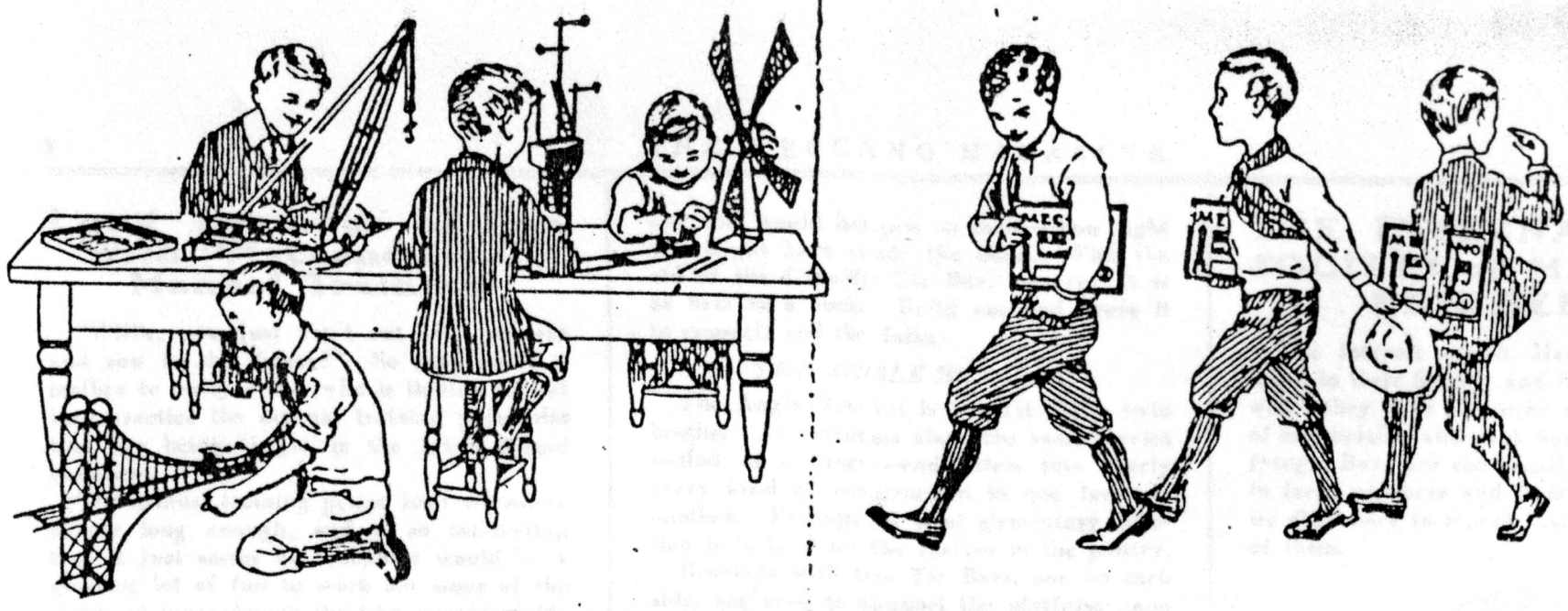
VOL. 2. No. 1 DECEMBER—JANUARY, 1919-20

MECCANO MAGAZINE

TO HELP MECCANO BOYS TO HAVE MORE FUN THAN OTHER BOYS



Club Night. The Happiest Night in the Week

EDITORIAL

FROM THE EDITOR'S CHAIR

As this is our holiday number I want to take the opportunity of wishing every one of my boy-friends a Bright Merry Christmas and a Happy New Year. I hope that Christmas will bring you lots of fun.

Don't forget that I am just a big boy myself and keenly interested in all your play, and that is why I am so proud of Meccano, because it makes happy boys and brings more real fun into a boy's life than anything else.

I would like to spend Christmas with you all, but as it is impossible to be with each one of our million Meccano boys, I am just sending this Christmas message to you from Meccano.

May it be the best holiday season you have ever had, with lots of real good fun and a big load of worth while things from Old Santy.

Please do not forget the Editor in the midst of your good times, and as soon as Christmas is over, write him a letter telling all about it, how you enjoyed it, and the presents you received.

During December, in all the better stores there will be displays of Meccano and often a Meccano demonstrator in charge. There will also be special demonstration models shown. One model we are using for our Christmas display is a big Lighthouse with a flashing electric light in the lantern, and another a Meccano Workshop with little machines, miniatures of the real ones, driven by the Meccano Electric Motor. Every Meccano boy should make a point of seeing these Christmas displays, talking with the demonstrator and asking for the new Meccano leaflet and competition entry blank.

The competition entry blank will tell you all about the big prize offer open to every Meccano boy: there are $1,000 worth of prizes to be given away. The first prize is $250 in cash, some lucky boy is going to win this—why not you? The leaflet is handy to keep or give to a friend, as it has prices of all the Meccano outfits.

Early next year I hope to have some very important news for you in regard to Meccano parts. Some very clever ideas have been worked out which I know you will want to hear about. You will read about these in the next issue of the Meccano Magazine. Watch out for it.

The Editor

THE MARCH ISSUE OF THE MECCANO MAGAZINE

Make sure of your copy now.

The next issue of the Magazine will be published in March, and if you are not already a subscriber, ensure your copy by sending 6 cents today.

No receipt will be sent unless a stamped addressed postcard is enclosed.

Be a Regular Fellow!

While Meccano is a dandy remedy for that lonesome feeling, to get the most out of Meccano building, fellows ought to flock together.

Exchange of ideas makes better work. One chap can't think of everything, but get the bunch together and Oh, boy! it's marvelous the clever things that will be thought out.

That's what the Meccano Club is for—to keep you "up on your toes" all the time. Have you a club? No? Then organize one at once. You'll find it more fun than a basket of monkeys, and you'll get a pile of good out of it, too.

First get in touch with as many boys as you can who own Meccano sets. Ask all the fellows in your room and see how many you can enroll in that way. Perhaps you can get several names from the store where you bought your Meccano. As Meccano is the original construction toy and has been sold for many years, you ought to unearth a good many boys who own outfits and would be only too glad to join in on the club idea and help make it a big success.

When you get all your names together, send to us for full rules and suggestions how to organize and conduct a Meccano Club.

An urgent reason for organizing new clubs and reviving old ones at this particular time is this: the Meccano Prize Competition is now on and every boy with more than one idea in his head certainly ought to enter. We are going to give away $1,000 in prizes to those who build the cleverest, most ingenious and original models, with a grand first prize of $250, and you'll want all the ideas you can get, so you can carry away one of these prizes. Just think what you could do with that $250! You could buy a motorcycle, a canoe, a pony, a—well, you think a little on it yourself.

Don't be a hermit; get together, start a Meccano Club and win a prize!

Long Evenings of Fun With "Meccano-ized" Manual Training

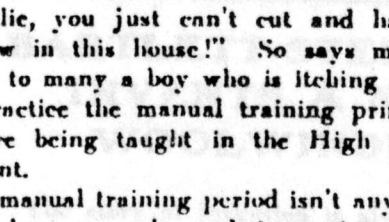
"Willie, you just can't cut and hammer and saw in this house!" So says many a mother to many a boy who is itching to put into practice the manual training principles that are being taught in the High School basement.

The manual training period isn't anywhere nearly long enough, and is *so* interesting that it just seems as though it would be a glorious lot of fun to work out some of the stunts at home during the long winter nights when it's so cold outside you can hear the wagon wheels a block away, and inside it's cozy, bright and warm.

Then's "when a feller needs a friend," and that friend is Meccano. No hunting around for pieces of wood in the furnace room, no sawing, cutting and pounding, and no chips or sawdust on the rugs. For home study of manual training, Meccano—clean, bright, fascinating—is just *the* thing. Let's see what we can get out of it in a constructive way.

Open up your Meccano outfit and pick out two 6-hole and two 11-hole strips. Bolt them together. Now you have a simple Frame. For some strains it is strong enough, others it will not withstand at all. As a proof of this, stand it up on edge, hold the lower strip firmly against the table and then push down on the top strip and to one side. The whole Frame will then start to collapse.

There is something lacking! It needs what is called a Tie Bar. To make this, bolt together two 7-hole strips, bolting them through two holes to give it rigidity, then, after straightening up your Frame until it is square again, bolt the Tie Bar on to it from corner to corner diagonally, using the bolts already there. You now have the device illustrated below.



FRAME AND TIE BAR

There! Push and pull on this Frame all you want to. The Tie Bar keeps the end strips from being pushed forward or pulled backwards, thus making the entire construction as sturdy and rigid as though it were welded together. Work it out—in Meccano. The result will make you sit up and take notice!

Well, now that we've got it, what's it good for? Gate making, for one thing. Ever swing on a gate and feel it sag? It wouldn't have sagged with a whole gang of kids on it if it had been properly braced with just such a Tie Bar.

Ah! There's a gate a young elephant might swing on and trumpet with joy. As long as the wood, hardware and supporting post hold, it won't sag a bit. However, a gate is but one of the many forms of construction to which a Tie Bar imparts firmness and strength. Engineers use it all through their work.

In Model No. 63 in Meccano Manual we have a sled made up of a simple platform and two side frames, but if these frames had no Tie Bars, the whole sled would shut up like a jack-knife the instant you applied any considerable pressure to the platform—and this would happen no matter how tight you might have made the bolts. With the aid of the friendly Tie Bar, however, it is as firm as a rock. Build one and prove it to yourself and the folks.

THE ANGLE BRACKET

The Angle Bracket is the Tie Bar's twin brother. It performs about the same service—that of a brace—and enters into nearly every kind of construction in one form or another. Perhaps its most elementary function is to hold up the shelves in the pantry.

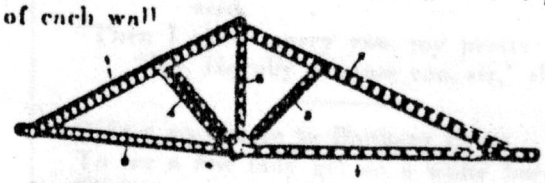
Brackets with two Tie Bars, one on each side, are used to support the platform upon which carpenters work on a new house. The brackets are held in place by long poles extending from the ground up to the angles on the inner side.

MECCANO TOWER WAGON OF ANGLE BRACKET CONSTRUCTION.

Whenever something goes wrong with the trolley wire, pretty soon along comes a Tower Wagon with men and materials to make the repair. The Tower Wagon has an Angle Bracket shelf for a platform, and it is just as solid as though it were one piece. Build one. You can have lots of fun with it, wheeling it around, and raising and lowering weights with its hoisting attachment, at the same time becoming familiar with the principle of the Angle Bracket.

A ROOF TRUSS

Speaking of new buildings, you must have noticed how many large halls there are that have no pillars extending to the floor. Ever wonder how the architect managed to keep the roof from caving in? He did it by what is called Trussing. A Truss is a kind of combined Tie Bar and Angle Bracket construction that needs but two points of support, the ends, and these rest on the top of each wall.



MODEL ROOF TRUSS BUILT OF MECCANO

In making up this Roof Truss, notice that parts 1, 2, 3 and 4, which have to meet the compression or thrusting forces, are made from angle strips, while parts 5, 6 and 7, which are merely in tension, are made from ordinary flat strips. This use of angle irons for the parts that have to stand the thrust, and flat bar irons or rods for the parts that stand the tension, is always followed out in structural iron work.

The next time you build a shack, don't have any poles in it. Use a Truss as above and see how much more room you have.

GIRDER CRANE WITH TRUSSED JIB.

A Roof Truss can be used upside down just as well. In the Meccano Girder Crane the swinging jib is really nothing but the simple Roof Truss reversed. It is used in this position for a great many purposes. Long bridges with few piers are often under-trussed in this fashion, and the delicate vanes of the great seaplanes, like the famous N C-4 which recently crossed the Atlantic, are made rigid by similar trussing of wood and wire.

In the next number of the Meccano Magazine we will tell you more about the fun you can get out of "Meccano-ized" Manual Training. Until then, see how many models you can build embodying the few simple principles we have outlined.

THE INTERNATIONAL SOCIETY of MECCANO ENGINEERS

The interest which Meccano boys have taken in their Society and the eagerness with which they have competed for the distinction of membership and rank has been most gratifying. Boys are continually wanting to join in large numbers and it is for their benefit we shall have to repeat just what is required of them.

Membership.—Send in your name and address to headquarters, 71 West 23rd Street, New York, N. Y. We will then enroll you in the Society as a member and send you a copy of the next issue of the Meccano Magazine, so that you can get acquainted with it and hear what other boys are doing. For six months you are to continue model building and do all you can by talking about the Society to increase its membership.

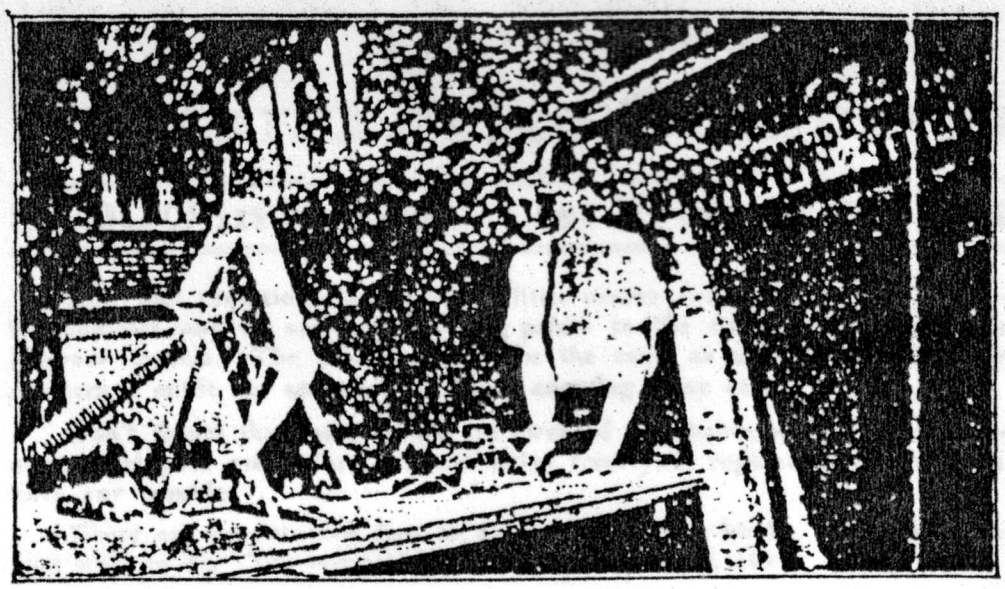
Junior Engineer Degree.—After you have been a member of the Society for six months you can become a Meccano Junior Engineer. Write us, giving full name and address, date you were registered as a member of the Society, and state what you know about Meccano and what models you have built. The degree is an award for merit, that is why it is so greatly prized.

During the six months period of building you will have learned something of the history of Meccano and its inventor, and the names and uses of Meccano parts. You will also have learned the importance of the Meccano system of standardized strips and girders with holes one-half inch apart. So it will be easy to write us a letter telling all you know. In this letter add a list of the models you have built and any you may have invented. Be sure to write clearly and use one side of the paper only. As soon as you have been awarded the Engineer Degree you will get a beautiful blue enamel button and a letter certifying that you have been admitted to rank in the Society.

Senior Engineer Degree.—After you have obtained the first degree and have worn your button for six months and continued to use your building Outfit you have the opportunity of obtaining a further honor called the "Senior Engineer Degree." You obtain a second certificate and a silver bar with the word "Senior" on it. The latter is to be worn above the blue enamel button. The two have been designed to match. The illustration above shows exactly how they are worn.

To obtain the second degree, send full name and address, date on which you obtained the Junior Degree and what you have done to earn the higher rank. A Senior Engineer is supposed to know how different kinds of girders are built, to be acquainted with the Meccano "standard details" given at the end of the Manual, and the scientific value of Meccano as illustrated in Manual No. 2.

Address all applications for degrees to Board of Examiners, International Society of Meccano Engineers, 71 West 23rd St., New York, N. Y.



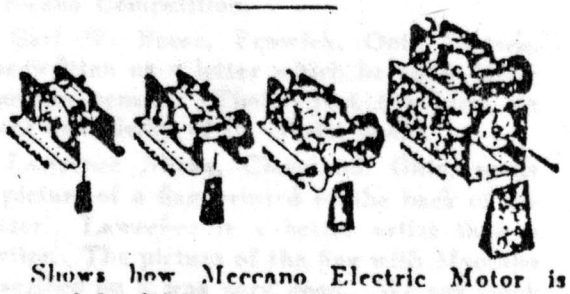
WOOL-WINDER Invented By Californian Boy

BARTLETT STEPHENS INVENTS A NEW WOOLWINDER

The story of invention is always interesting reading. Every boy likes to read of the early electrical experiment of Benjamin Franklin, or how young Stevenson, in watching the kettle boil was led to think of the power of steam and the possibility of a locomotive engine. Many a Meccano boy in inventing models does something that has never been done before, or improves on an already existing idea. Boys who do either the one or the other are real inventors, as much so as Benjamin Franklin or George Stevenson.

Bartlett Stephens is a Meccano inventor, who lives in San Francisco and is just fourteen years of age. He is the son of Charles A. Stephens, Manager of the Community Placement Bureau and former Chief Boarding Officer for the Customs Service. This bright young Meccano boy had often noticed the amount of labor and time expended in winding skeins of wool, and with the true spirit of invention set about applying his knowledge of Meccano to constructing a mechanical method of doing this. Our illustration shows Bartlett with his model. It will be seen that the model consists of a rotating frame, some twenty-six inches in height, which carries the skeins of wool while a guider directs the worsted. The device is motor driven and has proved its practical value by the extensive use to which it has been put.

We notice from the July 9th issue of the San Francisco "Examiner," that our young inventor is to enter the School of Mechanics & Arts. We are sure that all Meccano boys will wish him success.



Shows how Meccano Electric Motor is geared for lifting heavy weights.

MECCANO NURSERY RHYMES

Below we print a selection of Nursery Rhymes which Meccano boys have sent to us from time to time. Some of them are very good. If any of our readers think they can do better we shall be glad to receive their attempts, the best of which will be published in future issues of the Meccano Magazine.

There was an old woman who lived in a shoe,
She had so many children she didn't know
what to do;
Meccano, however, suggested a way
Of keeping them merry and happy all day.

Under the spreading chestnut tree
The village laddie stands,
And chuckles he, with honest glee,
Meccano in his hands.

Old King Cole was a merry old soul,
And a merry old soul was he;
And he called for his pipe,
And he called for his bowl,
And he called for his Meccano No. 3.

"Where are you going to, my pretty maid?"
"I'm going a-marketing, sir," she said.
"What will you buy there, my pretty maid?"
"Meccano Outfits, sir," she said.
"And what do you want them for, my pretty
maid?"
"For a wee boy to play with, sir," she
said.
"Then I shall marry you, my pretty maid!"
"Mr. Hornby's before you, sir," she said.

Ride a cockhorse to Banbury Cross,
To see a fine lady get on a white horse,
With rings on her fingers and bells on her
toes,
She talks of Meccano wherever she goes.

Mary, Mary, quite contrary,
How does your Meccano grow
With puffer trains,
And lovely cranes,
And tanks to fight the foe.

Little Miss Muffett,
Sat on a tuffett,
And with Meccano she started to play;
This did so enthral her,
The spider failed to appal her,
And turned disgusted away.

SCIENCE CLUB HORACE MANN SCHOOL

NEW YORK.

Boys! Are you going to enter the Meccano Competition? All of my boys are. We've formed a Meccano Club. And we're working hard each on our own model. It's lots more fun than to follow the Manual, and it's not very hard. Yesterday we held a meeting to talk over our plans. Would you like to know what we decided? Listen:

President: Boys, we've come together to find out how we can help each other become inventors. Each one of us must think of some new idea for a model. Then we must construct it and show it to the members of the club. We will all examine it to see whether it works and whether it can be improved.

Robert: I don't think any invention will be any good, Mr. President, unless it can do something useful. A lot of the models the boys make can never be used for anything.

Lionel: I was reading a book on inventions yesterday and it said that all inventors look for something that people want very bad or haven't got before they start work. Let's do the same.

Jerry: My Dad is an inventor. He invented two machines and he says that it isn't so hard to find out what people want as it is to know just how to go ahead. He says that if people would only study the lives of inventors and read their own stories of how they did it, there would be many more inventors in this world.

President: Robert, you have invented more things than anybody else in this club, can you tell us how you do it?

Robert: Yes. I'll gladly tell you; but why can't we all do the same? We've all invented something. And wouldn't it be great if all the boys who own Meccano could tell us, and we tell them just how to go about inventing a model.

Eliot: Gee. I've got an idea. Let's ask the editor of the Meccano Engineer to print our stories and the stories of other Meccano inventors.

President: Great. All those in favor, say Aye.

Club: Chorus of Ayes.

Now boys, do you want to get help with your idea for a model? Do you want to make your invention a real one that will be worth something and win a prize? Then be sure to read these stories of how boys came to invent their models. But will you too tell other boys about your own new inventions? Send us your story in a letter. Write it in your own way and don't be afraid to tell us everything. And above all be sure to tell us

1. How old you are.
2. Where you live.
3. Whether you go to school and in what class you are.
4. Why you wanted to invent your model
5. What your model can do.
6. What gave you most trouble in making it
7. How you overcame this difficulty.
8. Whether there was a model in the Manual which gave you some help. Which one
9. How you could improve your model
10. Whether your model makes you think of any new models or new ideas which you would like to try out.
11. How long you have had Meccano.
12. About how many models you have constructed already.

A New Grand

Meccano Prize Competition

$1,000 in Prizes. 1st Prize $250 in Cash

Now that conditions are getting a little nearer normal we are able to resume our big Contests, and we are again offering prizes to the value of $1,000.00 for the best Meccano models. The conditions will be the same as usual, and every boy who has a Meccano outfit has an equal chance of carrying away one of the big prizes.

Don't forget that more prizes are awarded to simple models than to complicated ones. Get your entry form without delay from your regular dealer, or from us if you have any trouble.

There are no entrance fees or restrictions of any kind. The entry form tells you just what to do. The competition closes on March 1st, 1920.

ANY BOY CAN ENTER MORE THAN 200 PRIZES

MECCANO

OUR MAIL BAG

The Editor has a little talk to this column with his Meccano boys. Whether he has space to reply to them all here or not, he is always glad to hear from them. He receives hundreds of letters each day and only those which deal with matters which are likely to interest other Meccano boys can be dealt with here.

Correspondents will help the Editor if they will write on one side of the paper only.

Barton Deits, Philadelphia, Pa., has a No. 2 Meccano Outfit and has built everything in the Instruction Book. You have indeed been industrious, but we have a No. 2 Manual ready for you now with one hundred new models, and before you have built all these there will be more coming. Always something new in Meccano.

John Hess wants the Meccanoman to spend Christmas with him in California.—How delightful! Sorry I cannot come this year, but if the Pacific Air Express gets going well, by next year I will come.

Arba Swaine Taylor, Lynn, Mass.—That was quite a dandy photograph of a Ship built with Meccano parts you sent us the other day. Try again, you are going some.

Paul L. Hoffman, Omaha, Nebr.—We were glad to hear from you again. News from Nebraska is always welcome.

Clarence A. Storms, St. Paul, Minn.—Quite an interesting lot of models which you have built. What about that Spinning Top, did it go well?

Llewellyn Passwater, Rensselaer, N. Y.—We can see from your letter that you have been very busy with Meccano lately, and you have new names for some of the models you built. If you can invent models as easily as names you ought to try for a prize in the Meccano Competition.

Carl W. Beese, Fenwick, Ont., Canada, has written us a letter which he calls "good common sense." That's just the kind we want and plenty of it. Write again.

Lawrence Slirka, Cleveland, Ohio, sends a picture of a flag printed on the back of his letter. Lawrence is a better artist than a writer. The picture of the flag with Meccano inscribed on it was very good. We are much pleased with it.

Ralph Sprungman, Minneapolis, Minn.—Your poem, "Meccano as a Toy," is good and we believe you mean every word of it. With a little practice we think you could write something even better. Try again.

George Albach, Buffalo, N. Y., says that Thomas Edison, Samuel Morse, Elias Howe and Alexander Eiffel did not have Meccano when they were boys and were severely handicapped on this account. We agree—that is one of the advantages boys of today have.

"Say, boys, do you want to know what is a good toy?" Charles Gile, Kenosha, Wis., has discovered it. Meccano he finds to be the best of all. We agree with him heartily.

Andrew Wyatt, Providence, R. I., began with a No. 0 Outfit four years ago and is so keenly interested that he plays with his Meccano at least six days a week. A very good record. A boy who sticks to a friend like this will certainly make good.

Bubbie Beckett, No. Vancouver, Canada.—We hope we will not have to keep you waiting much longer for the new Meccano parts. As soon as they are ready, an announcement will appear in the M. M.

Mount Vernon, N. Y.

Gentlemen:

I am writing you this letter because I think it will interest you, for it is all about my most graceful friend who is my own Meccano No. 1 outfit, this Meccano outfit is to me too most fascinating friend of mine.

Here is an example of what happened to me one day when I was anxious to play with my Meccano.

It was about seven o'clock Wednesday morning. I went to play with my Meccano and I heard someone calling, "Hey, Freddie," and I went to the door to see who it was and it wa. my best boy friend. He said to me, "Let's play with our Meccano outfits", of which he has a No. 0 and I have a No. 1. Then I said gladly, "Come on the porch and I will go and get it".

We had a very good time, while he was making an aeroplane I was making a windmill. After a while the mailman came down the street. I asked him if he had anything for me and he said yes, and I near cried with joy when he handed me a letter from the Meccano Co. It was a large envelope. Then Julius said, "Open it and see what they sent you". Then we heard Julius's mother call him, he ran across the street. His mother said to him, "Here is some mail for you from the Meccano Co." Then he came across the street looking very happy, we done nothing but look at that mail all day long. And I am so well interested in building models and writing letters to you that I am giving up my job as a paper boy so that I use that time for building models and writing letters about once a week to you about how I am getting along in building models with my Meccano outfit No. 1.

I must close now.

Yours truly,

MASTER FREDERIC WIDULSKI.

Meccano Manuals of Instructions

There are two Meccano Manuals of Instructions, and no Meccano boy is properly equipped unless he has them both. Book No. 1 is the regular manual which goes with the main Meccano outfits. It contains illustrations and full instructions for making 226 fine models; some of the models have been designed by our own staff of experts, and others are prize-winning models contributed by Meccano boys from every country in the world. Price, 35 cents.

Meccano Manual, Book No. 2, has only just been published, and it contains illustrations and instructions for building 100 entirely new models, very many of them prize winners. It contains Tanks, Guns, Submarines, Searchlights, and other warlike models; also a new series of simple and intensely interesting scientific experiments which any boy can make, and which impart a lot of useful knowledge. Price, 35 cents, post free.

PRICES OF MECCANO

No. 00	Outfit	$	1.00
" 0	"		1.50
" 1	"		3.00
" 2	"		6.00
" 3	"		9.00
" 4	"		15.00
" 5	"		20.00
" 6	"		40.00

Each Outfit contains full instructions

MECCANO OUTFITS WITH ELECTRIC MOTORS

No. 1X	$	4.50
" 2X		7.50
" 3X		12.00
" 5X		25.00

Outfits No. 4, 5 and 6 also contain an Electric Motor.

ACCESSORY OUTFITS

No. 00A ..	$ .50	No. 3A ..	$ 6.00
" 0A ..	1.50	" 4A ..	5.00
" 1A ..	3.00	" 5A ..	20.00
" 2A ..	3.00		

Meccano Clockwork Motor ..	$3.00
Inventor's Accessory Outfit ..	3.00
Meccano Electric Motor ..	2.00
Meccano with reversing mechanism and extra gears	4.00

Each Meccano outfit is complete with all parts and tools necessary for building models. Full instructions are included and the youngest boy can commence to build at once without study. An accessory outfit may be purchased at any time, enabling bigger and more interesting models to be built. Additional parts may also be purchased separately, at prices given in our published lists.

Remember, that though boys play with Meccano for pleasure, and though they get more genuine fun from it than from any other toy, it also gives them a sound knowledge of engineering. Through playing with Meccano, many a bright boy has been started on a prosperous career in one of the most important and profitable professions — engineering and mechanics.

PUBLISHED BY MECCANO COMPANY, INC.
71 West 23rd Street, New York, N. Y.
Printed by La Pidus Ptg. Co., New York