placed in a small shed 6 ft. by 9 ft. and a hopper boiler feeder is placed outside the house, holding enough gas coke for the day's firing. One charge is sufficient to maintain the lamps for six hours, but after the engine has stopped sufficient heat is left in the boiler to supply a heating coil connected with it all night. The consumption of fuel for this service is 120 lbs. of coke per day.—*Eng.*

THE PATENT LAW.

Sir Henry James, the late Attorney-General, is of course a high authority on legal matters. But we are not quite able to follow the view taken by him in a letter to a correspondent which appeared in our last issue. According to the statement made to us, it appears that an inventor forwarded to his patent agent "three provisional specifications" for improvements in steam engines, and was informed by him that as they were quite distinct it would not be possible to include more than one under the same patent. Under the old law, the agent stated, there would have been no difficulty in including all under one patent, but he added that the new law was very strictly construed in this particular.

Thereupon the client addressed a communication to the late Attorney-General stating that as one who took an interest in the passing of the new Patent Laws on the grounds that inventors were justly entitled to a more economic law, he was more than surprised that the new law admitted of a construction the effect of which was to burden inventors with expenses from which they believed it had entirely relieved them. He did not think inventors, or any one interested in Patent Law, understood when the new law was passing through the Lords and Commons that it could, or would be, constructed in the way represented to him, and he hoped that it arose from some extra official diligence in the Patent Office, and not that the Act really intended that each item of improvement of the same machine should be under separate patents.

To this Sir Henry James replied that the patent agent was labouring under a mistake as to the supposed change in the law effected by the new Patent Act. The Solicitor-General and himself had issued regulations then in force in the Patent Office, and the effect of which was that the rules as to the inclusion of more than one invention in the same patent remained the same as they were before the new Act was passed. So long as these regulations were in force there would be no ground for the apprehensions expressed in the letter addressed to him.

Now, whatever may be the theory applicable to the case, we are prepared to show that under the new law the practice has certainly not been uniformly in strict accordance with the suggestion that no alteration in the law as affecting the point in question was effected by the Act of 1883.

Prior to the coming into operation of that Act the granting of patents was regulated by the Patent Law Amendment Act of 1852 and rules from time to time made thereunder. The Act itself (unlike the Act of 1883) was silent as to what might be included under a single patent. But the rule of the law officers dated December 12, 1853, was in these words: "Every application for Letters Patent, and every title of invention and provisional specification, must be limited to one invention only, and no provisional protection will be allowed or warrant granted where the title or the provisional specification embraces more than one invention."

The examination of provisional specifications was carried out nominally by the law officers, but actually by their clerks, and was quite as efficient as the present examination, though far less costly. Under the old practice a single patent would be allowed to cover, for example, improvements in ordnance, firearms and projectiles. The features protected might include improvements in the mode of building up large guns, improvements in the construction of the breech mechanism of small arms, and improvements in the construction of projectiles, besides other features. It was a common thing to include under one patent, improvements in breech-loading firearms and in cartridges.

Under the new law an application for a patent for improvements in firearms and cartridges designed for discharge by electricity, had to be divided. The Comptroller maintained that the specification contained the subject-matter of more than one invention, and he went so far in the first instance as to require that four patents should be applied for instead of only one. The invention was one in which obviously a suitable cartridge was necessary in order that the gun should be operative, because a circuit had to be completed before the discharge would be effected. Therefore in order to produce the result aimed at, namely the discharge of the projectile, the cartridge formed an essential. However, notwithstanding this fact, which was repeatedly urged upon the authorities: and notwithstanding the innumerable precedents, the Comptroller insisted upon a division of the case into two.

In other words, whereas under the old law protection for fourteen years would have been obtained for the entire invention at a cost in Government fees of £175, the cost under the new law will be £308.

The Comptroller in giving his decision said it was a rule that an improvement generally applicable to small arms, and an improvement in small-arm cartridges, could not be considered as a single invention, and therefore such improvements were not allowable in one specification. The improvements of the one were not necessary for the efficient working of the other, and moreover the general nature of the improvement made it applicable to all members of the same class. The only exception to this rule would be where a *special* improvement in the firearm required an unusual formation of the cartridge, or where a cartridge was specially adapted for use in a particular firearm. There seemed to him to be no reason for departing from this general rule in the case of electric small arms.

In another case an alternative arrangement for distributing steam in an engine had to be withdrawn from an application for patent, and had to be made the subject of a separate patent.

In contradistinction to this, it may be mentioned that under the old law a single patent was allowed to include improvements in steam boilers and other apparatus applicable to the heating and evaporation of liquids, parts of which improvements were applicable also to other purposes; and that in another case a single patent was allowed to include an improved construction of steam fire-engine, and also a boiler in various forms applicable for stationary and other purposes, and in part applicable also for cooling fluids. Indeed innumerable examples could be given to prove how much more liberal was the practice under the old law than it has heretofore been under the new.

As it would seem that the law officers have exercised considerable control in the matter, it becomes evident that even if in point of form the letter of Sir Henry James is correct, yet in point of fact the effect of the practice under the new law is to make it more costly than it was under the old law to protect a given amount of invention.

What may be the particular regulations to which Sir Henry James refers in his letter it is not possible to say. He does not state when they were made, nor does he say in what terms they are framed. Possibly they are secret rules of recent date, which have not been, and are not intended to be made public. If some enterprising member of Parliament would move for copies of the regulations in question, considerable public benefit would probably result.

Whatever may be these regulations it is certain that the new law expressly provides that every patent shall be granted for one invention only, although, on the other hand, it is not competent for any person in an action or other proceeding to take any objection to a patent on the ground that it comprises more than one invention.

An eminent authority in a treatise on the new law states in a footnote that a patent may still be obtained for an invention consisting of several parts, where the parts are so worked as to produce an improved result by their joint or successive operations. So far as we can see the only reason that can be urged in favor of limiting the subject matter of a single patent is that the State may get as much as possible out of the inventor's pocket. A single invention may comprise many features each in itself new, and there may be a valid claim to the whole in combination, as well as subsidiary claims to sub-combinations and to each of the several features separately. But under the old law it was the practice to allow the applicant to go much further. In describing his invention, and the separate parts, he was permitted to show that he claimed to apply them, not only to the main purpose constituting the object of his invention, but also to other and different purposes. Why then should he be, as he undoubtedly is, denied this privilege under the new law, if it be true, as indicated by Sir Henry James, that it is a mistake to suppose there has been a change under the new law? In view of the sharp lessons the authorities have received it is possible they will hereafter be disposed to adopt more liberal views. We should not be surprised to find under