RECENTLY Patented inventions. Engineering.
Compound Condensing Engine. John S. Briggs, Poland, Me. This engine has high and
low pressure cylinders and a celindrical valve having low pressure cylinders and a cylindrical valve having ports on one side connecting with the exhaust of the hish
pressure cylinder, while ports on the pressure cylinder, while ports on the opposite
nect with the low pressure cylinder and the a valve reciprocating in the valve cylinder having a transverse passage connecting the exhaust from the high pressure cylinder successively with the low pressure cylinder and the condenser. The arrangement is designed
to prevent back pressure in the high pressure cylinder and to supply the low pressure cylinder as well as the condenser with exhaust steam from the high pressure
cylinder.
Air Valve for Water Pipe Lines. -Theron $A$. Neble, Seattle, Wash. Fer water pipe lines
or other chambers containing water, the value provided by
this invention is arranged to let ent air when the pipe line this invention is arranged to let at air when the pipe lin
or chamber is being filled and let in air when the pipe breaks or is being emptied, thus preventing a collapse, the valve also opening to let ont accumulated air that has
collected at the summits of the pipe line, without allowing the water to escape, and preventing the hammering of the water. Within the valve casing is a chamber com municating with the atmosphere, a float carrying a valve
to establish communication between the chamber and the casing, while a stem separate from the valve projects to the outside of the casing and is arranged to engage the valve

## Electrical.

Circuit Controller.- William T. Budds, Charleston, S. C. This invention relates to cir cuit controllers for call bes systems, and prevides means
by which a break in the main wires may be easily located without sending a lineman to flnd it in the usual manner also, so arranging the parts that, should a wire be broken, the call will still be operative. The invention provides a
controller wheel having a number of peripheral projec controller wheel having a number of peripheral projec
tions indicating the number of the call box in which it is arranged in the usual manner, the wheel being made by the single operation of a die, and therefore inexpen
sive, and there being both a metallic and ground circuit through the latter of which the circuit may be operate should a break occur.

Bicycles, Etc
Bicycle Step.-Heinrich G. Borgfeldt Brooklyn, N. Y. The bicycle step, according to this at its shaft-bearing end, being so placed with relation to the pedal crank that motion will be immediately imparted
to the wheel when the weight of the rider comes upon the to the wheel when the weight of the rider comes upon the
step, making it unnecessary to take a few steps hefore step, making it unnecessary to take a few steps hefore
mounting, as is ordinarily the case. The step will, in rendering the act of mounting much easier.
Bicycle Ball Bearing. - William J Tripp, New York City. This bearing, for use on bicy to a minimum, while permitting of readily adj justing the several parts and affording convenientaccess thereto for repairs, etc. Two collars, each having an inwardly over-
hanging portion, are secured to the axle, and an addihional collar is carried on each overhanging portion, the additional collars being extended inward and contracted
the pairs of collars thus forming an annular ball race, the ends of the hub being projected within the additiona collars and the overhanging portions of the first named collars.

## Mechanical.

Brace.-John H. Morrison. Prescott ure an easy, steady and quick boring of the mate sure an easy, steasy and quick boring of the mate
rial, without necessarily increasing the speed of the crank arm fe be turned by the operator, is the object of
this invention. The tool is provided with a U-slaped frame having upper and lower bearings, in the lower on of which is a sleeve through which passes a vertical slaft carrying at its lower end the tool holder for a bit on gear wheels with the slceve, w
may be transmitted to the shaft.
Cutter Head and Cutter.- Frank especially designed to facilitate turning rosctes, coine blocks, etc., has been devisce by this inventor, the cutter head being provided with jaws forming curved slots
at adjacent edges for the reception of the culters, and the cutters heing made of thin steel and curved to pro
ane a shearing cut.
Scroll Saw. - James ( $\dot{\boldsymbol{r}}$ Counelly, Verdon, S. D. To facilitate adjusting and operating the
saw and combine therevith a lathe to be operated at will is the object of this iuvention. The arrangement
is such that the saw tabic remains level, the erave frame being mounted in a yoke and being adjustable, so that he saw frame may reciprocate at any desired angle
while combined with the saw is a he and tail center a lathe, the parts heing soc conuccted that the lathe
the saw may be operatel modependently, either one bein hrewn inte or out of operation.
Tuyere. -- Davill Sumime. Darwin, Ind T- facilitate increasing or diminishing the draught in
blacksmiths' forges, this invention provides a novel tuyere with an arrangement for keeping a projecting part cool, with an ausiliary draught opening to keep a
smoldering fire when the forge is not in use. The invention comprises upper and lover plates united by lateral the upper plate havmg perforations communicating w.th the draught passages, a surrounding channel being aiso
connected with a water reserv vir, while the draught connected with a water reservir, while the draugh
passage may be connected with any stylc of hellows.
Bolt Cutter. -~ James R. Rambo, Pulaski, Tenn. This device compriscs a hollow hear
with rigid hardale, twe siditable parallel jaws becing an-
ranged in the head, to which alse a hande lever is
piveted, while a jaw lever has a head with projections
engaging the jaws, its outer end having pivetal and engaging the jaws, its outer end having pivotal and
loose connection with the handle lever. The tool is
adapted for bolt cutting in general, but especially for adapted for bolt cutting in general, but especially for
cutting off the ends of tire belts, which it does squarely and evenly, without leaving any bur
Apron Board for Paper-making Machines. -Perry D.Taylor, Watertown, N. Y. This
invention provides a board on which the apron may be invention provides a board on which the apron may be
quickiy and conveniently adjusted for anysized sheet quickly and conveniently adjusted for any sized shee
without detaching any part of the apron from the board Without detaching any part of the apron from the board
or removing the attaching medium between the board and apron or between the apron and deckle frame. Bar with which are connected angular shields are held t sections are attached to the sliding bars and connected with the shields.

## Agricultural.

Scythe.-Gervais Nolin. Skowhegan, Me. To make a scythe of high grade and uniform vention, with a ribbed back, the blade being formed of ne piece and homogeneous in its composition at it and having a socket to receive the rib of the back. By this improved method of manufacture, the steel is heate but a few times and to a lesser degree than by methis
Colter Band.-Thomas J. Mancill Maben, Miss. A simple and inexpensive colter, which may be fastened to a plow beam without drilling holes in
and weakening the latter, is provided by this invention. I comprises a top and bottom bar connected by diagønal
side bars, the top and bcttom bars having extensions side bars, the top and bcttom bars having extensions
with elongated openings through which hook bolts are with elongated openings through which hook belts are
passed, while a set screw is passed through one of the ide pieces. This colter band may be readlly applied
beams of different thicknesses or adjusted to the right or left or vertically, as desired.
Pruning Implement.-John L. Man ning, Bartow, Fla. This invention comprises a staff ning, Bartow, Fla. This invention comprises a staff or
handle and twe piveted hook-shape cutters, one cutter having an extended shank or lever arm which is piveted
to the landle, the other cutter having a sliding connec tion with the handle, a pull rod being connected with
the extended shank or lever arm, the arrangement being the extended shank or lever arm, the arrangement being
such that a pull on the lever arm operates both cutters such that a pull
simultane ously.

## Miscellaneous.

Fire Truck.-Richard J. Voelker, St Louis, Mo. This invention relates especially to the imple form of latch mechanism by which the steering r being jarred be prevented from accidentally jumpin or removed without displacing the steering wheel.
Weather Signal Indicator.-J. G Wall, Brooklyn, N. Y. For use in public and privat weather signal indicator to display signals according to the daily reports of the Weather Burean, comprising bulletin board formed with means for reading the weath$r$ and storm signals, such means being printed, paintea, ext to be readily interpreted by the public, in connection with a clangeable calendar, graduations with pointers in air and sensible temperatures are gıven by the indicator This inventor has also further protected his weather sis nal indicator by taking out a copyright thereon.
Door Securer. - Richard D. Williams, ew Yorik Cily. For the use of guests, boardersan travelers, etc., this device is more especially designea,
comprising a series of telescoping tubes, the upper on having a flat forked head to engage the shank of a doc nob, while the lower one has a toothed foot piece, there
belng means for holding the head and foot pleces in alip nment, and a simple form of locking device to hold quickly and conveniently applied to lock a door against intruders, and may be telescoped into small space to be
carried in trunks and bags, being alse available as a andy
Machine for Cutting Dough.-Her nan Weichert, Jersey City, N. J. For cutting dough in
pieces of suitable size for leaves, each piece or loaf having he exact weight required, this invertor has devised nachine to which the dough need only be fed, when the required weight. In the receptacle to which the dough is fed is a screw conveyor. there being a reciprocating cutter mounted to cross the outlet of the receptacle, and means for regulating the area of the outlet. An delivereat may be increased or diminished, and any othe plastic material may be fed and cut off in a similar man
Lock-J ames M. Sweeney, Somerville Mass. This invention relates to locks in which a casing
carries a sliding bolt normally retained by a series of carries a siding bolt normally retained by a series of
tumbiers movable by a specially constructed key. to re
lease the bolt and rermit it to be shot the improvement providing a lock in which the bolt may be operated by a key or by a 15 teh. The upper part of the casing is re
cessed for any suitable form of latch, and the shape size. and relative dimensions of the timblers and ke. may be changed to produce inlumerable co
Autopneumatic Piano Player. Fred R. Goolman. Los Angeles, Cal. In this instrument
the pneumatic action, in combination witi bellows, valves the pneumatic action, in combination witin bellows, valves and tabes, forms the principal part of themechamism, the
control of the entire music, the perating of the expresplaying being effected witho the assistance of the - pe rator, and the instrument being designed to have a more perfect action and a finer and more delicate expression
than bas heretoforc becn attained. 'The instrument may be driven by an elcectric or water motor, spring or weight

## It almost any piano or reed parts being modifled to suit.

Envelope.-Albert Butzer, Carlyle III. The blank of which this envelope is made has a edge a locking tongue, cuts in line with the sides of the tongue extending into the blank, and the inner end of the tongue having a delicate connection with the blank
It is designed that the envelope shall be inexpensive to It is designed that the envelope shall be inexpensive to
make, and that after having once been closed it may not nake, and that after having onc
be reepened without detection.
Mucilage Holder.-Frank F. Peck, dapted to be pressed below the level of the mucilage by he brush and to rise above such level on removing the brusb, the arrangement beine such as to permit of read
ily scraping off surplus mucilage from the brush, auto matically returning it to the chamber or well without clogging the mouth of the holder. This prevents also the loss of mucilage from its becoming hard in drying e the surfaces exposed to the air, and the mucilage in the holder retains its consistency for an additional period,
not being liable to become unclean from dust and other not being lia
impurities.
Writing Tablet.-William H. Grifn, Hawthorne, N. J. A simple and inexpensive device ates, is provided by this invention, the [device being writing tablet. Mounted on one end of a board or back ing is a spring-held bar adapted to clamp the paper on held in desired position by the action of the spring.
Schooi, Room Directory and Bulle-ins.- James S . McClung, Pueble, Col. This board has
series of clips on its front face to receive information cards bearing on one face the name, age, grade and date of entrance of pupil, with address of parent or guardian nd on the epposite face a record of physical condition, etc., a record card being removably secured on the ob-
verse side of the board presenting a digest of the record of pupils. The improvement is designed to present a record of which all the details will be readily accessible, -om and investigate the history of one or more pupis thout aisturbing teacher or stuanta.
Anti-Rat tler for Thill Couplings. - Frank P. Johnson, Danville, Pa. This invention of the same inventor, and comprises a bolt for securing the thill to the axle clip, the bolt having one end ex
tended downwardly and inwardly, while a wear plate has is lower end connected with the down ward and inwar
extension of the bolt, a spring engaging the lower per tion of the plate and pressing forward its upper portion nd may be used on beth right and left hand couplings.
Fire Escape.-Joseph Hagel, Mount Sterling, Ill. A slotted tube is arranged vertically as a
permanent fixture on a building, according to this invenion, a block sliding in the tube being moved by a rop or cable extending from cranks and a drum at the bo
tom over a pulley at the top of the tube, and there being wered the cige bing arranged to be locked at desired height. The device may be used to permit fire men to conveniently carry and operate hose, as well a
to facilitate escape from any of the floors of a build-

Dumb Waiter Safety Door. - Theo dore Grottke, West Hoboken, N. J. T• close the doorb
of dumb waiter shafts at each fleor of a building, to prevent fire from spreading therein, and to allow the
cage to open the doors noiselessly at each ascent and descent, is the object of this invention, according t
which the deors areh inged at one side of the shaft and normally supperted horizontally by independent counter balancing levers, there being sets of door openers at the top and bottom of the cage adapted to successively en
gage the doors and swing them upward or downwar Window Shade Fixture and Cu Tain Pole Support.-Gcorge Biehn, North Yakima,
$W_{\text {ash }}$ This invention relates to fixtures adapted for ash. This invention relates to fixtures adapted fo
ready attachment upon the side or top mouldings of ready attachment upon the side or top mouldings of
vindow casements without the use of screws or nails ffording a re:iable support for the window shade at an desired point on the casement, and also providing f
the ready removal of the flixtures without tools. Noval bracket supports for the curtain pole are also provided which are likewise arranged for attachment or remov

號
bed Rail Clamp. - La favette W eaver Jr. Bridgeton, N. J. An improved vetachable clamp or
astening for securing together the slats that suppori a ed bottom or springs and the side rails of a bedstea forms the subject of this invention The clamp com-
prises a curved or bent main jaw adapted to engage the rail, two slidable auxiliary jaws to engage a slat, while a no link are pivot three jaws. T pivotal connections form an arrangement on an ec
centric so that the lever will he self-lockirg when adjustai.
Artificial Leg. - Amos E. Tullis, Fargo, N. D. This leg has an cxternal shell, preferably of raw hide. and inner inflatable air cushion with tube special arrangenent closug the tube. the arrangement of parts being such as to prevent the air cushion getting out
-f place, while it may be casilv inspected or removed of place, while it may be casily inspected or removed
for repairs if necessary. This artificial leg is dessuned to be conveniently fitted to place and worn withou
njury or discomfort to the stump of the limb. on whic it may be seciurely held.
Composite Flooring or Ceiling.John W. Piver, Pinia, Ga. A composite board or plank adapted for use in flooring or ceiling. etc., is provided by
thice invention, being formed of longitudinal stripe cut from a flat grain beard or plank, the outside strips thicker than the inside oncs, and with the edge grain
practically at right angles to the wearing surface, thus
producing an article which shall be more attractive or
ornamental in appearance than composite boards or
planiss ordinarily used, and with ne loss or waste of planks

Fence Post.-Alfred J. Ogram, Literberry, P Ill. This invention relates especially to fence post braces adapted to be buried in the ground. providing zontal foot is bolted to the base of the post, while an inclined body portion meets an extended horizontal portion and diagonal top brace, both the latter being also anchored to the post.

## Designs.

Skirt Band.-Eliner W. Towne, New York City. This design presents an ornamental bana or the top of a skirt, in which bars arranged in cir
cumferential groups meet a series of transverse bars.
Carpet.-Eugene A. Crowe, Brooklyn abrics have been granted this inventor, one of which as scroll stems interrupte by feliate figures, combine with diverging leaves, fiowers and foliage, the background being of stipp.e character. In the other design
foliate figure is a prominent feature, with a compound curvid stem and leaves and sprays carried by the stem with a feathery effect, the leaves and sprays appearing at the ends as well as at the sides of the stem.
Note.- Copies of any of the above patents will be furnished by Munn \& C.. for 10 cents each. Please
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ferracute Machine Ce., Bridgeton, N. J. Full Improved Bicycle Machinery of every description.
The Garvin Machine Co., Spring and Varick Sts., N. Y. Concrete Houses - cheaper than brick, superior
tone. "Ransome," 757 Monadn 0 B Block, Chicago. The celeorated "Hornsby-Akroyd" Patent Safety $\mathrm{O}_{\mathrm{i}}$
Engine is built by the De La Vergne Refrigerating Ma The best book for electricians and beginners in elec ricity is " Experimental Science," by Gee. M. Hopking, 27. Send for new and complete catalogue of Scientific

mints to correspondents
Names and $A$ ddress must accompany all letters
or no attention will be paid thereto. This is for our References to formor pabticlestion. or answers should
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noiriries not answered ne reasenable time should
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some answers require not a little revearch, and
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pecial river riter In imation on matters of
personal rather than generai interest cannot be expected without remuneration.
cientific American ant suplements referred
to may oe had at the oticice. scientinc American suppiements referred
to may oe had at the otite. Prive 10 cents each.
Beoks referred to promptly suplied on receipt of
Mince. Is sent for examination should be distinctly
markei or labelec.
(7348) L. H. B. says: Can you furnish me the formula for making seal metal, such as
is used for the "counters" in notarial and corporate seals? A. Use the following for the counters for seals:
Lead, 3 lb .; tin, 2 lb .; bismuth, 5 lb ; melt in the order
(7349) A. D. T. writes : At my home is a large leather-covered arm chair. Several evenings ago
was very much surprised when I arose from the same and touched the valve on the gas pipe fo find hat an electric spark enisted from my finger thps. This occurred on repeated trials. In the reom there are ne me-
tallic bodies other than the gas pipe. Everything I with is insulated, the chair with the leather, the floor
with carpet. The spark may be scen and heard in any part of the room. It is a mystery to me and to all whom I talk to of it. There are no wires of any lind in the house; neither telephone nor light. Any explanation of
the above would be highly appreciated. A. Y ou describe the usual experiment of lighting gas with your finger. Had some one turned the gas cn, and had you then
toncled the tip, the gas would have been lighted by the spark. The electricity is due to a charge gained by yourself through friction either against the leather of the chair or the wool of the carpet, probably the latter. Such a charge can $\begin{aligned} & \text { nly be gained by a nonconductor or by an } \\ & \text { insulated conductor, such as is the human body when }\end{aligned}$ tanding on woolen. In cold, dry weather such electrical charges are very easily produced upon the clothing in
the hair, or rubbing paper, silk, or woolen.
(7350) W. B. B. asks (1) how to make or where to get the bichromate cell spoken of in the article
"Howte Make a Medical Cuill," by S R. Bi, ttouc, in Supplement, Ne. 569. A. Scien rific american Sup
plement, Ne. 992 , price 10 cents. describes with full de PLEMENT, N•. 192 , price
tall and drawings the bich cenates. cell, so that any one can
make it. 2 w moke it. 2. Weuld any goed battery do? If so. What
voltage will it require? A. Any goed battery will de. The bichromate cell las 18 volts. 3. Would the Mesce dry battery do? A. You will require two Mesco or oth
dry or Leclanche cells to cqual one bichromate cell. dry battery nill not work the coill
bichromate battery will do it.
(7351) W. G. H. asks: 1. What is the best battery for rumning a miniature electric locomotive, a bichromate cell. 2. For a 75 foot telephone lme do need a battery at both ends? If so, how shall I connect them to the line? A. If vou have a permanent magnet telephone, you can use it without any battery. The car-
bon transmitter requires a cell for :ts primary coil at (7352) J. H. T. aiks for information about reading telescopes such as are used with reflecting
galvanometers, etc. I weuld like to know lens system and details of constiuction. A. A reading telescope is hem are ordinary spy glasses with the erecting lenses re noved from the inner tube. Such a spy glass can be ought for a couple of dollars with an object glass about ient stand and attach the scale below the telescope. The gures on the scale must be reversed so as to be turned mirror of the galvanometer. The object glass should be an achromatic lens of 8 inches to 9 inches focus and the eye piece a positive eye piece of about 2 inches f $\bullet$ cus.
These require the tube to be 10 inches to 11 inches long hen adjusted for focus.
(7353) E. G. asks what kind of an at achment to put on a common turning lathe for turning balls-wood or thetal-w: give the process for turn-
ne wooden balls and billiar bell ins wooden balls and billiard balls. First, lurn by a tempate or gage or by caliper, as nearly spherical as pos ble. Then make a chuck of wood and fasten it to the the chuck hollow so that the ball will enter nearly half a hemisphere. Cnuck the ball at right angles to the posiion that it was first turned in. 'Turn ©ff the outside or projecting part true by nearly obliterating the lines of the rist turnng, then rechuck ana turn the otherhemisphere. If great nicety is required, as in billiard balls, you will
have to contnoue the chucking in several other positions and turn very carefully vith curved tools. A little chalk nt he chuck will help the ball $t$ etick. If $y \bullet u$ have dif ficulty in holding the hall in, you may put a small false center against the ball, made of iron, with a thin piece of leather waxed upon it to prevent scratching. If this is
dene nicely, you may do the work without chucking the ball se deep.
(7354) L. H. M. writes: 1. The safety valve of a
never foams. How and by means of what forcc does it set there? A. Whenever the safety valve blows off, the
water beneath is agitated and small particles are lifted an blown through the safety valve. A boiler alxays foams when it is making steam. The space just above the water line is filled with a water mist raised by the liberation of the steam below the surface, which, on passg the surface, breaks the water in a mist or small par rown from any boiler having too little steam reay bo Stand on the opposite side of a darkened room from cress it, so that you can see the several ( 7 or 8 ) images produce by multiple reflection. If the brightest image is at the top and the othcts grow dimmer as you descend, change the mirror end for end. so that you look acrossit in the opposite direction to which you did at first. The brightest of the several images is now at the bottom and explain how changing the mirror inverts the order of the nages? A. some defect in the surface of the mirror produces the change descibed. A perfect
the same quality of image in any direction.
(7355) C. E. P. writes : 1. I have a would be speeded to 2010 ; dimensions 2 s follows: Fiel magnet $171 / \frac{1}{2}$ inches long, 3 inches wide, $1 / 2$ inch thick, turns of No. 16 wire to each layer, and there are 32 ayers, making 2,240 turns in all. Drum armature. The armature is 4 inches in diameter, 3 inches long, eight sec-
tions, wound with No. 18 wre, twe layers, making in all 30 turns. A. About 30 volts, if your field is cast If wrought iren, it would be 40 volts. 2. Would this machine make a sufficient exciter for an alternator of the side 16 inches ins for 55 or 1 io volts? Ringer field hches wide, armature 10 inches in diameter. A. Yes 3 What size wire for this machine to get 110 vo
(7356) C. A. B. asks for a description of a battery tight from one five 16 candle power lamps A. Y Yu cannot, except at very great cost, light 10 cand
power lamps by a battery. In addition to the material it would require one man's labor to keep the battery in proper order. Only very small lamps. 1 to $5 \mathrm{c} . \mathrm{p}$., are ever ishted by batteries, and these more for some especia uantity of light or economs.
(7357) C. W. R. asks: 1. What is the difference between an induction coil and an intensity coil? A. We do not know just how the name " intensity onl " may have been used in the place where you saw
it. It might be used for an induction coil in which the voltage is raised, as in the Ruhmkorff coil, in distinction increased as in an ordinary transformer. 2 How could I wiad the dynam described on page 494, "Experimental Science, " for the highest posible voltage and how many volts and amperes would I get? Alse, could I use the
same for electroplating, introducing resistance enough ?
A. Wind it like the hand power dyname, page 48\%,
same velume, and you will have twelve volts and perhaps
thrce amperes. You canlot then use it to advantage for plating; the current 18 very small. Still, if you put in resistance in the external circuit, it will plate slowly. Wonla the avove dyname be more powerful if the clectric motor, and if sol what size wire would it be wound with? A. No. There is not room for such
an armature between the poles. 4. What would be the voltageand amperage of the above dyname if the field werc excited with two Samson batteries? A. It would make little differenc' and there would be no use in exciting the fields by external current when the machive an excite its onn fields. You can, however, ao it you wish. 5. What voltage and amperage are N. 2 Samson hatteries? alse of Mesce dry batteries when
new? A. All forms of Leclanche cells have about $11 / 2$ external circuit. On short circuit they resistance of the to ten amperes, but could not deliver se much bey
few seconds. They would polarize immediately.

## NEW BOOKS, ETC

Four'th annual Report of the Con MISSIONER Of Public Roads. For
the Year ending October 31, 1897 . Issued under the Authority of Henry
I. Budd. Commissioner of Public Roads. Trenton, N. J. 1898
This is an interesting pamphlet which shows the bad which have been effected in them. The State of New ersey may well be proud of her splenda network of ricts delightful. The pamphlet contains several studies on read building which ought to prove of value to all Primer of Psychology. By Ed ward Broadford Titchener. New York Macmillan Company. 1898. 12mo, pp. 314. Price $\$ 1$.
In the last few yeare psychoology has come prominentiy - the front as a study which should be tanght in all ittle of techuical detail as is compatible with accuras $f$ statement the wethods do results of 1 ald hology, and the reader is stimulated by means of psesions and exercises upen the subject matter of the chapters to refer to more adranced treatises. The sub. ect may be introduced elther by way of a generatac cont of scientific study or by the way of braiu anatomy dapted for the purpese for which it is in be admirably apted the pupose for wint is
Hawail's S'rory by Hawail's Queen
 Lee \& Sh
Price $\$ 2$.
The present work is an autobiography of Hawaii's ate queen. It is particularly timely in vie $N$ of the
probable annexation of Hawaii to the United States As might be supposed, Queen Lilinokalani, in detaling he events of her life, protests against the revelution which deprived her of her throne and answers the slurs manners and customs of this strange people and the ook offers interesting reading. The work 18 an impertant contribution to the history of the Hawaiian of annexation now pending before the United States Senate, and ought comman considerable attention
from the reading and thinking public. The book is handsomely made and is well illustrated by half-tone engravings.
The Art of Getting Rich. By Henry Knowledge Publishin. Company. Pp. 294. Price $\$ 1.50$ cloth, 50 cents paper.
The present work tellshow fortunes were made in the Liddle ages and how they are made today, as weli as straned to observe that we de not believe that fortunes this or any other book, but a diligent study of it would
tend to inculcate that thrift which has been the basis of nearly all of the large fortunes.
The Report of the Superintendent Geodetic Survey. Showing the progress of work during the fiscal year ending with June, 1896. Washing ton: Government Printing Ofice.
1897. Pp. 772. Quarto, 19 naps.

## TO INVENTORS


INDEX OF INVENTIONS
For which Letters Patent of the United States were Granted FEBRUARY 8, 1898,

AND EACH BEARING THAT DATE.





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