

Case No. 13,840.

TERRY CLOCK CO. v. NEW HAVEN CLOCK
CO.[4 Ban. & A. 121;¹ 17 O. G. 909.]

Circuit Court, D. Connecticut. Feb. 12, 1879.

PATENTS—INVENTION—MECHANICAL SKILL.

The desirability of an improvement, the difficulties to be encountered, and the unsuccessful experiments of others in the same direction, tend strongly to show that he who achieves the desired result was not merely a better mechanic than his predecessors, but that he had a problem, which required the skill of the inventor, to solve.

[Cited in *Electrical Accumulator Co. v. Julien Elec. Co.*, 38 Fed. 136.]

In equity.

Charles E. Mitchell and Charles W. Gillette, for complainant.

John S. Beach, for defendant.

SHIPMAN, District Judge. Since the decision of the court in this case upon the facts as presented on the trial, the plaintiff has filed in the patent office a disclaimer, whereby it disclaims “combining a dead-beat and recoil escapement, except when the same is produced from flattened metal by bending into the shape and for the purpose, substantially as described in the specification of said patent.” The plaintiff now asks for a decree against the defendant upon the ground that it is confessedly using a combined dead-beat and recoil escapement made by bending from flattened steel, and that such an escapement so made is the invention of the plaintiff, and is a material and substantial part of the thing patented, and is definitely distinguishable from the part inadvertently claimed without right.

The defendant replies that, in view of the state of the art existing at the time of the alleged invention, there was no invention in the mode of construction by

bending, but that the choice of methods was a matter simply of mechanical skill and judgment.

Prior to the date of manufacture of the Botsford clock in 1853, clocks were constructed either with the recoil escapements, or with the dead-beat escapements. It is stated in the former opinion that dead-beat verges were generally made by pressing from solid steel. It can truly be said that they were always made in this way, while recoil verges were made by bending from flattened steel. Botsford invented in 1853, but did not patent, a combined dead-beat and recoil escapement, which he made by pressing from solid steel. In 1868, Terry invented a combined escapement not differing, in shape of the working surfaces, or in operation, or in construction, from the Botsford escapement, in any manner, except that it was made by bending. Dead-beat verges were made of solid metal, because it is necessary to have the pallet a perfect dead-beat, or poor timekeeping is the result, and it was supposed that metal could not be bent with such exactitude as to make the pallet a perfect dead-beat. The steel was liable to spring out of shape when hardened. On the other hand, solid verges were more expensive, because, if the pallet was not accurately adjusted to the teeth of the crown-wheel when the pallet was first made, the process of correcting the defect was difficult and expensive, whereas bent verges were adjusted with ease, so that dead-beat verges were made of solid metal to insure accuracy at the time of construction, while recoil verges were made by bending, from motives of economy.

It was, therefore, desirable that the combined dead-beat and recoil escapement should be made by bending, in order to produce a cheap clock, if by such a mode of manufacture accuracy could be obtained. The advantages of this method seem to have been appreciated, and attempts to accomplish the result were made by others than Terry. Botsford

unsuccessfully made the experiment before he attempted the solid verge. Geo. W. Brown, an experienced manufacturer, made similar experiments upon fine movements, and says that he found "on so fine a sized verge it was almost impossible to form steel into the required shape—certainly impracticable." The patentee experimented with solid verges, and found them to be too expensive for ordinary clocks. He succeeded in making a bent combined verge, which proved a success. The solid combined verge has not been used in this country since 1859, until April, 1877. Since the last named date the defendant has made between one thousand and two thousand such verges. These were made by the milling process.

The desirableness of a bent combined verge, the difficulties to be encountered in its successful manufacture, and the unsuccessful experiments of other manufacturers satisfy me that the patentee was not simply a better mechanic than his predecessors. Botsford and Brown had both, after their experiments, fallen back upon the solid verge; but their style of manufacture in the then state of mechanism seems to have been too expensive for common clocks. At any rate, it went out of use about 1859, after Botsford ceased to be a clock-manufacturer and his clocks had all been sold. In this state of the art, combined escapements being disused, Terry first told the public that an accurate and cheap combined escapement could be made by bending. He made a step forward, substituted the bending process for the process by pressure, and effected a new and useful result by effecting a material saving in the operation. The economy is not by any means so marked now as it was in 1868, in consequence of other improvements in manufactures; but when Terry made his invention he gained a material advantage in 859 point of cheapness of production. The successful result, and the fact that previous experimenters wanted to obtain the result,

but failed, lead to the conclusion that the patentee was not merely contending with mechanical difficulties, but that he had a problem, which required the skill of the inventor, to solve. *Smith v. Goodyear Dental Vulcanite Co.*, 93 U. S. 486.

Let there be a decree for an injunction and an accounting, with costs.

{For another case involving this patent, see *Terry Clock Co. v. New Haven Clock Co.*, Case No. 13,841.]

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