

with our explanations?

Now I am going to tell you how the world began. I have been a long time getting at it, but it seemed to me that all the explanations I have made were quite necessary. In fact, I do not think I have explained enough now, but I must go ahead, and hope for the best.

Do you know the constellation of Orion, the Mighty Hunter? I feel as if I ought to talk awhile about Orion, but I shall have to assume you know it. We in Australia have it overhead every summer. It is in England during the winter nights, but it is here in the summer nights. Those stars are overhead here in December midnight, and they are overhead in England in December midnight, for the world makes a complete revolution in twenty-four hours. December is winter in England. Is not that odd? When we are roasting at Christmas they are freezing. In December Orion is overhead with us at midnight; in December Orion is overhead with them. It is very difficult to comprehend. But everything is difficult to comprehend, if you want to understand the cause of anything. I do not think anything is "caused" really, except insofar as law is the cause of it. Nothing ever happens by "chance"; but everything is the result of something that happened before. That subject, however, is too deep for us at the moment.

In the constellation of Orion you can see a great big nebula, as it is called—a cloud of gas, or vapour. It is billions and billions of miles in extent, and if you could get close to it you would find that it was composed of gas. On the outside you would find it cold, but on the inside you would find it hot. That gas is in motion, just as gas is in motion everywhere. What made all that gas gather into a cloud? The law of its nature.

Did you ever notice the curious way water runs out of a bath? There is a small hole, where you pulled the plug out, and all the water has to run out of that hole. Well, if you watch, you will find that the water begins to swirl and swirl, and at last it goes with a savage rush, that makes itself heard even outside the bathroom. If you watch closely enough, you will find that the swirl nearly always sets in the same way—that is, from left to right. Why? Ah! there you have the same law that makes water run down a hill instead of running up. It is the law! Nearly all the planets circle round the sun in the same direction as the water runs out of the bath; but they say there are some that circle the opposite way, and I daresay it is quite true.

The nebulous matter in the constellation of Orion is gas, and it will keep whirling, just as the water in the bath does, till it really roars with fury. And the faster it swirls the hotter it gets, and the denser, till at last, after millions of years, it will be going so fast that it makes your human mind dizzy even to think about it, and it will grow so dense that it will be just a flaming mass of gas, all developed from the cloud mist.

There you have the birth of a sun, a great flaming, gaseous, white-hot sun. That sun will keep on whirling at such a speed that it will throw pieces off which would fly right away into space except for the pull that I told you about. The whirling sun would fling them into space, but the pull holds them back, and the combination of the two forces keeps the mass going round in the circle. Thus you have the central sun and the small worlds going round it. Our world is probably a bit of the sun, and the force that threw us off left us whirling where we are; and that is how the world originated.

Of course, you do not need to believe that; but if you can get a big telescope at any time, you will find that there are nebulae (fire-mists) scattered all about the sky, and you will see new suns, and old ones; and if you could study the subject, you would find that the old suns have lived so long that they have burned out, and they have gone quite black. Of course, they still keep falling through space at the rate of thirteen or twenty or two hundred miles a second, for the simple reason that there is no end of space; there is nowhere for them to stop. The universe is almost crowded with dead suns, and that is what Professor Bickerton talks about—the "collision" of dead suns making new suns.

It is a big subject, is it not? Our sun whirled around till it had thrown off some worlds; eight or more of them are here now. Some of them, when they were not, circling round in a more or less gaseous form, threw off other pieces, which became either rings, as in Saturn, or moons, as in Jupiter—which has seven moons—or a single moon, as the earth has. That is how the suns and worlds and moons came to be. It is very simple really, but we have never appeared able to discuss it, and so it all sounds mysterious. It is less than a century-and-a-half since Herschel discovered that the stars move, and it is less than a century since we began to have a general glimmering of what we now call "popular astronomy," though astronomy is not very popular yet. However, it is coming along.

Next Lesson: IN THE DAYS WHEN THE WORLD WAS YOUNG.

## The Comparison Odious

SURELY there is material for the ironist in the fact that the higher political protagonists of our economic system habitually talk in their public outpourings like illiterate evangelists; while the speeches of the wild Russian-Bolshevik leaders so often read, in moderate statement and meticulous analysis, like an editorial in some such publication as the monthly bulletin of the National City Bank. Probably the point is that our bankers and the Soviet leaders alike represent a world of actualities; while our unfortunate politicals represent a world of pure blather. The head of one of our larger financial institutions, after a long conference with Messrs. Martens and Nuorteva, who were the Soviet's trade-representatives in this country before Mr. Wilson's Administration hurled them from our shores, was chiefly impressed by the fact that these representatives of alien politics talked like business men. Apparently such a thing transcended his experience here.

Admirably in point is a speech by M. Chicherin, Russian Commissar for Foreign Affairs, on the proposals for the Genoa conference, delivered before the All-Russian Central Executive Committee, 29 January. The Executive Committee, with its 200 members chosen from the Central Soviet, is the somewhat unwieldy administrative council responsible under the Russian Constitution for the conduct of the Government. It is virtually of parliamentary proportions. Under the unrestrained dictatorship which, as we are repeatedly informed, dominates Russian policy, there would be no reason to suppose that the Foreign Minister would find it necessary to make more than a formal and superficial announcement in respect to the problem of Genoa, and to secure a blanket endorsement for the dictators. At best, one would expect nothing more than the evasions and platitudinous generalities of a Lodge addressing a committee of the Senate on some new departure in foreign policy. But M. Chicherin's speech is the address of an exceptionally talented executive presenting an important proposition before his board of directors. With businesslike candour and directness, above all with a fine grasp of the larger implications of his subject, M. Chicherin gives a thoroughly dispassionate analysis of the whole international situation leading up to Genoa; and by the time he concluded, his auditors must have had a very substantial education in foreign affairs.

What, for instance, could be more admirable than the following quotation setting forth the British attitude?

When I put before you for ratification our first peace-treaty, the treaty with Esthonia, I referred then to the sharp divergence of interests between England and France, both in relation to the Baltic States, and with respect to Soviet Russia. On the banks of the Thames, I said, flourishes the finest flower of the art of government. There you will find concentrated all the acumen, all the political sagacity of the capitalist world. The government circles of England know well how to look ahead, and possess a fine flair for the appearance of new historical forces. The English governing-tradition consists in the observance of the succession of historical events and in compromising

with new historical phenomena. To enter into agreement with new historical forces in order to dominate them—therein consists the triumph of the traditional English art of government.

At the present time the representative of this English tradition is Lloyd George, with his pliability, his sensitiveness to all surrounding social and political forces, and his skill in compromise.

This policy (compromise with regard to Soviet Russia) of Lloyd George had temporarily to give way to the military plans of the extreme chauvinist circles represented by Churchill. Their object was to establish on the ruins of Soviet Russia a naked dictatorship of the Entente, relying on the big banks, by means of which conquered Russia would be converted into a colonial country. But no sooner was the failure of Denikin apparent than Lloyd George, at the autumn banquet of the Lord Mayor of London in 1919, delivered an historic speech on the necessity for coming to terms with the Soviet Government.

The arrival of Krassin in London marked the beginning of a new period in our relations with England and in our international relations in general. Lloyd George's motto, "Peace and trade"—once the motto of the great majority of business interests in England and even of the labor-organizations—was also our motto.

With equal dispassionateness M. Chicherin then takes up the situation in France, in Italy and in the United States, as affecting Russian relations. His analysis of the muddle in America shows an acquaintance with intimate American politics that probably few of our publicists could match. In the course of his discussion of American policy, he brings out the contrast between the instant enlistment of American sympathy for generous relief-measures in the matter of the Russian famine, and the stubborn failure of American leaders in business and politics to show towards Russia any sense of reality. Plainly M. Chicherin believes that in the nature of events, British policy offers inevitably the best hope for Russia to-day, largely because British statemanship shows such a persistent sense of political realities.

One need not care a paper rouble for or against communism in order to appreciate this sort of exposition. Clearly the tenacity of the present Russian leadership against almost insuperable odds is explicable on the ground of intelligence. It is a difficult matter to overthrow intelligence, especially in a world where, in political circles at least, it is such a rarity. Americans who have the good fortune to light upon a copy of this address will read it with a feeling of humiliation and envy. The inevitable query will arise, Why can we not have from our political executives utterances of such clarity and comprehensiveness? Possibly the answer is that to speak well, a person must have something to say.

Nothing worth serious comment has as yet happened at Genoa. We must acknowledge that the conference has already lasted longer than we thought it would; and we may add that it has been twice as entertaining as we expected. Most of the fun is furnished by the contrast between the Russian delegates, who talk like straightforward men of affairs, and the others, who talk the conventional jargon of international politics—who talk, in other words, like mountebanks.

For instance, at the outset it was agreed that disarmament and reparations should not be discussed, although every sane man knows that it is absolutely impossible to discuss a single question in European economics without being carried straight back to these two points, for they are fundamental to everything in the economic life of Europe. When the conference was convened, the Russians promptly put themselves on the right side by offering to disarm; for which they were rebuked by M. Barthou, and told that they should not introduce a forbidden subject. They mildly replied that they did not know the details of the Cannes agreement, for no one had told them. They had heard, however, that the French were worried because the Soviet Government had a large army, and they merely thought that it would be a nice neighbourly thing to offer to disband it. However, if the French really did not want to discuss the matter, they would apologize and subside—which, accordingly, they did; and thus ended one of the most amusing scenes ever enacted in the harlequinade of politics. It left our French friends standing in the worst possible light.

Then when it was proposed that the Russians

(Continued on page 5)