salt water, which makes it a good conductor

tie a key or other bit of iron, and you have Franklin's primitive lightning catcher,

BOTTLING THE ELECTRICITY.

with electricity. Touch this knob to the nose of a dog and you will see the most as-

tonished animal that ever walked on four

legs. It won't hurt the dog. It will proba-bly tumble him over, and he will soon get up again without knowing what ailed him.

But you will never get that same dog to again touch his nose to the leyden jar knob.

There are some very interesting electrical experiments that you can perform at home

On a dry, crisp night, it you will shuffle quickly over the carpet in your stocking

feet and hurriedly touch your knuckle to

DECORATIONS IN AMERICA.

of Any Real Value.

LIFE'S DURATION.

Worry and Irregularities.

The horse lives 25 years, the ox 15 or 20, the

hog 10 or 12, the rabbit 8 or 9, the guinea

pig 6 or 7. The numbers all bear propor-

tion to the time the animal takes to grow its

full size. Man is the only animal that sel-dom comes up to the average. He ought to

live 100 years, according to the physiological law, for five times 20 are 100, but he

scarcely reaches an average of four times the growing period. To sum it all up, man is the most hard-working and laborious of ani-

mals, also the most irregular and intemper-

or is consumed by the fire of his own reflec-

GLADSTONE'S LATEST PORTRAIT.

He is irritable, and often wears out,

I. H. WEBB.

electric spark.

fretful porcupine."

New York Sun. 1

TIE BUECAPS

will be in that piace at once, and when you turn the blue side, whatever is before you that you wish absent will immediately dis-

appear."
Meta was overjoyed with this gift and

could not thank her triends enough for it.
"Now," she thought, "I need no longer

fear the snakes which are found among the

berry bushes, nor the giant who lives in the

mountain."

Not long after this, Meta went into the

mountain to pick berries, and as she walked from bush to bush she forgot her cloak,

which she had left lying on the ground. It was not until she wished to go home that she discovered her loss, and then, although

she searched diligently until night came on,

she could not find the missing cloak. Then,

too, to her terror and dismay, she heard

wards her. The little girl crept far into the

bushes, thinking she might escape the mon-ster; but he espied the trembling little

figure and dragged her from her hiding-

He then placed the little girl on a large basket of vegetables which he was carrying nome; but in the darkness Meta escaped,

tain, vainly seeking the way home. In the

carrying the lost cloak. She was about to

when a great confusion in the street attracted

her attention, and having inquired the cause

enemy was approaching the walls, and that soon the city would be in ruins.
"I shall save your city," cried Meta, "and the enemy shall do no injury to your

By means of the fairy cloak the enemy

The ring was willingly given, and Meta

was seen in her home. But instead of the

humble cottage, which she had left, there stood a large palace, in which the little girl

always lived happily. Although the little bluecaps often visited Meta, they always

SOME ENIGMATICAL NUTS.

Puzzles for the Little Folks That Will Keep

Amusements.

Their Brains Busy for Most of the Week

if They Solve Them Correctly-Home

Address communications for this departmen

1282-REBUS.

Something dreaded by the early American SEE JAY BEE.

1283.-SYNONYMY.

Strolling along the street one day
I "came across a doctor."
Who was hurrying along the opposite way—
I believe he was a proctor.
Can you tell me his profession? In physics
He most certainly excelled:
The mind is what he studied.

The mind is what he studied. The 'varsity's where he dwelled.

In the second line synonymously

I've told you his profession; Of syllables three it is composed-

Pray pardon this digression. A verb, an article and a noun, if rightly placed together. This my story will to you make plain

Though it were tough as leather.

I'm a certain kind of sleep;

1284,-TRANSPOSITION.

I'm a certain kind of steep;
In me one may laugh or weep:
Do the thing that's most outlandish,
Court as boldly as Miles Standish,
Do, in fact, whate'er is told,
Whether one be young or old.

II.

By the aid of divination;
By the aid of divination
I foretell events to come.
Of events once past I'm dumb,
But the future still allures me,
And the world success assures me,
For there are those still believing
In the art where all's deceiving.

In the art where all's deceiving.
H. C. BURGER.

1285-A BIRTHDAY PARTY.

Green meadows sunny sky, singing birds, babbling brooks—these all greeted fittle May Trevelyn as she trudged blithely on her way to attend the birthday party of one of her friends.

A sweet little creature she looked, with her animal bound with a blue ribbon, and her defence decorated in the same way. Her young friends greeted her warmly as she joined them, for she was a great favorite with all.

1286-DOUBLE CROSSWORD.

to E. R. CHADBOURN, Lewiston, Maine

"What are you doing in my mountain?"

the giant of the mountain coming to

After the death of her aunt, with whom he made her home, little Meta lived alone red side out, wherever you wish to be, you

and as soon as the stranger had gone, she cut out the 12 tiny blue caps, and before the steal my berries." I shall teach you to

of the mountain, I have a beautiful stone | and all night she wandered over the moun-

call, and where every pleasure is found. | morning she found herself close to the walls

WHAT ARE YOU DOING IN MY MOUNTAIN?

Your life is sad and lonely. Come with me of a large city, and having entered the gate

to my home, and there you shall want for | was delighted to see the 12 little bluecape

went as easily as if they were walking on of the tumult, she learned that a powerfu

eyes. Meta at once recognized these little creatures as the fairies, who, she had heard, lived on the other side of the mountain.

Meta a great reward; but she said: "Give

lived on the other side of the mountain.

"These are my children," explained the lady, and as she presented each with one of have it as a memento of my visit to your

to the dining hall. Here stood a table, bluecaps often visited Meta, they always adorned with flowers, and the finest silver found more substantial lood than sunbeams

(TRANSLATED FOR THE DISPATCH.)

she made her home, little Meta lived alone

in a small cottage in the village. She earned

her food and clothes by running errands for

the farmers' wives, and in summer by sell-

ing berries, which she gathered in the

mountain. But the child's life was sad and

dreary; for she could not go to school with

the other children of the village, and all her

time must be spent in hard work, with very

tew hours for play. One evening, as Meta

sat with her sewing on the doorstep, a tall,

fair lady, whom she had never seen before,

came down the narrow street and stopped

before the little cottage.
"Can you sew well, little girl?" asked the

Meta, "and the village people say that I am quite skillful with the needle."

"I have here," said the visitor, "some cloth, from which I wish 12 very small caps made. If you will do this work for me by

o-morrow evening you shall receive a good

Meta willingly agreed to make the caps,

and as soon as the stranger had gone, she

next evening they were ready for the owner,

When the tall, tair lady came again to Meta's home, she said. "On the other side

mansion, with servants to obey my slightest

Meta gladly accepted this kind offer, and

was soon on her way with her new friend.

Over the rough, stony mountain path they

the softest turf. In a short, time, Meta saw the beautiful mansion, which she thought

was to be her future home. When they had crossed the wide park, and entered the broad hall, they were met by 12 tiny little girls, with long golden hair and laughing blue By me

the blue caps, she said: "Here is Meta, city."

who made the new caps for you. She has

Then each of the fairies had a kind greet-

ing for Meta, and when they had warmly

welcomed her among them, they led the way

and glassware; but on the dishes was no food, yet Meta was surprised to see that the

little Bluecaps, as she called the fairies, seemed to be eating from empty plates.

one of the miries, "I see that you do not

but I do not see any food."
At these words, all the Bluecaps laughed

merrily, and one said: "I shall explain.

We live on sunshine and air, and find it a

healthy diet. You, too, will like it when

Meta then tried to partake of such food as

her friends had provided; but she left the

table more hungry than she had been for

"If I were only at home," she thought,

But she tried to lorget her hunger by en-

loving the beauties about her, and was

grateful to her friends for their kind attentions. Soon, however, Meta became tired

and sleepy and asked that she might go to rest. She was then led to a small room,

where instead of finding a soft bed with

silken covers, she saw only a hard, bare

floor, and neither bed nor chairs, "We sleep in such rooms," said the fairy,

who had led Meta here, "because we think

When Meta was left alone, she said to

"In my little cottage, I could have had a

But in spite of the hard floor on which she

had thrown herself, the little girl slept

soundly all night, and when she awoke in

the morning she found the fairies and their

mother taking their morning meal of sun-beams and fresh air. Room was made at the table or Meta, and a fine golden plate

was given her. When breakfast was over,

and the pleasures of the day were about to begin, Meta said: "I thank you, my dear

friends, for your kindness to me; but I shall

be happer in my little home, in the village than in your beautiful home."

The fairies were very sorry to part with Meta, but when they saw she really wished

to go, they did not try to detain her, but bade her a loving farewell. Meta then left

the munsion and the park with its trees and

flowers, and took her way over the mount-

ain toward home. Becoming weary and

",11 l only had something to eat," she sighed, "for I am half famished."

And as she looked anxiously about in hope of finding some berries with which to

satisfy her hunger, to her great surprise, she saw in the bushes a small basket, containing white bread, cheese and fruit. The little girl lest no time in wondering whence

the basket came; but she eagerly devoured the food. When she had finished, she saw,

gushing from the rocks, a crystal stream of cold water, from which she drank heartily.

"Sunbeams and tresh air may do for the

fairies," cried Meta, "but give me white

At that moment a slight noise was heard

she feared that they had heard her speech, and that they might wish to take her again to their home. But the lady said: "We have sought you, not to entreat you to return with us; but to bring you a gift as a token of our regard for you. We have had many guests who greatly admired our beautiful home; but who, when invited to dinner, were rude enough to make sport of or she was a great favorite with all. They had a merry time playing games, such as the color of a sightless man, a placord, something found in the work-basket, etc. Then they had read or couples, colors, the satisfant of a certain kind of fruit, the confession of a shricking baby, etc.

As the sun was a great favorite with all. They had a merry time playing games, such as the color of a sightless man, a placord, something found in the work-basket, etc. Then they had a treat, consisting of couples, colors, the satisfant of a certain kind of supplies man, a placord, something found in the work-basket, etc. Then they had a treat, consisting of couples, colors, the satisfant of a certain kind of or she was a great favorite with all.

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in the bushes, and the fair lady and the 12 fairies appeared. Meta was slarmed, for she feared that they had heard her speech,

our dainty fare. You alone have been kind and courteous. We sent you the food which

you have just eaten, and now we wish to

roadside to rest.

bread and cold water."

weak from lack of food, she sat down on the

they are more healthy than any other kind.

pillow on which to rest my head."

"there I could have at least dry bread and water from the spring."

you have become accustomed to it.

"I am hungry enough," answered Meta;"

"Are you not hungry, my friend?" asked

now come to make her home with us."

"My aunt taught me carefully," replied

strange lady.

price for the inbor.

Seek his name. He's a favorite with the masses, Will it last? Will his books be read for ages,

Or be cast
To the four winds of the heavens?
Time will tell:
Let us render him his glory,
Read him well.
H. C. Burg H. C. BURGER.

1287-DECAPITATION. Where does the drunkard all, Where will be last? Hears he no conscience-call, No voice so still and small, Saving there shall befall Recompense vast ompeuse vast?

What is the drunkaru a.

When life is o'er?
Unmourned he shall be cast
Into the earth, his past
Biotted, forgotten fast—
Wreck on life's shore.

BITTER SWEET.

1288-DIAMOND. 1. In Baltimore, 2. Did feed, 8. Vales, 4. Inventions, 5. Honey-combed, 6. Softening, 7. Publishing, 8. Establishing, 9. To pain acutely, 10. One of the Siamese twins, 11. In Pittsburg.

1289-ANAGRAM.

1290-DISPATCH.

In merry play
The first one day
Was frisking on the hearth,
When quick her last
Was captured fast

We heard her call,

That in the swamp we see.

1291-JACK'S WORK.

Last night Jack Frost came into town,
And covered all the trees with
He gave the brooks a coat of ice,
To the delight of boys and girls.

He had a large amount of —— Which had not yet been gathered in, Yet he his lot with patience bears.

It did not harm his corn-field's —. Which were too hard for Jack Frost's teeth

ANSWERS.

1273-Article, fount, stick, columns, ink and

aper; a printer. 1274-1. Ground, hoe; hoe, ground. 2. Plow.

soil; soil, plow. 3. Stock, mind; mind, stock.
4. Pay, work; work, pay. 5. Need, help; help,
need. 6. Head, strike; strike, head. 7. Run,
risk; risk, run. 8. Mark, make; make, mark,
9. Good, arm; arm, good. 10. Like, saw; saw,
like. 11. Joe, Kelp; Kelp, Joe.
1275—Monday, dynamo.

MRS. STOWE'S FAITH

An Impressive Saying and an Impressiv

Scene at a Celebration.

Few scenes in literary history are more

by Messrs. Houghton, Mifflin & Co. at the

Claffin in West Newton some years ago.

The golden sunshine of a perfect June day

made radiant the scene. It was a lawn fete—with a raised dais on which sat Mrs.

Stowe and the guests of honor.

Poems had been read and songs had been

sung, and at last the frail, slight form of Mrs. Stowe was seen standing, and in her

few brief remarks one sentence will always remain in memory: "My friends, let us

never doubt; everything that ought to happen is always going to happen." The

words were as impressive as if uttered by a sibylline prophetess of old.

A CHAPTER ON HUMOR.

The Soil it Grows in and How it is Kept

Fresh.

Original humor comes of some peculiarity

of the perceptions, quite different from the

ordinary, lightened up by a lively and

bright mind, and, with this, literary skill

in bringing these perceptions clearly before the minds of others. But a few repititions

make these oddities and peculiarities of per-

ception tamiliar and commonplace. They

not only lose the charm of novelty and the

stimulus of surprise, but they become stale and, if persisted in, pitiful. Wit and hu-mor can only remain fresh when growing,

and that somewhat sparsely, upon a soil that

He Shaved Himself.

"I attribute the tranquil happiness of my

latter days as much to my ability to shave

myself as anything else," said a rotund

member of the Union League Club yester-

spent in barber shops, and the insult, mauling and discomfort to which I have been

subjected by heavy-handed German barbers, I am surprised at my own stupidity and muddle-headedness. I had always heard that a man who shaved himself never went

back to barber shops, and my own father had given me plenty of advice when I was a

boy. But my beard was stiff and hard to shave, and so I gradually became a victim

New Use for the Phonograph.

Apart from any moral point of view,

from any question of the misery it inflicts

on the family, or from any reflection on the

waste of money, what an everlasting, idiotic

and altogether remarkable idiot a clever

man can make of himself when intoxicated!

Your phonograph would be your real temperance lecturer if you would take down the utterances of Philip drunk and grind

boastfulness, the absurd lack of sense in the speeches, the inane jokes, the ridiculous conclusions would point a moral to Philip's

mind, which no words save his own could.

St. Louis Globe-Democrat.]

General Booth's Theory.

The poor need religion, of course; but first

they need material salvation, which implies

not merely temporary succor, but the facili-

ties of self-help and the assurance of employ-

ment at fair wages. It is dreadfully hard for an indigent and discouraging man to be

a good man. His situation does not inspire

virtuous thoughts and feelings. The pres-sure of physical deprivation tends to weaken

his moral faculties and to make him dis-

trustful of spiritual suggestions and agencies.

The Proposal Declined.

And what is your business, my pretty maid? I am a waiting girl, sir, she said. Take me and no longer wait, miss, he said; Thanking you kindly, no sir, she said.

"When I think of the time I have

country house of ex-Governor and Mrs.

Boston Bugget,

Chicago Interior.]

is rich in wisdom.

New York Sun.]

of the shops."

New York Telegram.]

day.

1275—Monday, dynamo.
1276—Seifish, dwarfish, elfish, fiehu, offish, 1277—Rally, ally, 1278—Rotation.

He says he ought to thankful be

To penetrate, as it appears.

tThe blank in each stanza is to be filled by a word used to fill the blank in the preceding stanza, with one letter removed.]

And hurried all
To set the captive free.
Her lust once small
Puffed out like all

Between the trap's sharp teeth.

So much for mythology-now for fact. If you will stop reading for an instant and cast your eyes about the room, you will probably see a real, tangible, live animal that has 40 times more eyes than Argus I am a kind of share-divider,
Of gain or loss I am decider;
When my profit I discover,
A dividend I then pay over.
When there is loss, then understand,
That "I report no" loss on hand.
NELSONIAN. was reputed to have. This animal is the common house-fly. You know some of the strange things about this little creature. For instance, you know that he is inclined to be entirely too familiar in warm weather. You know, too, that he can walk on the ceiling of your room back downward, just as well as he can walk on the floor. Possi-bly you know that he has six feet to walk with, and that he is full-sized and mature when born-that is, he is a transformed

in our day.

WONDERFUL STORIES

From Fields of Natural History, As-

tronomy and Philosophy.

THE FLY HAS THOUSANDS OF EYES.

Mosquitoes First Swim, Then They Sail, and Finally They Fly.

FRANKLIN'S EXPERIMENT REPEATED

WRITTEN FOR THE DISPATCH.

mythological creature with a hundred eyes.

He had a queer habit of sleeping with 50 of

his eyes open, and for this reason he was

selected to watch Io, another mythological

character. But a scheme was successfully

used to lull all of Argus' eyes to sleep by

flute music. For this nap Argus lost his

head. His eyes were then transplanted into

a peacock's tail, and there you can see them

You have probably read about Argus, the

THE LITTLE PELLOW'S EYES. But there are some things about the ouse-fly that you probably don't know. In all the strange work of nature there is hardly anything more wonderful than the eyes of this familiar little insect. You have noticed, probably, that the two apparent eves of the fly are relatively very large. Well, each of these apparent eyes, as find by examination with the microscope, is what naturalists call a compound eye-that is, it is made up of a great number of little eyes, with each of which the little creature sees. Argus was a pauper, in eve wealth, compared with our little friend the house-

Another familiar little creature, in some respects more wonderful than the fly, is the ant. You know a good deal about this tiny animal, although there are many kinds of them that you have never seen. There is the large black ant, who sometimes takes a fancy for a nip of human flesh, though his bite is neither dangerous por very painful. Then there is the very little red ant that you may possibly find in the sugar bowl unless your grocer is both keen-eyed and careful. But there are many very strange things about auts that you probably have never heard of. For instance, did you ever see an aut fiv? No? Well, both male and female ants fly. But ants have no wings, you mentally retort. No, not the ants that you have seen scampering about. But the fathers and the mothers of these scampering ants had wings.

the storm and so greatly distinguished them-THE ANTS THAT WORK. selves by personal heroism ever received Just here we have one of the strangest things in animate nature. The children of ants are mostly what are called "neuters" even a medal from Congress, or if he did no one knows of the fact. There are only two decrations of value in this country, that of the Order of the Cinwithout sex—and they have no wings.
These are the working ants. They have
compound eyes like the house-fly, but their
parents, the flyers, have both compound
and single eyes. Nature seems to have proyided the compound eyes for certain insects cinnati and of the Loyal Legion. In foreign countries a rosette or button or ribbon in the lapel of the coat means that the wearer has been decorated by the Government, but over here where the Constitution forbids the in order that their near-by vision may be very keen, and then the single, or longgiving of decorations by the Government, and their acceptance from other Govern-ments by Americans in office, the people have to decorate themselves. Almost one of range eye, is sometimes given in addition.

The social life of the ant family is something marvelous. They build houses with "all the modern improvements." These houses, whether underground or in mounds. every dozen of the young men you meet on the street to-day wears a little variously Few scenes in literary history are more worthy to live than a picture—never to be forgotten by those who saw it—at the celebration of Mrs. Stowe's 70th birthday, given by Messrs. Houghton, Mifflin & Co. at the colored button in the lapel of his coat. It is very common now, and the wearer wants utter strangers to know that he is the member of some society or club. almost human intelligence. The strength of the ant is amazing. Tests have been made wherein an ant carried 12 times its own weight. That is equivalent to a man of And How It is Prematurely Shortened by average size carrying nearly a ton. But St. Louis Globe-Democrat. ants are not always simply curious or won-The passions certainly shorten life, and derful insects. In some countries they are often a match for a man in the struggle for sometimes suddenly end it. "Choked" with passion is very often not an exaggeration. existence. In Guiana, we are told by travelers, the ants build villages with houses sometimes 20 feet high. The little animals multiply so fast that they swarm over the The lower animals, which live temperate lives, have their prescribed term of years.

> But the ants in our latitude behave better. They are often an annoyance, and occasionally a nuisance, but they are always an interesting study. A FISH, A SAILOR, A BIRD. It is needless to ask whether you have heard the music and felt the lancet of the mosquito. It is a littly nuisance, sure enough, but it is so wonderful in some respects that in studying it we can almost forget the music and the nip. It is not far out of the way to say that the mosquito is at first a fish, then a sailor and afterward a bird Anyway, he successively swims, sails and

mers see mountains, extinct volcanoes, val-

leys, and what seem to be the beds of seas or oceans. Thousands of years ago, long

before man appeared upon the earth, the

"Man in the Moon" may have been a living being, and possibly he may have levelled his telescope at the earth, just as astrono-

mers now gaze at our ghostly satellite.

You have noticed that the moon and the

sun are apparently nearly the same size, but there is a mighty difference. It would take more than 100,000,000 moons to make a body as large as the sun. Here is an illustration:

The moon is about 240,000 miles from the earth—so far away that it would take a rail-

way train, running 30 miles an hour, nearly a year to get that far. Now, suppose you could take the sun in your hand, as you would an orange, and cut it into three parts of equal size diametrically. Well, if you should then attempt to put one of these thirds of the sun between the auth and the moon.

of the sun between the earth and the moon

there would not be room! The diameter of the sun is about 850,000 miles—more than

POWER OF THE SUN.

the earth.

surrounding country, infesting houses in myriads, attacking domestic animals and

even human beings, so that settlers are sometimes compelled to flee for their lives.

A Pastel Taken From Sittings in the Library at Hawarden. The mother mosquito lays eggs in stag-The picture of Mr. Gladstone herewith in nant water. These eggs produce the "wrig-glers" that you may have seen. The "wrigtaken from one of the very latest sketcher glers' have no gills like fish, and so they have to come to the surface of the water to breathe. Righ, here we find one of the queerest of all queer things. The mosquito breathes through his tail! That is, the air is taken in through a tube of hairs situated have sure the tip of the tail. made of the distinguished statesman. Through influential friends Mr. J. McClure Hamilton, who, by the way, was born in Philadelphia, succeeded in getting a half dozen sittings in Mr. Gladstone's library at Hawarden. very near the tip of the tail. When the "wriggler" gets to the proper age he stops on the surface of the water and apparently rips the back seam of his skin. The skin on the back cracks open, and the mosquito which you know so well is seen. But he is

ate.

not yet strong enough to fly, so he stays in the old skin, which is now a sort of mosquito gondola, and sails about until he is strong enough to fly away and begin his blood-sucking career. THE MOON IS A CHOST. Do you know that the moon, which looks so bright and beautiful on a clear evening, is the only dead object you see in the heavens? This is true. The best authorities all agree that the moon has passed through all the stages that our earth has reached, and, furthermore, that its internal fire is all burned out, its water and air gone, and that it is now really a ghost of what it once was. Whether animal life ever existed on the moon or not is some-thing that we shall probably never know. But there is no apparent reason why men

Mr. Gladstone Reading The results are a brilliant oil picture and two pastels, one of the latter of which is re-produced from the Pall Mall Budget. The pastels are vivacious, full of character and

attract much attention.
"Mr. Gladstone was busy at the time,"
says Mr. Hamilton, "and all that I desired
was that he should go through his morning's work as usual, and be absolutely unconscious of my presence. The golden rule of silence which is observed in the library at Hawarden is the ideal one for work. It is very distracting to have to talk to one's sitter, or even to be talked to by him. So Mr. Gladstone did his work and I did mine, with such results as you have seen. During the first hour and a half he reads, and a ter that he conducts his correspondence; and so in one of my pastels he is reading and in the other writing. I had two sittings for the reading picture and one for the writ-ing."

Sqllivan Has Been Struck. three times the distance of the moon from Boston Herald.] Snapper—There's no use after this to talk about Sullivan being invincible. He's been struck and struck badly.

Tuff Boy—By whom; hou?
Snapper—Stage struck. Just think for a moment of the potency of this mighty orb, the sun. He is about 93,000,000 miles away from us. A railway

train, going at the rate of 30 miles an hour, would take within a fraction of 354 years to travel so far! But at this amazing distance you know what heat the sun sends us in summer time, and you know how keenly we sometimes feel the slight diminution of that Characteristics of the Swedish System heat in winter. And yet this immense fiery orb is hundreds of times smaller than many of Physical Culture.

of the other suns in the universe that you can see any clear night, twinkling far away in the illimitable depths of space.

Have you ever heard of Benjamin Frank A REASON FUR EACH MOVEMENT. lin's experiment in capturing lightning by means of a kite? That was the first elec-trical experiment in the United States, and No Elaborate Apparatus Necessary to Make Perfect Physiques. any boy can do without much trouble just what Franklin did. This is the way to do it. Take an ordinary kite, and from the point where the cord is to be fastened you run small wires along the ribs, so that the points of the wires product the contact the cord of the wires product the contact the contact and of the contact the contact and of the contact an

PROGRESSION IN THE EXERCISES

IWRITTEN FOR THE DISPATCH. ! Those who do not find time for exercise will have to find time for illness -Lord Derby.

ject a few inches beyond the outer ends of the kite ribs. You then soak your cord in In these days of a noticeable awakening of electricity; attach the cord to the kite ribs, in contact with the wires, and send the kite heavenward. To your end of the string of popular interest for the physical development of children and young people the question is repeatedly asked, "What is the Swedish system of gymnastics?" or "Which The most favorable time for this experiment are its characteristics wherein it essentially is when a thunder shower is approaching, differs from other gymnastic systems?" The but you are likely to catch some electricity almost any cloudy day. Touch your knuckle to the key and you will hear something like that produced by striking a match, but not nearly so loud. You will also get a little electric shock, and if the expense of the catches and the same and the same are striked. fact is, that to fully understand the Swedish system of physical culture, or any other that has any righteous claim to the prefix "system," it is necessary to be thoroughly conversant with the principles that are fundamental to all gymnastics. It is a knowledge not to be gained in a few minutes, periment were in the dark you would see an nor to be explained in a few words. Yet in the following will be found, briefly stated, in what respects the Swedish method differs from the others: A great deal of amusement can be had by this experiment if you have a small leyden jar, which can be had wherever philosoph-ical apparatus is sold. Attach the knob of the jar to the key and you will fill the jar NOT AN ANTIQUATED SYSTEM.

The Swedish system of gymnastics, de-vised by T. H. Ling, the scientist and philosopher, was founded upon the laws of nature and upon the laws of the human organism. Since the days of Ling the system has been much perfected and improved by Ling's numerous tollowers, who have made it keep even pace with the progress of those sciences upon which it is based. For that reason the system is not altogether as anain have the uninitiated think; and the fact that it has survived in a country where nothing is done in a superficial and irrational way ought to be a guarantee for its First, let it be considered how the exer-

the nose of another person you will produce a slight shock and you will see an electric spark. Sometimes you may be able to light a gas jet in this way.

Again, take four strong tumblers and place them on the floor, with a board on top large enough to stand on. Let one person mount the board and let another rub him according to their gymnastic value, which quality depends on how the movement combines the utmost effect on the body with simplicity and beauty of performance. Only such exercises are chosen and used whose local and general effects are fairly quickly down the back with a piece of fur. If the hair of the insulated person is dry well known and proved to be needed by the body. Not only the needs of the individual, and loosely brushed it will stand up, in the language of Hamlet, "like quills upon the but his or her abilities as well are to be taken into consideration; and for that reason the instructor must know how to vary the exercises according to the degree of physical culture and ability possessed by They Are Very Numerous, but Only Two Are the pupil.

CORRECTING WRONG TENDENCIES.

The movement should have its developing The engineer of the English man-of-war effects in a short time; it should be simple who escaped from the storm at Samoa in the so that every pupil can do it fairly well; and it should have beauty of execution acface of the gale, and the head of the firm cording to each one's ability. In order to supply the needs of the organism and to dewho made the engines, were both decorated by the British Government, one for daring velop the body harmoniously, the exercises to run straight into such a storm and the have to overcome a great many tendencies other for building such good engines. But to faulty growth or bad posture; and the greater or less value of a movement depends not one of the officers or men of the American vessels who faced and lived through on its power to counteract or correct these tendencies. It naturally follows that the system uses no exercise which would en-courage such faults, for instance, using weights for beginners, etc.
In accordance with the physiological

truth that the first, greatest and most ex-tensive effect of exercise is on the respiratory organs, and that hence, during exercise these organs must be allowed perfect freedom of motion, the Swedish method disapproves of and discards all movements which compress the chest, or which in any way interfere with free respiration; and the greatest attention is given to the proper development of the chest. In recognition of the fact that, to be truly strong a man must know how to breathe well, much prominence has been given to "respiratory" exercises. "Breathel" 'Don't hold your breatn!" are common exns in gymnasiums where this

method is used. MUSCLES CARE FOR THEMSELVES.

In judging of the effects of an exercise, we think the least of the muscular develop-ment produced; for, the effect of all general exercise is to develop muscle, and this aim is reached without especially working for it. But we think all the more of the effects roduced on nerves, vessels, etc., for the results in this direction can be vastly changed by varying the movements, as demonstrated in medical gymnastics; in other words, the exercises have been made to harmonize with the laws of physiology.

In measuring a man's strength, we compare the man to himself; we do not say that a man is strong because he can lift so many pounds, or because he can jump so high, and run so fast. But when he possesses a healthy, well-balanced and well-proportioned body, which his will has under good control, then he possesses physical culture. even though in the eyes of some he may seem weak as compared to others. It is this health, symmetry, and harmony we aim at in selecting the exercises; and that the Swedish method accomplishes its purpose has been too well demonstrated to leave room for doubt.

AESTHETICAL DYMNASTICS. Movements are never chosen "because they look so pretty," for educational gym-nastics do not aim at beauty of performance. When gymnastics do have such an aim they are called "methetical," "calisthenics," etc., and these have but little effect toward physical development. And yet we claim that when a movement is well done it is graceful also. Some persons mistake a languid manner of motion for grace,

and hence claim that the Swedish exercises are too jerky to be graceful.

Our second point for consideration is the regularity of method. In order that gymnastics be systematic there must be progression. In the Swedish method this is adhered to very strictly, so that the exercises, beginning with the very simplest, gradually become stronger and more complicated. So closely has the effect o: movements on the human organism been studied that the slightest change of position—even the turning of a hand-has its recognized influence in the progression, and it is here that the system demands the most from the instructor. No movement is attempted unless the previous ones of the same kind have been thoroughly practiced, and no exercise is used whose commencing position has not already been practiced sufficiently to guarantee its correctness; for, if the commencing position is saulty, the movement cannot be

rightly executed. ATTITUDE ON APPARATUS.

The Swedish method does not entirely disapprove of dumb-bells, and allied forms of apparatus, but through years of constant practice it leads up to them, claiming that before increasing the weight by external means you should make a progression by prolonging the lever of the weight already present. So for instance, a backward-flex-ion of the trunk with the arms extended upward and the hands holding weights must necessarily be preceded by the same move-ment without the weights, and that by a flexion of some kind with the arms fixed behind the neck, and still earlier with the

hands on the hips, etc.

After years of practical investigation it was found that if, in every lesson, the exercises followed each other in a certain, com-paratively unchanged order, the movements could be made stronger; they could be given more duration; ill results could be com-pletely prevented; and hence the good ef-fects become all the more pronounced. For that reason all movements were divided into dasses as follows:

THE BLEVEN CLASSES. 1-Introductions. By those we understand some simple exercises used at the beginning of a lesson to gain a general mus-cular control, to correct the base and general 2-Arch-flexions, which consist of back-ward-flexions of the trunk; they have the

effect of straightening the dorsal region the spine; of vaulting the chest forward by drawing the lower ribs apart, thus increas-ing the capacity of the chest, and of culti-vating the extensibility of the upper region

of the abdomen.

3—Heaving movements, which consist of various exercises in a hanging pesition, and others that have the effect of expanding the upper part of the chest by lifting it upward incidentally they also develop the arms. If these movements are not preceded by the arch-flexions they will produce lameness in the upper region of the abdomem. Free standing arm extensions are classified in this group, since their effects resemble those of heaving movements, for which they also

repare the way.

4-Balance movements. The two precedents ing movements are strong, hence they increase the heart-best noticeably. Now a rest ought to ensue—the word rest not to be understood as meaning inactivity, but changing activity-and the time is conven-iently filled by the gentle movements called balance movements. These require but lit-tle effort from any one of the many muscles brought into play; the heart-beat is not in-creased by them, but becomes lessened by the mechanical propulsion of the blood into balance-movement the pupil is again ready for more specific work.

THE MORE ACTIVE CLASSES. 5—Shoulder-blade movements consists of arm movements, which have the effect of placing the shoulder blades in correct posi-

6-Abdominal exercises bring into forcible play the muscles forming the abdominal walls; their effects are to promote digestion and to shorten the stay of the food in the

7-Forward flexions of the trunk, which tend to strengthen the dorsal muscles, keeping the spinal column in a naturally easy

and erect position.

8-Lateral trunk movements consist of rotations and sideways flexions, etc., of the trunk. They have a far-reaching effect on the general circulation by accelerating the in the inferior "vena cava," leading the blood off from the abdomen and legs, etc. Incidentally they also expand the chest laterally and strengthen the muscles around the waist.

9-Slow leg movements. By this time the heart-beat is again increased; the slow leg movements furnish a means of les-soning it. For by these the blood becomes mechanically propelled forward, through the forcible passive extension of some muscies, while others are in gentle active con-traction. These movements may be conveniently omitted, when the previous exercise are not strong enough to make them a neces-10-Jumping and vaulting. These ex-

ercises have the effect of cultivating the general elasticity of the body more than does any other form of movement. And if we recall that grace and elasticity are very nearly identical in gymnastics, we under-stand the gymnastic need of these movements. They develop courage, self-reliance, a true appreciation of space, and produce great ability of voluntary co-ordination of motion as well. The Swedish method differs from all others (not founded on it) in its manner of preparing the jumping by practicing the intermediate positions and motions, before the real movement is attempted, as well as in demanding that the correct "landing" should be insisted upon. In like manner the vaulting is prepared by first cultivating in the pupil the clinging to the bar, no matter what hap-pens before he is made to leap over it. And the progression is so strict that we have no accidents to record in these "violent" precipitate movements.

THE CLOSING MOVEMENT. 11-Respiratory exercises. These consistor deep inhalation and exhalation accompanied by some arm movement that will expand and contract the chest in even rythm with the respiratory act. These movements, which can be conveniently combined with some movements of the legs or trunk, have the effect of restoring tree respiration (after jumping, etc.) and to lessen the heart-beat. Respiratory exercises are brought in not only at the end of every lesson, but at any time when their effects are needed, and often dso at the beginning of a lesson containing strong exercises that require an increase

activity of the lungs.

To this daily curriculum various additions are often made, such as to bring in one more, the shoulder-blade movement, when needed: or another heaving movement: or an abdominal exercise; or to leave the last one out for children, and so on-as the in-structor may decide. In addition to the free-standing movements, each class con-tains numberless exercises on apparatus, and supplies a sufficient number to form a progression from infancy to well developed man or womanhood-through all the grades in school, college and in after-life as well.

BT WORD OF COMMAND. The third point in which the Swedish system differs from the majority of others is in the method of applying the exercises. The movements are applied to the words of command, this being the only method enabling the pupil to concentrate his mind on one thing at the time, that thing being his own motion. This is in accordance with the definition of gymnastic movement, which tells us that, unless a movement is done with full volition, it ceases to be gymnastic. In those methods which use imitation memorizing, etc., the movements become mechanical, the pupil dividing his atten-tion between himself and something outside

him, i. e. they cease to be gymnastic.

Objections have been raised to using words of command, because "it is so tiresome," "too soldier-like," etc. To this the answer is given, that to get the full benefit out of exercise we should put our whole mind into it, this being much less tiresome than to exercise while we think of some-thing else. On the other hand we have the theory of a small minority of antagonists, that gymnastics, without music, do not give enough recreation, especially to children, because there is not enough exhilaration in such exercises. In regard to this objection, we claim that discipline is necessary, not only for a soldier, but for everybody, if we are to have any control whatsoever over ourselves. Words of command also teach the pupil to think quickly. The Swedish method disapproves utterly of music for the very simple reason that but few gymnastic movements are rythmical.

AXEL C. HALLBECK,

Inste Courtesy. The Jenness Miller Magazine.

Manners are stronger than laws, and no man or woman, either in society or out of it, can afford to ignore this fact. It is strange, but nevertheless true, that but few pers possess an inpute sense of the proprieties of life, although many of them do not perhaps flagrantly violate the strict code of etiquette.



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