

**Natural Right of Man to his Invention.**

[The following able article on the natural right of an inventor to his invention is from the pen of Commissioner Mason, and we recommend it to the careful perusal of all who are interested in patents and patent property. It is no more than simple justice to state that Judge Mason has done more to elevate the character of patent property and to maintain the rights of inventors than any previous Commissioner; and although his views are antagonistic to those entertained by us upon this subject, yet we can vouch for his candor in this expression of his opinions.]

In next week's paper we shall take occasion to elaborate on this interesting subject, and shall sustain our views by the highest known authorities who have made it a subject of careful consideration.]

I have to thank you for the complimentary terms in which I find my late report noticed therein in recent numbers of the SCIENTIFIC AMERICAN.

But while I do this in all sincerity I feel constrained to reply to some remarks contained in your number for last week. I do this not for the purpose of engaging in a controversy on the subject, nor for any reasons personal to myself, but merely because I think your views erroneous, and error in the conductors of a public press is doubly dangerous.

You seem to suppose that the inventor has not the same natural right to that which he has brought into active usefulness as though he had created or constructed a tangible article. I am wholly unable to appreciate the force of the reasoning in support of that proposition. If a person creates or renders useful that which but for him would have been valueless, does it make any substantial difference whether he does this with his head, his hands, or his feet? The result is all that is material.

But I shall be told that the Indian who builds a wigwam in the forest, has no right to prevent others from imitating it. Probably this is true, for giving a particular shape to a wigwam would not be a patentable invention under our law.

But suppose the Indians to be altogether destitute of wigwams, and suppose some one wiser or more fortunate than the rest should create or discover a lamp like that of Aladdin by the rubbing of which, old useless materials could be at once converted into comfortable habitations, would not the possessor of that lamp be fairly entitled to the entire use and benefit of it?

Now, every real inventor has possessed himself of something of the very nature of such a lamp, which is but the type of knowledge—the true practical Aladdin's lamp. The inventor is able to do with a given amount of means what cannot be done by others. This knowledge is the subject matter of his patent. If he has not a natural right to the benefits of it, I can conceive of no such thing as a natural right to property of any description. He has possessed himself of something he himself has created. In doing so he has not diminished in the least whatever would have been otherwise possessed by the world. This is something superadded to what before existed and superadded by himself. Besides, he has undoubted power and right to conceal his discovery from all the world. No one has a right to compel him to reveal what he has invented. If he does make such a revelation, may he not rightfully prescribe some terms on which this shall be done? If so, has he not a "natural right" to the benefit of his invention?

Suppose I could cause an island to rise up in the midst of the Atlantic. Suppose I had the further power to cause it to disappear at pleasure. Would any one contend that I had not a "natural right" to that island? If I finally made it permanent and gave it to the world, ought I not to prescribe the terms on which this should be done? Every inventor has created an island which he may cause to disappear forever. Has he no natural right to it?

To say that he has not, single-handed, the means of enforcing that right, argues nothing against its existence. What could the owner

of ten thousand acres of land do by himself towards enforcing his rights? It is the very object of governments to protect each other in the enjoyment of rights which would otherwise be snatched from us by the hand of rapacity.

Mr. Scott, in an opinion quoted with approbation by you, says that a patent does not give a right of possession, but a right of exclusion. And pray, what is the difference? Are they not in this relation convertible terms? Does not my right to possess infer the right to exclude others from the possession? Is a patent for an invention any more a monopoly during its life-time than a patent for lands?

After all, do not those who reason against the rights of the inventor lose sight of the real point in the case. The bird that builds a nest on the branch of a tree has a right to that nest, but cannot justly prevent other birds from doing the same thing. And why? Because all that it has done is to follow its instincts to construct a nest. It has invented nothing. But suppose birds had always built their nests flat on the ground, and suppose, in a general convocation of all the birds, some one should proclaim "I have possessed myself of a power which I can impart to others, by which you can all be enabled to suspend your nests on the slender branches of the tall trees entirely beyond the reach of your most numerous and most formidable enemies," would not the whole feathered congress at once by acclamation enact a law that as an act of justice each one availing himself of that power for the period of fourteen years would pay to the public benefactor a reasonable compensation?

But I shall be told the right of the patentee is wholly legal, and not natural. Let us bring this question to the test. Here are two men one of whom has made an invention, the other has not. Both claim a patent. The public interest will be as well subserved by granting it to the one as the other. If the inventor has no natural right it is wholly immaterial as a matter of equity to which of these men a patent is granted. But would not any one of correct moral preceptions cry out against the injustice of such a proposition? Why? Because the inventor has a natural right to that which he has created.

One word in relation to the perpetuity of patents. I did not say that an inventor had a natural right to a protection of infinite duration, but that the strongest argument against the granting of a perpetual patent grew out of expediency. I am still of that opinion. There are other valid arguments against the granting of such patents, but I had not time and space to state them in my Report; I merely stated what I deemed the strongest, and one that was sufficient.

The rights of property of every description are to be held in subserviency to the public welfare. If the State is to be called upon to exert its whole power to protect private rights it has clearly the privilege of demanding something in return. Every individual can rightfully be called upon to surrender a portion of his natural rights for the sake of securing the remainder.

Thus, when I purchase lands of the United States my title is complete—my right perfect. But still, the State may require me to pay taxes for the same, and in default thereof may sell it to another. It may say to me "the public interest requires that you should not entail this property upon any particular class of heirs—that it should not be limited by will beyond a prescribed period," and in various other respects it may make my natural rights subject to the public welfare. The same rules apply to the property in inventions, and in this way it is perfectly legitimate and proper that natural rights should be modified. A protection for fourteen years is better than an unprotected perpetuity.

I have written much more than I intended, and had I more time I could have condensed all I have said into much smaller space, but this I cannot do at present.

Yours very truly  
CHARLES MASON.

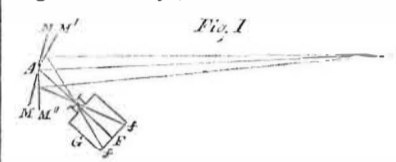
Washington, March 11th, 1856.

Now is the time for trimming vines in the Northern States.

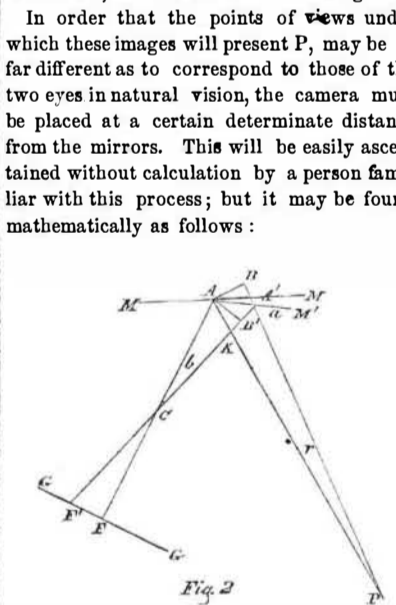
**Daguerreotype Pictures for the Stereoscope**

The accompanying figures illustrate a method of taking photographic pictures for the stereoscope, whereby the two pictures may be taken simultaneously. This method is the invention of F. A. P. Barnard, Professor of Chemistry in the Alabama University. The description of it is taken from *Silliman's Journal*, and re-published by us at the request of some photographic artists (in order that it may have the benefit of the extensive circulation of the SCIENTIFIC AMERICAN,) as an important matter intimately connected with the progress of their art, and not so generally known as it should be.

This method has the advantage of requiring no modification of the construction of the camera; and also the additional one of producing both pictures, if desired, upon one plate, but this result cannot be secured with a camera having two object-glasses, (without at least a very inconvenient arrangement of mirrors,) because of the two pictures produced in such a camera upon one plate, the right hand one will be that which should belong to the left eye, and vice versa.



In order that the points of views under which these images will present P, may be so far different as to correspond to those of the two eyes in natural vision, the camera must be placed at a certain determinate distance from the mirrors. This will be easily ascertained without calculation by a person familiar with this process; but it may be found mathematically as follows:



Let A M, A M', fig. 2, be the two mirrors, and A the hinge. Then the camera being supposed to be properly adjusted, A F, will be the line of its axis, and also the direction of the ray P A, after reflection, while the mirrors continue in one plane. Let A M', be the position of one of the mirrors after its displacement. Then if C be the virtual center of the arrangement of lenses, the image of P will be formed at F', instead of at F, by means of the ray, P A', reflected through C to F'. G G, the glass screen, will of course be perpendicular to the axis, A F.

Draw A B perpendicular to A P, and A B' perpendicular to A F. Put the angular change of position of the mirror, M' (=angle MAM') = a, the angle ACA' = b, and the angle APA' = r. Then in the triangle PAB, right angled at A, angle B = 90° - r. It is easily seen that BAM = the original angle of incidence of P A. Represent this angle by I. Then

BAM + MAA = BAA' = I + a  
Also, as above, ABA' = 90° - r  
Whence, in the triangle BAA', the third angle,  
BA'A = 90° - I - a + r.

Now, to obtain AA' in terms of A B,  
sin BA A : sin ABA' :: AB : AA',  
Or, putting AB = a  
sin (90° - I - a + r) : sin (90° - r) :: a  
a cos r  
cos (I + a - r.)

Again, in the triangle B'AA'  
Angle AB'A' = 90° + b.  
And, AA'B' (=AA'B) = 90° - I - a + r.  
Whence sin AB A' : sin AA'B' :: AA' : AB',  
Or sin (90° + b) : sin (90° - I - a + r) ::  
a cos r : AB'

And AB' = a cos r cos (I + a - r) / cos b

Now AB' is parallel to GG : hence,  
FF' : AB' :: FC : CA,

which last term is the distance (measured from the virtual center of the objective) at which the camera must be placed from the point, A.

In this proportion, F F', is arbitrarily fixed, and will be from 1 to 1.4 inches, FC is the focal distance of the camera, when the image of P is distinct on the screen, and A B' is determinable by the foregoing formula.

In that formula, a is one half the distance between the eyes (1.4 inches on an average,) b is directly determinable in the right angled triangle CFF', and r is in like manner to be obtained from the right angled triangle PAB, the distance, AP, of the object from A, being ascertained by measurement.

The mirrors ought to be such as are prepared for photographic purposes;—that is to say, they should be of the best glass, and have their surfaces perfectly parallel, or else they should be of metal.

In Prof. Barnard's letter to Prof. Dana, on the subject, he says, "The photographs prepared in this way are not surpassed by any others I have tried. I am accustomed to adjust them on the plate at a distance from each other somewhat less than that of the eyes (say between two, and two and a quarter inches from center to center.) I employ no optical artifice to superpose them (such as interposed prisms, or lenses eccentric to the eyes); but looking through the centers of the lenses, the superposition takes place naturally and easily. If the pictures are rather large, they must be more widely separated, and some optical expedient must be employed to produce deflection and aid the eye.

In every daguerreotype for the stereoscope which I have seen (as purchased from the opticians) the relief is grossly exaggerated. You will not find such the case with this. The error of the manufacturers has been to make the points of view—in taking the photographs—too widely different."

**To Inventors.**

MESSES EDITORS—Will you allow me to request you to suggest, through your paper, that a small card and bill-head press, which can be afforded at a price not over \$30, is greatly needed, and if invented would be worth a great deal. In country printing offices, such a press would be appreciated. A card press cannot be had for less than \$135—which is a ridiculous price; and it is strange if a small, neat, compact machine, to be worked by a treadle, cannot be got up for less. The press should be capable of printing a form at least as large as a half letter sheet. E. M. D.

**Pennsylvania Polytechnic College.**

We understand that this young institution has met with great success since it was established about two years ago. It is strictly a college for teaching the practical sciences—mathematics, chemistry, engineering, mining, agriculture, &c. Each of the departments is under the charge of a separate professor. It is the only institution of the kind in our country, and deserves an extensive patronage. It is located in the city of Philadelphia; Prof. A. L. Kennedy is President of the Faculty.

The steamboat Belle exploded her boilers recently while running on the Sacramento river. Most explosions have taken place at starting the engine; this was the case with the Belle.