

The Old Year and the New.
How swift they go,
Life's many years,
With their winds of woe
And their storms of tears,
And their darkest nights whose shadowy
sapes
Are lit with the flashes of starriest hopes,
And their sunshiny days on whose calm
heavens loom
The clouds of the tempest—the shadows of
gloom!
And ah! we pray
With a grief so drear,
That the years may stay
When their graves are near.
Tho' the brows of to-morrows be radiant
and bright,
With love and with beauty, with life and
with light,
The dead hearts of yesterdays, cold on the
bier,
To the hearts that survive them, are ever-
more dear.
For the heart so true
To each Old Year cleaves;
Tho' the hand of the New
Flowers garlands weaves.
But the flowers of the future, tho' fragrant
and fair,
With the past's withered leaflets may never
compare;
For dear is each dead leaf—and dearer each
flower—
In the wreaths which the brows of our past
years have worn.
Ye! men will cling
With a love to the last,
And wildly sing
Their arms round the past!
As the vine that clings to the oak that falls,
As the ivy twines round the crumbling
walls,
For the dust of the past some hearts higher
prize,
Than the stars that flash from the future's
bright skies.
And why not so?
The old, old years,
They knew and they know
All our hopes and fears;
We walked by their side, and we told them
each grief,
And they kissed off our tears while they
whispered relief;
And the stories of hearts that may not be
revealed
In the hearts of the dead years are buried
and sealed.
Let the New Year sing
At the Old Year's grave;
Will the New Year bring
What the Old Year gave?
Ah! the Stranger-Year trips over the snows,
And his brow is wreathed with many a rose;
But how many thorns do the roses conceal,
Which the roses when withered will soon
reveal?
Let the New Year smile
When the Old Year dies;
In how short a while
Shall the smiles be sighs?
Yea! Stranger-Year, thou hast many a
charm,
And thy face is fair and thy greeting warm,
But dearer than thou in his shroud of
snows—
Is the furrowed face of the year that goes.
Ye! bright New Year,
O'er all the earth,
With song and with cheer,
They will hail thy birth;
They will trust thy words in a single hour
And they will love thy face, they will lau-
thy power,
For the New has charms which the Old has
not,
And the Stranger's face makes the Friend's
forgot.
—[Father Ryan.]

BETWEEN TWO LOVES.

BY OLIVIA WARDELL.

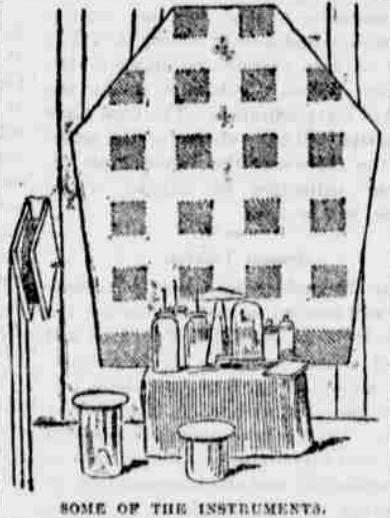
While trying to secure some wild
flowers for my cousin Gertrude, I lost
my balance, and fell over the cliff,
where they found me unconscious. I
will say right here that I had not per-
formed this dangerous feat because I
loved Gertrude more than her sister
Hope. I felt that I was destined to
lose my heart to one of them, but at
the time was undivided in my liking.
I had been unconscious for some
days, when one morning I knew for
the first time what was passing about
me. I could distinguish soft voices
that were familiar.
I tried to open my eyes and to
speak, but in vain. A weight, as of
lead, pressed down my lids and tied
my tongue.
But I could hear, at first faintly,
then distinctly.
"Isn't it very strange, Gertie, how
certain misfortunes are to come to-
gether? Only think of that bank in
Calcutta falling, and of cousin Rich-
ard losing his fortune, while he is ly-
ing here sick and unconscious!"
"It is more disagreeable than
strange, I think," Gertrude's voice
answered, "for from a great catch he
has become a pauper. I must say it's
disappointing enough. I know he
loves me devotedly, Hope, and I had
almost grown to like him as well, but
now of course, when he gets better,
I shall at once have to put him in his
true place."
"Gertie! Gertie! don't make your-
self out so heartless and mercenary!"
Hope cried, her childish voice grieved
and pleading. "Say you are
only jealous! Please do! You
don't really mean that, while a
man is rich, you can give him your
heart only to take it away again when
trouble comes to him!"

"That is just it, Miss Hope; and
when you have seen a few more
years of life, and learned how very
nice money is, you will abandon
your high-minded attitude and learn
to look out yourself for number
one."
I shuddered through all my feeble-
ness as I listened. Could such sordid,
wicked words be issuing from the
beautiful mouth of her whom I had
deemed my ideal woman?
There was a rattle of drapery, and
Gertrude rose from her chair by the
window.
"I'm going now Hope, for I see
mamma coming up the path. She'll
rely on you in a few moments, and I
want to practice a little."
Coming to my bedside, she paused
a moment.
"Poor Dick, how pale he looks!"
Hope said, softly.
"He looks more yellow than pale,"
her sister answered. "But here comes
mamma."
The door that opened to admit Mrs.
Dean's motherly form closed upon
Gertrude.
"You need the fresh air, too, Hope—
Run away, dear, into the garden—
I'll take care of cousin Dick. The
doctor will be here soon. I think he
will see improvement."
"Do you, mamma? He looks very,
very ill to me," said Hope's voice
above my pillow.
"Do you really think he will get
better, mamma?"
A tear fell upon my forehead.
"To be sure I do. My child, your
heart is too sensitive for others'
trouble. You are growing to look
like a shadow yourself. Run out into
the garden this moment, or the doc-
tor will have two patients instead of
one."
So this was the nature I had deemed
inferior to the other. I had neglected
the fragrant violet while stretching
my hand to reach the more flaunting
rose, and in doing so had discovered
—thank fortune, in time!—the thorn.
Gertrude did not experience the
trouble she anticipated in putting me
in my "true place," for it was Hope
now to whom my conversation was
directed, and whose good will I strove
with all my powers to gain. At length
I had the satisfaction of knowing that
my efforts were not futile.
"But I thought it was Gertrude
that you cared for, Dick," she said to
me, after; with all the eloquence I
could muster I had told her one day
what she had grown to be to me.
"I admired Gertrude—I love you,
Hope; are you sure, now that my for-
tune has taken to itself wings, that
you care for me enough to become a
poor man's wife?"
A proud flush crossed the sweet,
sensitive face. "No girl could be
poor whom you love," she answered.
My uncle and aunt were truly fond
of me, and made no demur when they
learned the state of affairs. I have
forgotten to say that both Gertrude
and Hope were children of Mrs.
Dean's first marriage so that no ob-
jection could be raised on the point of
relationship.
"We may not be rich, but all the
same we shall be happy," I assured
them.
And they were satisfied.
Our marriage was to take place in a
year's time. The days rolled by, un-
til a month before the blissful event.
One day uncle came into the library
with a piece of intelligence.
"Merlewood," a magnificent place
that for a long time had been unten-
anted, had been purchased, he had
heard by a gentleman who was soon
to bring there a bride. Extensive
alterations and improvements had al-
ready been begun.
"Oh," exclaimed Gertrude, "what a
prospect for a bride! Merlewood is a
fitting abode for royalty itself. I
wonder if she is pretty, and if she ap-
preciates her good fortune."
"I can answer the first," I inter-
rupted, smilingly, as I took Hope's
tiny hand in mine. "She is very, very
pretty, and better, she is good. As
to the last, I do not believe she ap-
preciates what you call her 'good for-
tune' as yet, for she does not know of
it. She still thinks that her betrothed
is a poor man, not realizing that it
sometimes happens that a part of a
fortune may be lost through the fail-
ure of one bank, while the greater
bulk may remain unharmed in an-
other."
Rising, I led my wondering Hope,
and I am expected to give my water
from fifty cents to a dollar when I
leave for having served it to me.
She Seized Her Opportunity.
"I am always moved by the sound
of music," said young Phlathead, as
the clock struck 11.
"Let me play something for you,"
said Miss Uplate, with sudden eger-
ness.

ture of expressions upon her usually
calm face, among which surprise and
chagrin were foremost, Gertrude took
her departure from the room. And
so I won my wife, my jewel and my
Hope, the anchor which will hold me
fast no matter how many may be the
temptations which the coming years
can hold.
Beeswax.
The manufacture of beeswax is in
itself an important industry in this
country. Formerly it was prepared
in a crude way by simply pressing the
honey out of the comb. The best of
it is made from the cappings with
which the bees cover up the cells after
they are filled with honey. It is now
commonly refined for market by a
new process of American invention,
sun's rays being employed to assist
the operation. The crude wax is put
into a shallow metal tank covered with
glass, alongside of which is a mirror
so placed as to reflect the rays of the
sun into the tank. This produces a
very high temperature inside of the
tank, the bottom of which is an in-
clined plane. The wax as it melts
runs down and strains itself through
wire gauze into a receptacle.
After cooling, it is ready for mar-
ket. Beeswax is utilized for a great
variety of purposes—among others,
for artificial flowers, phonograph
cylinders, ointments, pomades, leather-
dressings, and the beautifying of
floors. It is used for embalming the
dead, and by dentists for taking
moulds of people's jaws. In India it
is employed for dyeing cloths, those
portions of the fabric which are not
intended to take the color being cov-
ered with a thin layer of wax. One
of the most important uses for bees-
wax is in the manufacture of candles.
Roman Catholic priests are not per-
mitted by the regulations of the
church to employ candles made of any
other material than wax produced by
bees. In the Greek Church everyone
who attends divine services must bring
a candle of wax. The people provide
themselves for this purpose with little
tapers.
In countries about the eastern part
of the Mediterranean these tapers are
current like coins, being a medium of
exchange in a small way. The chari-
table give them to beggars instead of
coppers. Medicants go from door to
door with baskets, collecting the little
candles, and sell them to the churches.
In Europe much wine and vinegar are
made from honey, and in France cakes
of honey, sugar and almonds are con-
sumed in vast quantities. Honey is
chiefly utilized for medicinal purposes
in China. There, as well as in India,
the larvae of bees are considered a deli-
cacy, and the brood-combs containing
young grubs are much relished.—
[Boston Transcript.]
Russian Hotels.
The hotels of this city and St.
Petersburg are among the largest in
the world, says Frank G. Carpenter,
writing from Moscow, Russia. The
Hotel de Europe of the latter city has
many hundreds of rooms and you lose
yourself again and again in wandering
through them. This hotel at Moscow
must cover five acres, and you can
feed a thousand people in its res-
taurant at one time. The restaurant
of the Russian hotels have separate
cashiers from the rooming parts of the
hotel and you pay for your meals when
you get them. You can get a very fair
dinner here for 75 cents, and I had for
this amount today a soup, a roast,
some fish, some game and a dessert.
This meal was served under a great
dome and my table was next to a mar-
ble fountain in which fish were swim-
ming. When I ordered my fish I
stepped up to the fountain and pointed
out the fish I wanted to the white-
gowned waiter, and he took a net and
dipped it out and sent it to the kitchen.
It was a sterlet, which is one of the
finest fishes of Russia, and within ten
minutes after the waiter had caught it
I found it sizzling on a plate before
me. I take my dinners and my lunches
in the restaurant, as is the Russian
custom, and my breakfast is always
served in my room. I have this when
I get up, and it consists of tea or
coffee with bread and butter and
nothing more. If I order tea the waiter
brings it in in a tumbler instead of a
cup, and I have adopted the Russian
method of drinking it with a bit of
lemon in the place of milk. This
breakfast I pay for with my room,
and I am expected to give my waiter
from fifty cents to a dollar when I
leave for having served it to me.

MAKING RAIN.
**FAILURE OF GENERAL DYREN-
FORTH'S PLAN IN TEXAS.**
How the Theory Originated and How
Experiments Were Conducted—
Atmospheric Conditions Un-
changed by Concussion.

GENERAL DYREN-
FORTH'S fourth exper-
iment in rain-making
in Texas has proved,
says a Chicago Herald
letter from San An-
tonio, no more suc-
cessful or satisfactory
than were his three
experiments of last
year. There seems
to be something in
the atmosphere of
Texas that is "agin"
the theory of the
scientists who believe
in rainmaking by at-
tacking the heavens with bombs. It is
probable that this will end all further
attempts to carry the theories to a suc-
cessful conclusion in this State, even if
it does not result in the abandonment of
the theories altogether. The people who
have backed General Dyrenforth's last
experiments are satisfied that rainmaking
cannot be made a successful or profitable
pursuit; the company which was to have
been formed, had these experiments been
successful, will probably not materialize,
and the gentlemen who have put up all
the way from \$1000 to \$5000 each will
return home poorer in purse, but rich in
experience.
In view of this last unsatisfactory at-
tempt to disturb the forces of nature, it
may be interesting to give a brief history
of the science of rainmaking by force of
explosives. Ex-Senator Farwell is really
the guilty person who projected this un-
happy theory upon an unsuspecting
world. He was not the discoverer of the
alleged science, but he is responsible for
supplying the means with which General
Dyrenforth made his first experiment.
The real discoverer of the science was
Edward Powers, who in 1871 published a
book entitled "War and the Weather."
This was a collection of historical data
tending to show that even in very dry
regions, battles, during which there was
cannonading, were followed by copious
falls of rain. The fact was not new in
itself, for even Napoleon had written in
the same strain of many of his cam-
paigns and many European scientists of
a later day wrote of the unusually wet



SOME OF THE INSTRUMENTS.

seasons which prevailed throughout
France during the Franco-Prussian
war. Mr. Powers, however, presented the
matter in such distinctive and concrete
form that it attracted general attention.
Mr. Powers wanted the Government to go
into the business of rainmaking on lines
equivalent to fighting a great battle; he
wanted to resort to heavy cannonading
with the usual implements of war, and
he estimated that the cost of two exper-
iments exclusive of the cost of the guns,
which were to be loaned for the pur-
pose by the Government, would be
\$181,500. This was a suggestion too
expensive to be thought of, and the
scheme in itself attracted no attention.
Nine years later General Daniel Ruggles,
of Virginia, invented a balloon which
when filled with gases, could be sent
into midair carrying aloft explosives to
be let go at whatever distance desirable
by means of electricity. It was this in-
vention which attracted the attention of



MANUFACTURING OXYGEN GAS FOR BALLOONS.

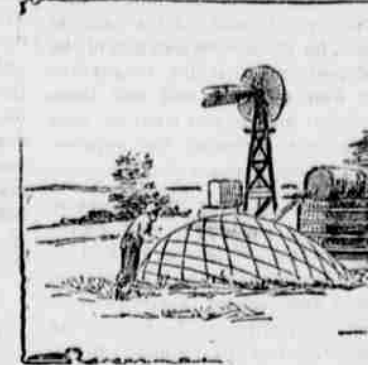
Senator Farwell, who has already given
the subject much thought. General
Dyrenforth was also a student of this
method of producing rain and he and
Senator Farwell had just about this time
acquired, through his interests in the
Texas State capital syndicate, an enor-
mous cattle ranch in Texas, and natu-
rally the subject was one of great inter-
est to him. Lieutenant John P. Findlay,
of the army signal service, was also an
enthusiastic believer in the theory of
rain-production by artificial means, and
he, Senator Farwell, General Dyrenforth
and General Ruggles had, during the
years 1889 and 1890, many consultations.
At last Senator Farwell obtained from
Congress an appropriation of \$9000 with
which to test the theory, the same to be
expended by the Department of Agri-
culture. Out of this fund the exper-
iments of last year in Texas and of last

summer at Fort Meyer near Washington
were conducted.
As the world knows, none of these ex-
periments were completely satisfactory.
In some of them rain was no doubt pro-
duced in limited quantities, but whether
from the result of the experiments or
from natural causes, was not fully de-
termined. General Dyrenforth believes
that he produced the rain. Disinterested
people who observed the experiments and
noted the atmospheric conditions, before
and after, were inclined to believe that
the detonations and concussions of Gen-
eral Dyrenforth's batteries had very lit-
tle to do with it. But certain it is that
no experiment directly produced rain in
sufficient quantities to be of any prac-
tical value in proving the correctness of
the science. Granting that the rain was
the result of the explosion the limited
quantity which fell was entirely too ex-
pensive a luxury for common people to
indulge in, nor did it come in sufficient
volume to be of any benefit to the region
in which it fell.
Though prosecuted upon the same
general line, the experiments in San
Antonio were conducted in a somewhat
different way from the preceding ones.
A higher power explosive was used and
heavier charges fired from the ground
than were fired at any of the exper-
iments of last year. The new explosive,
called rosellite, invented by Dr. Rosell,
the eminent chemist of the patent office,
Washington, was used for the ground
batteries. This is an explosive of ten
per cent. higher power than dynamite,
and because it is impossible to explode
it without the aid of dynamite, it is
infinitely more safe to transport and
handle. This explosive is a mixture of
thirty-two parts of nitrate of soda,
two parts of chlorate of potash and
twenty parts of asphalt oil. The chlorate
of potash and oil are mixed together,
and that mixture is mixed with the ni-
trate of soda. When complete the
mixture cannot be distinguished from a
fine grade of light brown sugar. It is
absolutely non-explosive in mere han-
dling; it cannot even be exploded by
the ordinary explosive cap. To explode
a five-pound cartridge of rosellite re-
quires two ounces of dynamite, and the
insertion into that of the ordinary ful-
minate of mercury cap. The cap ex-
plodes the dynamite and the dynamite
explodes the rosellite, and then you want
to be conveniently absent from the vic-
inity. In the San Antonio experiments,
charges as large as thirty pounds were
exploded from the ground. The charge
was usually tied to the limb of a tree
at about five or six feet from the
ground, then a duplex electric wire was
connected to the dynamite fuse and cap,
and carried a distance of a thousand feet
to a portable dynamo. When the charge
was fired the noise was simply appalling.
Many of these explosions were within
2000 yards of houses in the vicinity. It
is quite safe to say that there was not a
whole pane of glass left, and chimneys
were shattered and doors blown in.
Usually the trees upon which the charges
of rosellite were affixed were blown into
toothpicks, and in some cases even the



INFLATING THE EXPLOSIVE BALLOON.

roots were torn from the ground. In all
previous experiments the explosives used
in the ground batteries were rackerock
and dynamite. Much was expected from
the rosellite, that being a more powerful
explosive, as it doubtless is for rendering
or disintegrating purposes, such as use
in mines, etc., but it was the opinion of
General Dyrenforth and the other experts
that for the purposes of rainmaking it
was not as good as the other mixtures.
It did not seem to make the same con-
cussion, nor was its noise as great. But
all experience shows that ground bat-
teries and explosions are of little value.
If rain is to be made at all by explosives it
must be by balloon work in the clouds.
Whatever result was obtained from any
of these experiments was manifestly the
result of balloon explosions. Not only
were they more powerful, the noise
greater and the concussion more terrific,



MAKING HYDROGEN GAS FOR BALLOONS.

it much. Once or twice during the bal-
loon experiments one could see that the
cloud rifts were disturbed, but their per-
turbation and quite conspicuous frowns
did not result in tears. If the science
of rainmaking is ever to be carried to
success by these methods it must be by
balloons, and to employ them in suf-
ficient numbers will entail a cost and dif-
ficulty of construction and operation
scarcely commensurate with any benefit
likely to be obtained.

Turf Carriers of Ireland.

A distinctive feature of the histor-
ical regions of Killarney and other parts
of Ireland are the turf carriers, who
are usually women employed by the peat
farmers or those who make a business of
cutting up the soil of the red bogs into
squares, which are dried and sold for
fuel. The women are the wives and
daughters of cottagers, frugal, industri-
ous, remarkably handsome and of fine
figures, which are strengthened and de-
veloped by this out-of-door labor. It is
not infrequent to hear them singing in a
rich, natural voice the plaintive songs of
Ireland in their native Celtic tongue.
While the manufacture of fuel out of
turf is carried on by men, these women
do considerable business in selling it in
its prepared state or in delivering it,
in small quantities. Their wages are a
mere trifle, but help to eke out an exist-
ence that is full of privations.



A TURF CARRIER.

Strange.
This globe is full of oceans and of
lakes, both large and small, but the mil-
lion down near Grandpa's farm I can-
not find at all.—Puck.

but they seemed to reach the very center
of moisture in the heavens.
General Ruggles's plan of sending ex-
plosions aloft by means of balloons was
not used in any of these or preceding
experiments. A simpler and more effec-
tive plan was adopted. From the very
first General Dyrenforth took no stock
in sending explosives aloft to be fired
from balloons. The very plan was for-
bidden and too dangerous to be
thought of. By the aid and inventive
genius of Dr. Rosell a method was dis-
covered of inflating the balloons with ex-
plosive material, sending them up to
work out their own sweet will, and at a
proper moment explode either by means
of an electric battery or time fuse. The
first experiments were with electric
wires, but these were cumbersome and
costly, and therefore in the San Antonio
experiments the time fuse alone was
used. The explosive to fill the bal-
loons is a combination of hydrogen and
oxygen in the proportion of two of the
former and one of the latter. This mix-
ture of gases explodes with the slightest
spark, and when it goes it goes for all
it is worth. The explosion of a twelve-
foot balloon at a height of 4000
feet is a pretty sight. The flash is
10,000 times the power of an arc
light and it shoots out points
and jettings very much like the sun dur-
ing a total eclipse. And then the awful
stillness which prevails between the
brilliant flash and the frightful concus-
sion which one awaits on tip-toe, is
almost awe-inspiring. When the crash
comes it is terrible. If the explosion has
taken place near or under a cloud there
is an echo, and another echo, and seem-
ingly a wave of echoes reach the earth in
proportion to the number of clouds, but,
after all the clouds don't seem to mind



Strange.