

PROTECTION FOR INVENTIONS.

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I have by a few typical cases, exposed (at least I trust I have) the fallacy of those who say the inventor, in the absence of any patent law, would still invent for the hope of reward, because he might reckon on gaining that reward by becoming the manufacturer of that which he had invented, but there are other opponents of patents who do not hold forth a hope of gain in this way, they say, a wise and beneficent Government should reward the "citizens who have deserved well of their country." I believe I have caught the language of the formula. I don't think these men talk about fellow-subjects of the Queen. However this, may be, they gravely propose that a portion of the revenue of the State should be adjudged each year to meritorious inventions. I find it difficult to treat such a proposition as this seriously, but I suppose I must do so.

Let us see how it would work. What inventions should be rewarded? None but those which had come into actual use, or in addition to these inventions which were only just published. If the former, how deal with objections that would be urged by a host of men who would spring up to allege that the man who put himself forward as the first inventor was the merest visionary, and that had it not been for their real practical skill the whole thing would have remained a useless scheme. Moreover, as I shall, I hope, hereafter show, years in all probability would elapse between the publication of an invention and its adoption, if there were not protection for inventors, and in this way the unhappy inventor might be dead, or in his dotage, worn out by hope deferred, before the reward was adjudged to him, even if it were ever so adjudged, looking at the competition of pretenders that would be sure to arise. But take it to avoid this delay in compensating the inventor, it should be in the power of the tribunal to give the reward to originators of untried inventions, only imagine the cloud of schemers, both in and out of Bedlam, who would commit their crude conceptions to paper and send them to the tribunal, confident that they must get the reward. By what possible machinery could such a tribunal act to investigate novelty, degree of merit, and practical feasibility of inventions that had nothing but a paper existence. I believe that in their despair and disgust many men of intelligence and character who might have been on such a tribunal would retire from it, and that it would degenerate into a clique for perpetrating the vilest jobs.

Fancy the pressure brought to bear on such men by the member for some borough who has been assured by half a dozen of his constituents that their "talented townsman," Mr. Smith, is a most meritorious inventor, that he has designed a machine, which on being worked by one man, succeeds, through an arrangement of leverage and the aid of a screw, in giving off as much power as has been estimated to be equal to a good 10-horse engine. Models have been tried which conclusively proved that if (there is always an if) they had been properly made these results would have been fully attained. I may perhaps be told there must be on the committee men of sufficient sense to know that such statements were ridiculous; but in some cases I should be very sorry to abide by the opinion of any body of men, in the absence of trial, whether an invention could succeed in practice, or not. I will give you an instance. Next to Earl Dundonald, one of the earliest inventors in the art, now so extensively followed, of sinking cylinder foundations, was Dr. Potts. He published an invention in which he told you, that if you placed a cylindrical hollow cast-iron pile with its open mouth upon the gravel bed of a river, and if you covered the top of the pile, and then exhausted the air from its interior, the pile would penetrate the ground, and would do so although, from the nature of the soil, it would be all but impossible to get the pile down, even a short distance, by the heaviest blows that could be given to it by a powerful pile driver. Dr. Potts was right in this, but, in the absence of experiment, would not the members of the Inventors' Reward Committee have come to the conclusion that the doctor was a visionary, and that his invention could be proved to be chimerical; would they not have said that, in the instance of a pile of a foot in diameter, the utmost pressure that could be got upon it by the ex-

haustion of the air, even in the impossible event of a perfect vacuum, would not be quite three-quarters of a ton, that in practice it would not be more than half a ton, and that such a force, a statical one, must obviously be far less powerful than the effect of a ton weight suffered to fall on the pile through a drop of several feet, and that thus Dr. Potts's exhaustion plan could not send the pile down at all, or if it could, the pile, when down, would clearly be unable to support any load worth speaking of?

But those gentlemen who thus would have withheld all share of the national reward from Dr. Potts, on the ground that his invention must be useless, would have been wrong, for the fact is that Dr. Potts's plan, although it only imposes on the heat of a 1 foot pile a pressure of about half a ton, does send such a pile down into soils which offer so much resistance that the pile when thus driven will support many tons weight without the least yielding. It being a fact that the pile did go down, and equally the fact that the mere pressure of the air upon its top was wholly inadequate to account for its being driven, attention was directed to the subject, and we know that the pile descended in consequence of the removal of the soil from below its bottom edge caused by the rush of water into the exhausted cavity of the pile.

It appears to me the suggestion of rewarding inventors generally by Government grants is an absolutely impracticable one, and that it never could be successfully carried out. There have been some particular instances of this mode of reward. I will only allude to one, and again it is Crompton to whom I wish to direct your attention. After years of the disappointment and loss to which I have referred, and after not only his townsmen and neighbours, but the kingdom itself had become enriched by the general adoption of his invention—there being between four and five million spindles at work—some persons in his neighbourhood backed up a memorial he presented to the ministry of the day, and, after much discussion, Government awarded to Crompton the munificent sum of 5,000*l.*, and at the age of 60, after having devoted 30 years of his life and all his property to the advancement of his invention, one of the very greatest that has up to the present time been made in the spinning of cotton, he received a sum equal to a stipend of 75*l.*, a year paid to him throughout those 30 years. Probably among those who supported Crompton's memorial to the Government were to be found some of the honourable men who did not pay their promised subscriptions: perhaps their conscience had awakened, and these gentlemen thought a cheap way of satisfying them would be to make the nation discharge their private obligations, thus reminding one of the definition of charity, that A never sees B in want without feeling a strong desire to relieve those wants out of the goods of C.

If a system of national rewards were instituted, I am certain that the sums to be awarded must be wholly inadequate to compensate the really meritorious inventor, who thus would not be tempted by them to invent. That if awards were not to be made until commercial success had certified to the value of the invention, reward would be delayed and would be tritterd away among numbers; that if untried inventions were to be rewarded, good inventions might be rejected, because as in Dr. Potts's case, they would not be understood, while the whole host of pure visionaries would be encouraged, and finally that the invention which was supported by the most plausible and persistent advocacy, whether of the inventor or of his supporters, would obtain the reward that should be given for real merit only.

I now come to the last class of reward suggested as being sufficient to secure new inventions, and not mere inventions, but inventions carried to practical result.

This class of reward, if rather shadowy, is cheap—it is honour. The meritorious inventor who has "deserved well of his country" is to be rewarded by some honorary distinction. A statue, a tablet, a public recognition in his town-hall, and an address from the recorder, or something of that sort; and, moreover, after such public recognition, the honoured inventor, as he went along, would hear, "Look at that man; he is the great, the celebrated Mr. Smith, who invented"—what?—if the steam engine or the electric telegraph, the principle used might be understood and a common respect with civilisation extends; but there are many great and most useful inventions which relate to manufacture, having technical terms—terms which are absolutely gib-