

timony uncertain, his failure to claim or suggest his alleged invention to Brodrick, or to claim it in his subsequent patents, would be sufficient to place his evidence either within the rule of abandoned experiments, or without the requirement of proof of anticipation beyond a reasonable doubt. The denial of infringement may best be disposed of in the language of Judge Green, when a similar defense was presented after the main opinion in the Fuerth Case. Judge Green said:

"Their insistent is that as Brodrick described the wax he uses, preferably, as having a fusion point of 120° F., it follows that the wax they use is much harder, and not within the limitations of his letters patent. But the fusion point of the wax used is not the test of hardness. The true test is, will its particles move readily under slight pressure? If so, it is 'soft.' That the wax used by the defendants has this characteristic of softness cannot be denied. The fact that the stencil made by them is a perfect stencil proves it. * * * And, although the wax with which they coat their basic sheets may be different in composition from that used by the complainant, yet none the less it is a soft, waxy, or gummy coating, within the terms of Brodrick's patent."

The claim that complainant has failed to prove title might have been fatal to this bill if the objection had been seasonably taken. As, however, no objection was made at the time when the certified copies from the patent office were offered, this objection comes too late. In any event, this point not having been raised until after the case had been heard at great length, this court feels bound to dispose of the question upon its merits, and not to allow this technical objection, not raised or insisted upon until near the close of the final hearing, to interfere with the disposition of the case upon its merits. Let a decree for complainant be entered.

BENNETT et al. v. SHOOLEY.

(Circuit Court, W. D. Pennsylvania. June 16, 1896.)

1. PATENTS—CONSTRUCTION OF CLAIMS.

The words "detachable clip," as used in the claims of a patent for a railway torpedo, held to mean a removable clip, or one which is connected with, but not positively attached to, the torpedo shell, as by riveting or soldering.

2. SAME—INFRINGEMENT—RAILWAY TORPEDOES.

The Beckwith patent, No. 409,902, for a railway torpedo, construed, and held valid, and infringed as to claims 1, 2, and 5.

A. S. Pattison and J. M. Nesbit, for complainants.
William Yost, for respondent.

BUFFINGTON, District Judge. On August 27, 1889, patent No. 409,902 issued to Walter C. Beckwith for a railway torpedo. This patent was subsequently assigned to complainants, who file this bill for the alleged infringement by respondent of three claims thereof. The controversy relates to railway torpedoes, which are small tin shells or cases, charged with an explosive compound. These are placed on the rails, and attached thereto. Trains passing along ex-

plode them, by which the engineer is notified of danger or obstructions ahead. The torpedo is attached to the rail by a wire or lead strip which laps or is turned up under the shoulder of the rail. Prior to the patent in suit such strips or wires were soldered or riveted to the tin torpedo case before the torpedo was charged. The operation was tedious, and required skilled labor. In the subsequent operation of filling the case the strip was liable to be torn off, as, indeed, it was in the handling, shipment, or use of the torpedo by the manufacturer or user. If this happened, another strip could not, without serious danger, be riveted or soldered to the shell, and in practice it was never done. The torpedo became a "cull" or rejected one. By the method shown in the patent in suit, which was both simple and effective, these difficulties were overcome, and certain other advantages gained. From the proofs, Beckwith, the patentee, seems to have been the first to conceive the idea of loosely attaching or securing the lead or wire to the torpedo, instead of positively uniting it thereto, as was the previous practice, by solder or wire. The means he thus employed served also to hold the case and cover of the torpedo together. To carry out his invention, he suggested in his specification several alternative methods. In the sloping torpedo of oblong shape he provided flanges on the lower opposite edges. On the under side of the torpedo he put a removable sheet-metal clip, indented in the center at both ends, and having its four corners turned or lapped over the flanges mentioned. He thus attached clip and torpedo to each other, and held together the two parts of the torpedo as well. The central longitudinal line of the clip was concaved, so as to allow the insertion of a wire between clip and torpedo. The ends of this wire were doubled up under the shoulders of the rail, and thus permitted the attachment of the torpedo to and its retention on the rail. In such a construction the clip could be slipped from either end over the flanges, and thus readily attached for service or displaced. Where the invention was applied to round torpedoes not provided with flanges over which the ends of the clip could be slipped, as noted above, the edge of the torpedo was made with pendent slotted ears on opposite sides, which passed through slots in the end of the clip, or else the ends or lugs of the clip were passed through slots in the sides of the torpedo shell, and turned back on themselves. Such constructions were adapted for the use of either lead strips or wires. The manner of using the lead strips, while not stated in the specification, is shown in the drawings to be by passing the strip first in and then out through slots in the middle body of the clip. After noting these several forms in the specification, the patentee says:

The object of using clips as here shown is to enable any fastening device—such as a wire or a leaden strip—to be applied to the torpedo after it is filled, with perfect safety. If the leaden strip which is ordinarily applied to a torpedo should become broken or detached, the torpedo must be treated as a cull, because it is not safe to attempt to solder the lead to the filled torpedo again by the use of the clips. As here shown, a new fastening can be applied to any torpedo at any time with perfect safety. The soldering of the leaden strips is an expensive as well as a slow process. As here shown, the clips may be applied to torpedoes of different shapes. If desired, the round tor-

pedo may also have a projecting flange formed around its lower edge, or any other suitable construction may be employed as a means of enabling a clip to be attached to a torpedo.

Upon this application five claims were allowed, three of which are alleged to be infringed, viz.:

(1) The combination of a torpedo, a detachable clip, means for attaching it to the torpedo, and a wire for attaching the clip to the rail, substantially as shown.

(2) The combination of a torpedo with a detachable clip and means for attaching the clip to the torpedo, substantially as described.

(5) The combination of a torpedo with a detachable clip and a fastening device for attaching the torpedo to a railroad rail, substantially as shown.

In the light of the novelty shown by the proofs to have been disclosed in Beckwith's device, and in view of the language of his specification, we are of opinion that by the term "detachable clip," found in the foregoing claims, was meant a removable clip, or one which was not positively attached to and virtually made a part of the torpedo shell by riveting or soldering; that such an attachment was meant which, while it accomplished connection, did not create union. To illustrate by a familiar example, it was an attachment akin to that made by screw threads as contrasted with a union by welding. Such construction is permissible by the language of the specification. It does no violence to the terms of the claim, and, being permissible, it should be adopted, since it serves to secure to the patentee the substantial improvement in torpedo construction which was first disclosed by his patent. The character of this improvement is justly measured, we think, by the inventor, who in the proofs says:

The use of the clip described in complainant's patent was the means of increasing our sales by allowing us to turn them (torpedoes) out at a greater speed and at less cost, enabling us to put them on the market at a less price than heretofore, besides causing a great saving to us in the matter of "culls" which are made by the strap soldered to the torpedo becoming detached, and thereby making the torpedoes practically useless, as a new strap could not be resoldered to the torpedo. By the use of the clip described in complainant's patent, we did away entirely with the "culls" as above described, as the torpedo is entirely finished before its lead strap is fastened to it by the clip, which can readily be replaced or detached or broken by further handling. Another advantage from the use of the clip is the fact that the box or case, being entirely (un)incumbered with the strap, is much more rapidly filled and manipulated than when the strap is attached to the torpedo box by soldering, which has to be done prior to the filling and finishing of the same. Another advantage to be derived from the use of the clip is that it binds the inner and outer torpedo cases, * * * thus preventing them from falling apart, and by that means making a "cull" of the torpedo, thus resulting in a loss to the consumer and manufacturer, and a dangerous source of annoyance to the consumer, from the fact that chemicals in an unprotected state take on the nature of a sensitive explosive, whereby a slight friction would cause damage. * * * The saving in the cost of manufacture, I would say, was about one-half. This is brought about partly from the fact that it does away with all culls, which are sure to accumulate when the lead strap is soldered to the torpedo, and partly from the fact that the ratio of time required in applying the lead strap is four to one in favor of the clip. My experience in skilled labor in soldering the lead strap to the torpedo case did not exceed fifteen gross per day, while we will put up sixty gross per day by using the tin clip. This refers to the work of one person; and the skilled labor for soldering was more expensive than the skilled labor for applying the patented clips per day. Referring to riveting the clip to the torpedo case, I would say the operations

are multiplied. First, the clip has to be riveted to the torpedo case, requiring as much or more time than to solder them on; then the strap has to be fastened to the clip, so that the operation is much more expensive than soldering.

The torpedo made under the patent has been manufactured in large numbers, and successfully marketed.

We next turn to the question of infringement. The respondent has made and sold a torpedo in which the tin shell is charged before a clip or lead strip is attached. In opposite sides of the flanges around the torpedo case are cut grooves, in which is seated an oblong-shaped wire clip, which extends across the upper shell face, and the ends of which are bent over the torpedo sides. They seat themselves in the flange grooves, and are then turned or bent upward against the lower shell face. This clip seems to hold the two portions of the torpedo together, and affords a means of attaching a lead strip, which is passed through the stirrups or ends of the clip, and serves to attach the torpedo to the rail. If we are right in our construction of the term "detachable clip" in Beckwith's claims, there can be no question but that this device infringes. The details may differ somewhat, but the difference is in form, not in substance. The same means—a detachable clip, a torpedo, and a lead attaching strip—are used in substantially the same way to accomplish precisely the same result. The clip of Schooley may be heavier in material, less easy to disengage, and be made of wire instead of tin or sheet metal, but there are no limitations implied or expressed in Beckwith's claims in either or any of these particulars which restrict them to such narrow limits. The substance of what Beckwith invented is found in what Schooley has constructed. This seems to us quite clear if we inquire what the effect on Beckwith's application for a patent would have been had Schooley's device existed before it. Clearly, it must have anticipated it, and prevented the allowing of the claims now in controversy. In it Beckwith would be met by a combination which included a torpedo, a clip that, as compared with prior methods, must properly be embraced by the term "detachable," means for attaching the clip to the torpedo, and a lead for attaching it to the rail, all of which are elements of Beckwith's claims. Such being the case, their use in combination subsequent to Beckwith's patent must be adjudged an infringement thereof.

A decree may be prepared adjudging the respondent infringes the claims noted.

NEW YORK PAPER-BAG MACH. & MANUF'G CO. v. WESTERN PAPER-BAG CO.

(Circuit Court, N. D. Illinois. November 13, 1895.)

PATENTS—PRELIMINARY INJUNCTION—PAPER-BAG MACHINES.

A preliminary injunction, based on claim 9 of the Leinbach, Wolle & Brunner patent, No. 242,661, for a paper-bag machine, refused, because the court was not sufficiently assured that the hinged folding plates of said claim, with the associated mechanism, as described, were to any degree practically operative for the purpose of making paper bags.