

# United States Court of Appeals for the Federal Circuit

03-1477

HIGH CONCRETE STRUCTURES, INC.,

Plaintiff-Appellant,

v.

NEW ENTERPRISE STONE AND LIME CO., INC.  
and ROBBINS MOTOR TRANSPORTATION, INC.,

Defendants-Appellees.

Manny D. Pokotilow, Caesar, Rivise, Bernstein, Cohen & Pokotilow, Ltd., of Philadelphia, Pennsylvania, argued for plaintiff-appellant. With him on the brief were Bruce J. Chasan and Salvatore R. Guerriero.

Erik N. Videlock, Pepper Hamilton LLP, of Philadelphia, Pennsylvania, argued for defendants-appellees. With him on the brief were Nicole D. Galli and Kathleen A. Johnson of Philadelphia, Pennsylvania; and James M. Singer of Pittsburgh, Pennsylvania.

Appealed from: United States District Court for the Eastern District of Pennsylvania

Judge Franklin S. Van Antwerpen

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DECIDED: July 29, 2004

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Before MAYER, Chief Judge, NEWMAN and CLEVINGER, Circuit Judges.

NEWMAN, Circuit Judge.

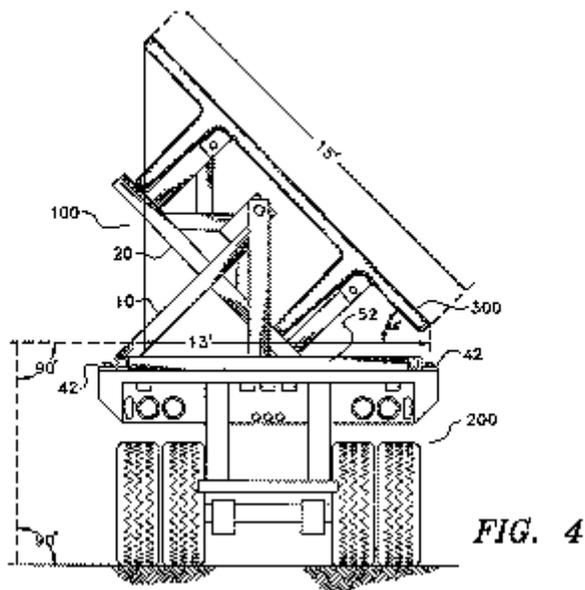
High Concrete Structures, Inc. ("High Concrete") appeals the decision of the United States District Court for the Eastern District of Pennsylvania<sup>[1]</sup> granting summary judgment that U.S. Patent No. 5,947,665 (the '665 patent) is invalid for failure to comply with the best mode requirement, and consequently not infringed by New Enterprise Stone and Lime Company and Robbins Motor Transportation, Inc. (together "New Enterprise"). Because the district court incorrectly applied the law

of best mode, we reverse the summary judgment on this ground, and remand for further proceedings.

### THE PATENTED INVENTION

The '665 patent is directed to a device for adjusting the orientation for transport, on a truck or other means of conveyance, of heavy and bulky cargo typified by large pre-formed concrete structures called "double-tees." Double-tees are concrete modules used to support heavy loads, such as for floors of parking garages, and can weigh as much as 85,000 pounds. In the past such structures were transported lying flat on the bed of a truck. However, if the double-tee was wider than normal loads, and many were, the truck was classified as carrying an oversize load, requiring it to conform to special regulations and limiting its route and times of travel.

The patented invention is an apparatus called a loading fixture or tilt frame, which carries the cargo at an angle so that the loaded truck is not unduly wide. The tilt frame is configured to place the center of gravity near the axis of rotation, whereby the tilting of the frame carrying the load is accomplished with the aid of the force of gravity. The tilt frame thereby reduces the effective width of wide cargo and enables over-width structures to be transported without incurring "wide load" requirements. The invention is illustrated in the '665 patent as follows:



The tilt frame (100) is a "W" shaped support structure (20) mounted to a support frame (10) by means of a pivoting joint. The location of the pivoting joint is near the center of gravity of the support structure and loaded double-tee (300) so that the assembly can be tilted with minimal force. Apparatus and method claims of the '665 patent follow:

Claim 1. A loading fixture suitable for transporting cargo, comprising:  
an arm, disposed to support said cargo in a tilted transporting position;  
a pair of perpendicular members extending in a perpendicular direction from said arm; and  
a plurality of boots, each disposed at a respective end portion of each of said perpendicular members, each boot being shaped to contact and support a corner of the cargo, wherein each of said perpendicular members positions a respective boot to contact and support a respective corner of the cargo simultaneously.

Claim 19. A method of loading a double-tee for transport, comprising the steps of:  
placing the double-tee on a loading fixture having a body and a pair of perpendicular members, the pair of perpendicular members extending in a perpendicular direction from said body, so that both perpendicular members simultaneously contact and support a respective corner of the double-tee; and  
tilting the double-tee to a transport position.

In operation, the double-tee is lifted by a crane and lowered onto the frame, which rotates to the

transport angle of about 45°. The '665 specification states that the cargo "can be rotated manually without heavy equipment. While this is not a requirement, it can greatly reduce the cost of loading and unloading such cargo." Col. 2, ll. 59-61. The inventors stated by deposition that for heavy cargo like the double-tee the rotation is accomplished with the aid of the crane when the cargo is loaded, and not manually.

On the defendants' motion for summary judgment, the district court held all the claims of the '665 patent invalid for failing to disclose that the inventors' preferred mode of practicing the invention was to use the crane to tilt the loaded frame at the time that the crane loaded the cargo onto the frame.

### **Standards of Review**

We review a district court's grant of summary judgment de novo. See Stark v. Advanced Magnetics, Inc., 29 F.3d 1570, 1573 (Fed. Cir. 1994) ("[T]he appellate court determines, upon de novo review, whether the summary judgment was correctly granted as a matter of law."); Quad Environmental Technologies Corp. v. Union Sanitary District, 946 F.2d 870, 872 (Fed. Cir. 1991).

Violation of the best mode requirement is a question of fact, for it depends on the applicant's intent. Spectra-Physics, Inc. v. Coherent, Inc., 827 F.2d 1524, 1536 (Fed. Cir. 1997). To grant summary judgment on a factual question, all disputed material facts must be resolved in favor of the non-movant, Anderson v. Liberty Lobby, Inc., 477 U.S. 242, 252-53 (1986), and consideration must be given to the evidentiary standard of proof, Id. A disputed fact is material if it may affect the outcome of the suit. Anderson, 477 U.S. at 248. When the nonmovant cannot prevail even on its view of the facts, with doubts resolved in its favor, the moving party is entitled to judgment as a matter of law. See United States v. Diebold, Inc., 369 U.S. 654, 655 (1962); Young Dental Mfg. Co. v. Q3 Special Products, Inc., 112 F.3d 1137, 1141 (Fed. Cir. 1997). A patent is presumed valid, 35 U.S.C. §282, and can be proved invalid only by clear and convincing evidence. United States Surgical Corp. v. Ethicon, Inc., 103 F.3d 1554, 1563 (Fed. Cir. 1997).

### **The Best Mode**

The specification must set forth the best mode known to the inventor for practice of the invention claimed in the patent. 35 U.S.C. §112. Invalidation for failure to set forth the best mode requires (1) the inventor knew of a better mode than was disclosed, and (2) the inventor concealed that better mode. Chemcast Corp. v. Arco Indus. Corp., 913 F.2d 923, 927-28 (Fed. Cir. 1990). Both parts of the best mode test must be met in order to invalidate the patent. Spectra-Physics, 827 F.2d at 1535.

As explained in In re Gay, 309 F.2d 769, 772 (CCPA 1962), the best mode requirement precludes inventors "from applying for patents while at the same time concealing from the public preferred embodiments of their inventions which they have in fact conceived." See Randomex, Inc. v. Scopus Corp., 849 F.2d 585, 588 (Fed. Cir. 1988) ("It is concealment of the best mode of practicing the claimed invention that section 112 ¶1 is designed to prohibit."); Hybritech, Inc. v. Monoclonal Antibodies, Inc., 802 F.2d 1367, 1384-85 (Fed. Cir. 1986) ("[I]n order to find that the best mode requirement is not satisfied, it must be shown that the applicant knew of and concealed a better mode than he disclosed.").

The district court ruled that the inventors of the '665 patent violated the best mode requirement because they did not state in the patent specification that a crane was the preferred mode of carrying out the method of loading and tilting the frame. High Concrete argues that the use of a crane in loading cargo was well known, that only very heavy loads would require the assistance of a crane in tilting the frame, and that for many loads a crane is not needed. New Enterprise concedes that a person of ordinary skill in the field of loading cargo would realize that the aid of a crane during tilting of the frame is "an option." However, New Enterprise argues that what is not disclosed is the inventors' preference for the use of a crane for heavy loads, not whether a crane is always needed. High Concrete responds that its invention is not whether a crane is used to load the double-tee, but the tilting fixture itself.

Invalidation based on a best mode violation requires that the inventor knew of and intentionally concealed a better mode than was disclosed. The specification states that the tilting action is assisted by gravity and does not need "heavy equipment." New Enterprise conceded, for purposes of its motion for summary judgment, that the placement of the pivot point four inches from the center of gravity was at

"about" the center of gravity. High Concrete argued that since the tilting occurs primarily with gravity, the loading crane is a stabilizing and safety device, as any person in the field would understand and use for heavy or bulky cargo. New Enterprise conceded that use of a crane to assist with heavy loads is well known to persons in the field of loading cargo. There was neither evidence nor inference of concealment of this information by the inventors.

Deliberate concealment is not charged. The best mode requirement of §112 is not violated by unintentional omission of information that would be readily known to persons in the field of the invention. See, e.g., Ajinomoto Co., Inc. v. Archer-Daniels-Midland Co., 288 F.3d 1338, 1346-47 (Fed. Cir. 2000) (no best mode violation where patent specification omitted a reference to a publication that was known in the art); Young Dental Mfg., 112 F.3d at 1144-45 (no best mode violation upon general disclosure of grade of plastics, since it was within knowledge of persons of ordinary skill to select a suitable grade and there was no showing that a particular grade was necessary and concealed); Robotic Vision Systems, Inc. v. View Engineering, Inc., 112 F.3d 1163, 1166 (Fed. Cir. 1997) (no best mode violation because disclosure of computer software was "implicit in the specification" and would be apparent to a person skilled in the art).

Although New Enterprise argues that the reference in the specification to manual rotation is evidence of concealment of use of the crane to rotate the loads, there was no evidence or inference of intent to conceal this use. The cases relied on by New Enterprise do not establish violation by High Concrete. The use of a crane to aid in tilting the frame was not a mode determined through experimentation or selection or trial and error, as in Northern Telecom, Inc. v. Datapoint Corp., 908 F.2d 931, 940 (Fed. Cir. 1990), or essential to practice of the invention and omitted from the patent, as in Dana Corp. v. IPC Ltd. Partnership, 860 F.2d 415, 419-20 (Fed. Cir. 1988). In Northern Telecom, one of the objectives of the invention was to capture data on standard audio magnetic tape cassettes which, while widely used in audio applications, had not been used for data storage. The inventors concealed the fact that they purchased tape and cassettes of their own design and specifications and that these were different from standard audio tapes in mechanical strength and magnetic characteristics. The inventors argued that a commercially available tape met the invention's requirements, but the court found that the

inventors had deliberately concealed the identity of the preferred tape, and that most of the available tapes could not be used. No such attempt to mislead is present in this case.

Similarly, in Dana Corporation a technique of applying silicone to rubber surfaces was discovered by the inventor to be essential for the successful operation of the claimed stem seals for valves in automotive engines. An internal report by the inventor stated that only such silicone-treated seals performed the invention adequately; this essential aspect was not disclosed in the patent specification, and was found to violate the best mode requirement. In contrast, in the case before us it was undisputed that anyone with experience of heavy loads would know to use a crane to move the load. Known ways of performing a known operation cannot be deemed intentionally concealed absent evidence of intent to deliberately withhold that information. No such evidence was offered.

The summary judgment of invalidity on this ground is reversed. The case is remanded for further proceedings.

REVERSED AND REMANDED

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[1] High Concrete Structures, Inc. v. New Enterprise Stone & Lime Co., No. 02-CV-0086 (E.D. Pa. Apr. 17, 2003).