

# LINCOLN LORE

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## ABRAHAM LINCOLN'S ADDRESS ON DISCOVERIES AND INVENTIONS

The era of discovery and invention in America is best personified by Thomas A. Edison, one of the many remarkable men whose birthdays occur in February. Recalling Edison's efforts, we are reminded that Abraham Lincoln prepared an address once on the subject of "Discoveries, Inventions, and Improvements," which was one of the two or three popular addresses he is known to have delivered.

The complete address as delivered by Lincoln is not available, but paragraphs from two disconnected manuscripts, containing notes he used, allow us to catch the drift of his argument:

"All creation is a mine, and every man a miner. The whole earth, and all within it, upon it, and round about it, including himself, in his physical, moral, and intellectual nature, and his susceptibilities, are the infinitely various 'leads' from which man, from the first, was to dig out his destiny. In the beginning, the mine was unopened, and the miner stood naked, and knowledgeable, upon it."

"Man is not the only animal who labors; but he is the only one who improves his workmanship. This improvement he effects by Discoveries and Inventions. His first important discovery was the fact that he was naked. . . . The most important improvement ever made in connection with clothing, was the invention of spinning and weaving. . . . Spinning and weaving brought into the department of clothing such abundance and variety of material . . . affording garments not only adapted to wet and dry, heat and cold, but also susceptible of high degrees of ornamental finish."

"The discovery of the properties of iron, and the making of iron tools, must have been among the earliest of important discoveries and inventions. We can scarcely conceive of the possibility of making much of anything else, without the use of iron tools."

"Transportation—the removal of person and goods from place to place—would be an early object, if not a necessity, with man . . . For this object, wheel-carriages, and water-crafts—wagons and boats—are the most important inventions. The use of the wheel and axle has been so long known, that it is difficult, without reflection, to estimate it at its true value."

"Now, as to transportation by water . . . The sight of a crow standing on a piece of driftwood floating down the swollen current of a creek or river, might well enough suggest the specific idea to a savage, that he could himself get upon a log, or on two logs tied together, and somehow work his way to the opposite shore of the same stream. . . . The leading idea was thus caught; and whatever came afterwards, were but improvements upon, and auxiliaries to, it."

"As man's food—his first necessity—was to be derived from the vegetation of the earth, it was natural that his first care should be directed to the assistance of that vegetation . . . This was the beginning of agriculture."

"We have all heard of Young America. He is the most current youth of the age. Some think him conceited and arrogant; but has he not reason to entertain a rather extensive opinion of himself? Is he not the inventor and owner of the present, and sole hope of the future?"

"The great difference between Young America and Old Foggy is the result of discoveries, inventions, and improvements. These, in turn, are the results of observation, reflection, and experiment. For instance, it is quite certain that ever since water has been boiled in covered vessels, men have seen the lids of the vessels rise and fall a little,

with a sort of fluttering motion, by force of steam; but so long as this was not specially observed, and reflected, and experimented upon, it came to nothing. At length, however, after many thousand years, some man observes this long-known effect of hot water lifting a pot-lid, and begins a train of reflection upon it . . . Observation, reflection, and trial give to the world the control of that tremendous and now well-known agent called steam-power."

"The inclination to exchange thoughts with one another is probably an original impulse of our nature . . . But to carry on such communications, some instrumentality is indispensable. Accordingly, speech—articulate sounds rattled off from the tongue—was used by our first parents. . . . Speech, then, by enabling different individuals to interchange thoughts, and thereby to combine their powers of observation and reflection, greatly facilitates useful discoveries and inventions. What one observes, and would himself infer nothing from, he tells to another, and that other at once sees a valuable hint in it. A result is thus reached which neither alone would have arrived at."

"But speech alone, valuable as it ever has been and is, has not advanced the condition of the world much . . . Writing, the art of communicating thoughts to the mind through the eye, is the great invention of the world. . . . When we remember that words are sounds merely, we shall conclude that the idea of representing those sounds by marks, so that whoever should at any time after see the marks would understand what sounds they meant, was a bold and ingenious conception, not likely to occur to one man in a million in the run of a thousand years."

"When writing was invented, any important observation likely to lead to a discovery had at least a chance of being written down, and consequently a little chance of never being forgotten, and of being seen and reflected upon by a much greater number of persons; and thereby the chances of a valuable hint being caught proportionately augmented. By this means the observation of a single individual might lead to an important invention years, and even centuries, after he was dead. In one word, by means of writing, the seeds of invention were more permanently preserved and more widely sown . . . At length printing came. It gave ten thousand copies of any written matter quite as cheaply as ten were given before; and consequently a thousand minds were brought into the field where there was but one before. This was a great gain—and history shows a great change corresponding to it—in point of time."

"The capacity to read could not be multiplied as fast as the means of reading . . . It is very probable—almost certain—that the great mass of men at that time were utterly unconscious that their condition or their minds were capable of improvement . . . To emancipate the mind from this false underestimate of itself is the great task which printing came into the world to perform . . . It is, in this connection, a curious fact that a new country is most favorable—almost necessary—to the emancipation of thought, and the consequent advancement of civilization and the arts . . . It is in this view that I have mentioned the discovery of America as an event greatly favoring and facilitating useful discoveries and inventions. Next came the patent laws. These began in England in 1624, and in this country with the adoption of our Constitution. Before then any man (might) instantly use what another man had invented, so that the inventor had no special advantage from his invention. The patent system changed this, secured to the inventor for a limited time exclusive use of his inventions, and thereby added the fuel of interest to the fire of genius in the discovery and production of new and useful things."