

## THE ATOMIC CRUSADE

*By Arthur H. Compton*



**T**HE ATOMIC program, which began five years ago last month, was in fact a crusade. This is why it was so effective. It was not necessary to have a highly refined organization to get cooperation. The goal was recognized as so important that personally favored ideas were willingly scrapped when it became clear that better progress could be made by working along other lines. Individual scientists, leaders of the Government, the Army, universities, and great industrial organizations successively caught the vision of great achievement. They could see that success might spell early victory in the war and that to lose the race might well mean defeat. They were glad for a chance to share in what was instinctively recognized as one of the great human adventures of all time.

Many have wondered how the secret was so well kept that both our enemies and the American public were taken completely by surprise. Probably some thousands of persons—a per cent or so of the million who worked on the job—knew, or guessed, that atomic bombs were being prepared. Though very few were acquainted with such essential details as delivery schedules, objectives, and timing, the vigor of the prosecution of the work showed that the use of the bombs in this war was expected. Of course, care was used in selecting those who would have to know the purpose of what they were doing. But the real explanation for the tightness of the secrecy was that when, by accident, someone learned what was going on, he was awed by its significance. A simple suggestion was enough to make him understand that “here is something I must





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not tell. The safety of the world may depend on the tightness of my lips." He had himself become a part of the crusade.

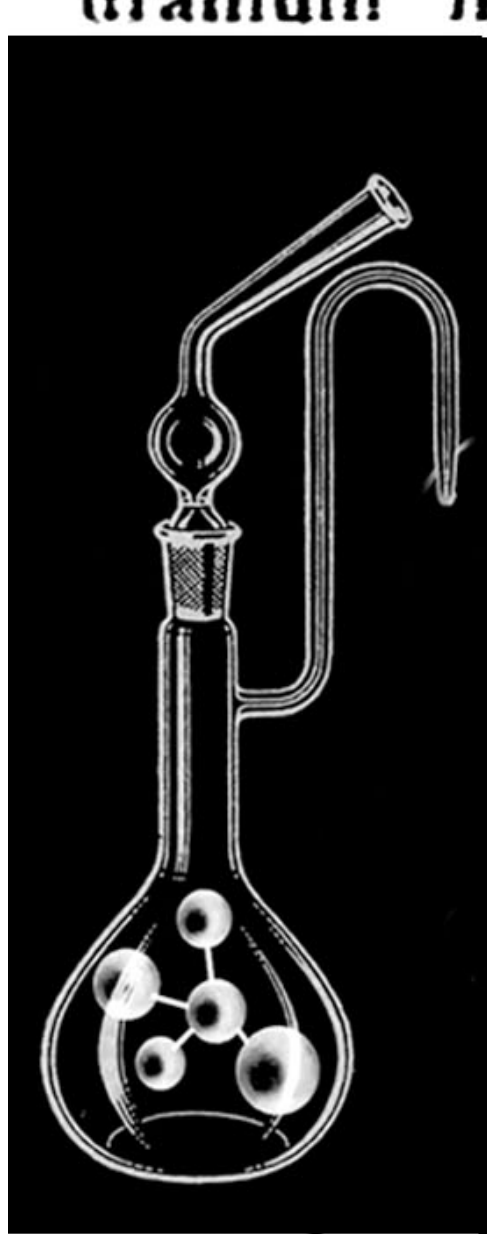
As in the case of a holy war, so also the atomic crusade was the expression of a widespread faith that had developed over many years. Among the scientists this was a faith in the reliability of their methods of prediction, a confidence in their ability to accomplish a task that theory showed was possible, combined with a conviction that the release of atomic energy would eventually become one of the greatest gifts that science could ever provide to man. Generations of experience with the growing applications of science gave the representatives of government and industry a faith in the considered judgment of scientists. Other marvels as great as this had appeared. All those in responsible positions were determined to avoid any chance of losing the fight for freedom. If for no other reason than that they might be right, the predictions of the scientists must be listened to. Faith, expressed in complete support, was called for.

**I**T WOULD be a mistake to suppose that either the scientists or the Government set out initially to build an atomic bomb. This was indeed the central military objective of the great atomic war effort. The bomb was, however, only the wartime aspect of a much greater vision. This vision began to take shape with the discovery fifty years ago that within the atom lies a storehouse filled with energy vaster by far than that which shows itself in such chemical processes as the burning of coal. Many a physicist hoped that he might have a share in presenting this wealth of energy in useful form as a Promethean gift to mankind. Perhaps nothing that physics could ever do would be of so great practical importance. There were dreams of a more abundant life, of greater knowledge to control disease, of greater freedom to build a better world. When uranium fission was discovered, it

seemed that these dreams might be made real. Atomic power to drive the wheels of industry? Yes, and to propel ships over the seas and supply heat in the arctic wilds, making more of the planet available to man.

But uranium fission came at a time when war compelled everyone's attention.

The possibility of atomic explosions had been thought of only as terrors to be avoided, disasters that might overcome the bold experimenters who first would start the atomic chain reaction. Could atomic engines win the war? Hardly. By the time they were developed in usable form the war should be over. Nor would the use of





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such engines be of decisive importance. But the sudden release of atomic energy might make a bomb that would give to its user an enormous advantage. When this advantage was clearly seen, fear lest the enemy might first build such weapons called for a great effort. The atomic war program quickly took shape and into it was thrown all the strength that could be spared from other vital tasks.

To those who had been working with atoms for years, however, even the winning of the war was only one step in the use of the new-found strength. Victory was necessary so that people should be free to work for a better world. Among the essential features of that better world, stands prominently the freedom from fear of war. The atomists knew that from here on, war would be so destructive that its waging would be madness. The world must see that this is true and be compelled to find a way whereby war can be prevented. With this as a greater

objective, the years they spent at making atomic bombs prepared those who were making them to burst into a vast missionary call for peace as soon as the war was



won. The little group of atomic physicists had now grown to a crusading army, with the strength of the many thousands of humanity-minded men and women who had shared their war effort.

Nor is peace itself the final goal. Many have been the frustrations of science. Improved methods of supplying food and shelter and other essentials to needy humanity have failed to achieve their promise because of the failure of society to use them for the common welfare. Here in atomic energy is a new, great opportunity to enrich life. Those who have brought this new child of science into being are determined that they shall not be frustrated again. It is not the rich, not the clever or the powerful, not the United States, Canada, or Britain alone that shall prosper from this new gift. The whole world shall have peace and, as far as the new advances of science and technology can bring it, prosperity and a more complete life. It is this great goal that the atomists hold before them. Atomic energy gives perhaps the greatest opportunity they will ever have to work effectively toward that goal. This opportunity must be used to the utmost. Such is the spirit of the atomic crusade.