

Case No. 13,077.

SMITH ET AL. V. MARSHALL ET AL.

{2 Ban. & A. 371;¹ 10 O. G. 375.}

Circuit Court, W. D. Pennsylvania. Aug. 26, 1876.

PATENTS—COMBINATION—INFRINGEMENT—ONE
ELEMENT DISCARDED—FLASKS FOR CASTING
IRON PIPE.

1. The defendants, having discarded one of the essential elements of the patented combination, *Held*, not to be infringers.
2. The invention described in the patent consisted of a combination of the two halves of a flask for casting iron pipe; of flanges on each side of the halves; of stop-hinges applied to these flanges on one side; of clamps to be applied to the flanges on the opposite side; and of staples attached to each half about the middle of it. None of the elements were new. The defendants used flasks divided horizontally into two equal parts, each with flanged edges and with staples or handles on each part, and clamps applied to the flanges on one side of the halves to hold them together, but instead of the hinges on the flask, the halves of the flask were fastened together by means of bolts and nuts, applied to the flanges on one side through holes therein provided for that purpose: *Held*, that the bolts and nuts were not the equivalents of the hinges described in the patent.

{This was a bill in equity by William Smith and others against James Marshall and others for the infringement of letters patent No. 142,661, granted to J. B. Aston, September 9, 1873; letters patent No. 53,883, granted to G. Ross, April 10, 1866; and letters patent No. 37,037, granted to Firth & Ingham, December 2, 1862.}

Ranken D. Jones, J. J. Coombs, and A. M. Brown,
for complainants.

Bakewell & Kerr, for defendants.

MCKENNAN, Circuit Judge. The bill in this case is founded on three patents, viz.: No. 142,661, to James B. Aston, for improvement in devices for

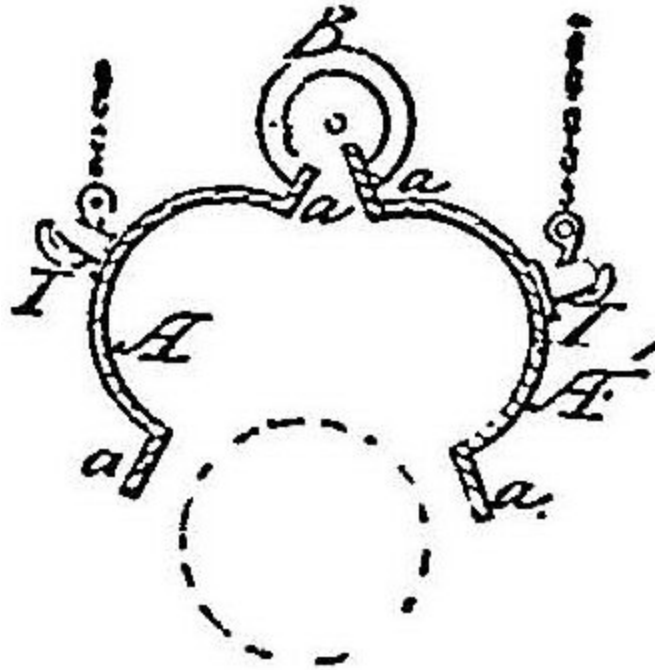
blackwashing molds; No. 53,883, to George Ross, for improved molding and casting apparatus; and No. 37,037, to John Firth and John Ingham, for improved flasks for cast-iron pipes.

No infringement of the first two of these patents has been proved, and it has, therefore, been agreed that the bill, so far as it relates to them, may be dismissed without prejudice.

To the complaint founded on the Firth and Ingham patent several defences are set up in the answer, but as the case is decisively with the respondents on the question of infringement, it is only necessary to consider this defence.

The first claim of the patent is the only one involved in the controversy, and is as follows: "The combination, substantially as set forth, of the two halves A and A of the flask hinged together, the staples I, or their equivalents, the flanges a a, and clamps B B, or their equivalents, for the purpose specified."

{Drawing of patent No. 37,037, granted December 2, 1862, to Firth & Ingham; published from the records of the United States patent office.}



596 From the specification it appears that the invention is applicable to flasks for casting iron pipes. These flasks consist of iron cylinders divided horizontally into two equal parts. The semi-cylindrical parts are each provided with a Hange, and are held together on one side by stop-hinges attached to the flanges, and on the other by clamps tightened by wedges. When the parts are brought into contact and thus secured they constitute a "rigid iron tube, incapable of being disarranged." After being placed vertically in the casting-pit, and then suitably manipulated, the molten metal is poured into the mold, and the flask is then ready to be removed and its contents discharged. This is effected by attaching the tackle of a revolving crane to the staples in each half of the flask, and swinging it round to a proper position above the foundry floor, where it will be suspended horizontally. The clamps are then removed, and the halves of the flask will then open sufficiently to allow the contents to fall out on the foundry floor, but will be prevented by the hinges from opening further than is necessary for this purpose. This is the specific

and peculiar function of the hinges, and they have no distinctive utility, except as necessary devices in the mode of manipulating and emptying the flask described in the specification.

The invention, then, as described and claimed in the patent, consists of a combination of the two halves of a flask for easting iron pipe, of flanges on each edge of the halves, of stop-hinges applied to these flanges on one side, of clamps to be applied to the flanges on the opposite side, and of staples attached to each half about the middle of it. None of the elements of this combination are claimed as the invention of the patentees. In point of fact, they are all old, so that the novelty of their combination, and adaptation to the use for which they are intended, constitute the essence of the invention.

Whether the respondents have infringed the patent will depend, then, upon the fact of their use of a flask substantially embodying this combination in its entirety in the manufacture of iron pipe. That their flasks are divided horizontally into two equal parts, each with flanged edges, that there are staples or handles on each of these parts, and that clamps are applied to the flanges on one side of the halves to hold them together, is not denied. But the respondents do not use hinges on their flasks, instead of which, the halves of the flask are fastened together by means of bolts and nuts, applied to the flanges on one side through holes therein provided for that purpose. And these bolts and nuts are claimed to be merely the equivalents of the hinges described in the patent. They cannot be considered abstractly as mechanical equivalents, because they have apparently very different mechanical adaptabilities. Mechanical equivalents are not those merely which produce the same result. "A mechanical equivalent, * * * as generally understood, is where the one may be adopted instead of the other, by a person skilled in the art, from his knowledge of the art" Curt

Pat. § 332, note. Certainly no degree of skill would suggest the substitution of a bolt and nut for a hinge to perform the well-known office of the latter.

Nor are they equivalents in the sense even of producing the same results. The prescribed function of the hinges is to allow the two halves of the flask to separate when the clamps on the opposite side are removed, and to prevent them “from opening farther apart than is necessary to allow the pipe and sand to fall out and insure the correct closing of the two halves together.” That they may perform this function at all it is indispensable that the flask should be removed from the casting-pit and suspended in a horizontal position in pursuance of the method indicated in the specification.

But the mode of manipulation employed by the respondents is essentially different from this. They do not discharge the contents of the flask from its side; they do not remove the flasks from the casting-pit, but retain them there in a vertical position. The halves of the flasks are held together tightly by clamps, and the bolts are used solely to prevent the halves of the flask from becoming detached from each other. When the pipe is east, and it is desired to discharge it from the flask, the clamps are taken off the flanges, and the bolts being left loose, with half an inch or less play, the flasks are pried apart as far as the bolts will permit. The chain of a crane is then attached to the bowl of the pipe, and it is drawn out vertically, without removing the flask from its place in the pit, and the sand is permitted to fall out into the pit at the other end.

Now, in a mode of operation so different from that in which a hinge is an appropriate device, it is obvious that it would be neither a necessary or proper auxiliary. The distinctive capabilities of a hinge are available only in a process which contemplates an automatic discharging of the flask, from its side,

when it is horizontally suspended for that purpose. But in a method wherein the flask is kept in an upright position, and the pipe inclosed in it is withdrawn vertically by the direct application of mechanical: force, there is no required or useful place for the peculiar office of a hinge, and the use of a bolt cannot, therefore, be regarded as merely substitutionary.

It remains only to add that the respondents, having discarded one of the essential elements of the patented combination, are not infringers. Assuming that they use all the other elements of the invention, they do not encroach upon the right of the patentees, unless they appropriate the invention as a unit, or employ merely a colorable substitute for one or more of its constituents. This is the 597 result of the application of a very familiar principle of the law of patents, and rules the case in favor of the respondents.

Let a decree then be entered, dismissing the bill so far as it relates to patents Nos. 142,661 and 53,883 without prejudice, and as to patent No. 37,037 generally, with costs.

¹ [Reported by Hubert A. Banning, Esq., and Henry Arden, Esq., and here reprinted by permission.]

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