

GOULD *v.* SPICERS AND ANOTHER.*Circuit Court, D. Rhode Island.*

April 9, 1884.

## PATENT—INFRINGEMENT—FURNACE—GRATE-BARS—CAM-SHAFTS.

A combination patent is not infringed by another patent unless all of the elements composing the combination in the first patent, or equivalents therefor, are employed in the second patent.

In Equity.

*Thos. Wm. Clarke*, for complainant.

*W. H. Thurston* and *B. F. Thurston*, for defendants.

COLT, J. This is a bill in equity brought for the alleged infringement of reissued letters patent, No. 9,959, granted to David B. Gould, December 6, 1881, for an improvement in grates. The invention relates to agitating the coal-bed of a furnace by lifting the grate-bars and letting them fall suddenly by means of two shafts provided with cams arranged under and near the ends of the grate-bars. The general principle of agitating the fire surface of a furnace by the employment of a series of loose grate-bars operated by one or more camshafts, is not new. The same principle we find in various older patents, and it is illustrated in the Cass English patent, the Watson English patent, and the Allen and Hudson American patent. The patent under consideration must, therefore, in view of the prior state of the art, be limited in its scope to the particular combination of devices described in the patent. Nor do we understand the patentee to claim more than this. The specification declares that the object of his invention "is to provide means for gradually lifting the grate-bars, with their load, and letting them fall suddenly and alternately as the cams are rotated, thus producing a sufficient

agitation of the coal-bed without the exercise of undue strength in turning the cam-shaft." The first claim, embodying the combination of devices by which this result is secured, is as follows:

"The loose grate-bars, A, having enlargements, C, and projections, *d*, in combination with the wiper-shafts, D, having the alternate curved cam projections terminated by abrupt shoulders, as and for the purposes described."

It is clear that the main improvement contemplated by this invention is such a construction of loose grate-bars and cam-shafts that upon turning the shafts the bars will fall suddenly; this result being accomplished by means of projections on the under side of the grate-bars near the end, in connection with the abrupt shoulders of the cams. Now, in the defendants' grate we find neither grate-bars nor cams of this peculiar construction. The bars have no such projection at either end, and no equivalent therefor. In the absence of such projections they resemble the bars of the Cass and Watson patents. The cams in defendants' grate are not terminated by abrupt shoulders, but are curved on both faces much like the Watson patent. In consequence of this, the cam-shaft can be revolved in either direction, or oscillated; while, in the plaintiff's grate, the shaft can be turned only one way, owing to the peculiar shape of the cams and the projections on the bars, such shape being necessary to produce the sudden fall described in the patent. In the place of two camshafts,—one at each end of the grate-bars,—the defendants use only a single shaft arranged under the centers of the bars.

The combination described in the first claim of the patent is made up of several elements. One of these consists of the projections on the grate-bars; another, of the abrupt shoulders of the cams. These features are wanting in the defendants' grate. The claim in the patent also embraces two cam-shafts; the defendants

use only one. Under 319 these circumstances, there can be no infringement. It is well settled that a claim for a combination is not infringed unless all of the elements composing the combination, or equivalents therefor, are employed.

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