

Case NO. 1,499.

BLAKE ET AL. V. RAWSON.

[Holmes, 200; 3 O. G. 122; 6 Fish. Pat. Cas. 74; Merw. Pat. Inv. 444.]<sup>1</sup>

Circuit Court, D. Massachusetts.

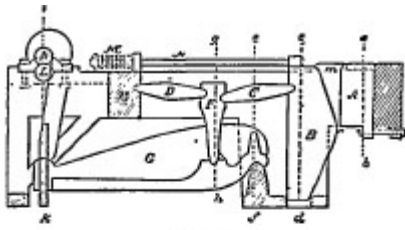
Jan., 1873.

PATENTS—EFFECT OF PRIOR  
DECISIONS—INFRINGEMENT—MECHANICAL EQUIVALENTS—NOVELTY—ANTICIPATION—EVIDENCE  
CRUSHER—SCOPE OF INVENTION.

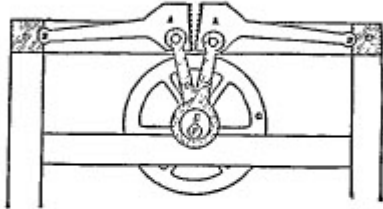
1. Where the answer set forth, and counsel contended that the facts and law applicable to certain prior machines, as compared with the patented combination, were not properly presented to the judges who tried and decided former cases under the patent, and where some additional facts were adduced and proved, not presented in the other cases, the court considered the whole testimony, without regard to any previous action on the patent, as if it had never been tried and adjudicated upon.
2. The machine patented frequently has a broader scope than the particular form of the machine described as the form used by the patentee.
3. The question of novelty is to be settled by a comparison of prior machines with the machine patented, rather than the form of the machine in use.
4. It is not always enough, to prove that two combinations of elements are equivalent, to show that each element of the combination in one may be regarded, under some circumstances, as the equivalent of the corresponding element in the other, when the elements are separately considered. If the mechanical combinations of the members of the two machines be such that the action and mode of operation differ in the two machines, then one is something more than a mere mechanical equivalent for the other.
5. Although Hamilton's stone-crusher is a combination of certain elements, which, separately considered, do not materially differ from the elements of the combination described in the Blake patent, yet it neither embodies the arrangement nor mode of operation of the Blake machine, but operates upon a different principle, and is not an anticipation.
6. Where a machine, similar to that described in the plaintiff's patent, existed twenty years before, and a single person only testified to more than an experimental use of it, and it was soon after abandoned: *Held*, that it did not invalidate the patent.

[In equity. Bill by Eli W. Blake and others against George W. Rawson for infringement of letters patent] Final hearing upon pleadings and proofs. Decree for complainants.

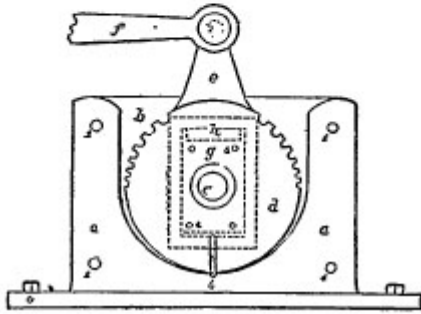
<sup>1</sup>[This suit was brought upon letters patent for "improvement in machinery for breaking stone," granted Eli W. Blake, June 15, 1858, and reissued January 9, 1866. The patent had been previously sustained. See cases of *Blake v. Stafford* [Case No. 1,504], and *Blake v. Eagle Works Manuf'g Co.* [Id. 1,494]. The principal devices brought forward to anticipate the patent in the two former cases, as well as the present, were the Forward machine, used at Louisville, Kentucky, for a short time in 1847, and the Hamilton stone-crusher, patented January 3, 1854. The engravings, Nos. 1, 2, and 3, represent respectively the Blake, the Forward, and the Hamilton machines.



No. 1.



No. 2.



No. 3.

[In No. 1, A and B are the jaws between which the stone is crushed. A is stationary, while B, by means of a revolving shaft and fly-wheel, and the toggle-levers D, C, with intervening mechanism, is made to advance and recede alternately through a definitely limited space, thus crushing the stones and releasing them after they are crushed.

[In No. 2, A A are the two jaws, both of which move, and hi the same manner. By means of the arms D, D, and eccentric B, on shaft F, they are caused to rise and fall in the arc of a circle, thus crushing the stone that comes between their faces. G is a flywheel to steady the motion.

[In No. 3, there is a cylindrical roller, which is made to rock upon its central shaft by means of the arm shown.]<sup>1</sup>

H. T. Blake and G. W. Baldwin, for complainant

Sherman & Drew, for defendant

SHEPLEY, Circuit Judge. This ‘bill in equity is brought for an alleged infringement of the reissued patent of Jan. 9, 1866, to Eli W. Blake, for anew and useful machine for breaking stones for road and other purposes. This patent has already been before the court; and has been sustained by Judge Shipman in the case of *Blake v. Stafford* [Case No. 1,504], whose decision in that case was sustained by Mr. Justice Nelson on a motion for a new trial; and also in a case before Judge Drummond, *Blake v. Eagle Works Manuf’g Co.* [Id. 1,494].

The principal points relied upon in the present case by the learned and able counsel for the defendant, are those which are also set up in the answer in relation to the alleged prior inventions of James Hamilton, as described in letters-patent of the United States, issued to him on the 3d of January, 1854, for “improvements in machinery for crushing and grinding quartz and other hard substances;” and also of one Samuel Forward (or Forwood), of Louisville, Ky., who constructed a machine for breaking stones for roads in Louisville, in the year 1847.

The answer sets forth, and counsel contend, that the facts and law applicable to these two machines, as compared with the combination patented to the complainants, were not properly presented to the judges who tried and decided those cases; and also shows, that some of the facts adduced and proved by this defendant, in support of some of the allegations now made by this defendant, were not made and proved in either of the causes above named. For these reasons, we have carefully considered the testimony of the witnesses and the opinions of the experts in relation to the quartz-crusher of Hamilton and the rock-breaker of Forwood, without regard to any previous action on this patent by any court, as if it had never been tried or adjudicated upon.

The essential characteristics of Blake’s stone-crusher are two jaws between which the stones are to be broken, having their acting faces so nearly in an upright position that stones to be broken will descend by force of gravity between them; and convergent down-

ward, one toward the other, in such manner that, while the space between them at the top is such as to receive the stones to be broken, the space at the bottom is only sufficient to allow the fragments to pass, when broken, to the required size; and a revolving shaft, with a fly-wheel driven by steam or other power; and such intervening mechanism between the revolving shaft and the movable jaw as shall impart to the jaw a definite vibratory movement, causing it to advance with great power toward the other jaw through a short and definitely limited space, and alternately to recede and advance, so that the stones fall down between the jaws until their descent is arrested between the convergent faces, when the movable jaw, advancing, crushes the stones, and, receding, liberates the fragments; and they again descend, and, if too large to pass through the space at the bottom of the jaws, are again arrested and broken by the advancing movable jaw, until the fragments are sufficiently reduced in size to pass through. The patentee does not claim the manner of supporting the jaws in their proper relative position, or his particular mode of imparting the definite motion with the required power to the movable jaw from the revolving shaft. These, he claims, may be varied indefinitely, without affecting the principle of the operation. After describing the invention which he claims, the patentee describes the form in which he embodies his invention; and it is evident from the claims in his patent, taken in connection with the specification to which they refer, that, although he describes a crank, lever, and toggle-joint as one mode, and the mode adopted by him of communicating a definite motion to the movable jaw from the revolving shaft no construction can properly be given to the patent, such as is suggested by defendants, which would limit it to the toggle-joint mechanism, which is described by the patentee as the particular form in which one element of the patented combination is constructed and embodied in one form of his machine. The machine patented frequently has a broader scope than the particular form of the machine described as the form used by the patentee. The question of novelty is to be settled by a comparison of prior machines with the machine patented, rather than the form of the machine in use.

The Hamilton quartz-crusher, relied upon as an invention antedating the complainants', is a combination of certain elements which, separately considered, do not materially differ from the elements of the combination described in the Blake patent. All the elements of the combination are old in both machines. The novelty in both consisted

in the peculiar mechanical combination of the members of the contrivance, and the resultant mode of operation. The movable jaw in the Blake machine advances toward and recedes from the fixed jaw in a direction substantially at right angles with the faces of the jaws, so that, when advancing, the stones are nipped and crushed between the jaws, and, when receding, the stones are liberated. In the Hamilton quartz-crusher there is a cylindrical roller or pestle in a basin having its sides eccentric to the circle of the movement of the roller or cylindrical pestle, the inner sides at the bottom of the curved basin gradually approximating to the circle of movement of the cylindrical roller. This cylinder is made to move around its central shaft with a reciprocating vibratory movement, but, being cylindrical and turning upon a fixed central axis, can only move in the direction of the periphery of the cylinder. The surfaces of the cylinder operate upon the material by a grinding process tending to rotate the stones on their own axis, and at the same time to draw them down into a space where, by reason of the eccentricity of the opposite surfaces, they are nearer to each other than at the point where they begin to operate on the stones to be crushed. In the Hamilton machine, every point on the acting face of the roller moves in the segment of the circle of the periphery. In the Blake machine, it is strictly correct to say that the points in the movable jaw advanced toward the fixed jaw in the arc of a circle, but the whole movable jaw advances toward and recedes from the fixed jaw, and the space through which it moves is so small compared with the periphery of the circle which would be described its rotation were continued, that the operation upon the material is substantially the same as if the movable jaw were advanced toward the fixed jaw in a direction at right angles with the face of the jaw, nipping and crushing the material at the points of impact without any tendency to a rotating or grinding action upon it. In the Hamilton crusher, the surface of the rotating cylinder passes laterally by the surface of the basin, reducing the material both by the grinding operation and by moving it into a space progressively narrower, as if it was passing between rollers. The mode of operation is different in the two machines. It is not always enough, to prove that two combinations of elements are equivalent, to show that each element of the combination in one may be regarded under some circumstances as the equivalent of the corresponding element in the other, when the elements are separately considered. If the mechanical combination of the members of the two machines be such that the action and mode of operation differ in the two machines, then one is something more than a mere mechanical equivalent for the other. A careful examination of the evidence in the case, and close comparison of the working models of the two machines, has resulted in forcing upon my mind the same conclusion arrived at by Mr. Justice Nelson, in the case of *Blake v. Stafford* [Case No. 1,501], when he says: "Hamilton's quartz-crusher neither embodies the arrangement nor mode of operation of the plaintiff's machine, but operates upon a different principle and embodying a different set of ideas."

The Forward machine is not in existence; and no such machine is proved to have been in existence within twenty years. There is no evidence tending to show that more than one Forward machine was ever made or used. Only two persons testify to having seen that machine. Only one witness testifies to anything which can possibly be claimed to have been any other than an experimental use. The model introduced in evidence, constructed to correspond with the description of the machine as testified to by these two witnesses, according to their recollection, after the lapse of twenty years, does not in some important particulars correspond with the drawings given by one of the witnesses; and the two witnesses differ also materially in their statements. The principal feature of the Forward machine was, that it had two horizontal jaws, each from six to seven feet long, whose opposite bearings were from twelve to fourteen feet apart. The crushing-faces of these jaws were proximately segments of a circle, the radius of which is represented by the length-of the jaw. In the downward movement of the two jaws they operated in the crushing process upon the material as if it were passing between two cylinders of a diameter of twelve or fourteen feet. The idea of the machine seems to have been, by use of two segments of cylinders of this diameter, to avoid the use of such cumbrous and expensive devices as two cylinders of such great diameter and great weight and expense as their requisite strength would have involved, and at the same time to obtain the same result. There was no lateral movement by which the jaws could be made to recede from each other after the crushing process resulting from the downward movement. The upward movement of the jaws was one which threw them against and lifted the whole mass of super incumbent material. In view of this obvious feature of the machine, it is impossible to credit the testimony of Johnson, or to agree with the opinion of the expert, that this was ever a practically successful machine. The-inference that it was not is also strengthened by the fact that it was immediately abandoned, and never appears to have been used afterward; and there is no evidence that a second one like it was ever made. It is difficult to see how Blake could have been aided in the development of the ideas embodied in his structure by any suggestions he could possibly have received from Forward's machine, if that had been in existence and known to

Blake when he was developing his invention.

It is too clear to require any extended remarks, that no one of the other machines referred to in the answer anticipated the invention of Blake. He is therefore to be considered as the original and first inventor of what he claims in his patent. Applying the construction already given to those claims, the infringement by the Rawson machine is obvious.

Decree for complainants.

[NOTE. For other cases involving this patent. see note to [Blake v. Robertson, Case No. 1,500.](#)]

<sup>1</sup> [Reported by Jabez S. Holmes, Esq., and by Samuel S. Fisher, Esq., and here compiled and reprinted by permission. The syllabus and statement are from 6 Fish. Pat. Cas. 74, and the opinion from Holmes, 200. Merw. Pat. Inv. 444, contains only a partial report.]

<sup>2</sup> [From 6 Fish. Pat. Cas. 74.]

<sup>3</sup> [From 6 Fish. Pat. Cas. 74.]