

GOODYEAR'S PATENT EXTENSION.

COMMISSIONER HOLT'S DECISION.

[CONCLUDED.]

An earnest endeavor has been made to depreciate the ingenuity displayed in the invention by representing the discovery to have been the result rather of 'accident' than of scientific investigation. As early as 1834-'5, Mr. Goodyear seems to have formed a most exalted estimate of the capabilities, as a material for manufacture, of the gum known as 'caoutchouc,' or 'india rubber.' This gum had been previously extensively employed in the fabrication of a variety of articles, but, owing to their indifferent quality, all concerned in these enterprises, as well as in those which followed for a series of years afterward, were involved in bankruptcy and ruin. The fabrics thus made could not keep the market, because they were found to grow rigid under the influence of cold, and to soften and become sticky under that of heat, while they rapidly decomposed when brought into contact with perspiration and the animal oils. The applicant was thoroughly convinced that these qualities, which had proved so disastrous to the trade could be removed, and he set himself resolutely to work to ascertain the process of accomplishing this result. Sulphur had already been advantageously combined with india rubber by Hayward, so that the discovery had been approached to its very verge. The step, however, which remained to be taken, short as it was, was indispensable, and without it all those which had preceded it would have been unavailing. Science could afford but little assistance in the inquiry, for, as the event proved, the most potent element in the process was too subtle to be disclosed by the severest chemical analysis. The applicant had therefore to pursue the investigation gropingly; but he persisted in it with an ardor and a courage which nothing could abate or daunt. His aim was definite, his conviction as to its attainability complete. As one who searches for a hidden treasure in a field where he knows it is to be found, so pursued he his explorations in quest of this secret. He sought it on the right hand and on the left, by day and by night, in the midst of ceaseless toil and lavish expenditure, and by the light of every form of experiment which his most fertile genius and daring spirit could suggest. He became completely master of everything known in regard to the properties of the material which it was his ambition to improve, and so thoroughly was he imbued with the soul of his inquiry, and so intensely quickened was his vigilance, that no phenomenon, however minute, could meet his eye, no sound, however faint, could fall upon his ear, without his once detecting and appreciating its bearing upon the great problem whose solution he was seeking. From four to five years were passed in these unremitting labors, when an incident occurred which at once revealed the long-sought truth. And it is a singular coincidence that the spark of light yielded by this incident was elicited by a collision, so to speak, the result of that intense zeal which, so far as health and fortune were concerned, had been the consuming fire of his life. In one of those animated conversations so habitual to him, in reference to his experiments, a piece of india rubber combined with sulphur, which he held in his hand as the text of all his discourses, was by a violent gesture thrown into a burning stove near which he was standing. When taken out, after having been subjected to a high degree of heat, he saw—what, it may be safely affirmed, would have escaped the notice of all others—that a complete transformation had taken place, and that an entirely new product—since so felicitously termed 'elastic metal'—was the consequence. When subjected to further tests, the thrilling conviction burst upon him that success had at length crowned his efforts, and that the mystery he had so long wooed now stood unveiled before him. His history in this respect is altogether parallel with that of the greatest inventors and discoverers who have preceded him. The lamp had swung for centuries in the cathedral of Pisa, but, of the thronging multitudes who worshipped there, none had heeded the lessons which it taught. It was reserved for the profound and observant intellect of young Galileo to extract from its oscillations the

true laws of the pendulum, which led to the creation of an infallible measure of time. The theory of universal gravitation loses nothing of its grandeur or value because suggested by the falling of an apple from the tree. In all lands, by teeming millions, this phenomenon had been observed, but to none had it imparted instruction—to none had it spoken of that wonderful secret which lurked beneath its simple features. At length its 'still small voice' fell upon the delicate and appreciative ear of one whom it startled into inquiry. The light thus afforded, to whom all had been blind, was indeed dim and twinkling; but, following its guidance as one who traces back the dawn, the great Newton soon plunged into the full-orbed splendors of a discovery confessedly the most brilliant which has gilded and ennobled the annals of science. On all the hearth-stones of the civilized world, for thousands of years, the kettle had boiled and lifted its lid by the expansive power of its steam; yet for none had this seemingly trite and ever-recurring incident been significant—to none had it announced that measureless power of which it was the humble but distinct exponent. At length the movement caught the eye of a lonely student of nature, then a prisoner in the Tower of London, and in the soil of his prolific mind it proved the rapidly-expanding germ of that steam engine whose triumphs have changed the social, political, and commercial aspects of the globe. So india rubber, in combination with sulphur, may by accident have been exposed to a high degree of heat often before without attracting the attention of any: and it is safe to allege that it might have been thus exposed a thousand times afterwards without the world's having been the wiser or wealthier for it. The thorough self-culture and training of the applicant and his unwearied researches, prepared him at once to seize upon, to comprehend, and embody, in a practical form, the truth he sought, the moment it presented itself, no matter how dimly, to him. This was his merit—the same in kind with that of the most illustrious inventors, who have appeared in the world, and by that of but few of them surpassed in degree. It is a figure of speech—but an exalted mode of expression—which assigns to man any part in the work of *creation*. In his very best estate he is but a ministering priest at her altar, and when he has reached the highest walk in the drama of intellectual power to which his feeble steps can ascend he is still but a humble translator of the languages of nature. It is a fact which singularly increases the credit due to this inventor, that the very path in which he finally achieved success was the one which the experience of the past had taught him to shun. A low degree of heat had been applied to a combination of india rubber and sulphur, and it had melted under it, so that heat—the increased intensity of which consummated the discovery—was the very element which he had felt himself admonished to avoid. The discovery being made, the applicant soon thereafter added white lead to the combination, which rendered it complete, and assuming that his mission was but begun, he bravely bent himself to the task of surmounting the obstacles which still frowned upon him on every side. These obstacles, so graphically sketched in the testimony, seem to have been almost unprecedented. Capitalists shrunk away from the discovery, so confidently announced, as a chimaera, and manufacturers who had suffered so deeply by the india rubber business denied it their confidence. Its practicability had to be demonstrated by a long series of illustrations, which the total want of experience rendered protracted and often ruinously expensive. Every inch occupied in the enlarging field of its usefulness had to be conquered by many sacrifices, while, of the Protean formed applications to which it was destined to attain, there was not one that did not involve an outlay of treasure, of toil, and high artistic skill. All these, from the beginning to the present hour, have been bestowed—unceasingly bestowed—upon it, and as the fruits of all these have been, and are still being, reaped by the public, the applicant is entitled to remuneration for them.

Has the applicant been remunerated for the time which he has devoted to this invention and to its introduction into use?

It is extremely difficult to estimate in the coin of dollars and cents the worth of eighteen years of the prime of human life—especially so, when the life is one of lofty genius, of indomitable enterprise, and of stainless virtues. It is, however, about that period of precisely such a life, that has been consecrated to the pursuit and development of this discovery—nor would a shorter period of time have sufficed for the arduous and perplexing task. This declaration may be made with the more emphasis, because, in all the volumes of testimony filed, there is not one word found tending to its contradiction. Throughout those long and toilsome years it is apparent that there has been no compromise with the suggestions of avarice or with the claims to self-indulgence and ease. It has been already

fully shown that the applicant's fortune, his health, the comforts of his family, the freshness of his early and the patient energies of his later manhood, have all been unhesitatingly melted down in the crucible of this inquiry, and he is now seen tottering toward that grave which must soon open in his path, with nothing left of the heroic and athletic man but what remains of the maimed and scorched soldier on the battle-field—a wreck which every great and generous people have taken fondly to their bosom. The time of the indolent, the selfish, the dissolute, and the dull, is little worth to a world which they rather cumber than bless by their presence; but the time of the gifted, the brave, the philanthropic and unconquerable sons of genius, has for mankind a value which we should but feebly express in the arithmetic of dollars. But while we may have no means by which to measure with unerring accuracy the intrinsic worth of the ingenuity and time which have been expended, and cannot by any analysis weigh or compute their ingredients, there remains to us one standard by which a proximate estimate at least may be reached—that is, the results which have been produced. What that time and ingenuity have yielded to the public is the true test of their value, alike to that public and to the inventor; for what the former have received the latter must, upon every principle of sound logic, be held to have parted with.

What have been the results of the discovery and introduction into use of the vulcanizing process? The testimony is very full upon this point. We learn that through this instrumentality a large foreign commerce has been created in the raw material, and an inland trade in the india rubber fabrics amounting to between four and five millions of dollars annually; that extensive india rubber manufactories have grown up, giving profitable investment to some seven millions of dollars of capital, and active employment to some ten thousand operatives; and that a large portion of these fabrics is intimately connected with human comfort and the preservation of human life. Not to enumerate more of the articles produced by this process, it would be hazardous nothing to say that the shoes and wearing apparel perfected by it, and now cheaply and abundantly made, and almost universally in use, have saved thousands from a premature death, and may save millions in the ages which are to come. In the presence of these vast and still expanding achievements of this invention, the criticisms which have been made upon the applicant's accounts, as though they were some petty grocer's bill, shrink into insignificance, and, indeed, can scarcely be listened to without a blush. We have, however, a yet more definite basis on which to rest our judgment—the testimony of Hayward and Haskins. Both have long been india rubber manufacturers under the vulcanizing process, and the former made the valuable discovery of combining sulphur with the gum, for which a patent was granted to him. Their depositions are marked by frankness, and leave no doubt of their perfect acquaintance with this great interest, in all its ramifications and aspects. Hayward says that the vulcanizing process for the next seven years would be worth to the public one million of dollars; if so, it should have been worth two millions for the last fourteen years. Haskins does not hesitate to estimate the process at "many millions of dollars." It should be observed that the evidence of the contestants does not reduce these estimates. It is not possible to escape from the conclusion to which statements so emphatic, and coming from sources so fully entitled to credit, lead us. If, then, this process is worth two millions of dollars, the applicant has received but a little more than one-fortieth part of the remuneration which he was entitled to claim.

It has been assumed as a means of avoiding the force of these estimates, that the applicant is entitled to receive from the public, not what the invention is now worth, developed and established as it is, but what it was worth when the patent issued. This view has been urged with much persistence and plausibility, but it has not impressed me as liberal or sound. When the invention came, timid and struggling, into existence, meeting in every quarter with scoffs and distrust, had it been offered for sale in the market, it would, probably, have commanded a few thousand dollars—possibly less. But to say that its value is to be measured by what it was then considered to be worth, would be to determine that the character of the tree is to be judged rather by the green than by the ripe fruit found upon its branches. The present expanded and prosperous condition of the invention is mainly owing to the genius and unceasing struggles of the applicant, and he may justly reap what he has sown, and so diligently cultivated. In the adjustment of machinery to accomplish the ends so distinctly pointed out by the inventor, and in the manipulations of the gum and treatment of the fabrics in the various stages of their man-

ufacture, it is admitted that many improvements have been made by skillful mechanics and operatives, and these have their utility and importance; but to allow such labors to rival or depreciate the claims of the applicant, would be to rank the simple plowman of the fields with that sublime and beneficent Providence which creates alike the soil out of which the harvest springs, and the sunshine and the shower by which it is nurtured and matured.

Another, and most potent reason, why this patent should be extended is found in the acknowledged fact that the public have not kept the faith which they plighted with the applicant when he covenanted to surrender to them a product, which was, in effect, the concentrated essence of the physical and intellectual energies of his entire life. That public stipulated with him that he should peacefully enjoy for fourteen years the monopoly created by his patent, and, had he been permitted to do so, he would, no doubt, long since have realized an ample remuneration; but, so far from this having been the case, no inventor probably has ever been so harassed, so trampled upon, so plundered by that sordid and licentious class of infringers known in the parlance of the world, with no exaggeration of phrase, as 'pirates.' The spoils of their incessant guerilla warfare upon his defenceless rights have unquestionably amounted to millions. In the very front rank of this predatory band stands one who sustains, in this case, the double and most convenient character of contestant and witness; and it is but a subdued expression of my estimate of the deposition he has lodged, to say that this Parthian shaft—the last that he could hurl at an invention which he has so long and so remorselessly pursued—is a fitting finale to that career which the public justice of the country has so signally rebuked.

Important as are, to the parties of this issue, the immediate consequences bound up with it, they are insignificant indeed as compared with the value, to the public, of the principle involved. From the very foundation of this government, it has been its settled policy to secure a just reward to all inventors, and it is to the inflexible maintenance of this policy that we are indebted for the unparalleled advancement, which, as a people, we have made in the useful arts. All that is glorious in our past, or hopeful in our future, is indissolubly linked with that cause of human progress of which inventors are the *preux chevaliers*. It is no poetic translation of the abiding sentiment of the country to say, that they are the true jewels of the nation to which they belong, and that a solicitude for the protection of their rights and interests should find a place in every throb of the national heart. Sadly helpless as a class, and offering, in the glittering creations of their own genius, the strongest temptations to unscrupulous cupidity, they, of all men, have most need of the shelter of the public law, while, in view of their philanthropic labors, they are, of all men, most entitled to claim it. The schemes of the politician and of the statesman may subserve the purposes of the hour, and the teachings of the moralist may remain with the generation to which they are addressed, but all these must pass away, while the fruits of the inventor's genius will endure as imperishable memorials, and, surviving the wreck of creeds and systems, alike of politics, religion, and philosophy, will diffuse their blessings to all lands, and throughout all ages.

However much the seeming perplexity in the applicant's accounts may expose him to cavil, and to that vituperation which is so ready a coinage of the professional zeal, and however short some of the points in the case may fall of that complete elucidation which could have been desired, there is one fact established beyond all controversy, and which stands out from this record with painful prominence. At the close of all his toils and sacrifices, and of the humiliations he has been called on to endure, this public-spirited inventor, whose life has been worn away in advancing the best interests of mankind, is found to be still poor, oppressed with debt, and with the winter of age creeping upon his shattered constitution. It is perfectly manifest that this is in no degree the result of vice or of improvidence on his part, but is an inexorable consequence of the impoverishing experiments inseparable from the prosecution of his great enterprise, and of that prolonged and exhausting strife in which unscrupulous men have involved him. He now begs of that country to which the energies of his manhood have been so freely and so faithfully given, that he may be allowed to enjoy, for a few years longer, that precarious protection which our most feeble and imperfect laws extend to the fruits of intellectual labor; and were the appeal denied, I feel that I should be false to the generous spirit of the patent laws, and forgetful of the exalted ends which it must ever be the crowning glory of those laws to accomplish.

The patent will, therefore, be extended for seven years from the 15th of June, 1858.

J. HOLT, Commissioner.