

Case No. 6,804.  
[3 App. Com'r Pat. 297.]

EX PARTE HOYT.

Circuit Court, District of Columbia.

April 11, 1860.

PATENTS—IMPROVEMENT IN MILLSTONES.

[Hoyt's invention of an improvement in millstones, consisting in uniting the segments of the upper stone by molten lead or other molten metal, and binding the same together by a leaden band, is one of novelty and great utility, and not anticipated by Harrison's patent for fastening the segments of the lower stone by cement, and binding them with a metal band.]

Appeal [by Samuel Hoyt] from the decision of the commissioner of patents refusing to grant him letters patent for his improvement in constructing millstones.

MORSELL, Circuit Judge. The applicant states his claim thus: "What I claim as my invention, and desire to secure by letters patent, is the use of lead solder or other similar molten metal for the purpose of uniting the sections of a millstone and binding the same together at the eye and circumference, and at the same time giving increased weight to the stone, substantially in the manner herein described." The commissioner adopted for his decision the report of the examiners, dated January 27, 1860, which in substance is as follows: "The affidavits filed in this case controvert no position, we are disposed to assume. They are therefore simply irrelevant. The only question in this case is whether the use of lead to hold together the sectional parts of millstones can be considered a legitimate subject for letters patent because it is applied in a particular manner. We are decidedly of the opinion that it cannot. And for this reason the reference to Harrison's millstones establishes the fact that the mere use of lead in such form of application as necessarily

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attains the object contemplated by applicant, though perhaps Harrison had another object in view, is not new, and we do not think the variation as to the mode of applying the lead that is proposed by applicant amounts to anything more than would obviously suggest itself to any mechanic of ordinary skill; such a variation in fact as is only colorable, and therefore not patentable. But if we are wrong in this regard, there is another view, as we look upon this invention, which is equally fatal to the claim. It is this: A comparison of Harrison's plan of applying lead with applicant's plan develops the fact that the latter has adopted with respect to each section of his millstone the identical mode shown by the former's model as respects the whole millstone; hence it follows that applicant has merely duplicated Harrison's plan in order to produce the only difference which exists between his plan as applied to the whole millstone and Harrison's plan as thus applied. We recommend the final refusal of a patent."

The commissioner says the foregoing report is confirmed, and a patent refused, January 30th, 1860. To this decision the appellant filed sundry reasons of appeal, too extended in the length to be here recited. Suffice it to say that they in detail fully cover all the objections that were intended to be raised to the decision. The commissioner in his report in reply to said reasons in substance says that the applicant states his invention to consist in running lead, solder, or other suitable liquid, &c. (as hereinbefore stated). For the reasons of rejection, the commissioner refers to the letters of rejection and the report of the appeal board. He proceeds: "There is nothing new in making burr millstones of sections of burr stone fitted and cemented together. This has for ages been the common mode; the sections of stone being cemented together with plaster for which the burr stone has a great affinity, and the whole secured with cast-iron eyes, with flanges and iron bands around the circumference. The applicant was told this, and also that the sections of stone had often been cemented in cast-iron covering, the back of the stone as well as its circumference; thus holding its sections together with all the tenacity of the iron casing. This casing as effectually adds weight to the stone as the device of the applicant, and, besides this, lead had often before been inserted in the stone itself for the purpose of balancing it, but still it was adding weight to the stone; and, this being a well-known device, there was no patentable novelty in running lead between the sections of a stone in order to make it heavy, when lead had before been imbedded in millstones for a different purpose, yet accomplishing precisely the same object, or in covering the back of a millstone with lead, imbedding the stone in a casing of lead, when it had before been encased in cast-iron, &c. For these reasons, and the known fact that there is no affinity whatever between lead and stone, for lead may be cast on stone, and, as soon as cold, be as readily removed as if cast on the ground, the applicant's case was rejected, and various references given. Iron banisters are secured to granite steps by means of lead, but not by any affinity existing between the lead and stone, but simply by making the holes in which the iron supports

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are to be placed larger at bottom than at top, and then filling them with molten lead. It is the form of the cavity that secures the lead and iron in place; and so with the sections of stone, if the cavities in the burr blocks were larger at bottom than at top, and the lead could be run into them, then, upon the principle above stated, they would to some extent hold the sections together. But the tenacity or strength of lead being far less than a common hempen rope, or than most kinds of woods, even if it could be used as the applicant proposes, would make it a very poor substitute for the more efficient means heretofore adopted. Buch. Mach. p. 253, giving examples of the strength of materials, shows that the sections of stone if encased even in wood, would be far more securely held together than if incased as proposed in lead. But the question here is not of utility, but of patentable novelty, and it is respectfully submitted that the references given show a substantial anticipation of the device of the applicant. He urged before the examiner, and laid great stress on the fact, that in making his millstone he did, not cement the sections of stone in a casing previously cast, as had before been done, but that he arranged his sections of stone together, and then cast the casing over them. But the case of Edward Harrison, to which he was referred, fully covers this view of his case. Harrison, in describing the mode of making his millstones says: 'The runner is formed of a united metallic back D, and hub W, combined with a disk X, X, X, composed of the requisite quantity and quality of stone. The said back may be made of soft material, and be cast upon the back and within the eye of a prepared stone, or be formed of cast-iron, and the stone face to be fitted and cemented to the back and around the hub of the same.' The suggestion here made to cast the back on the segments of stone in place of first casting the back and cementing the sections of stone in it, and to make the back when cast on and around the sections of stone of soft metal, embraces lead, solder, &c., as claimed by the appellant, and shows a substantial anticipation of his device. The affidavits filed in this case are not regarded as affecting the question of patentability at issue, and therefore have not been specially referred to, the case having been

decided on the reasons and references herein stated.”

The affidavits just alluded to appear to have been acted upon by the commissioner and their truth and credit not denied, but the commissioner supposes them to be inapplicable to the issue in the case, which he says is as to the patentability of the invention. The first two witnesses, Howell and Gibbs, are practical millers, and acquainted with the business of constructing millstones. They say that they have had the invention of Samuel Hoyt, of Wilmington, Delaware, fully explained to them; that they understand said invention to consist in uniting the burr sections readily with lead, and lining the eye of the stone with lead, and surrounding the circumference and covering the top of an upper running stone with lead; that they are firmly of the belief that the uniting of the sections of the cellular burr stone with lead is a far superior method to that of uniting the sections with the cements usually employed, because the lead that enters the cells is stronger than the cementing materials commonly used, and because there are no perceptible contracting or expanding properties in lead, and because the corrosive properties in the lead have a tendency under the influence of the atmosphere to increase its bulk, and consequently the sections are continually being forced more tightly together; that the radial ribs of lead connecting the eye circumference and top in Samuel Hoyt's invention give the stone throughout a more solid and compact character than is imparted to a stone made in sections, and united with cement, and faced on its bottom, and lined in its eye, and encircled at its circumference with lead; that in practice it is essentially necessary to cement with plaster or some substance the sections of burr stone radially notwithstanding a lead base, lead eye, and lead encircling band are employed, and even if an iron band be employed; that Samuel Hoyt's invention, above described, unquestionably does overcome a long existing difficulty, to wit, getting a proper amount of weight in a small circumference, and at the same time weight answers as a good means whereby to unite radially the burr sections together; that these advantages are not obtained in a bottom-running stone which has its eye lined, and its under face covered, and its circumference surrounded with lead because no radial ribs are provided, and also because the lower running stone, by being thus weighted, retards, instead of aiding, the grinding operation, the extra weight acting only as a resistance to the driving power; that they have no interest whatever in Samuel Hoyt's invention, &c.

Benjamin Price, another witness, a master miller in a very respectable establishment for nine years, and who had been engaged in the business for upwards of twenty years, says that he has been shown by Mr. Samuel Hoyt a model of a mill burr stone fastened together by means of lead cast around the several parts or divisions of said stone which model was then before him; that he thinks from his own personal experience in his business that this kind of stone so finished is superior to, and must necessarily take the place of, those now in common use. “Some few days since I was running one of our stones,

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made in the usual manner, the balance rind fastened with calcined plaster, and a small portion of lead in it, which we had to take out and fasten with lead, as we found the calcined plaster would not hold without cleaning out the plaster and casting in the lead which we find prevents the stone from separating or working foul. Deponent verily believes that means of cementing throwing around or over with lead in place of calcined plaster a stone is infinitely stronger and better for the purposes of grinding as represented in this model." Another witness (William Kellow) says "that the four pieces of marble set or fixed in the lead box or frame now before him were brought to him by a certain Samuel Hoyt; that deponent cast the lead around said pieces of marble, and finished the model of the burr mill stone as now shown; that he subjected said model to a revolution of from two to three hundred times per minute in the finishing. The said model, after finishing, was then given a velocity of from fifteen hundred to two thousand revolutions per minute, which said deponent believes was a severe test; and that the stone now before him is the one he finished and tested; and he believes it impossible to separate or break a stone so constructed under any speed of revolutions. Deponent further declares and says that the said Samuel Hoyt, in his presence, subjected said model to a pressure sufficient properly to grind wheat, crushing and grinding wheat by such pressure." The last witness, Charles Smith, says: "That a certain Samuel Hoyt employed him to furnish marble for a mill-burr model divided into four pieces, forming, when set together, a circular form of diameter of five inches and seven-eighths of an inch. The piece of marble now before me set in lead are the four pieces I furnished said Hoyt. My own opinion is that the marble pieces so set in lead would resist ten times greater wear, force of blows, hammering, or other pressure than if in a solid piece. My own experience as a worker in marble and stone using lead and other substances for holding, staying, or supporting and otherwise, has been for the past twenty years, during which time I have been constantly engaged in such business."

This was the state in which this case was presented to me by the commissioner, who delivered all the papers, documents, and evidence therein according to previous notice given of the time and place appointed for the hearing of said appeal, when and where also the appellant appeared by his attorney, and, having filed his argument in writing,

submitted the case. The five witnesses whose testimony has just been stated appear to stand fair and unimpeached, to be competent practical millers, some of them skilled, and acquainted by long experience and practical knowledge in the business of constructing mill stones, and all of them experienced in the subject claimed as an improved invention in this case. They speak of the invention in this case as known to them as possessing a character for uniting, holding, staying, and supporting the burr mill stones far superior, stronger, and better than the common plaster of Paris cement and of the method and result as a valuable improvement in mill stones. That according to this method the lead that enters the cells is "free from contracting or expanding, and because of the corrosive properties in the lead have a tendency, under the influence of the atmosphere, to increase its bulk, and consequently the sections are continually being forced more tightly together," thus developing a principle never before known in their application, and a new and valuable result. Other parts of the method (particularly the provision of radial ribs), as peculiar, are also described as perfecting the invention; also as new and valuable, "getting a proper amount of weight in a small circumference at the same time of uniting," &c. In noticing this part of the subject, the commissioner says: "The affidavits controvert no position we are disposed to assume. They are therefore simply irrelevant." In other parts he says that the invention claimed in this case is nothing more than a duplicated Harrison's plan; a mere colorable contrivance. Now, that there is some difference between the two is admitted by the commissioner. It is admitted that the purpose or object in view were not the same, but very different. Harrison does not pretend to claim it as a part of his invention. The suggestion in Harrison's specification alluded to by the commissioner relates to the lower stone, which in his invention is the runner, and the upper stone is stationary. This of itself makes an essential difference in the application of the contrivance. Again, the sections of stone at their radial joints are cemented together by plaster of Paris, and are bound at the circumference by an iron or brass band. This cement is altogether dispensed with in appellant's method, which consists of uniting the burr sections at the radial meeting surfaces as herein before stated. It is also worth noticing that two of the witnesses, who appear to be experts, say, as before stated, that it would be impracticable to apply to advantage this method to Harrison's bottom stone runner. They say "that these advantages are not obtained in a bottom-running stone, &c., because no radial ribs are provided &c."

The foregoing views appear to me to be correct, and show that there is error in the decision of the commissioner, and that it must be reversed, which is hereby accordingly done, and it is ordered that letters patent be issued to the said appellant as prayed.