and Queries.

HINTS TO CORRESPONDENTS

References to former articles or answers should give date of paper and page or number of question.

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 bis turn

Buyers wishing to purchase any article not adver-tised in our columns will be furnished with addresses of houses manufacturing or carrying the same.

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

Scientific American Supplements referred to may be had at the office. Price 10 cents each.

Books referred to promptly supplied on receipt of price.

Minerals sent for examination should be distinctly marked or labeled.

(9844) C. E. D. writes: In your an-

swer to J. S., No. 5703, September 23, 1905, you

say a person is no heavier while going up an

elevator than going down, and explain the ef-

fect of inertia on the matter. It seems to me

this does not cover it. Either the attraction of gravitation must be considered as a fixed some-

thing which exerts its pull without moving (an

inconceivable thought to me) or else it must have a speed at which it pulls, just as light or

electricity has a speed at which it travels.

If it is admitted to have a speed, then this speed

must be between 0 and infinity, and therefore

measurable. If it had an infinite speed of

action, any mass multiplied by this speed of ac-

tion would be infinitely heavy, and therefore

impossible to weigh. It would seem, there-

fore, that gravitation must have an appreciable

measurable speed, and that if we could find an

elevator with a constant speed, one would weigh as much less when coming down as the speed of the elevator takes from the speed of gravi

tation, while in going up the conditions would be reversed, and one's weight would be in

; creased in the proportion that the speed of the

elevator adds to the speed of gravitation. Is not this correct? A. The theory of the in-

trinsic nature of gravitation is not by any means settled among scientists. Indeed, there can hardly be said to be such a theory. There

would seem, however, to be a substantial agree

ment that gravitation acts instantaneously

through space. That gravitation has a velocity

would hardly be considered a suitable expres-

sion of this fact. Nor do we see how the veloc-

ity of gravitation can have anything to do

with the weight of bodies. This is determined

by the relative amount of matter in the earth

or major body and the body to be weighed, as

we call it, and the distance between the centers

of gravity of these two. It is not involved in

the question of the speed of action of gravita-

velocity in a moving body cannot affect the

earth are affected by it to the same extent, so

that, like every other constant, it is omitted in

considering the changes of value of the varia

(9845) D. E. F. writes: I note the

of the SCIENTIFIC AMERICAN which I here

combustion. That even in this sense the an-

swer is "yes" you can really demonstrate in

the following manner by means of the inclosed

celluloid over night in water. Take them out

of water and wipe dry and let dry an hour

or two. In a moderately warm room free from

strong drafts, hold the card of celluloid verti-

will continue to run downward and disappear,

leaving only a trace of ashes. The samples

bles in an expression.

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Notes

his turn.

for discharging the load of the body at the side of the wagon, thus avoiding obstruction of the street or railway thereon, provision being also made for placing the body in inclined position, so as to elevate the place of discharge, and, furthermore, to elevate the body to a greater degree and permit inclination of the body at its highest point, so as to dump the load at different altitudes relatively to requirements due to different positions of the place designed to receive the load in a cellar or elsewhere. Names and Address must accompany all letters or no attention will be paid thereto. This is for our information and not for publication.

TRUCK.-E. F. SHERRILL and B. R. SHER-RILL, Moline, Ill. In this patent the invention is an improvement in trucks and especially in that class of trucks designed for use in handling baggage, bricks, and the like, wherein it is desired to raise the articles to a higher level in some instances and to lower them from a higher level in other instances.

## Designs

DESIGN FOR RUFFLING .--- C. SEIDEL, New York, N. Y. The designer has invented a new, original and ornamental design for ruffling which represents a width of material made up of comparatively heavy and light double and single cross-lined strips. Single and double cross-waved patterns run through the cross-lined portions.

NOTE.-Copies of any of these patents will be furnished by Munn & Co. for ten cents each. Please state the name of the patentee, title of the invention, and date of this paper.

## Business and Personal Wants.

READ THIS COLUMN CAREFULLY,-You will find inquiries for certain classes of articles numbered in consecutive order. If you manu facture these goods write us at once and we will send you the name and address of the party desir-ing the information. In every case it is neces-sary to give the number of the inquiry. MUNN & CO.

Marine Iron Works. Chicago. Catalogue free.

Inquiry No. 7512.-For makers of the instrument called the "Leak Finder," used for locating leaks in underground water mains.

"U.S." Metal Polish. Indianapolis. Samples free.

Inquiry No. 7513.-For machines to make stapled and drawn push blooms. For bridge erecting engines. J. S. Mundy, Newark, N. J.

Inquiry No. 7514.-For makers of rubber pillow ventilators.

Drying Machinery and Presses. Biles, Louisville, Ky. Inquiry No. 7515.—For makers of typewriter parts, such as machine parts.

Handle & Spoke Mchy. Ober Mfg. Co., 10 Bell St., Chagrin Falls, O.

Inquiry No. 7516.-For makers of garment hangers made of wood.

Sawmill machinery and outfits manufactured by the Lane Mfg. Co.. Box 13, Montpelier, Vt.

Inquiry No. 7517.-Wanted, makers of an article for waterproofing silk without injuring the fabric or lessening the flexibility of same.

I sell patents. To buy, or having one to sell, write Chas. A. Scott, 719 Mutual Life Building, Buffalo, N. Y. tion. Even if it were, the speed of action of Inquiry No. 7518.-Wanted, catalogue of latest ' gravitation is so enormous that any change of machinery for making peat bricks for fuel. | velocity in a moving body connect effect the

The celebrated "Hornsby-Akroyd" Patent Safety Oil actual weight of that body, and all weighings

Engine is built by the De La Vergne Machine Company, at the same distance from the center of the Foot of East 138th Street, New York. Inquiry No. 7519.-For makers of bare and insu-lated copper magnet wire.

WANTED.-Young man experienced in drafting and designing textile machinery "New England." Machin-

ery, Box 773, New York. inquiry of L. A. H. (9779) in a recent issue Inquiry No. 7520.-Wanted, machinery to make briquettes from sawdust.

WANTED. - Ideas regarding patentable device for quote: "Is there such a thing in the realm water well paste or mucilage bottle. Address Adhe-sive, P. O. Box 773, New York. of science as flame or combustion without emit-ting light?" I take it that he means rapid

Inquiry No. 7521.-Wanted, makers of metal

fountain syringes LATEST ADVERTISING NOVELTIES.-High-grade Il-lustrating, Designing and Printing. Catalogues a Specards of thin, transparent celluloid. Soak the cialty. Smith & Berkley, Holland Bldg., St. Louis, Mo.

Inquiry No. 7522.-Wanted. a saw operated by electricity, gas or steam for sawing trees.

Manufacturers of patent articles, dies, metal stamping, screw machine work, hardware specialties, machinery tools and wood fibre products. Quadriga cally in the left hand and light the upper end with a match. When it burns down about Manufacturing Company, 18 South Canal St., Chicago.

Inquiry No. 7523.- For importers or makers of half an inch blow it out. Thereafter there colored glass bead fringe used in making lamp sha(es; also for makers of stamped brass beading and mould-ing used in this work.

Absolute privacy for inventors and experimenting. A well-equipped private laboratory can be rented on leaving only a trace of ashes. The samples moderate terms from the Electrical Testing Labor- which I inclose herewith do not work as well

are soaked. This is just as we should expect. since celluloid does not contain any ingredient which is soluble in water and it is impervious to water.

## NEW BOOKS, ETC.

W. S. Leonard. New York: John Wiley & Sons, 1905. 8vo.; pp. 554; 689 figures. Price, \$4.

This is a very complete textbook of machineshop tools and methods, which was written for use in connection with lectures on this subject given in the Mechanical Department of the Michigan Agricultural College. The book describes in detail all the various tools, both large and small, used in the modern machine shop. While necessarily somewhat elemental in character, it nevertheless contains a deal of information valuable to the ordinary machinist. It is very thoroughly illustrated with diagrams and half-tone plates. The present is the third edition, which has been thoroughly revised and enlarged.

ENGINEERING CHEMISTRY. By Thomas B. Stillman, M.Sc., Ph.D. Easton, Pa.: Chemical Publishing Company, 1905. 8vo.; pp. 597. Price, \$4.50.

In this, the third edition of a well-known manual on quantitative analysis, the author has taken note of the rapid changes during the past few years in methods of testing the various products of chemical technology and materials of construction, and he has completely revised that portion of his work that has to do with these subjects. Much additional matter has been included, especially information pertaining to asphalt, lubricating oils, Portland cement, and the technology of the products of the blast furnace. The book is fully illustrated, and is quite up to the standard of the previous editions, and will be found valuable to all students, chemists, and engineers.

COMMERCIAL ECONOMY IN STEAM AND

OTHER THERMAL POWER-PLANTS. By Robert H. Smith. With numerous diagrams by H. Malcolm Hodson. Philadelphia: J. B. Lippincott Com-pany, 1905. 8vo.; pp. 291. Price, \$7.

The main idea of the author in writing this work was to persuade the mechanical engineer to advance from the primitive view that engineering science can guide him only in the physical construction and dynamics of his ma. [B] B] chinery to the more complete idea that scientific method must also be applied to his reckonings of cost and value produced. The ultimate triumph of practical science must, the author believes, 'he evidenced in its demonstration of the means, o attain maximum economy. An exact measure of economy is the first essential in any section of technico-commercial science. The author, therefore, discusses an "Economy-Coefficient" applicable to all kinds of productive industry, and also probably to the industry of distribution and exchange. By a simple combination of the three factors of  $\frac{H}{H}$ Cost, Value, and Speed of Production, this coefficient aims at giving due value to all essential elements of commercial economy. The author also deduces other coefficients which are of value in the discussion. The book goes into commercial steam-power economy in a very thorough mannes, and has numerous charts relating to this and kindred subjects. It is very complete and will be found to contain many useful ideas regarding economy in the operation of power plants.

PRACTICAL KITES AND AEROPLANES. By Frederick Wasser, C.E. London: Guilbert Pitman, 1903. 16mo.; pp. 78. Price, 60 cents.

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The kite, from the toy of a schoolboy, has, by the ordinary laws of mechanical evolution, developed into the aeroplane, capable of carrying loads vertically, and sustaining them at a certain altitude by the ordinary wind currents, but so far the airship of the future as a problem admits of no solution by the aeroplane or aero-curve surface alone; unless it may happen to a future inventor to cause a flat disk, of gas or air, which by its inherent high pressure shall impinge upon the inner surface of an aero-curve and by diversion overcome gravity, and thus cause a vertical ascension. This may occur in the future; but according to our present lights a captive aeroplane may be only used for raising a single passenger to

as well; Carriage Painting; House Painting; The book is illus and Furniture Varnishing. trated with a number of half-tones, and will be found interesting reading by all who have to do with this industry.

## INDEX OF INVEN For which Letters Patent

United States were Issued

for the Week Ending

November 14, 1905

AND EACH BEARING THAT DATE See note at end of list about copies of these patents.]

Abrasive apparatus, O. C. Wysong Acetylene tetrachlorid, making, Askenasy	804,514
Active Mugdan Active Astenasy & Mugdan Active Astenasy & Mugdan Active Astenasy & Mugdan Active Astenasy & Mugdan Astenasy & Astenasy & Astenasy & Mugdan Astenasy & Astenasy & Mugdan Astenasy	804 <b>,516</b>
and sulfuric, Askenasy & Mugdan Advertising novelty, W. H. Bender	804, <b>515</b> 804,372
Agricultural implements, draft bar for, N. H. Bloom	804,703
Agricultural implements, riding attach- ment for, N. H. Bloom. Airship and propeller therefor, J. C. Clancy. Automobile steering mechanism, H. H. Buf- fum	804.702
Airship and propeller therefor, J. C. Clancy. Automobile steering mechanism, H. H. Buf-	804,702 804,583
Awning and cover fastener. Waterhouse &	804,375
Axle, lubricating, J. A. Birdwell.	804, <b>285</b> 804,448
Bag filling and weighing machine, F. G. Pennock	804,262
<ul> <li>Bag filling and weighing machine, F. G. Pennock</li></ul>	$\begin{array}{c} 804,199 \\ 804,622 \end{array}$
Ball bearing jack, H. G. Johnston Bathometer, E. S. Wheeler	804,662 804,570
Bed and carriage for children, combination, S. D. Carmichael	804,581
Bed bottom, spring, F. J. & W. C. Van Cise. Bed, folding, Froman & Lanham	804,352 804,594
Beeliveding apparatus, J. F. Schöning Beehive, G. F. Kregel	804,271 804,736
Bill holder, A. J. Tice	804,531 804,445 804 492
Binder, temporary, A. S. Harn Binding post F Lackson	804,422 804,599 804,232
Bit. See Harness bit. Bit, A. L. Bethe	804,700
M. Harwell Blank, bill or statement, H. J. Halle Blast regulating apparatus, automatic, Ugyghon & Cabot	804,720
Boats, automobiles, and other vehicles, an-	804,689
nouncing device or horn for, Tauzin &	804,567
Laury Boats unsinkable, device for rendering small, J. M. A. Deydier	804,797 804,590
Boiler tube fastener, Ervin & Walker Book holder or rest, C. E. Fowble	804,590 804,4 <b>62</b>
<ul> <li>Boats unsinkable, device for rendering small, J. M. A. Deydier</li></ul>	804,458
Boring tools, detachable head for, C. P. Howk	804,602 804,619
Bottle closure, H. A. Olsson Bottles, flasks, etc., machine for making,	804,619
Bowling alley ball gutter, P. J. Riddell	804,576 804,551
Box, W. C. James Box hook, A M. Maretzek	804,725 804,665
<ul> <li>Boring tools, detachable head for, C. P. Howk</li> <li>Bottle Cosure, H. A. Olsson.</li> <li>Bottle Cosure, H. A. Olsson.</li> <li>Bottles, flasks, etc., machine for making, C. Boucher</li> <li>Bowling alley ball gutter, P. J. Riddell.</li> <li>Box, W. C. James</li> <li>Boxkok, A. M. Maretzek.</li> <li>Bracelet, necklet, and like ornament for personal wear, E. Satchwell</li> <li>Bracket, C. Schraubstadter</li> <li>Brake beam, G. P. Ritter.</li> <li>Brake beam, G. P. Ritter.</li> <li>Brake spetem, F. B. Rae.</li> <li>Brick klin, E. D. Young.</li> <li>Bridge, G. Lindenthal</li> <li>Bridge, G. Lindenthal</li> <li>Bridge, G. Lindenthal</li> <li>Bridge, G. Londenthal</li> <li>Bridge, G. Londenthal</li> <li>Bridge, Bottanassage, R. M. Smith.</li> <li>Bucket, bottom dumping and handling, P. C. Hains, Jr.</li> <li>Bucket, clam shall W. R. Roherts.</li> </ul>	$\begin{array}{c} 804,678 \\ 804,435 \end{array}$
Brake beam, G. P. Ritter Brake mechanism C. W. Larson	804,267 804,414
Brake shoe, vehicle, E. D. Shoop Brake system, F. B. Rae.	804,629 804,502
Brick drier, W. R. Martin Brick kiln, E. D. Young	804,489 804,294
Bridge, G. Lindenthal Briquet manufacturing machine, G. Hopfner.	804 <b>,744</b> 804,402
Brush, fountain, W. Hasz Brush, scalp massage, R. M. Smith	804,467 804,680
Bucket, bottom dumping and handling, P. C. Hains, Jr.	804,221
Hains, Jr. Bucket, clam shell, W. B. Roberts Bucket, refuse, H. Freise Buckle, H. K. vom Hofe	804,715
Buckle, H. K. vom Hofe Buckle, M. Barabasz	804,470 804,788
Bunsen burner, L. Page Burglar alarm, J. O. Morris.	804,496 804,616
Buckle, M. Barabasz Bunsen burner, L. Page Burglar alarm, J. O. Morris. Burglar alarm, J. O. Morris. Butter cutting machine, M. C. Gehl Butter cutting machine, R. F. Stewart.	804,760 804,219
Calculating device, C. M. Young	804,566 804,646
S04,563 to Calculating device, C. M. Young Calculating machine, H. E. Goldberg Camera, W. F. Folmer Can-beading machine, H. C. H. Walsh Can bolding device, cracker, E. L. Reed Candy machine, B. B. Bowers Candy pulling machine, E. J. Jenner. Car brake, F. T. Whitted Car coupling, D. P. Moran. Car coupling, D. P. Moran.	804,463 804,385
Camera, W. F. Folmer Can-beading machine, H. C. H. Walsh	804,802 804,642
Can holding device, cracker, E. L. Reed Candy machine, B. B. Bowers	$\begin{array}{r} 804,672\\ 804,374 \end{array}$
Candy pulling machine, E. J. Jenner Car brake, F. T. Whitted	804,726 804,287
Car coupling, D. P. Moran Car coupling, H. Donnelly	804,424 804.523
Car coupling, D. P. Moran. Car coupling, H. Donnelly Car curtains, fastener for vestibuled, H. L. Garrett Car draft rigging, railway, J. F. Courson. Car, dumping, J. H. Kelly. Car fender, S. Ebenschweller Car locomotive, multiple, J. J. Troeger Car, railway, J. G. Brownfield Car replacer, H. Pratt Carbureter for explosion motors, G. Enrico. Carplet sweeper, O. Chaplin Carly. See Reel carrier.	804,310
Car draft rigging, railway, J. F. Courson Car, dumping, J. H. Kelly	$\begin{array}{c} 804,649 \\ 804,412 \end{array}$
Car fender, S. Ebenschweller Car fender, A. J. Berg	804,587 804,790
Car locomotive, multiple, J. J. Troeger Car, railway, J. G. Brownfield	804,638 804,2(5
Carbureter for explosion motors, G. Enrico.	804,766 804,589
Carpet sweeper, O. Chaplin Cartler. See Reel carrier.	804,213
Cart, J. Dain Cartons, machine for opening up end-closing	804,386 804,716
Cartridge case extractor, Benet & Mercie Case and holder combined W Paine	804,699
Cariter. See Reel carrier. Cart, J. Dain Cartons, machine for opening up end-closing knockdown, C. W. Gay Cartridge case extractor, Benet & Mercie Case and holder, combined, W. Paine Cash carrier apparatus, J. W. Clark Caster, furniture, A. W. Graham Casting pig iron, E. P. Martin. Cennet block-maing machine, J. Miller Cement block-molding machine, Fischer & Telbok	804,214 804,809
Casting pig iron, E. P. Martin Cement block-making machine, J. Millez	804,329 804,423
Cement block-molding machine, Fischer & Talbot	
Talbot	804,789

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	leaving only a trace of ashes. The samples	to our present lights a captive acrophane may	ocar ne riock analis, intenta, or somethic ocar
A well-equipped private laboratory can be rented on		be only used for raising a single passenger to	Cement block-molding marbine, Fischer &
moderate terms from the Electrical Testing Labor-	which I inclose herewith do not work as well		Talbot
atories, 548 East 80th St., New York. Write to-day.	as some which I have heretofore tried, which		Centrifugal separator, J. B. Bartholomew 804,789 Chain, G. C. Horst 804,723
Inquiry No. 7524For makers of high resistance	continued to disappear until the whole card	cold and the pressure of the and the pre-	Chain coupling link, cattle, B. Knothe 804,327
wire of small size, suitable for hot wire electrical		vailing in the atmosphere. The author desires	Chuck or rock drilling machines, J. H.
instruments.	was consumen, but these sumee to completely	to create interest in the subject by a timely lit-	Thomas
Internet out Waynes Hadenstered will consider	demonstrate this remarkable phenomenon. I	tle book.	Cigar and cigarette cutting machine, H.
INVENTIONS WANTEDUndersigned will consider	think this celluloid is a little too thin to work		Eisner 804,651
one or two good patented or patentable inventions to	well. I also inclose several white celluloid	THE INDUSTRIAL AND ARTISTIC TECHNOLOGY	Cigar stand, combination, C. A. Mueller 804,333
manufacture on royalty. Something in popular demand			Cinch grip, E. A. Grushus
preferred. Honest treatment guaranteed. F. Rani-	washers, which seem to be more efficient in	TT ( Q ): MQ Now Yorky Toba	Cloth holder, P. J. Coan 804,348
ville Company, Grand Rapids, Mich.	demonstrating the phenomenon than is the		Coal washing apparatus, R. I. Martin, Jr., 804,488
Landing No. MEDE . Don molecus of a othors of	transparent celluloid. Let about one-third of	Wiley & Sons, 1905. 8vo.; pp. 372.	Coin collector and holder, Wiley & Stevens, 804,695
Inquiry No. 7525.—For makers of postoffice caves.	-	Price, \$3.	Coke puller, H. F. Pearson 804,670
	the disk burn before blowing it out. Soak		Concentrating and amalgamating table, J.
WANTEDCompetent man who has knowledge of	'these in water as indicated, then at once dry	This is a very complete technical work on	<b>A.</b> Hamilton
Mechanical Engineering, to take a position as traveling	by pinching between blotters and burn. A.	the subjects of paints and varnishes. A brief	Concrete block-molding flask. T. Libby 804,240
salesman for the selling of construction material used	We have been interested in burning the pieces	account of their modern use, and of the prin-	Concrete floor centering, P. Kuhne
in Insulating Refrigerating Plants. Apply by mail to			Concrete structures. means for reinforcing,
the Bruening Cork Company, Oakdale, All'y Co., Pa.	of celluloid you send us, as well as other	sipile interved in the second and appress	Moorman & Yelm 804,614
• • • • • • •	pieces. They smoulder after the flame is ex-	tion, will be found within its pages. Among	Conduit coupling, W. S. Brown 804,204
Inquiry No. 7526For parties to manufacture	tinguished, as do other combustible materials,	the subjects treated are Varnish and Its Manu-	Cone coupling, H. Baumgartner 804,573
motor cars for street car service, gasoline system.	until the substance is cooled below the tem-	facture: Linseed Oil: Tung Oil: Rosin: Japans	Contacts, making. F. Petz 804,429
Inquiry No. 7527For manufacturers of wire-			Container, J. R. Harbeck
forming machinery.			Conveyer for crushing machines, elevating, T. J. Grav
		nese and Japanese Lacquers; and Spirit and	Conveyer for grading and ditching machines.
in metal boxes, baving springs inside for winding.	loid burn any after the flame is extinguished.	Pyroxylin Varnishes. A chapter on the protec-	elevating, H. S. Hoy 804.474
Inquiry No. 7529For a machine for cutting	The white thick disks contain some paint-like		Copy or book holder, A. Merceret 804,666
right-angle, circular and oval beveled openings in mat	material, used for filling, which carries on the	0	Corn husker and ensilage cutter, A. Rosen-
board.	material, used for ming, which carries on the	most userul in the book. Other chapters deal	thal
Inquiry No. 7530For manufacturers of venti-	compustion longer. We are just as successful	with Water Pipe Coating, the Painting of	Coupling, J. & J. O. Timms
lators.	without soaking in water as when the pieces	Ships' Bottoms, and Ship and Boat Painting	Crab can. Saalbach & Maxwell 804,504