

## GILBERT THRILLS



At left—DICK DEGENER, U. S. A. Springboard Diving Champion.

Acme



Above—JACK LOVELOCK, New Zealand. Winner of the men's most thrilling race, 1,500 Meter, in World Record time of 3:47.8.

Acme



MAJORIE GESTRING, U. S. A. 13-year-old Olympic Champion won Gold Medal in Springboard Diving for Women with a score of 89.28 points.



Above—GLENN HARDIN, U. S. A. Captured the 400 Meter Hurdles event for the Stars and Stripes.

Acme



Above—ADOLPH KIEFER, U. S. A. World's greatest Backstroke Champion capturing thrilling event.

Acme



Above—CORNELIUS JOHNSON, U. S. A. New Champion who won the High Jump final in this event.

Acme



At left—ARCHIE WILLIAMS, U. S. A. Winner of 400 Meter Race. Time 0:46.5.

Acme



At right—DOROTHY FOYNTON HILL, U. S. A. Platform Diving Champion who retained this title for the U. S. A.

Acme



At right—KITIE SON, Japan. Ran the fastest Marathon in history, covering 26 miles in 2:29:19-2/10.

Acme



At left—HELEN STEPHENS, U. S. A. Star of American Women's Team. Winner of 100 Meter Sprint in record time of 0:11.5.

Acme



At left—FORREST TOWNS, U. S. A. Winner of 110 Meter High Hurdles. Time 0:14.2.



Nippon Dempo Newsphoto

## 1936 Olympic Track and Field and Swimming Champions

## TRACK AND FIELD

Event	Winner	Country
100 Meter Dash	Jesse Owens	United States
200 Meter Dash	Jesse Owens	United States
400 Meter Run	Archie Williams	United States
800 Meter Run	John Woodruff	United States
1,500 Meter Run	Jack Lovelock	New Zealand
5,000 Meter Run	Gunnar Hoerck	Finland
10,000 Meter Run	Ilmari Salminen	Finland
Marathon	Kitie Son	Japan
400 Meter Relay		United States
1,600 Meter Relay		Great Britain
110 Meter Hurdles	Forrest Towns	United States
400 Meter Hurdles	Glenn Hardin	United States
3,000 Meter Steeplechase	Volmari Iso-Hollo	Finland
50,000 Meter Walk	Harold Whitlock	Great Britain
Shot-Put	Hans Woelke	Germany

## TRACK AND FIELD

Event	Winner	Country
Discus Throw	Kenneth Carpenter	United States
Javelin Throw	Gerhard Stoek	Germany
Hammer Throw	Karl Hein	Germany
Broad Jump	Jesse Owens	United States
High Jump	Cornelius Johnson	United States
Pole Vault	Earle Meadows	United States
Hop, Step and Jump	Naoto Tajima	Japan
Decathlon	Glenn Morris	United States
100 Meter Dash	Helen Stephens	United States
80 Meter Hurdles	Treshonda Valla	Italy
400 Meter Relay		United States
High Jump	Ibolya Csak	Hungary
Javelin Throw	Tilly Fleischer	Germany
Discus Throw	Gisela Mauermayer	Germany

## SWIMMING

Event	Winner	Country
100 Meter Free Style	Ferenc Csik	Hungary
100 Meter Back-Stroke	Adolph Kiefer	United States
200 Meter Breast-Stroke	Detzuo Hamuro	Japan
400 Meter Free Style	Jack Medica	United States
1,500 Meter Free Style	Noboru Terasa	Japan
800 Meter Relay	Dick Degener	United States
Springboard Diving	Marshall Wayne	United States
Platform Diving		
100 Meter Free Style	Rita Mastenbroek	Netherlands
100 Meter Back-Stroke	Dina Senff	Netherlands
200 Meter Breast-Stroke	Hidako Machata	Japan
400 Meter Free Style	Rita Mastenbroek	Netherlands
400 Meter Relay		United States
Springboard Diving	Majorie Gestring	United States
Platform Diving	Dorothy Hill	United States

# The Cabin on Bald Mountain and Capturing the Outlaws

A Thrilling Adventure of the Mysterious Ten

There is an old saying the world over that "Boys will be Boys." They form clubs, have baseball, football and all sorts of athletic teams, go through thrilling adventure and in general, enjoy life as all boys should. A. C. Gilbert, now president of The A. C. Gilbert Co. was no exception to the rule. He was leader of the Mysterious Ten, a group of youngsters in Moscow, Idaho where he lived when

a boy. The Mysterious Ten, just like you boys today, were up and doing all the time and their meeting the outlaws at their camp on Bald Mountain and the eventual capture of these two bandits will no doubt prove to be a mighty interesting and thrilling story.

Bald Mountain was about a mile from the town in which the boys lived and was the highest point of land around, about 1,000 feet high. The sides of the mountain



Climbing "Old Baldy"

were heavily wooded but the top was rocky and almost bare of trees. It looked all over the surrounding country. There was sort of a rough, broken path up through the woods and in the summer time a few adventurous spirits used to make the climb to the top for the fine view.

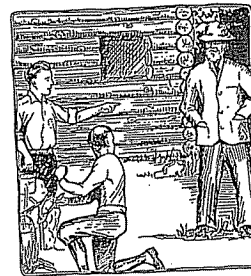
The boys had become a little bit tired of the Robbers' Cave they had discovered, and one day, at their secret meeting, it was proposed that they build a real big cabin near the top of "Old Baldy" and camp up there. So the boys got together a lot of axes, saws and hatchets, then they climbed up almost to the top of the mountain and picked out a good place for the cabin. They cut down some of the smaller trees and chopped them into the right lengths and after several days of work in vacation time they had a very good cabin. They stuffed the chinks between the logs with wood and grass, put some tar paper over the roof and made it pretty tight. Inside they made some bunks at each end and fixed them up comfortably with the ends of pine branches and some old quilts which they brought from home. One of the boys got hold of a small iron stove, which they took to pieces and carried up, to use inside the cabin, because it got pretty cold at times, especially at night, for a number of the boys occasionally stayed there for two or three days at a time.

They made a rough table and some chairs for the inside of the cabin, and another table outside the cabin where they could eat under the shade of the trees. There was a chest for a stock of provisions with a big padlock on it that would defy almost anybody to get it open. It was great sport, building this big shack and bringing up things to furnish it and the boys were all very enthusiastic about it.

Up on the top of "Old Baldy," a short distance above the cabin, they erected a flag pole. The color guard would go up to the top of the mountain when the boys first arrived in camp carrying the flag, which they kept in the cabin. They would raise it with appropriate ceremonies, including the firing of a small brass cannon. It would float until they were ready to leave, when it was hauled down with another salute.

The woods below the cabin were full of berries in places and not far from the cabin was a large pool, fed by springs, from which

a brook started. They got their water there and occasionally had a swim, for the pool was quite deep and wide.



Whatcha doin', kids?

next thing he noticed was the broken padlock on the provision chest lying on the floor and a frying pan on top of the little stove.

"Hey fellers," he shouted, "someone's been up here and broken in. They've been eating our provisions, too. The flour's almost gone and there's hardly any sugar left."

However, they soon came to the conclusion that some of the older boys around town had been up and broken in and they made up their minds to find out who they were. They raised the flag, chopped wood and got water for their dinner and spent a great afternoon. Gilbert and Towhead Dillon were cooking a stew for supper over the fire outside the shack when they were rather startled to hear a step behind them and a gruff voice say, "Well, kids, whatcha doin'?"

They turned to see a big rough looking man with a reddish beard and a slouch hat and not far behind him another fellow, shorter, with black curly hair. He was not half bad looking, but for one thing. The boys noticed immediately that there was a long red scar across his left cheek.

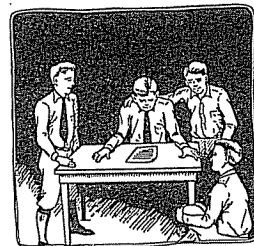
By this time Ralph and Sam were out of the cabin, hardly knowing what to make of the intruders. Then the big man spoke up:

"Going to invite us for supper kids? We've been tramping round looking over timber and found your cabin the other night, so we just unlocked the door and bunked in. Guess we can all be comfortable here tonight, can't we?"

"I suppose we can," said Gilbert, "but gee! we haven't got much grub for you. I guess you ate up some of it, didn't you?"

The big man grinned. "I guess we did kid, but we got some more, ain't we Jim?" he asked, turning to his companion.

"Yeh!" Jim replied, and then for the first time, the boys noticed a sack he had laid on the ground. "We got two or three chickens this after-



The Mysterious Note

noon and we'll live high, kids. Like nice broiled chicken? We'll have some if you'll help me pick the feathers." And out he dumped three chickens whose necks had evidently been wrung not very long before.

By this time the boys were getting kind of scared and Sam Robinson spoke of going home, although he had planned to stay over night with the others.

"No, kid," said the big man, "you stick around with us. Don't mind me and Jim. We're all right."



Watching the battle

fellow, "and mighty convenient for us. Good deal better than bunking in the woods—those nice soft bunks you put in boys."

By this time the boys' spirits were rising and the broiled chicken tasted mighty good to them. Still they did not like having these men around. It kind of spoiled their fun. Besides, they thought, if these fellows had broken into their cabin and used their provisions they might hang around and use it some more or come back once in a while and use it. Yet the men did not look just like tramps.

After supper the boys sat around the fire and told about the Mysterious Ten and their fire department and the Robbers' Cave where they used to go and camp.

"Robbers' Cave," said the big man. "Sure there aren't any robbers around these parts now, are there?"

"No," said Sam Robinson; "except some fellers broke into John Clark's grocery store two weeks ago and stole some stuff."

"Well, those weren't robbers, were they Jim?" said the red bearded man. "They were just poor hungry cusses, I guess."

About half past eight he gave a yawn and said, "I guess we'd better turn in Jim. I'm kind o' tired tramping through the woods. What do you say?"

"Guess we had," said Jim.

"You kids can have your bunks tonight," said the big fellow. "Jim and I'll just borrow a quilt or two and I guess I'll just roll up here against the door. Don't any of you boys try to walk out of here because you'll stumble over me and get me mad. And besides," he added, "you might set off this here gun of mine, that I sleeps on."

With that he pulled out a big revolver and laid it in the flat of his hand.

Well, there was no thought of leaving in the boys' minds that night. Long after Ed had rolled up in his quilt by the door they lay awake waiting for morning to come. No one of the four closed his eyes till long after midnight. But at last they all slept.

Gilbert awoke first when the sun was coming in through the little window at one side of the room. It was nine o'clock and both the men had gone. Quickly he went round and touched the other fellows till all were awake.

"Have they gone?" whispered Sam Robinson.

"I don't know, I'll see," said Gilbert, as he looked out the window. There was no sign of them. Then he peered out the door. Still no trace. Just then Ralph Thompson called out: "Look here, fellers," and held up a scrawl written on brown paper. It read:

"We've gone down to town. Cook your breakfast and stick around the cabin. Don't let us catch any of you coming down the

There wasn't much else to do, so the boys helped Jim pick the chickens.

"Where do you kids belong—down in town?" he asked. They told him "Yes," and he wanted to know if they came up to stay over night and if their folks knew about it. Boy like, they told him proudly that they did and that they were in a club and had built the cabin.

"Pretty good piece o' work, hey Ed?" said Jim to the big fellow.

"Yes," said the big fellow, "and mighty convenient for us. Good deal better than bunking in the woods—those nice soft bunks you put in boys."

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"We've gone down to town. Cook your breakfast and stick around the cabin. Don't let us catch any of you coming down the

mountain till this afternoon or I'll use my gun. If we don't come back by 3 o'clock you can go home."

That scared the boys worse than ever. They didn't dare disobey the command. They didn't dare to go down to the spring. They couldn't get up an appetite for breakfast even.

"I'll bet those fellows are robbers or have been doing something—and they're up here hiding," said Sam Robinson, and the others agreed.

"Tell you what let's do," said Thompson. "Let's go up on top and see if we can't signal some one. So they took an old white cloth and went up by the flag pole. But all their warning amounted to nothing, and it was no use to shout.

One after another the hours dragged by. At two o'clock they ate a little dinner of fragments of the chickens, and long before three they had the cabin locked and were ready to go home. I tell you no boys ever went down that mountain any quicker than they did. And they all headed for Gilbert's father's bank.

Mr. Gilbert was greatly surprised when four wild-eyed boys burst into his office and all tried to talk at once. But he began to grow excited himself when he heard their story and he called up Bill Howard, the Sheriff, on the telephone in short order.

"Bill," he said, "my boy Alfred and three other boys went up yesterday to that hut they built on Bald Mountain and about five o'clock two men, one a big fellow with red beard and another shorter fellow with a black mask and a scar on his cheek, came up there, showed a revolver and bunked in with the boys. They went away early the next morning leaving a note telling the boys not to leave the cabin till three o'clock in the afternoon or they'd shoot them. Guess you'd better get busy."

"Red beard, you say," answered the Sheriff, "and a big man? Say, I'll bet those are the two fellows who held up and robbed a train over near Cobden a few days ago. We got word day before yesterday to be on the look out for them. The big fellow is 'Red' Smith who only got out of state's prison about a month ago. He's a bad egg, and up to his old tricks. The other fellow has a scar on his left cheek, you say? Thanks! I'll get busy right away."

Well, the Sheriff did get busy. He telephoned to all the surrounding towns and posted placards all around. Three days later, a farmer about two miles out of town telephoned in that he had been losing chickens lately and he and his hired man laid for the thieves with shotguns. Early that morning they caught two men at the chicken coops and had peppered and wounded them. The fellows had drawn revolvers, however, and had retreated to the barn where they were holding the fort. The farmer said he thought they were the two fellows that were wanted.

The Sheriff soon got together half a dozen men and, as luck would have it, Gilbert and Sam Robinson were down town and got wind of what was going on. So they hustled back home and got their bicycles and road after the Sheriff's posse, shouting to Ralph Thompson, whom they passed, that they were going to help capture the train robbers. Gilbert had taken his little 22-calibre Fiobert rifle and looked quite warlike.

When the boys got to the farm, they found the Sheriff's men behind trees and walls around the barn. The Sheriff himself was the first one to see them, and he called out to them to go back of the house and keep out of sight. They hardly needed the advice for just as he finished speaking there came a fusillade of revolver shots from the barn and answering shots from the members of the posse posted on that side of the building. You bet that Gilbert and Sam Robinson ducked under cover pretty quickly.

Continued on page 28



The Surrender

### The Cabin on Bald Mountain

There were quite a lot of shots fired after that and one of the Sheriff's men came limping into the farm house a little later with a bullet in the fleshy part of his leg. Soon after that they heard shouting outside and when the two boys finally crawled to the corner of the house and looked around it toward the barn they were just in time to see two men coming from the barn with their hands held up above their heads, while members of the posse kept them covered with their guns. Gilbert could see that the big fellow's face was all bloody, so that he hardly knew him, but he recognized the short man at once, as the fellow called "Jim" who had been one of their unbidden guests at the cabin on Bald Mountain.



Following the posse

It took but a few moments for the Sheriff to snap the handcuffs on the men and then the boys rushed forward. It seems that the two robbers had both been hit by shot from the farmers' shot guns and although they were not dangerously hurt, they had lost considerable blood. Their ammunition was almost gone, and with the barn surrounded they knew that they could not get away, so they waved a white rag out of the door and agreed to surrender.

When the big fellow saw Gilbert and Sam Robinson, he said, "Hello, kids, I guess if we'd kept out of your cabin we would never been captured. But you're all right and you're game too, ain't they Jim?"

"Yes," says Jim, "How'd you like to have some more of my fried chicken, kids?"

"It's a good thing you treated these boys all right up there on Bald Mountain," said the Sheriff, "or it would have gone mighty hard with you."

"Aw, what d'ye think we are," said the big bandit, disgustedly, "we wouldn't have hurt the kids. They're good sports and we had a good time together."

Gilbert and Sam Robinson felt mighty proud and important as they rode back to town on their bicycles behind the Sheriff and his prisoners, and they were regular heroes among their friends, for half the people in town were in the streets waiting to see the robbers. They had to tell the story of the fight over and over again to the members of the Mysterious Ten and all the fellows who had not been fortunate enough to be up at the cabin on the mountain with the robbers were mighty envious of Gilbert and his friends, who had had such a thrilling adventure.

But they were even more envious at something that happened later. At the trial of the train robbers the boys were called into court to tell their story and then it developed that there was a reward of \$300 for information leading to the capture of the bandits. When the question of the reward came up, it was decided that the boys who were up at the cabin on Bald Mountain were entitled to half the reward and the farmer who discovered the men stealing his chickens was entitled to the other half.

Of course, Gilbert and his three friends were mighty surprised boys when they found that they were going to get one hundred and fifty dollars to divide between them. They felt like millionaires and after the trial they held a meeting and decided that they ought to use some of the money for the Mysterious Ten. So they voted to use half of it to buy a fine big bobsled and you can bet it was the finest and fastest double ripper in that town.

## Huge Hail Stones During Terrific Storm in Minnesota

Interesting Letter Received from a Reader of "Thrills"

Editor Gilbert Thrills,  
New Haven, Connecticut.  
Dear Sir:—

In reference to your article on Hail in the December 1935 issue of your magazine and describing stones that fell in New Hampshire measuring 4" in diameter, may I inform you that I have seen much larger hail than this in Minnesota.

On August 4th, 1916 at 4:40 A. M. a storm area about a half mile wide and sixteen miles in length passed over the northwest corner of Pine County, where "Willow Lane" Farm which I owned was located. In this particular section was wrought during the seven to the east of us great destruction was wrought during the seven or eight minutes the storm lasted. Our entire crop, even potatoes in the ground, was destroyed and hail stones the size of coconuts literally covered a 40-acre grain field and not a straw was left standing.

Shingles were completely torn off roofs—sides were ripped off buildings and my horse and a calf which were outside were killed.

My neighbors, however, suffered heavier losses and livestock, including cows, were killed and trees in the path of the storm were stripped of bark and limbs.

Some of the hail stones weighed two pounds, many measured 5" through, and I found others that were slightly flat that measured 7" across and about 4" through.

Buildings still standing show evidence of battered walls and roofs and four box cars of the Minneapolis Sault Ste. Marie rail-way, which were in a siding, had to be re-roofed and painted before going into service again.

Further to the east cyclonic wind drove smaller hail stones with terrific force and caused great loss of livestock and A. P. Wicks, who suffered the heaviest damage of all farmers in that section, is still telling about this storm.

I just wish to tell of this happening for I well remember what took place and find very few who have seen anything like it.

Yours very truly,  
HENRY PAULSEN,  
Mille Lacs Timber Company,  
Isle, Minnesota.

### A Clock That Is Always Wrong

There is one clock in the world that almost certainly will continue to show the wrong time, as it is said to have done already for hundreds of years. This clock is in a tower in Görlitz, in Silesia, and is always seven minutes fast. There is nothing wrong with the clock, which is deliberately allowed to show the wrong time as a memorial of an incident in the history of the city. It is said that in 1253 a plot was formed to murder the rulers of the city as they left a meeting. One of the men engaged in the plot changed his mind and prevented the murders by pushing the clock on seven minutes. The result was that the conspirators appeared on the scene too early, their aims were detected and they were arrested. In memory of this escape, and as a record of the strange manner in which it was contrived, the city authorities ordered that the clock should be left to show the wrong time.

### Fish Out of Water

Do you know that certain species of fish can live for months without water? This is the case with the lungfish of Australia, tropical Africa and the Amazon region of South America. If the river homes of these creatures become dry they simply curl up in cavities in the mud left in the beds of the streams, and remain there until rainy days return.

# The Mighty Force of Electricity

## Sensational Thrills and Awe Inspiring Mysteries Revealed in the Performance of Most Interesting Experiments and Stunts

For the boy who loves to tinker and experiment with the electrical marvels of the age, Electricity offers a field that is full of mystery, excitement and thrills.

What electricity is, neither you nor I nor anyone else, is able to answer, for no one knows but we can and do convert this mysterious power to wonderful results that serve our everyday needs for we have mastered this mighty force and made it our powerful servant.

We produce it and put it to work in a thousand different ways and it is hard to imagine what man's life would be without it, for today this invisible power is applied to countless tasks.

Powerful motors are driving at an ever increasing rate of speed, trains, ships, planes and automobiles. Giant machines of every type are propelled by this magic force. Light, heat and cold are produced and the telephone, telegraph, radio, television, X-rays and other marvels are all a part of it.

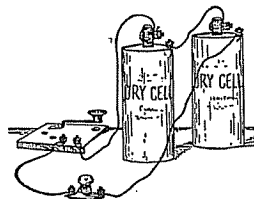
From every angle it is one of the most interesting of subjects and you boys never dreamed of the fun you can have experimenting with it. Electricity offers one of the biggest fields for men today and the boy who knows about this great power is the boy who will win in life. While electricity is still a mystery, much is known about the rules and laws governing its nature and for convenience it is classified according to its motion.

Static electricity is recognized as electricity at rest. Magnetism is electricity in rotation. Current electricity is electricity in motion and Radiant electricity is this power in vibration.

Now it's characteristic of every boy to want to know about these things and if you are searching for thrills and mysteries you'll find in the apparatus that's packed in the different Gilbert Electrical Sets that are shown on the colored pages, equipment that will give you hours of fascinating and inspiring fun. You'll be surprised with the hundreds of different things you can do and for experiments and stunts, well—there's no end to them. We won't attempt to describe these sets for that's taken care of on the pages where they are illustrated but it's fun, Boys, such as you have never had before and just for a little added interest we are going to show you a few of the interesting stunts that are in the manuals that come with each set.

### Flashlight Signaling Is Great Sport

Here is a first-class scheme with which you can signal over considerable distance at night. Connect a telegraph key in circuit with the lamp and the battery, as in illustration. Now by pressing down on the knob of the key you close the circuit and the lamp lights up.

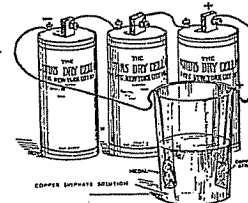


Hook-up for Flashlight Signaling

Of course, your "pal" at the other station must have a like outfit. Then let it be understood between you that one flash means yes and two flashes mean I don't understand. This is the regular spiritualistic code. You can use it for telegraphing, too, but you and your pal must learn to send the alphabet in the International Morse Code, or, as known commercially, General Service Code. This is the telegraph code of dots and dashes that is used all over the world by wireless operators. Study the chart and become familiar with the alphabet and you'll soon be able to send complete messages.

### THE INTERNATIONAL MORSE CODE

A	B	C	D	E
F	G	H	I	J
K	L	M	N	O
P	Q	R	S	T
U	V	W	X	Y
Z				
NUMERALS				
1	2	3	4	5
6	7	8	9	0



Electroplating

### How to Electroplate With Copper

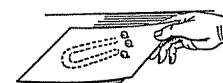
Take an old medal or a foreign coin, or any small metal object that is made of brass or silver, and boil it in vinegar for a few minutes to cut off all the grease and dirt. When the object is clean make a hook, on the end of the terminal wire connected, to the zinc of your battery and secure the object to it as illustrated. To the terminal wire of the carbon of the battery hang a clean strip of copper. Now dissolve three teaspoonfuls of copper sulphate, which can easily be secured at any drug store, in a tumbler of water and immerse the object to be plated and the strip of copper in it. In a few minutes you will see that a dull deposit of copper is forming on it. Leave it in the bath, as the solution is called, until an even coat is deposited on it. To give the object a bright finish rub it lightly with an ordinary pencil-eraser. An ink-eraser will scratch it.

### Estimating Your Distance in Miles from Electrical Storms

Lightning is our most prominent form of frictional electricity and by far the most powerful. It is caused by the accumulation of electrical charges in the clouds. When this charge becomes strong enough it escapes in the form of a huge spark, one to ten miles long, to some other cloud or high object on the earth. The thunder which accompanies this electrical discharge is the result of the heat of the flash, which warms the air and causes it to expand rapidly. As it does so more air rushes in to take its place. This all happens so quickly and with such force that it produces what we know as thunder.

You can easily determine the approximate distance in miles that you are from an electrical storm by counting the number of seconds between the flash and the thunder and dividing by 5. That is, if 15 seconds elapse between the two, the lightning occurred about 3 miles away. It is possible for us to make this estimate because light travels very fast but sound is comparatively slow.

### Remote Control—a Trick in Magnetism



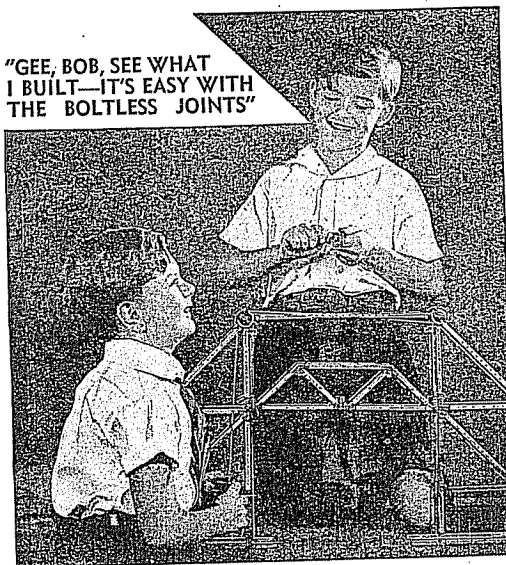
Lay your magnet flat on a table and place a sheet of paper over it. On the paper place 2 or 3 steel balls and move the paper back and forth. They will perform in a most amazing manner. Several interesting tricks can be performed using this principle.

# Be the *Fastest* Model Builder in Your Crowd!

*Just snap the parts together with the new*

## MECCANO- MORECRAFT

"GEE, BOB, SEE WHAT  
I BUILT—IT'S EASY WITH  
THE BOLTLESS JOINTS"



### A Thrilling New Construction Toy for the Younger Boy

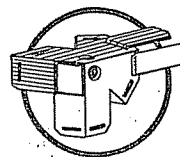
Oh boys! Boltless joints! That's the secret of speedy building with the new Meccano-Morecraft. Parts just snap together. And you can build fine big models in half the time it would take you with nuts and bolts.

Meccano-Morecraft enables you to build new and original models. Many of them never attempted before. And they're thrilling to look at when completed, for all the parts are brilliantly finished in red, blue and nickel.

Visit your nearest toy store this week and ask to see the new Meccano-Morecraft. Put some of the parts together with your own hands and see how quickly you can snap them into place.

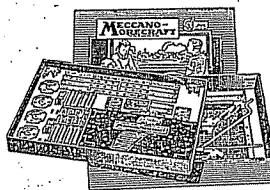
#### THE MECCANO-MORECRAFT BOLTLESS JOINT

Quick — Easy — Simplified model assembly for the 5-year old engineer and older fellows, too. No nuts or bolts—the parts just snap together. Almost before you know it, you have built a dandy model.



#### CRAFTSMAN OUTFIT

Generous assortment of parts in this double tray set. Complete with illustrated Manual.



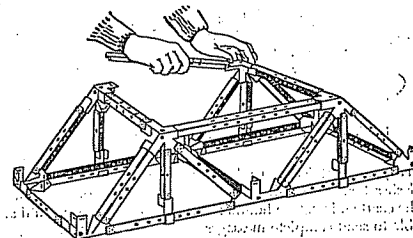
#### FREE—

Sixteen page Book of Models. Send at once and get this beautifully illustrated Book of Models. It tells all about Meccano-Morecraft and shows scores of fascinating models. Use the coupon below.

The Meccano Company of America, Inc.  
Dept. GT, 200 Fifth Avenue, New York, N. Y.

Please send free sixteen page illustrated book of Meccano-Morecraft.

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# Thrills—Adventure—

## Nature's Secrets Revealed through

# MECCANO MICROSCOPES

Do you know that a drop of stagnant water is so filled with teeming life, weird, ferocious, and wonderful, that the rankiest patch of jungle becomes by comparison a mere playground occupied by most ordinary creatures? The great explorers in all their adventures never encountered a world of stranger or more fascinating creatures.

Now all the thrills of an explorer are yours with a Meccano Microscope—without leaving your home—and the beauty of it is that you don't have to be an expert to use one.

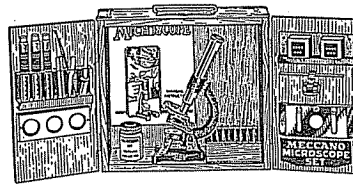
Meccano Microscopes are most powerful. Each is equipped with a splendid optical system and is easy to operate. Every Meccano Microscope has a tilting arrangement so that it can be used in the most restful position and capture the rays of light from any angle. They come in sets that are complete with slides and dissecting kit.

You can purchase a set for as little as \$1.00, or procure a fine laboratory type set in wooden case from \$3.50 up.

See them at your dealers or write for catalogue. Be sure you get a Meccano Microscope—it is guaranteed.

### SEE THESE NEW PROFESSIONAL TYPE WOODEN CABINETS

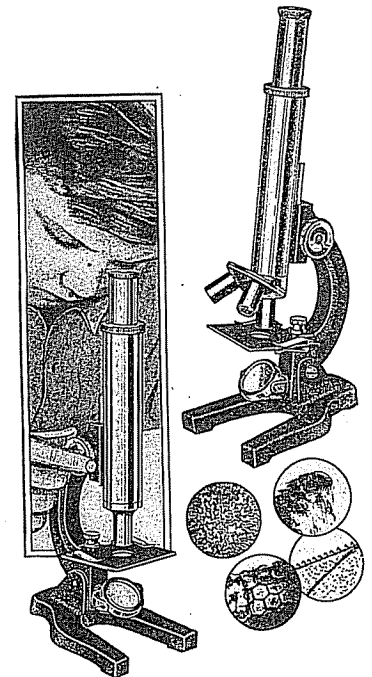
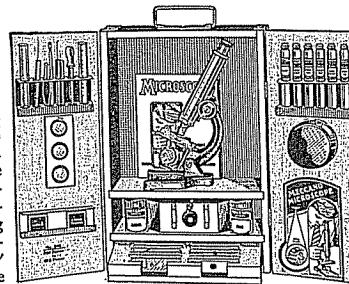
#### No. 300 Microscope Set



Microscope has three lenses in revolving turret giving 100, 200 and 300-power; also tilting device, brass clips and swiveling mirror. Height of microscope 8 1/2". Set includes glass slides, prepared specimen, dissecting kit, chemicals, stains, chrome plated dissecting base, and manual. Size 9" x 10" (open 20") x 3 1/2". Price complete \$3.50

#### No. 500 Microscope Set

Contains professional type Microscope with chrome plated tube and double focusing wheels, rack and pinion focusing and draw tube. Gives from 250 to 525-power. Large supply of slides in wooden rack, full set of chemicals, stains and dissecting kit mounted in metal racks; large dissecting piece with magnifying lens, and illustrated manual. Packed in handsome wooden cabinet opening in the center, with metal carrying handle. Size 15 1/4" x 10" (open 20") x 4". Price complete \$5.95.



## FREE—

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Please send me illustrated catalogue of Microscope Sets and other Meccano products.

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## How Many Minerals Can You Spot on Sight?

### Collection of Specimens a Fascinating Hobby and Highly Interesting Fun in Applying Analytical Tests

If you happen to be a boy who has passed the Boy Scout Test for Mining and have obtained your Badge of Merit, you have been required to obtain, name and define a certain number of minerals. You have found out from experience that this has been mighty interesting and fascinating fun and no doubt many of your pals have marveled at your ability to tell about different minerals, and have expressed the desire to know more about the different specimens themselves.

All this, of course, comes under the subject of Mineralogy which is that branch of science which has for its object the accurate investigation of naturally occurring products as regards to their physical and chemical properties, their economic importance and their uses in the arts.

Mineralogy today assumes a place of great importance from both an economical and business standpoint and its value is very easily understood when you realize that the prospector and mining man depend upon the economic mineralogist in searching for mines or handling ores and minerals. Sometimes valuable mines or worthless ones are reported on unfavorably by men not familiar with the principles and details of mineralogy. Again large sums of money may be lost by wrongly carrying out certain operations such as ore-dressing. It can be seen, therefore, that a knowledge of mineralogy—especially economic mineralogy—is a very important asset to the miner, prospector and metallurgist. This is the bigger aspect of the importance of mineralogy as a science. The other aspect, and one which ought to appeal very strongly to boys, is the fun derived from knowing how to identify or spot on sight different minerals as you find them, either alone or in the rocks in nature. As you become acquainted with the habits, forms, properties and peculiarities of the different minerals you will be able to picture all of these things in your mind on finding some of the minerals in nature. You will become much more interested in nature and will really see more things which before meant practically nothing but which are now of fascinating interest to you. Then again you may come across a mineral which you are not able to identify by sight. You cannot appreciate the fun there is in applying chemical and physical tests to these minerals and establishing for yourself, their names.

As for specimens, there are today between eight and nine hundred minerals known although only a few are common and important as rock making minerals, as ores of the useful metals or otherwise important in the industries. Rocks are often used in a general way for designating any portion of the earth's crust and these too contain certain minerals, but for the beginner a selection of specimens such as are at your disposal in the new Gilbert Mineralogy outfit, with complete equipment and a descriptive and illustrative manual of instructions, makes an ideal grouping to start with. Of course, you can easily add to this assortment and you will be surprised how quickly you can assemble a mighty fine collection.

In analyzing for chemical and physical properties, establishing identification and in knowing the economic importance of minerals, you will certainly enjoy hours of Thrills and you will be just as well versed in the Science of Minerals as the Boy Scout who passed his Mining Test and won his Badge of Merit.

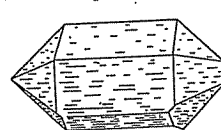
Many minerals are fully described and illustrated in the book of instructions which comes with each Gilbert Mineralogy Outfit, some of which we'll ask you a few questions about.

For instance, do you know that Quartz is the most common of all minerals and is a very important constituent of most rocks? It is usually recognized by its glassy luster, crystal form, hardness and conchoidal fracture, and a great many different varieties are found, the colors of which are due to the different impurities which they contain. It is a very common vein mineral and is associated commonly with muscovite and feldspar. It often occurs as an important

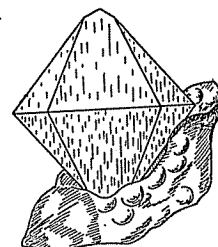
ore of gold and is found in large amounts as sand in stream beds and upon the seashore and as a constituent of soils.

Very good quartz crystals are found in Arkansas and New York. Rock crystal is found in Ural Mountains, Brazil, and on the shore of Lake Superior, Maine, Pennsylvania and South Dakota. Smoky quartz is found in Switzerland, Colorado, North Carolina and Maine. Agate is found in Brazil, Uruguay and in several places in the United States. Massive quartz is mined for various purposes in Connecticut, New York, Maryland, Wisconsin, and many of the various forms such as amethyst, rose quartz, agate, etc., find important uses as ornamental material. Used in the form of quartz sand or sand-paper as an abrasive material. Used for making mortar and cement in form of sand. Has an important use in the manufacture of glass, porcelain, as a wood filler, scouring soaps and in paints. Some of its various forms such as quartzite and sandstone are used as a building stone and as a paving material. Quartz sand is used in large amounts as a flux in several smelting operations.

Then again do you know that Muscovite is also known as muscovy-glass or common mica and that the name was derived from the mineral muscovy-glass which was used as a substitute for glass in Russia. Mica is derived from the Latin word *micare*, meaning to shine. It is a very common and widely distributed rock-making mineral and is found in many types of rocks. Muscovite is found in veins associated with quartz, feldspar, tourmaline, beryl, garnet, fluorite and apatite, and is found in the United States chiefly in the

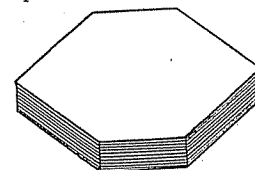


Quartz—Usually in the form of hexagonal prismatic crystals terminated by hexagonal pyramids. Sometimes the prism faces are missing, as in the form consisting of a double terminated hexagonal pyramid as shown in cut at right.



Appalachian and Rocky Mountain regions. It occurs in pegmatite veins in North Carolina and South Dakota. Deposits are also found in Connecticut, Maine, New Hampshire, Colorado, Alabama and Virginia. Also found in large deposits in Canada and India.

Mica is used extensively as an insulating material in the construction of electrical apparatus. Used to take the place of windows (islinglass), for stove doors, lanterns, etc. Powdered mica is used to give wall paper a shiny luster, as a non-conductor of heat, as a lubricant in oils, and as a fireproofing material.



Muscovite (Common Mica), an extremely perfect mineral, can be easily separated into thin sheets. Sheets are flexible and elastic.

I am sure you boys will agree that Mineralogy is a very interesting branch of science and that its numerous specimens will not only give you many hours of fascinating fun through analytical accomplishments but yield a vast amount of valuable knowledge through general research as well.