September 5, 1874.]
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ment. Andrew's Patent, naside page.

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anding Machne. Send for circular and sample of work. B. C. Mach's Co., Batte Creek. Mtch.. Boa 2 2.

## 

P. D. R. and several other correspondents torial pares of this 18ue.-H. D. E. will find directions
for making an moollan harp on p. 30 , vol. 26.--s. B. C.

$\xrightarrow[\text { Gchaum? }]{\text { G. Woak frat tin molten tallow, then in molten }}$


 chamber outstde, the water pasing back trom radiato and entertng bottom of coti, so as to keep up a contin. uous clrculation. I am told that teeam will format
pontat In the colland choke the plpe, preventing a free andsteady clrculation. Is this 8o? What size of plpe
ought Ito use and what ta the beat form of hot water radlator? Ia there anythang better than a smple mant.
fold of plain plpe? A. A much larger plpe will be nece esary to enable you to gecure ctrculation with the
arrangement that you propose. The mantrold will an.
B. B. B. asks: In a three mile boat race
would take of the fritt mile and a half and return, than it
row the three miles stralght ahead? A. Feg.
J. G. asks: In what part of the world was
the Garden of Eden? A. No one know. If the zarth goes round on its axis, why do we no St to the part where there to no frost or snow, or to
the part where there 18 no ummmer? A. If ou wil conaut any elementary
readlly percelve the reasoon.
Is there any thng produced that will keep coal dust cemented together so that tht willt and burning to ashe before it will part? A. There are numerous patents for
thls purpose, many of which have been described tn the J. H. K. asks: I am engaged in an experi
ment that requires the use of a It will be neceasary they should be aboontutely alrtitht,
and, as they war be exposed (probaby) to water, 1 t t and. as they will be exposed (probably) to water, tit til
equally mportant they ghould be waterpoor. Will Them to gatn these ende? Will gum cloth angwer? It
oo, mow sallilitaten it to the heads, and anould those headd be of wood or leather? A. We think you can ob.
taitrubber bottles or syringes that will be cheaper and tatarubber bottles or syringes that will be cheaper and
more astigactory than the arrangement that you pro
$\underset{\text { teetin such a manner that it would enter in alrtight }}{\text { W. P. An }}$ cylluder, would the sudden compression heat the alr
within the cyllnder? II so, would the expanaton of that
 the heat of compressaton would be disalapated, so that
the uaeful effect would not be as great as the power exerted.
What
What would be the preasure of atr per square tnch on
the tiaglde of a hollow casting one foet guare
 atmosphertc pressare? A. Proteasor Thuraton has pub
ished t table of the temperatures and presurea of air Youcan obtatn lit from D. Van Nostrand. Your other
question 1 of of business character.
W. S. F.asks: When is the transit of Venus
otake place? When nas the last? when will be the
 Thereare two tranalts, el ght years apart, and then more
than a century elapgei, afterwhich there are two more tranotts, elght yeara apart. A tranalt was predicted by Kepler, In 1651 , but was not observed. The tranalt of
1639 was observed by Horrox and Crabtree, in England.
 Wldely separated. The next rranat will take place on ery he present century will occur on December 6,1882 J. T. B. says: I have moved into a large
frame house, which resta upon pllara four feet Likn With latitice work between them, oo that there 18 a free
circulation of alr twe honse 1 g lathed and plastered throughout; yet, in a few days, artele2es of clothtna,
shoes, etc., will mold if put in the closets please tell
 noldine tas tn closeta, but in your case it ta caused mos probably by the fresh plasterlag of the house. Plaster
absorbs motature from the atmosphere tor some time atter it ti put on, and under certain condtitons of tem perature will give it of tin large dropp and streams.
is or this reason that new walls cannot be safely patrit. ed. We remember a case in point, where the newly
plastered wallib of the clasp ooom tn a chool bullding
were erve as slate, to be used for writing upon in place o the ordinary loackboradd. They were flatsped very
handoomely, and the imitation was perfect ; but in one weetr'g time the patint hegan to orun tis such streams as
 liosete open, and tet the
H. A. W. . says: You have been calling at
ention to the timportance of educatitg the lett gict of the body and braln. Is $1 t$ not a fact that more persons
are paralizzed on the right tide than the left, and may it vertaxed by giving it too large a proportion of the Work to be done? A. You evidently have forgotten
that the lett stie of the brain ts the tndex of the right Ide of the body. If you mantatin that the left alide of
he braln and left side of the body are both paral gred it


Cioll C. P. asks: Which will use the most Inches, each cut off at hali stroke, with 70 108. steam,
 plnton 12 nchene : or a low presure condenstng engtioe,
of dimensions equal to the task, with a geod generator of dimenslons equal to the task, with a good generator?
A. The second would be the moot economical, with the A. The second would be the most eco
ame grade of expanasion as the first.

Pame grade of expanion as the irrat.
Where could I Ieara the mill wright's trade? A. There Where could Mearn the minwrights trade? A. There
are numeroug good sopp scatered over the country.
It would be well for you to eater one of them as an ap.
 he propretor.
How can anyone enter the Bureau of Stesm Englneer to at washngton? We do not undertand exactly
what postilo you want. Write your wthanea deflitely to the Chef of the Bureau of steam Engineerlig, and
sou will probably obtain a reply. If there is stlla a ditAccult, you m1
your ditrict.
C. C. A.-The instrument you describe is
simplya preumatic ayringe. It 18 not a noveltr, having been sown tu coursec of experiments, under the sub
J. A. H. asks: Why does a glass bottle Surt, Ahen you expoose tit to the alr ana las it on red
oot coils? $A$. It to owing to the unequal expansion ot heglasa when placed upon the coals.
questionts very Indendite. The telescope tis compose
 Ight, objects magniled seerall dla
elementary text book upon optces.
H. S. asks: My finger nails are very brittle
 ails with ili; blycerin will not answer; keep the nalle
ut close. ir very fore, you must keep them bathed ont10uall
J. M. B. says: Please give a formula for
calculating the proper dimenatons of a thy wheel, dimen.

J. W. M.- Your idea for an electro-mag.
netic engine is not a or nothng betng gatned by 14 use ; and Instead of ie-
placlag the batery, you only lessen the rellabillty by
E. H. H. asks: Is there any machinery for cutting glies in use, that is workligg succeasfully, and
what has been the pricipal trouble with machne-cut nles? A. There are several of such machnes, machne.
cut fles betng in common use. The are not, however, equal to hand-cut flleg, elther tit the regularitt of the
G. S. asks: How can I harden thin brass
 Ver a mandrel the thickness of a common penhider while tit on on the mandrel after it has been wound.
 of superior glue.
To what color must I heat a watch apring to temper It, and muat tit not be well hardened before tempering?
A. To harden such a apring, heat it to a red heat and im. nere it in on thl cold. Then fry th tin equal parts of on and L, and then holding it in the flame oo that the ppring
vill blaze of itself when held away from the flame.
After blazing treely, allow the spring to cool of theelf.
W. G. R. asks: Will immersion in a solulon of aul phate of ooda be sumclent to teat the effectis
of frost upon a mample of artulactal stone? A . We hardy

P. J. H. asks: What is the effect of a daily
pplication of ratin water and ammonit to the hatr A. If the eolution or ammonata 10 scording to the regular
ormula, there will be no tnjurlous effecta. Inhaling the vapor of ammonal
detrimental to the halr.
N.D. T. asks: Is there any better substance water than the permanganate of potaba? If not, what mount ahould be ueed in purifytigg a tun of water, and
hat mantpulations are required? A. sulphate of al mina 1 s used topurttywater. If you use permanganat
 waterif if the waterreta 1 a a plak hue, put a stick or or
hip tint when the color will shortly disappear. You Record, 18:4.
D. W.S. asks: 1. Will the copper lightning do on my house tinure the water in the well to which
 round elght feet? A. Yes, and it would be betill safer
you depoiteds cart load or more of well ir you deposited s cart load or more of well burned
charcoal at the bottom of the rod, surrounding the rod Or a length of ceveral feet with the charcoal.
C. M. asks: In your issuue of July 18, in
 What is
balt
whatas.
What ts peroxide of lead,and la titnown by any more

Is anything mixed with the sulphur in which matches
J. E.S. .asks: Is it a fact that the water 150
miles from the mouth of the Amazon river 18 gutable or drlaking, or does 1 t mis with th
What number of emery and what grade ta most ant
 emery wheels from blanks made as planer knives are,
Hat 1 , with teel facee and lron backligz; and I ind that
 cut the ateel, but the tron will glaze the whe els. . I want
them for fast cutting. A. We adylise you to conalt a rellable dealer
What would be the actual horse power of a locomo
 The mean effectly ve pressure of steam to cyllndera tio re.
airedtor the solution of this problem.
G. G. McC. asks: What degree of heat is
necesaary tor the tncubation or hatching of the egg of

It J. A. A. asks: What is pip among chickens Is it injurious to the fowle? What 18 the hard sub
gtance on the endof chickens'tongues? A. "The plp os aome ta considered a catarrhal disease productng mouth, and tongue of others conalder that the disorder originates in a small realcle formed on the tip of th tongue, the contents of which, betng absorbed, lead to
the tunammation and the thickening of the akta. The common and well known symptom is a white scale o horny substance growing upon the tip of the tongue, by
which the breathing becomes partly impeded; the beak ta frequently held open as it gasplag for breath, and be appearruffled or disordered. The tongue is alao ver dry; and while the appetite is not much impaired, the
disordered fowl can eat only with conalderable diffcul disordered fowl can eat only with conalderable diffcu
ty, and ettain corners, pining away. The most effectua cure we have ever employed, and that, when the diseas has not proceeded too far, was to tear off the scale with
the nalla of our forefliger and thumb; and it ts not dif. the nalis of our forefnger and thumb; and it is not dif
acult, as it ta not adhestve; and then Boawell recom marge lump of fresh butter, which has previously been well mixed with Scotch snuff. • This,' says Boswell is a recipe which we consclentlously and confldently
recommend; and again we beg to repeat, that, in our experience, we have never known it to fall, except from
our own negligence in the delay of tia application.'"-
E. A. F. T. says: I have constructed a galhign and 6 inches in ditameter. ts made of very thick acld to 10 parts of water. Then I insert a glase cylln der (tinches indameter), closed at the lower end with
blottingpaper. In this Insert a cylinder of rolled up murlatizached 10 artar very well for silver nlating ; would it also do for nicke plating? A. Scveral cells of this description may be
used for ntckel as well as allver plating on a amall scale. used for nickel as well as sllver plating on a small scale.
How should ntckel ealta be prepared for plating? A. will And a rectpe on p. 51, vol. 30 .
C. W. G. says: I have discovered (near the nous size; they were cropptng out of the bank. One
bone measured 27 inches in circumference, 13 inches from surface of bone to the marrow. One of the upper
j3w teeth measured 111 nchesin length and $4 \% /$ Inches in Fldth. The alde of the faw were taken weighed 25 lbs, , the teeth belng, seemingly all connected together. About 5y/ feet away, I found
the rest of the upper jaw, somewhat decomposed though the teeth were in a good state of preservation
Can you give me the name from thit descrittion? Can you give me the name from thit description? A No. Wem1ght, it you sent on some of the teeth. If
you can obtain more data in regard to the gize of the
skeleton, leogih of body, lega, neck, etc., we might be able to aumwer you fully.
M. E. P. says: Please inform me how to heir green color? A. Small cucumbers, but not to young, are wipedclean with a drycloth. put intoa jar and bolling vinegar, with a handful of salt, poured on
them. Boll up the vinegar every three days, and pour It on them, till they become green ; then add gingeran esence o copper, and pickles so oprepared are injuriou
What will prevent insecta from eating wall paper? You do not state what the lance. some can onl ting the paper on the wall
How can I preserve citron to have it like the drted pound, and simmer until tender. Allow to dry in the
C. C. M., Jr., says: I have just completed an electric machine, ogt itwinn not work, sith.ourh every
thing appears to be mo gdod order. Rubbers are made amalkam of mercury, zine, and tin. The prime conduc tor ts made of thsulated wood, covered with tin foll
which aets, or should act as a good conductor of the which asets or should act as a good conductor of the
electricity, if any were developed. The negative conelectricity, if any were developed. The negative con
ductor is not insulated as most are, but is made of wood conected with the base. Perhaps I may have made greatly oblige me by stating it. The glass is insulated rom the atmosphere by olled sllk. A. Your negativ hould be placed in connection with the earth, if th positive fuld is desired; and if the negative spark is re
quired, the chain should be placed in connection with quired, the chain should be placed in connection wit the prime conductor and the earth. One of the con
ductorsmustalways be in connection with the carth
A. C. H. asks: 1. A tank full of water has outlets. If $a$ is open, it takes 15 minutes to empty the
tank, $b 30, c 45$, and $d 60$. How longwill it take if all four are opened at once? A. It will take about $7 / 2$ minutes.
2. Has the amount of wateranything to do with pressure of the diferent slzes? A. Under the same presaure,
large tube will discharge more water proportionally tuan a small tube
ne whit a white head commonly called the bald eagle.
How can I prepare leaves of plants so as to leave the Put them in waterandallow to atanduntll the parta de ared to be removed are nearly decomposed. The length of time will depend upon the kind of plant. Remove bheets of blotting paper. Then bleach by a preparatio sold in the market for the purpose. If this cannut b What 18 osmic acid? A. " The tetroxide of osmlum OA, commonly called osmic actd, ta the volatile strong
omelling compound formed when osmlum or etther o melling compound formed when osmlum or either
its lower oxides ts heated in the air, or treated wit nitric or nitro-murlatic acid. It may be prepared b heang osmlum in a current of oxygen gas, and con denses in the cool part of the apparatus in colorless
transparent cryatals. It melta below $212^{\circ}$ Fah., and bolls at a temperature a little above its melting point
Itsvaporhas an intolerably pungent odor : attacks the eyesstrongly and painfully, and is excesaively poison ous. Osmic actd le dissolvedslowly, but in considerable quantity, by water, forming an acid solution. It is a eparating todine from potasstum todide, converting
 O the French Academp ; was calculated that it was enough to poison the who

