

HALL v. MACNEALE.

1. Whether claim 3 of letters-patent No. 67,046, granted to Joseph L. Hall, July 23, 1867, for an "improvement in connecting doors and casings of safes,"—namely, "3. The conical or tapering arbors, 1, in combination with two or more plates of metal, in the doors and casings of safes and other secure receptacles, the arbors being secured in place in the plates by keys, 2, or in other substantial manner,"—claims arbors which are tapped into two or more plates, or whether it excludes, as a part of it, screw-threads cut on the arbors, is immaterial in the present case, because, under the former view, the defendants are not shown to have used arbors with screw-threads on any part of the arbor within the plates, and, under the latter view, the claim is invalid.
2. The whole invention is described in letters-patent No. 30,140, granted to Hall, Sept. 25, 1860, for an "improvement in locks," and a cored conical bolt with a screw-thread on it is shown in those letters. A solid conical bolt having existed, adding the screw-thread to it is not an invention.
3. Solid conical bolts without screw-threads having been used in two safes made and sold by the inventor more than two years before his letters were applied for, the invention covered by claim 3 was in public use and on sale, with his consent and allowance, so as to make the claim invalid under sects. 7 and 15 of the act of July 4, 1836, c. 357, and sect. 7 of the act of March 3, 1839, c. 88.

APPEAL from the Circuit Court of the United States for the Southern District of Ohio.

The case is fully stated in the opinion of the court.

Mr. Thomas A. Logan and *Mr. Edward N. Dickerson* for the appellant.

Mr. James Moore for the appellees.

MR. JUSTICE BLATCHFORD delivered the opinion of the court.

This suit is brought on letters-patent No. 67,046, granted to Joseph L. Hall, the appellant, July 23, 1867, for an "improvement in connecting doors and casings of safes." The only claim alleged to have been infringed is claim 3, which is in these words: "3. The conical or tapering arbors, 1, in combination with two or more plates of metal, in the doors and casings of safes and other secure receptacles, the arbors being secured in place in the plates by keys, 2, or in other substantial manner." In regard to what is embraced in this claim the

specification says: "The nature of this invention consists in . . . securing a series of plates forming a casing or door of the safe by means of conical or tapering arbors, which, being tapped in from the outside of the door or casing, and keyed upon the inside, present serious obstacles to the removal of successive plates forming the body of the safe. Figure 1 represents a perspective view of a safe embodying my invention. Figure 2 is a horizontal section of part of the same. Figure 3 is a detail view, in cross-section, of the door of the safe, showing the shape of, and manner of securing, an arbor. The most approved manner of securing together the numerous plates forming the casings and doors of safes is by means of screws tapped in from one series of pairs or triplets of plates from the inside, presenting no rivet heads upon the outside surface of the safes. . . . In the doors of safes the outer plate D is secured to the plates E F by screws *b*, counter-sunk in the plate F. . . . The fourth plate, I, has about the same area as the plate E. It is secured to the plate F by screws *e*, which pass through the inner plate K, in which they are counter-sunk. . . . In order to still further secure together the plates forming the door of the safe, I use a conical arbor, 1, or a number, if necessary; they are introduced in openings through the series of plates, being tapped into the two innermost of all the plates, and keyed in position. A smooth surface in the plane of the outer face of the door is presented, giving no means of removing the arbors, 1, even should the key, 2, be removed. . . . Since the doors of safes are more exposed than any other part of them, it is necessary to embody in their construction such devices, which in themselves are the simplest, as shall effectually bar forcible entrance to the safes. The introduction of arbors for the purpose of more effectually binding in one compact mass the series of alternate iron and steel plates in the doors or bodies of safes will very much protract the labors of the burglar; indeed, it will be necessary, in order to remove one sheet in succession, to cut out the arbors, which are made of the hardest steel. The arbors may be tapped through the entire series of plates, and the inner end rivet-headed instead of keyed, as shown in the drawing, or the inner plate, as well as other in the series of plates, may be put together in sections, and, fitting into notches in the arbor

or arbors, secure them in position. In this latter construction the arbors need not be conical, but may have any cross-section, tapering longitudinally."

When the specification says that the conical arbors are "tapped in from the outside," it means that screw-threads are cut on them and take into screw-threads in the body, and that the arbors are screwed in and have their smaller end towards the inside. The drawing, Figure 3, shows this, there being five plates, and the arbor being in position, and tapering from the outside to the inside, the larger end being towards the outside, and a screw-thread being cut on the arbor for the distance of the thickness of the two innermost plates, and the arbor extending through the five plates, from the outer surface of all to the inner surface of all, and a key extending from the inside, lengthwise of the arbor, the distance of the length of the screw-thread. The arbors, the specification says, "may be tapped through the entire series of plates," that is, the entire length of the arbor may have a screw-thread cut on it, and the inner end may be rivet-headed, that is, headed down into a rivet instead of being keyed. A peculiarity of the conical arbors is stated in the specification to be that they are tapped in "from the outside" and "keyed upon the inside," in contradistinction to the then existing most approved method of having screws with conical heads, the heads being counter-sunk in one of the plates, and the cone shape of the heads holding the screws so as to make it unnecessary to rivet them on the outside of the safe, the screws not going through all the plates, the head of the screw being towards the inside of the safe, and the other end of it not projecting beyond the outside. Whether claim 3, in claiming "*the* conical or tapering arbors 1 in combination," &c., is to be held, in view of the description in the text of the specification, and of the drawing, Figure 3, to necessarily claim arbors which are tapped into two or more plates, or whether that claim excludes as a part of it screw-threads cut on the arbors, is not material to this case. If the former, the appellees are not shown to have used arbors with screw-threads on any part of the arbor that is within the plates. If the latter, then, infringement being shown, we are satisfied that claim 3 cannot be sustained. The contention of the appellant is, that the

invention covered by that claim requires only a conical hole, conical through the entire series of plates to be secured, and a conical bolt corresponding thereto, and secured in place in the plates by a key, or in any other substantial manner.

A patent was issued to the appellant Sept. 25, 1860, for an "improvement in locks." The specification of that patent says: "Resting upon the front plate B of the lock, as shown in Figure 4, are seen two conical blocks, I I', a plan of which is represented in Figure 11. These are precisely alike in their construction, and they are adapted to the two stems G and H, as will appear. They are of a length corresponding with the thickness of the door M to which the lock is applied, so that, when introduced into appropriate apertures in the door, their outer faces will be flush with the outer face of the door, and their inner faces flush with the inner face of the door, and against the front face of the lock, when the same is properly fixed upon the door. The blocks I I' enter their apertures in the door by a screw-thread, and they are held from turning therein, so as to return outwardly, by an ordinary key driven into a key-seat drilled from the inside of the door before the lock is applied to its place. . . . The conical blocks are cored or drilled out in a peculiar manner to receive the two-part revolving arbor, as shown, the part p (p'), entering the narrow end of the conical blocks, being of a cylindrical form, and the part q (q'), entering the large end of the conical blocks, being of a conical form." These revolving arbors turn the stems G and H, and thus the tumblers are adjusted and the bolt of the lock is thrown. The drawing of the patent shows the conical blocks I I' as passing entirely through the door, the larger end of the cone on the outside, and each end flush with its proper face. These conical blocks were screw-threaded on their surface in the door, and were keyed from the inside. They were cored, to admit the revolving arbors, but their bodies operated in all respects like the conical arbors of the patent sued on.

In 1868 John Farrell and Jacob Weimar applied for a patent for the same thing covered by claim 3 of the patent sued on, and the Patent Office declared an interference between their application and that patent. The appellant was examined as a witness on his own behalf, in October, 1868, in that interfer-

ence, and testified as follows: "*3d Int.* State what knowledge you have had, in manufacturing safes, of the use of a series of plates united by conical bolts made drill-proof, and when and where you first had knowledge of their use. *Ans.* The first was in the year 1858 or 1859. I came across one John P. Lord's lock, which was said to be a combination, no-key-hole bank lock. I negotiated with the parties representing it, to try and introduce it and manufacture it. I then began to examine into it more particularly, and found that the knob or dial projecting through the door seemed to be very insecure in its construction. I set myself about so as to invent some better way of securing the protection to the lock and also the plates of the doors. I then invented a double and single conical-shaped arbor or plug, made drill-proof, composed of wrought-iron and steel welded together, the design of which was to fully protect the lock against sledge-hammers or other tools for driving the plug or plugs in, or from being drilled into, they being hardened. The further design of the said drill-proof plugs or arbors was to secure together a series of plates of wrought-iron and steel or other suitable metal whereby they could not be separated or pulled apart, more firmly binding them together than had been our former method of making safes, or joining together such series of plates. Some time after, during the year 1859 or 1860, the exact period of time I cannot remember fully, we made burglar-proof safes of a series of plates composed of iron and steel joined together, in which we had used more of the conical drill-proof bolts or arbors than we had formerly been in the habit of doing, for the express purpose of more securely fastening the plates together. We made them in the city of Cincinnati, in our factory, which was situated about the middle of the square bounded by Columbia, Sycamore, Front, and Main Streets. We have also used them to a very considerable extent since that time, in our factory situated at the southwest corner of Plum and Pearl Streets. I secured a patent for my double conical drill-proof arbor in the year 1860. My design of that was to secure full protection to combination no-key-hole bank locks. My single arbor I don't think I made any claim on at that time, but used it for the express purpose of binding the series of plates together. This

was also a conical drill-proof bolt, made of iron and steel. Our modes of fastening the above-described arbors were in different ways. Some we made conical, at the smaller end were made soft, so that we could rivet them down into a counter-sunk plate; others we cut a thread upon at the small end of the arbor or drill-proof bolt, which was done, and, when fitted up, the conical-shaped arbor or bolt was tempered; others were made with a thread cut upon the end of them, designed for a nut, which was designed to be used on the smaller end of them to fasten them more securely, so that they could not be withdrawn from the outside. The conical-shaped arbor, with the thread cut upon the arbor, was designed to be screwed into the inner plate of a series of plates, and then a key-seat cut in each of the threads of the plate and of the arbor, so that keys could be driven in to prevent their being unscrewed and withdrawn from the outside, thereby making them secure against the drill or the use of the sledge-hammer or other tools for forcing them in, being of a conical shape, or from removing any of the series of plates through which they passed."

It is apparent from this testimony that the appellant regarded the double conical-shaped arbor or plug, that is, the cored conical block, and the single conical-shaped arbor or plug, as being the same invention. He was endeavoring to carry back to 1858 or 1859 the invention covered by claim 3 of his patent of 1867. The only difference he makes between the double and the single arbor is that the former had a core removed from it. The latter was solid. Both, he says, were drill-proof, and had the same further design or object, namely, to secure together a series of plates in safes. He also says, that in 1859 or 1860 he made burglar-proof safes of a series of plates composed of iron and steel joined together, using in them these single conical bolts or arbors, for the express purpose of more securely fastening the plates together. He then describes the cutting of a thread upon the arbor and one of the plates to screw the arbor into the inner plate, and cutting a key-seat in the two threads, and putting in a key to prevent the arbor from being unscrewed from the outside. All this describes exactly what is covered by claim 3 of the patent sued on.

In his testimony in the present suit the appellant states that

he made three safes between 1859 and 1864 which were burglar-proof, and had conical bolts for fastening together the different plates of metal. One of them had the double conical bolt and no single bolt, and was sold to a firm in Dayton, Ohio. One was made in 1858 or 1859, to be exhibited at a fair in Ohio, and was sold to a banker in Lafayette, Indiana. It had the single drill-proof conical arbors in the doors. The third one was made to be exhibited at a fair held in 1860, and was sold to the treasurer of Loraine County, Ohio. It had a few of the single conical arbors. It does not distinctly appear that the single conical bolts in the Lafayette and Loraine County safes had screw-threads cut on them, but the appellant testifies in this case that the double arbor of his patent of 1860 had a screw-thread cut upon it running through one or more of the inner plates, for the purpose of holding it.

It clearly appears, from the testimony of the appellant himself, that the idea of making a claim to the invention covered by claim 3 of the patent sued on arose from the introduction into safes, in 1866 or early in 1867, of plates of steel and iron welded together. This enabled the value of the screw-threaded conical bolt to be more fully developed, because the screw-thread could be made more effective the whole length of the bolt. But the whole invention existed in the bolt of the patent of 1860. There was no invention in adding to the solid conical bolt the screw-thread of the cored conical bolt.

Moreover, the use and sale of the solid conical bolts in the Lafayette and Loraine County safes, even though those bolts had no screw-threads on them, constituted a use and sale of the invention covered by claim 3 of the patent in suit. The application for that patent was made in March, 1867, and the patent was granted under the provisions of the act of July 4, 1836, c. 357, and of the act of March 3, 1839, c. 88. Within the meaning of sects. 7 and 15 of the act of 1836, as modified by sect. 7 of the act of 1839, the invention covered by claim 3 of the patent in suit was in use and on sale more than two years before the appellant applied for that patent, and such use and sale were, also, with the consent and allowance of the appellant, and the use was a public use. It is contended that the safes were experimental, and that the use was a use for

experiment. But we are of opinion that this was not so, and that the case falls within the principle laid down by this court in *Coffin v. Ogden*, 18 Wall. 120. The invention was complete in those safes. It was capable of producing the results sought to be accomplished, though not as thoroughly as with the use of welded steel and iron plates. The construction and arrangement and purpose and mode of operation and use of the bolts in the safes were necessarily known to the workmen who put them in. They were, it is true, hidden from view, after the safes were completed, and it required a destruction of the safes to bring them into view. But this was no concealment of them or use of them in secret. They had no more concealment than was inseparable from any legitimate use of them. As to the use being experimental, it is not shown that any attempt was made to see if the plates of the safes could be stripped off, and thus to prove whether or not the conical bolts were efficient. The safes were sold, and, apparently, no experiment and no experimental use were thought to be necessary. The idea of a use for experiment was an afterthought. An invention of the kind might be in use and no burglarious attempt be ever made to enter the safe, and it might be said that the use of the invention was always experimental until the burglarious attempt should be made, and so the use would never be other than experimental. But it is apparent that there was no experimental use in this case, either intended or actual. The foregoing views, which are controlling to show that claim 3 of the patent in suit cannot be sustained, are in accordance with those announced in *Egbert v. Lippmann*, 104 U. S. 333.

Decree affirmed.