several years past, I have from time to time consulted Examiners on the subject, and in almost every instance they have stated that if *attorneys would file more complete drawings there would be less use for models.*

The two statements do not contradict each other, but go to show that with better drawings than usual, Examiners could dispense with models.

Any one who has had dealings with these officers must have noted their aptitude for readily understanding drawings; there are several Examiners who never look at the models. Of course the younger officers have this accomplishment to learn, but they acquire it in a very short time if they have any taste for the subject. All competent Attornies, as well as Examiners, invariably prefer to make examinations from drawings.

It would be unfair in a few exceptional cases to ask Examiners to dispense with models, but I will venture to say that in twenty-nine cases out of thirty an Examiner never wants a model if proper drawings "fully studied" are presented.

The other reason is that models afford facilities to Attorneys for the preparation of applications.

It is stated rather flippantly that "the solicitor who from sketches and such crude drawings as inventors usually are able to furnish can venture to construct *working* drawings of a machine about which he never heard until yesterday, must have unbounded intuition or unbounded cheek."

It is a little curious to note how persistently the author of the communication declares that *working* drawings will be required in the absence of models. Patents are not interpreted by reference to the models, but by the drawings attached to the patents, and if working drawings are essential to a proper interpretation of the patent, they are essential whether a model has been deposited or not. It is not true that *working* drawings are required; what examiners want is perspective with explanatory detached views and sections affording a full unmistakeable display of the invention.

The drawings must be sufficient to enable a skilled draughtsman to make from them working drawings for the construction of the machine, and to enable Examiners to readily understand the invention; and these requirements should be complied with, whether there is a model or not.

It is as absurd to say that working drawings must be attached to a patent in the absence of a model, as to say that an inferior drawing may be filed when a model is used.

The Patent Offices of European countries do not require models; they rely on good drawings. It is a mistake of the Washington Solicitor to say that the German Empire under the new laws demands a model with every application.

As to the increased cost of reproducing drawings which it is stated would be incurred in the absence of models, I have only to say that it costs no more to reproduce a good drawing than a bad one, by the photo-lithographic process.

It would seem that the Washington Solicitor cannot understand how proper drawings can be made from sketches such as inventors usually furnish; nevertheless the thing is done every day.

In different parts of the country attornies and their assistants are in the constant habit of making drawings from crude sketches; and even from verbal descriptions. I know young men scarcely of age who can make the most complete drawings from the roughest diagrams, and who after examining a working machine can make a correct drawing of it by the aid of a few simple memoranda.

An attorney who could not perform duties like this in manufacturing communities would be considered unfit for his profession.

It may not be generally true as regards Washington practice, but it is nevertheless a fact that hosts of models are made under the instruction of attorneys and from drawings furnished by them—drawings made from the roughest sketches.

In answer to the statement that "a very large proportion of inventors are not mechanics," I have to say it is the duty of an attorney to help these men by putting their inventions into proper shape, a duty which is constantly performed by attorneys or those employed by attorneys.

It is also stated that "a large proportion of those inventors who are mechanics, and who are fully able to read drawings, are utterly incapable of constructing *working* drawings. As a practical engineer who has worked among and has had charge of mechanics and has been engaged in mechanical pursuits for nearly forty years, I can say that there are very few mechanics who cannot make an accurate representation of an invention, rough perhaps, but simply sufficient to instruct a competent attorney.

Twenty or thirty years ago draughtsmen were scarce, and this scarcity might have afforded some excuse at that time for the use of models; but both mechanical and free-hand drawing have for several years past been taught in our schools, colleges, lyceums, workshops, &c., and now good draughtsmen are so plentiful that there is no difficulty in finding those who can make accurate well studied drawings from the most crude sketches.

The following quotation from the paper is worthy of especial notice:

"Unfortunately there are solicitors who only desire the highest attainable fee for the amount of service rendered. Abolition of models would enable them (as it would compel us all) to enlarge their charges."

This is a gratuitous insinuation that attorneys who want to abolish models are actuated solely by the selfish motive of looking for increased fees. As far as I am personally concerned, I will reply to this charge by saying, that as soon as models are abolished; as soon as I am relieved from the duty of instructing model makers; as soon as the delay consequent upon making models ceases, I shall be willing to reduce my charges.

"The abolition of models, says the Washington Solicitor, "would compel *us all* to enlarge our charges."

If it should compel attorneys to file more complete drawings, to abandon the practice of rushing through the office cases based on slovenly papers, the sooner models are abandoned the better will it be for the Patent Office, inventors and the public.

If the inventor is not taxed with the cost of a model, he can afford to pay a reasonable price for carefully performed duties.

If an increased charge, however, is to be made by attorneys on account of the abandonment of models, it will be very like a tacit admission that the duties were not thoroughly performed when models were used.

Those who are opposed to the continuance of the model system do not wish to prevent inventors from making models and sending them to attorneys who cannot perform their duties without them; on the other hand, they do not wish the furnishing of models to the Patent Office to be compulsory in all cases, they do not wish to see whole armies of inventors taxed for the accommodation of a small regiment of attorneys, with its awkward squad.

That the abolition or partial abolition of models would have a salutary effect, I feel confident it would, with other advantages, result in elevating the standard of mechanical, technical and scientific attainments, and a little more of these qualifications both inside the office and among attorneys would be of advantage to inventors who have much more at stake in this matter than all others.

Models, as I have stated in a previous paper, may be necessary in a few cases; perhaps one case in thirty may demand a model; in appeal cases they may be desirable, and in contested cases may be essential in the ready elucidation of difficult questions, but the terms of the statute show that the demand for models was not contemplated in every instance. Custom, however, has made the demand universal.

It is discretionary with the Commissioner whether a model shall be furnished or not with each application, but legislation will no doubt be necessary to enable him to make such ample and liberal provisions in the way of accessible drawings for the accommodation of inventors, as the abandonment of models will necessitate.

The public should have ready means of acquiring information relating to Patents, and the model halls of the Patent Office afforded in a measure this opportunity.

Drawings of many of the classes have been already reproduced, and there is no reason why drawings of all patents should not be bound in classes for the ready perusal of inventors and attorneys. If this should be done, an examination of models would be rendered unnecessary, for the drawings afford a much readier means of acquiring information about patents than models.

This suggests another important question: if copies of all patents are made by photo-lithography it would cost but a trifle to so increase the number that the largest city of each State in the Union could be furnished with a complete set.

Public policy and justice to inventors suggest the propriety of making accessible in different cities and large towns, copies of patents, not bound in monthly volumes, as is now the practice, but in classes.

If the present model system be abolished and there is room to spare in the Patent Office, let it be devoted to such highly finished complete and accurate models of patented inventions as the makers are willing to deposit, and in a short time we shall have a national industrial museum, instructive exhibits in place of a useless accumulation of dummy models.

PHILADELPHIA, Nov. 5, 1877. H. HOWSON.