vigoroue raken every morning wid

$$
\begin{aligned}
& \text { a vigorous rubbing with a rough towel } \\
& \text { atterwards. Out-door exerecise in the } \\
& \text { warmest part of the day, and a course }
\end{aligned}
$$

$$
\begin{aligned}
& \text { warmest part of the day, and a courze } \\
& \text { of cod Her uver oil s usually beneficial } \\
& \text { For those who suffer from derange- }
\end{aligned}
$$


 tuane and antr,


FOR WOMEN ANDHOME
ITEMS OF INTEARST POR MAIDS



 Nos. che










##  

## 






$$
\begin{aligned}
& \text { The manur nelonilogs of Drese } \\
& \text { The minor accessories of drese go } \\
& \text { fat toward making a complete costume }
\end{aligned}
$$



$$
\begin{aligned}
& \text { far toward making a complete costum } \\
& \text { and torm the flitithing toviches of wha } \\
& \text { the French call harmonious dreessing }
\end{aligned}
$$



$$
\begin{aligned}
& \text { the French call harmontous dressing. } \\
& \text { A well dressed woman need not neces. } \\
& \text { sarilly be expenalvely dressed. She ts }
\end{aligned}
$$



abose attire are becomingly and suit-
abty, as well as fanhonably chosen
harmonioualy comblned, carefully
 ing the Hittle detaftis of dress correct.
A Worth gown, a diamond stomacher. or a abth gown, a diamond stomache wrap cannot atone for
torn coretet cover, torn corset cover, a trowsy petticoot,
a torn glove or a pair of crooked heela There is an old saying that a lady may wears. That mout women are ver particular about the whoes they wear.
and expeet great things trom the mer.
chants who cater to therer needs te evl. which woon
them best.

## Hestides applying it to chapped hands aud taking It internally for colds, there are many other uisea for pure aud taking it internally for colds, there are many other uisen for pure siycerine. For laundry purposes it is invaluable hich sottened water ts tmperatite: the quantity to be used for such purthat it is not extravagant: for inatance, large bucket, in whe pure anch artaree and cumbrous things as blankets would be be Appied to to boots, leather galters, etce. when theso have been Impaired and hardenees by damp, wet or mud, it pre- vents cracks and untimely signs over night and wiped off before blacking is applied in the morning. ceaspoonfui of the name substance ad ed to every pound of four used tread and cake making ts a great in "shorter," and the artecles when bake pound of truit used in making jai will often do away altogether with carly erystallization which ts the bane of the thrifty housewife. <br> It th a mistake to fyty to the medicine chest directiy one feess arse in serious sorta, athough of course illnegses drugs are invaluable. If the and yeryes are out of order through worry or overwork, reat and quilet are th best doctors, with light, amusing hiter ature and recreation. A warm bat may be taken at night and a col oponge in the morning. Light, nour lebing tood and as nuuh sleep as poos alble. Many are amicted with weak circulation and suffer neverely weak





## 

SCIENTIFIC TOPICS CURRENT NOTES OF DISCOVERY
AND INVENTION.
 The Hent of stars.
$\begin{gathered}\text { Some scientifc measurements of the } \\ \text { heat of stars in recent years, white }\end{gathered}$ heat of stars in recent years, white
giving somewhat unsatisfactory results
as regards the direct purpose of the as regards the direct purpose of the
ates. rave shown the exceeding deli-
teacy of the instruments now employed for indlcating heat effects.
Prof. Boys describes his attempts to Prof. Boys describes his attempts to
detect heat radiatoma from the stars
by means of an exceedingly delleate radiometer, used in conjunction with
a sixteen-Inch reflecting telescope. In
spite of the fact that bis apparatus was sensitive enough to show the heat
equivalent to that of a candle 1.71
eniles away, no effect whatever could
mital me obtained from Venus, Jupiter, Sat-
be obre, Mars, Arcturus, Capelia, Vega or
urn,
any of the any of the numerous bright stars said
to lave been obtalned many years ago
by Huggins and Stone wrth compara-
tively insensitive apparatus. Further
tilat tively insensitive apparatus. Further
tnvestigations were undertaken by
Prot. Nchols at the Yerkes observa-
tory, Wisconsin. The testa were made
tole Prot. Nichois at the Yerkes Observa-
tory, Wisconsin. The testa were made
with an improved ratiometer of re-
markable sensitiveness. The radio-
 shielded from air currents and
other sources of disturbances. The in-
otruments consisted of a suspension
sit struments consised or a suspens.och
system formed of two mica diacs each
two millimeters in diameter, blackened two mimeters in diameter, blackened
on the face and supported on a light
cross arm on elther side of a thin
klass stafr, hung by an extremely fine quartz fiber in a partial vacuum. Both
vanes were exposed to the radiation
of the sky, at the focus of a silvered aperture and elght feet focus. Rays
from the star were reffected into
the concave mirror by means of a side-
rostat having a large, plane mirror of silvered glass. The rays entered the
radiometer through a tuuorte window.
With the With this apparatus a deflection of 0.1
millimeters would be given by a candle
thitteen miles away. Prof. Nichols' thirteen milles away. Prof. Nichols
radiometer 1s five times as sensitive as
that used by Prot. Boys, and the area of his telescope mirror is 2.4 times
that of the mirror used by Boys.
Seven determinations of the heat variattons of Arcturus gave a mean de-
flection of o.to millmeters. Vega was
also observed on seven nights, and also observed on seven nights, an
gave a mean deflection of o.27 milli-
meters. The results appear to b trustworthy, and estabish the ta
that the heat of some stars may be
terme that the heat of some stars may be
termined wth a fair approach to a
curacy, although many sources of curacy, although many sources of er-
ror exist, the actual value of whtch has
not yet been established. The test, not yet been established. The test,
however, may reasonably be consid-
ered to show that we do not recelve
from Areturus more heat than would from Arcturus more heat than would
reach us from a candle at a alstance
of five or six milles, no account being
taken in the latter case of atmosphere

Platunum Eloetrode Aro Lamps.
An entirely new departure in the construction of are lamps is disclosed
in a recent patent granted to an in-
ventor of New York. This lamp comvines the essenttal features of the in-
candescent lamp and those of the tacandescent lamp, and those of the fa-
millar arc lamp, the exhansted inclosIng globe of one and the are sprung
between two electrodes of the other. The electrodes are composed of plati-
num and gold. fused together in a
manner described by the inventor, and manner described by the inventor, and
these are supported by mannets and
plungers so as normally to remain in plungers so as normally to remain in
contact with each other when no cur-
ent ts passing, but to automatically ent ts passing, but to automatically
strike an arc when the lamp ts thrown
nto the circuit. The peculiar horl. onto the circuit. The pecullar hor1-
zontal arrangement of the quadant.
shaped electrodes is shown in the hhaped electrodes is shown in the
Thlustration. chamber in which
the are is maintained being highty rarineed prevents the oxidation and
ronsumption of the platinum electroder, so that they are non-consum-
ing, the same as an Incandescent lamp
alament. The high melting polnt of
quicklime sifted made of powdered
through a coarse mus
in bag over the white of an egal
lin bag over the white of an egg.
When buying carpets for preterence
select those with a small pattern, as
they are generally more closely woven hey are generally more closely wor
than thoos with arger designs.
Coal dust mixed with salt and wat Coal dust mixed with salt and water
and made into good sized lumps that
excellent to back up a fire for the Wht.
When a fire is nearly out it may
easily be induced to burn up brightiy



##  neandescent $\begin{aligned} & \text { Hghting - viz, great } \\ & \text { gteadiness of the inclosed alr eight } \\ & \text { globe. }\end{aligned}$

Hapld Ioe Cream Froozer.
prime requisites in tee crean The prime requisities in tre crean
freezers, from the housewifes polnt of
view, are the rapidity of the operation



OUR BUDGET OF FUN SOME GOOD JOKES ORIGINAL to Couse a
Jetasm


## suighuy mised.

"Prisoner," sald his honor, as the
case was closed, "you have been found case was closed, "you have been found
gullty of stealing a pig belonging to
Col. Childera. Have you anything to say before 1 pass sentence? "I has, eah," answered the prisoner,
as he rose up. "It was all a mistake,
 Childers. What 1 was arter was a
hawg belongling to Majah Dawson, hawg belonging to Majah Dawson, an
how dem two animala got mixed up
and de constable found de meat in my
 fur not keepin" better watch at de

## she Was so Surprised.

ay to you," began young Cholly Sappropose, "something which-ah-may apwize you think-ah-Miss

## That eertalaimed Miss Pepp-

 or once Cholly thought also, and on secona thought he dectded not topropose.-Philadelphia Press. "There's a man Y'm sorry for."
"He does seem to be in a pretty bad Hay. Paralyzed, tsn't he?"
"Yes. Paralysis is bad in any case, it would most people."
"Why sor" "You so he's been a teacher of
French. Now he has had to quit it.
He can't wigele bls shoulders."-ChiHe can't wow he has had to quit shoulders."-Chi-
cago Times-Herald. In order to prevent the rapid spread
flames in theaters and places of residence some attempt has been made
oo substitute draperies of asbestos for hose usually employed as curtains an
decorations. The welght and cost of that material, however, to soy cost onth-
ing of other objectlons, have inter tered with its use for this purpose-
And a wish bas long been entertained for a method of rendering ordinary materials freproot that shall be sim-
ple and tinexpensive, thus making possible the retention of the silk, woolen a process tabrics now in rewavor. Such
meported from Ger- The exact nature of the chemt many. The exact nature of the chem1-
cals utilized in this operation is not made known, but the Amertican consu
at Frefburg sends to Washington a re port on the subject. Samples of th
preparation having been procured, the consul tried a few experiments. Cloth
that had been treated with the fluld in question and dried was thrust into
a candle flame. The result was that cande name. The result was dal
the goods were charred, but they did
not take fire. Kerosene was the poured on a piece of material that had
been dipped in the preparation. When match was applled to it the oil would burn, but not the cloth. A bit of wood
wrapped in cloth that had been treated with the preparation was protected furnace. When bunting ore coals our
Whece
tains have been Impregnated wwith the fuld and dried an addition of less than 1 per cent of the welght can be de-
tected. The increase cost amounts to is done on a small scale and less when operations are conducted on a whole-
sale plan. The strength and color of touched by the process.-Memphis
scimitar, Scimita
25,537 Patents in 1809 .
The annual report of the commis-
sioner of patents for the year ending
Dee. 31,1899 , shows that the tonal sioner of patents tor the year ending
Dee. 31, 1899 , hows that the total re457, a sum but twice exceeded sinc
1836. The surplus for the year wa 1836. The surplus for the year wa
s113,673. The patent office now has
paid into the treasury $\$ 55,086,649$ more paid into the treasury $95.086,649$ mor
than it has drawn out. The number o
patents isued. Incluting designs and
relssue, was 25.527, a number vut once
exceeded. The number of patents ex
The piring during the yeer was 18,135 .
proportion to population, more patent
were Issued to citizens of Connectic
$\qquad$
titants. The commissloner approves a
bill pending in congress providing for
the construction of a freproof buthd-
$\qquad$
$\qquad$
From Russia comes the news that
Prof. Norsheweskil has invented an instrument, the prinelple of which is the
sensitiveness ot 1 IIht of elelentum and
and tellurium, both of which change their
quallty as conductors of eleetrity
with a variation in the light to whitch relative meaning only is indicated.
While their actual viston will be un-
and rects of changing light by its action.
It ts claimed that a totaly blind nan has been enabled to find the windows
in a rom, and atter some practict to
distingulah approachtng objects. 1ho taventor hopes to make the instrument
so eftelent that the blind will be able
to tell almost certinly when they art
approachlug an opaque or trangorent approachling
subs tance.

The thlet had been caught, red-
anded, but he feigned innocence nev"Ha!" exclaimed the pollcemann,
you're around again, eh?" I thought "ey put you away."
"No. The fudge sald he give me an"Oh, he dld? Come along then; we'll
hot him keep his word."-Philadelphat
ress.

Got Oat of It Chenply.
You saved my life, and whatever Thank you, sirt $1 / m$ a poor man,
ad it you help me with $\$ 15 \mathrm{I}$ should great'y obliged."
"You value my life at only $\$ 15$ ? Clear ive you shameless fellow: I wont
sive lant no so

Husband-" $\mathrm{Er}-\mathrm{my}$ dear, there is gogo be a very important-or-elec-
on at my club to-night, and I may--"
wife-"-
$\qquad$
$\qquad$
"Bre Helpling the Heathon.
collection wuz tuck up fer de starv-
"So 1 did, suh-so $I$ did; but $I$ been
rastlin' In s now my opinlon dat dem heathens
chuck. full, en any mo' would give em de indigestion!

W uittle boy was anked the other day Aat was meant by sins of omission.
He astutely replled, without any hes-
tation: "Those we have forgotten to Itation: "Those we have forgotten to
commit." This almost equals the iltlo
girl's defilition of talth as "belleving omething we kno
Household $W$ Words.

## 4

5

Mon mititr comeraction.
 Menpen aro



