

Fluid Fuel

By EDWIN E. SLOSSON

The mobility of man is measured by the mobility of the power he employs. Consequently, the efforts of technologists are now directed toward increasing the fluidity of fossil fuel. The finer the particles the more fluid the form. The cheapest and most abundant source of energy is coal but this is solid and deeply embedded in the rocky matrix of the earth's crust. From this matrix the coal has to be torn loose by explosives and then broken into lumps small enough to be shippable and shovelable. Putting fuel into powdered form it can be blown into a furnace on a blast of air. By combining it with hydrogen we can reduce the carbon to a liquid form and by heat convert it into a gaseous state where all the molecules are free and independent. Fuel in this free and fluid form, like gasoline and Diesel oil, has given us the internal combustion engines and made possible the automobile, the airplane and the submarine.

But the atom is not the limit of divisibility, although that is what its name implies. As we now know, it is possible to break up the atom, and its finer fragments, electrons and protons, afford us a still more fluid form of energy, the electrical current. To transport solid coal from the mine to the factory requires a large part of its power. To transport water from the mountain to sea requires no power. It will flow down hill of its own accord if you will only provide it with a sloping channel or an empty pipe. To transport electricity from a point of high potential to a point of low potential requires no power. The current will flow down hill of its own accord if you will only provide it with what is for it an empty pipe, that is, a copper wire. And the electric current will travel far faster than the coal train or the flowing stream. So the efforts of inventors are now concentrated on methods of increasing the mobility of energy by such means as converting coal into a liquid form, or converting its energy into the electrical fluid.

The transmission of power by wire is in actual operation up to two hundred miles. The wireless transmission by ether waves travelling at the rate of 186,284 miles a second is a vision of the future. Since such a speed is virtually instantaneous for all points on the globe the limit of mobility is here attained.

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NOT A GREEK STATUE OF VICTORY, but a Buddhist saint found in Chinese Turkestan. This photograph, taken by Dr. von Le Coq, illustrates how Greek standards of art reached this remote region.

Buddhist Art Like Greek

Kinship of the calm, slant-eyed Buddhas of eastern art to the virile sculpture of old Greece has been proved by statues and paintings found in Chinese Turkestan. This is the conclusion reached by the well-known Berlin ethnologist, Dr. Albert von Le Coq, which he explains in *Art and Archaeology*, the journal of the Archaeological Society of Washington.

Many art exhibits brought to Berlin from the Turkestan expedition by Dr. von Le Coq and his associates have been carefully studied, and he states that there is proof that Buddhist art of India, Java, China, Korea, and Japan has risen upon a common foundation, which is ancient Greek. Examples of Greek art worked their way gradually eastward in Turkestan, affecting the work of local artists; and as time went on, Chinese art influences swept in from the east, changing the Buddhas and giving them their well known oriental aspect.

One impressive piece of evidence, cited by Dr. von Le Coq, is a headless statue of a Bodhisatva, or Buddhist saint, which resembles very closely the Greek statues of Victory. Since Buddhist paintings had become so thoroughly Chinese, the scientists who found the saint's statue were puzzled to know why Buddhist sculpture should have kept the alert, vibrant look of Greek figures.

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Later excavations revealed the workshops of a monastery, where a great number of plaster moulds were found, showing that the artists had turned out their religious statuary in an efficient and simple manner. The moulds were sturdy enough for long service, and could be easily replaced. With this clue, the ethnologists found that the ancient type was represented endlessly until in later times, the tenth century, the moulds were deliberately changed to suit the changing ideal of beauty. Middle Asia was by this time cut off from the western world and its influence, while the roads from the East were always open.

The ruins in this inaccessible region which yielded the wall paintings and statues were of two types, Dr. von Le Coq explains: first, the temples in cities, and, second, cave-temples cut into the perpendicular faces of rock in wild, remote glens.

One extensive settlement of temples cut into steep cliffs is described. The temples were half full of loess dust, a peculiar drifting soil of Asia.

"On removing this," he says, "the pictures on the walls became visible, and on the floors we found heaps of manuscripts, heads and torsos of statues, coins, moulds, stencils in paper, seals, temple flags, etc. All these things had been snatched down and savagely trodden under foot. Still, even though damaged, they are most interesting relics of a wonderfully advanced civilization."

Among the most important material which the scientists brought back to Berlin from the old city of Khocho are a great number of manuscripts in seventeen different languages. The writings in Greek, Persian, Sanskrit, Middle Turkish, Chinese, Tibetan and other languages are evidence that this remote region was in early times a junction point where many different peoples brought contributions of learning. The manuscripts include writings in the lost language of the White Huns and others in two unknown languages in undeciphered alphabets.

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Roman tribes in Europe built houses of stone, whereas Germanic tribes preferred wooden structures.

A Brazilian rubber tree, which is supposed to be a delicate tropical plant, has been growing at Palm Beach, Florida, for 25 years.

Ventriloquism, or the practice of making the voice appear to come from a distant point, is believed to have played an important part in magic and ceremonial rites of many peoples.