

# SCIENCE

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## THE ENGINEER; HUMAN AND SUPERIOR DIRECTION OF POWER<sup>1</sup>

THE forces of nature are the most enduring wealth of mankind. To know their laws and to learn how to apply them has made of a puny little being of about 130 to 200 pounds of flesh and bone—three fourths of which is merely water—a giant of which Gulliver's tales have no equal; and compared to which the largest and most muscular animals of present or former geological periods are merely drowsy, clumsy creatures. All this has been accomplished by his few grams of better brain-matter, which permitted him to gather scientific knowledge and thus to wield powers akin to those attributed to some of the gods of antiquity.

But the forces of nature, in wrong hands, can be diverted from their very highest purposes into the basest demoniacal utilization.

During the late war, one of the nations reputed for its scientific knowledge, staggered history by the wholesale, unscrupulous utilization of science and engineering in attempting to extend and perpetuate an anachronistic and domineering system of government. The other nations, in trying to withstand this onslaught upon right and decency, were in their turn compelled to enlist the talent of scientists and engineers alongside the efforts of soldiers and sailors.

And now, thank God, we chemists can turn again to the sphere of action where we truly belong. We can try anew to become apostles of construction instead of destruction; soldiers of progress, of peace and happiness.

Unfortunately, this does not mean to say that *all* which *all* chemists accomplish is *always* dictated by such lofty motives; no more than liter-

<sup>1</sup> Address presented at the joint meeting of the American Chemical Society and the Society of Chemical Industry (of Great Britain), New York, September, 1921.