Bone Vs. Marion County

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Appellant : Bone

Respondent : Marion County

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U.S. Supreme Court Bone v. Marion County, 251 U.S. 134 (1919)

Bone v. Marion County

No. 63

Argued November 11, 1919

Decided December 15, 1919

251 U.S. 134

CERTIORARI TO THE CIRCUIT COURT OF APPEALS

FOR THE SEVENTH CIRCUIT

SYLLABUS

Patent No. 705,732 (Claims 1, 3, 5, 16 and 17) to Frank A. Bone for the combination, with a retaining wall having a heel, of a metal structure embedded vertically in the wall and obliquely in the heel, so that the weight of the retained material upon the heel of the metal structure will operate to retain the wall in vertical position, or of such a structure having also a toe opposite to the heel, *held* anticipated in principle by other patents and publications. Pp. 251 U. S. 136 *et seq.*

Patentable novelty or originality cannot be asserted of a device which

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has previously been described in printed publications in foreign countries although unknown in this one and to the patentee. Rev.Stats. 4886, c. 391, 29 Stat. 692. P. 251 U. S. 144 .

249 F. 211 affirmed.

The case is stated in the opinion.

MR. JUSTICE Mc KENNA delivered the opinion of the Court.

Suit brought in the district court of the United States for the District of Indiana to restrain the infringement of a patent for a retaining wall, which, to quote petitioner, is "a wall to prevent the material of an embankment or cut from sliding."

After issue joined and proofs submitted, the district court (Anderson, J.) entered a decree dismissing the bill for want of equity. The decree was affirmed by the circuit court of appeals, to review which action this writ of certiorari was granted.

The bill in the case is in the conventional form, and alleges invention, the issue of a patent numbered 705,732, and infringement by respondent. The prayer is for treble damages, an injunction, and accounting.

The answer of respondent is a serial denial of the allegations of the bill, and avers anticipation of petitioner's device by prior patents and publications in this and other countries.

This summary of the issues is enough for our purpose, and we need only add preliminarily to their discussion that Bone's device has the sanction of a patent and a decision sustaining it by the District Court for the Northern District of Ohio and the Circuit Court of Appeals for the

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Sixth Circuit. The difference of decision in that circuit and the Seventh Circuit is an important consideration, and must be accounted for, which is best done by a display of the patent and the case.

First, as to the patent: it describes the invention as being one that

"relates to improvements in retaining walls for abutments to bridges, . . . and such places as it is desired to retain earth or other matter permanently in place with its face at an angle nearer vertical than it would naturally repose when exposed to the action of the elements or gravity,"

and

"consists principally of introducing into masonry of concrete, stone, or brick a framework of steel or iron in such way that the whole wall is so much strengthened thereby that the volume of the masonry may be greatly reduced, and yet the height, base, and strength against overturning, bulging, or settling will still be ample."

The following figure represents a cross-sectional view of the device -- A representing the masonry, B the material retained, and B1 the earth on which the wall rests. The metal parts within A are indicated by the smaller letters.

image:a

The patent does not insist upon that form of the masonry in all particulars. The base of the wall may be, it is said, "varied to suit the circumstances;" it (the base) may extend to the rear, rather than the front

"with proper proportions of metal . . . the form shown in the drawings being what might be called an inverted T, while those suggested would be in the form of an L or reversed L."

The utility of the wall of these shapes is represented to be that it is

"not so liable to be overturned from the pressure of material behind it as would be a wall of the same height and area of section but having a rectangular, trapezoidal, or triangular shaped section,"

the latter shapes requiring more masonry. And it is said that the patented wall, "having more base and less weight" than such other shapes, "will rest more securely on a soft or yielding foundation, the weight of the material resting on the heel" causing the latter "to press on the earth below, and thus cause friction to prevent the whole wall from sliding outward." This is the especial effect of the patent, achieved by the wall of the shape described, and distinguishes it, is the contention, from the retaining walls of the prior art.

The patentee admits, however, that retaining walls had been "constructed of concrete and steel, but none" to his "knowledge" "had been supported on their own base as" his, nor had "any of them entirely enclosed the steel within the concrete," nor had "any of them used the weight of the material retained as a force to retain itself."

Such, then, is the wall and the utility attributed to it. The combinations which may be made with it are set forth in 17 claims, of which 1, 3, 5, 16, and 17 are involved in the present action. Counsel for petitioner considers, however, that 1 and 17 are so far illustrative that the others need not be given. They are as follows:

"1. The combination with a retaining wall having a

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heel, of a metal structure embedded vertically in said wall and obliquely in said heel, so that the weight of the retained material upon the heel of the metal structure will operate to retain the wall in vertical position."

"17. The combination with a retaining wall having an inclined heel and a toe at opposite sides thereof, of a metal structure embedded within said wall and heel, said structure consisting of upright bents at the back part of the vertical wall and continuing down along the upper part of the heel of said wall to the back part thereof, whereby, by reason of the toe and the heel, the weight of the retained material upon the heel of the metal structure will operate to maintain the wall in a vertical position."

So much for the device of the patent. How far was it new, or how far was it anticipated?

Bone's idea was conceived in 1898, and his patent issued in 1902, upon an application made in 1899, but, according to his counsel, the value of the invention was not recognized "until after the lapse of several years," when he, Bone, brought a suit against the City of Akron, Ohio, in the District Court for the Northern District of Ohio, in vindication of the patent and in reparation for its infringement. He was given a decree which was affirmed by the Circuit Court of Appeals for the Sixth Circuit. 221 F. 944.

The district court (Judge Day) gave a clear exposition of the patent, the relation of its metal parts [Footnote 1] to the masonry

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parts and their cooperating functions, and adjudged the patent valid and the wall of the City of Akron an infringement of it.

The circuit court of appeals affirmed the decree. The court said that the record disclosed nothing which anticipated "the substantial thought of the patent." If it had done so, or, to quote the exact language of the court:

"If the prior art had shown a structure intended for a retaining wall, and having a heel such that the weight of the earth thereon would tend to keep the wall erect, it might be difficult to find invention in merely adding the form of reinforcement most suitable to create the desired tensile strength; but we find no such earlier structures. [Footnote 2] "

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On application for rehearing, the court refused to direct the district court to open the case to permit the defendant to put in proof regarding a German publication of 1894.

Those decisions confronted the district court in the present suit and fortified the pretensions of the patent. They were attacked, however, as having been pronounced upon a different record, and this conclusion was accepted by the district court. The latter court found from the new evidence the existence of a structure upon the nonexistence of which the Circuit Court of Appeals for the Sixth Circuit based its conclusion. The district court said that Bone was not the first to do the things he asserted he was the first to do, and that, whatever the record in the Sixth Circuit might have shown, so far as the record before the court "was concerned, the absolute converse of that proposition" had "been demonstrated."

The court therefore as we have said, dismissed the bill for want of equity.

The decree was affirmed by the circuit court of appeals; indeed, the reasoning of the district court was approved after painstaking consideration of the patent and an estimate of the anticipatory defenses, none of which the court said was introduced in the *Akron* case, "otherwise a different conclusion would have been reached," adducing the opinion of the court. 249 F. 214. This being so, and there is no doubt it is so, the present case is relieved of the authority or persuasion of the *Akron* case, and it becomes necessary to consider the prior art and decide the extent

and effect of its anticipation.

We have given a cross-section of the device of the

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patent, showing its shape and strengthening "metallic members," and the patent informs of their cooperative function. We reproduce the device and set by its side the Marion County wall for comparison.

image:b

If we may assign novelty to the Bone wall and consider it a broad advance upon the prior art (the extent of its advance, if any, we shall consider later), we may assign infringement of it by the Marion County wall. To an examination of the prior art we are therefore brought.

It would be difficult to add anything to the consideration and comment of the court of appeals. The court cited in support of its judgment a patent issued to Francois Coignet in 1869, and one issued to Stowell & Cunningham in 1899 upon an application made in 1897, and to articles written by P. Planat which appeared in 1894 and 1896 in a scientific magazine called "La Construction Moderne," published in Paris; also a publication which appeared in Germany in 1894 concerning a wall which is given the name of Bauzeitung wall. The article recites that a "utility model patent" had been granted, consisting "of a vertical and a horizontal member."

The Coignet patent is somewhat indefinite. It relates, according to its declaration, to "monolithic structures, or articles made of artificial stone paste" into which irregular shaped irons are introduced to be

"arranged in such a

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manner as to interlace each other, so that, by the combination of this metallic skeleton and of agglomerated artificial stone paste, the thickness of the walls or size of the articles may be considerably reduced and yet great strength be attained."

It will be observed that there is nothing explicit of how "stone paste" and the "irregular shaped irons" operate or cooperate, aside from their cohesion or interlacing. Their arrangement is not definite as the "metallic members" in the Bone patent are, so that there might be, as in that patent, reinforcing metal in the heel of the wall acting with its upright portion serving the function, to quote Judge Day,

"of a cantilever beam whereby the weight of the material pressing upon the heel is transferred to the upright of the wall and operates to retain the wall in a vertical position."

If there was any prophecy (to borrow counsel's word) in it, the world was slow to discern it, and we are not disposed to give much anticipating effect to it, a view in which we have confirmation in the disclaimer of Bone, he conceding he was not the first to discover the art of reinforcing concrete.

The Planat publications are more explicit. We there see a relation between the metallic and masonry parts of a wall and their cooperation to produce strength in the wall and resistance to the pressure of and bulging from the stress of earth behind it. Both articles, the court of appeals said, "deal with retaining walls of reinforced concrete of the cantilever type," and quoted from the article of 1896 as follows:

"These computations suppose that one has effectively realized the fixing of the vertical wall to the horizontal slab at their junction. This fixing requires special precautions. The bars at the point of junction exert a pulling force which tends to pull them out of the concrete. . . . But here we have only a half beam on a cantilever span. It is necessary that the extremities of the bars in the

region of fixation should be held in a sufficient mass of concrete or maintained by some other means."

"One is able to reduce these projections in a very large measure if one takes care to bind together the vertical bars and the horizontal bars at their point of intersection. In this way, the pull of the bar is carried not only on its prolongation, arranged for anchorage, but also on the bar which is perpendicular to it, and whose great length permits it to offer a large resistance to the force tending to pull it out transversely."

The court did not enlarge upon other examples of the prior art, nor do we think that it is necessary to do so. The court, however, referred to a publication in Bauzeitung and the patent to Stowell & Cunningham. The former is too technical to quote, and the latter has not the simplicity of the Bone device, but both publication and patent represent structures that resist a tendency to tilting or bulging from the pressure of the earth in their rears. The Bauzeitung article did this by a wall which consisted of a "vertical and a horizontal member" which were "rigidly connected with each other," and

"the ratios so chosen that the resultant of the earth thrust passes through the horizontal part or through the foundation respectively, so that there exists no longer any tendency to tilting so long as the two parts continue to be firmly connected with each other."

It is further said: "To increase the stability, the horizontal part is furthermore connected at its rear end by means of anchors with the underground." It will be observed, therefore, that there are no metallic reinforcing members. It is the shape of the wall -- one having a base extending to the rear in the form of an L, the exact antecedent of one of the shapes described by Bone as having advantage over other shapes. And there was also the suggestion of the value of a firm connection between the "vertical and horizontal member." In other words, the publication showed a retaining

wall having a heel such that the weight of the earth thereon would tend to keep the wall erect, an effect and operation that Bone declares in his patent no wall had attained prior to his invention. And that effect and operation the Circuit Court of Appeals for the Sixth Circuit considered the essence of the Bone patent, and the court said that "[i]t might be difficult to find invention in merely adding the form of reinforcement most suitable to create the desired tensile strength."

The Stowell & Cunningham structure is, as we have said, somewhat complex in its mechanical parts. But these are but details; the physical laws that they are to avail of are explained so that "the volume of masonry" of retaining walls may be reduced, yet retain their strength by the use of metallic reinforcements.

Counsel attacks the sufficiency of the asserted anticipations, especially the publications, and in effect says that whatever conceptions lurked in them conveyed no suggestion of a "concrete entity," to use counsel's words, to execute them, and laments that Bone should be robbed of the credit and reward of adding to the world's useful instrumentalities which, but for him, would have remained in theories and the "dust from which respondent recovered them."

To execute theories by adequate instrumentalities may indeed be invention, but an answer to petitioner's contention we have given by our comment on the Bauzeitung and Planat publications and the fullness of their expositions. Bone may have been ignorant of them, and his device may not have been their suggestion. They seem to have been unknown to American engineers, not even the interest of the controversy in the Sixth Circuit having developed their existence. From this local ignorance, nothing can be deduced favorable to the patent. Its device having been described in printed publications, although in foreign countries, patentable novelty or originality cannot be asserted for it. Section 4886, Rev.Stats.; 29 Stat. 692, c. 391.

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Such is the provision of the law, and we cannot relax it in indulgence to what may seem the individual's merit.

The circuit court of appeals, to show the progress of the prior art, made use of the illustrations [Footnote 3] of the patents and publications that preceded Bone's, and we also avail ourselves of the same to show that Bone's patent was a step, not a leap, in that progress, and that the only originality that can be accorded it is in its special form, and there can be no infringement except by a copy of that form or a colorable imitation of it. We do not think the Marion county wall is subject to either accusation, and the decree of the circuit court of appeals is

Affirmed.

MR. JUSTICE DAY took no part in the consideration or decision.

[Footnote 1]

The following is an extract from Judge Day's opinion:

"The reinforcing members [metallic members] are placed near the back face of the wall and heel and near the lower face of the toe. The oblique reinforcing bars in the heel, acting in conjunction with the uprights, serve the function of a cantilever beam whereby the weight of the material pressing upon the heel is transferred to the upright portion of the wall and operates to retain the wall in a vertical position. . . ."

"Considering the claims of the patent and the testimony, I am of the opinion that Bone, the patentee, was the first to reinforce the retaining wall, or similar wall of concrete or masonry in such a manner that the weight of the retained material would be utilized to impart through the reinforcing members tensile resistance to the stern or vertical part of the wall, thereby fortifying this part of the wall against breaking strains."

"This was an advancement in the art, and possessed novelty and the structure of the defendant city infringed this patent."

"While many of the features of concrete structures were old, yet this combination, as outlined and described in this Bone application for a patent, was new. It is also in evidence that there has been a large sale and general acquiescence in the

Bone patent."

[Footnote 2]

The following is an extract from the opinion of the circuit court of appeals:

"The record discloses nothing anticipating the substantial thought of the patent. Masonry or concrete retaining walls were deep and heavy, and maintained by gravity in their resistance against a horizontal stress. There was no occasion for reinforcement. Sustaining walls had been built of concrete with vertical reinforcement, but they were maintained against side strain by cross-ties or beams, without which they might tip over. If the prior art had shown a structure intended for a retaining wall, and having a heel such that the weight of the earth thereon would tend to keep the wall erect, it might be difficult to find invention in merely adding the form of reinforcement most suitable to create the desired tensile strength; but we find no such earlier structures. Those which have that shape are sustaining walls only, and were so obviously unfit for use as retaining walls that no one seems to have seen the utility for that purpose, of which the form, when properly adapted and strengthened, was capable. There is also a prior wall, wholly of metal, fairly disclosing a unitary heel adapted to hold the wall erect; but to see that this could become merely a skeleton imbedded in concrete may well have required, in 1898, more than ordinary vision. Upon the whole, we think invention was involved, and the claims are valid."

[Footnote 3]

image:c