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Road, Clapton, N.E.

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Nowadays, however, hundreds and even thousands of boys have had practical experience in the line of mechanical engineering, and this is the result of Meccano. Such boys are able to talk intelligently on engineering subjects with those who are in the engineering world, and are able to read with interest engineering periodicals.

But it is when the Meccano boy steps out into the engineering world that the full advantages of his Meccano training are felt. As one who has been a Meccano boy for a long while and has now commenced studying Engineering in earnest, I am able to speak with some amount of experience. On commencing studies, I found that my work in the mechanical department had been lightened considerably by Meccano. The principle of levers was already quite clear to me, and moments were picked up without trouble. I had seen how that by gearing, the Meccano motor could lift much heavier loads, but at a slower pace. Hence, when I came across "Mechanical Advantage" and "Velocity Ratio," they gave me no trouble. The action of the constantly occurring worm and worm gear was quite plain and straightforward to me, because I had met it in "Meccano." The relation between the sizes and relative speeds of toothed wheels was also quite plain. Though bevel gears had not been met directly, their action had been illustrated by con-  
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Another field covered by Meccano is that of belt and chain driving. Here again Meccano had taught me much. The fast and loose pulley systems had been illustrated by Meccano, and the uses of crossed belts, cone pulleys, countershafts, &c., needed no explanation.

Thus it will be realised that the principles of Meccano are true Engineering principles, and that when a boy is enjoying himself with Meccano he is learning something of practical use and of great importance.

Let me here add an appreciation of the appendix to be found at the end of the Meccano Manual. Here many fundamental mechanical movements are illustrated, and much information may be gained by any willing to learn. Most boys are anxious to know how it works, and here we have the Centrifugal Governor (which is so widely used), Hooke's Coupling (the motion of which is so evasive), the principle of the inclined plane, the principle of levers, and many other fundamental movements made quite clear for even the youngest to understand.

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There are toys and toys. Some are only toys. Meccano is a toy, but a jolly good one. It is never a waste of time to play with Meccano. You can begin when you are quite young and go on till you are quite an old boy.

It is a poor boy who does not know Meccano. You can play the best games of all with it. You can make almost anything in the way of machinery. In

fact, there is scarcely anything worth making that cannot be made with Meccano. The only thing that is hard to make is a mistake, that is if you pay attention. And you can have competitions with other boys to see who can build quickest or strongest, or who can invent best or copy best. You do not know you are learning things, but you are all the time. Not many toys do that.

Meccano does not break as other toys do; and it is not nearly so expensive as many useless things which are only toys. It must be nearly worth its weight in gold. In Meccano you make your own toys; you make them work, too, especially if you have a motor.

It lasts such a long time because you treat it as a friend. There is only one thing cleverer than Meccano, and that is the man who invented it. When you are at work at it, it is not like a game which is the same each time. Meccano can be always different, and always more and more interesting. That is why it lasts so long. You have never finished.

An advantage in Meccano is that the pictures of the models are always true. In fact, the model you make is better than any picture of it. Then, you can always get spare parts if any should be lost. Of course, no Meccano boy loses them; they are too precious.

"Toy" rhymes with "boy" very happily; no two things go so well together. Also "noise" rhymes with "boys"; but there is this about Meccano—it is the most silent of toys. You can go on working so quietly that people do not know that you are in the room with them and they sometimes forget to say that it is time to go to bed.

Of all the fascinating toys  
That kind folk give deserving boys,  
This is the one that never cloy  
And never anyone annoys;  
The time it usefully employs,  
And ne'er engenders any noise.

It happily the hump destroys,  
And fosters educative joys;  
Each faculty it well deploys,  
And keeps the mind in equipoise;  
A young mechanic nought enjoys  
So much as this, the best of toys.

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## Meccano as a Help to Engineering

Sent in by Hector H. Beard, Gorsty Knoll,  
Nr. Coleford, Glou.

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I was 14 years of age on the 25th November, and I was apprenticed to a firm of engineers. I went a month on a trial, but before the month was up my parents were sent to, to say the firm would be glad to accept me as an apprentice, that they could see I had it at my fingers' end, and asked me had I been studying engineering books or what. I told them "No," but that I had been working with my Meccano, and the reply they made was this: "Well, if yours is a case of working with Meccano, it must be a grand thing for a boy to study." I consider that my Meccano has been the starting point in my life, of how to become an engineer, and I feel sure that it has helped me a great deal in getting in with the firm. I am in "The Forest Dean Engineering Company." I am deeply interested in my work, and I owe it all to my Meccano, and if I get on well I shall owe it all to using the Meccano. I have worked with mine all day long, and only left it to take my meals, and each part seems full of interest to me. Therefore, I consider Meccano is not only an interesting and pleasant pastime, but also that it gives boys such a splendid insight into all the different parts of engineering. I have three other brothers who are all keen on Meccano, and I can say honestly that if we turn out a family of engineers, we shall owe it all to your splendid gift of Meccano to boys.

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