 360,653	
Floor, stall, A. J. Lansing	360,452	Planter, corn, C. E. Sweney	360,489	Tile trap, drain, J. Maguire	ŀ
Fork. See Hay fork. Frame. See Watch movement frame.	000 COU	Platform. See Dumping platform. Plow, C. Hanson		Tobacco cutting machine, P. F. Dearstyne	: a
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Gas pressure regulator, high and low, W. M. Jack- son		E. Holbrook		Trunk attachment, McDowell & Medford	İ
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Harvester, cotton, O. T. Bugg Harvester draught equalizer, Devore & Keck	360,509 360,514	Rail joints, bolt protector for. E. Gilmore		Vessels, pin rail attachment for, J. McKeon 360,535 Violins, combined chin and shoulder rest for, F.	ļ
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G.	360,649 360,435 360,547	Weight and envelope sealer, combined, H. J. Moore	360,458 360,838
G.	360,649 360,435 360,547 360,661 360,507	Weight and envelope sealer, combined, H. J. Moore	360,458 360,538 360,745
G.	360,649 360,435 360,547 360,661 360,507 360,428 360,463	Weight and envelope sealer, combined, H. J. Moore	360,458 360,538 360,745 360,714 360,664 360,718
G.	360,649 360,435 360,547 360,661 360,507 360,428	Weight and envelope sealer, combined, H. J. Moore	360,458 360,538 360,745 360,714 360,664 360,718 960,706 360,731
G.	360,649 360,435 360,547 360,661 360,507 360,428 360,463 360,406 360,708	Weight and envelope sealer, combined, H. J. Moore	360,458 360,538 360,745 360,714 360,664 360,718 960,706 360,731
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G.	360,649 360,435 360,547 360,661 360,507 360,428 360,463 360,708 360,708 360,708 360,579 360,503 360,503	Weight and envelope sealer, combined, H. J. Moore	360,458 360,538 360,745 360,714 360,664 360,718 360,781 360,654
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G.	360,649 360,435 360,547 360,661 360,507 360,428 360,406 360,708 360,503 360,503 360,564 360,715 360,623 360,812	Weight and envelope sealer, combined, H. J. Moore	360,458 360,538 360,745 360,714 360,664 360,718 360,765 37,243 17,243 17,243 17,245 17,245 17,245
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G.	360,649 360,435 360,547 360,661 360,579 360,428 360,466 360,759 360,579 360,579 360,573 360,571 360,573	Weight and envelope sealer, combined, H. J. Moore	660,458 660,538 660,714 660,664 660,664 660,718 660,664 660,718 17,233 17,243 17,242 17,242 17,242 17,242 17,242 17,242 17,242
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G.	360,649 360,435 360,547 360,661 360,579 360,468 360,579 360,579 360,523 360,523 360,523 360,523 360,617 360,465 360,736	Weight and envelope sealer, combined, H. J. Moore	660,458 660,458 660,745 660,714 660,664 660,706 660,706 660,706 660,706 17,233 17,243 17,245 17,245 17,245 17,245 17,242 17,241 17,232 17,241 17,232 17,241 17,232 17,241 17,232 17,241 17,232 17,241 17,232 17,241 17,232

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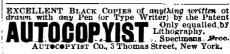
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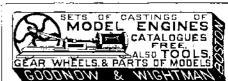
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