To take up each claim sued upon in detail, and demonstrate that the defendant's dredging machine infringes them, would take up too much time and space. The pivotal point, which it has been my purpose to ascertain and determine, was whether or not Bowers was the original inventor of the combination of a dredge boat having a self-contained pivot forming a center of horizontal oscillation, with devices for swinging and working the boat upon said pivot, in combination with a suction pipe, exhausting apparatus, and rotary excavator with inward delivery, and a discharging apparatus for removing the spoil,—whether he was a pioneer in the art of successful hydraulic dredging, and, therefore, entitled to a broad and liberal interpretation for his claims, or whether he was a mere improver, having obtained the general idea from a prior inventor, like Schwartzkopff, and merely improving upon the prior invention. Having determined that he is a pioneer inventor in the art of dredging, and entitled to a broad and liberal interpretation of his claims, it is unnecessary to pursue the subject further.

A decree will be entered in favor of the complainant upon the following claims: Claims 9, 10, 11, 12, 16, 22, 25, 53, 54, 59, and 87 of letters patent No. 318,859; claims 3 and 5 of letters patent No. 318,860; claims 1, 12, 13, and 15 of letters patent No. 372,956.

NELSON et al. v. FARMER TYPE-FOUNDING CO. et al.

(Circuit Court, S. D. New York. December 16, 1898.)

1. PATENTS—ANTICIPATION—MEASURE OF PROOF REQUIRED.
That a prior device operated in the same manner, so as to constitute an anticipation which will defeat a patent for a later one, must be proved beyond a reasonable doubt.

2. SAME—IMPROVEMENT IN TYPE-CASTING MACHINES.
Neither the Hochstedt, Wenzel & Heinebach patents, Nos. 352,869 and 354,060, nor the Rettig patent, No. 354,935, all for improvements in type-casting machines, were anticipated by the device shown in the Mason patent, No. 187,880, for an improvement in type molds.

This was a suit in equity by Robert W. Nelson and others against the Farmer Type-Founding Company and others, for the infringement of certain patents.

Charles S. Burton, for plaintiffs.
Jerome Carty and Harvey S. Knight, for defendants.

WHEELER, District Judge. Metal type is cast in a machine having a mold of upper and lower blocks, into which the molten metal is forced through a funnel-shaped part of the mold at the foot of the type, and fills the mold, including this part, whereby the face and body of the type, with this excrescence attached, are cast. A forward movement of the mold separates the casting from the metal. Formerly an upward movement of the upper block carried the casting, held it in slightly by projecting pins, away from the lower block, until the end of the casting separated from the metal,

and called a "sprue," should strike a finger, and the head a stool projecting from the lower block, and be withheld from the moving upper block till the casting would be released from that block, fall into a chute, and be carried away. The excrescence, called a "jet," was separated from the body of the type by hand.

A patent, No. 187,880, dated February 27, 1877, was granted to Thomas Mason for an improvement in type molds, in the specification of which the parts of the mold blocks forming the jet are called "breaks," and the invention referring by letters to drawings was described thus:

"In these breaks, angular or V-shaped recesses, a, are formed, which, when the mold is closed together, are oppositely arranged in respect to each other, so that, when metal is injected into the mold, angular shoulders, b, corresponding in form to the recesses, a, are formed on each side of the break, c, of the type; so that, as the mold is opened with the type or casting in it, the contrary action of the oppositely arranged inclined sides of the recesses, a, produces sufficient strain to sever the break from the type, which is retained by the shoulders of the mold. The recesses in the breaks of the mold may be arc-shaped, or may have any other form which will effect the severing of the break."

This suit is brought for alleged infringement, in the same machines, of claims 1, 2, 3, 4, and 6 of patent No. 352,869, dated November 16, 1886, for a mold for casting type by which the jet is held in the stationary lower half of the mold by pins, and broken and separated from the body of the type by the rising of the upper half, carrying that with it away from the jet, to be released and dropped into one receptacle, while the jet is removed by an arm into another; and claims 1, 2, 3, and 4 of patent No. 354,060, dated December 7, 1886, for a mold for casting type, having recesses in the jet part of the lower half for casting detents upon the jet, to be struck by an arm moving close to the jet end of the mold, to release the jet from the mold,—both of which were granted to Carl Hochstedt, Philipp Wenzel, and Herman Heinebach; and of claims 4, 5, 6, and 7 of patent No. 354,935, dated December 28, 1886, and granted to George Rettig, for a type-casting machine having an arm connected with another arm or lever, called "D," pivoted to any part of the machine fitted in a position relative to the lower part of the mold, and connected by a link, called "D′," to a part as an arm, E, moving when the mold is open, for moving the arm, D, past the jet end of the lower half of the mold, to strike the projecting points of the jet, and dislodge it.

The several claims involved are, in their order:

(1) In a type-casting machine, the combination, with the lower stationary member of the mold, having a detaining device in the jet-casting portion, of the upper mold section, provided with similar detaining devices in the type-casting portion, substantially as described.

(2) In a type-casting machine, the combination, with the lower or stationary half of the mold, B′, of the pin, b, the upper movable half of the mold, B, and the pins, b^1, b^2, whereby the jet is broken from the type in the process of casting, substantially as described.

(3) In a type-casting machine, the combination, with the type mold, the upper member of which is provided with a type detainer, and the lower member of which is provided with a jet retainer, of a jet-discharging arm, connected

with a moving part of the machine, and moving in close proximity with the jet end of the mold, substantially as described.

(4) In combination, substantially as set forth, the mold having in one member a type detainer, and in the other or companion member a jet detainer, and a jet-ejecting arm moving past the jet end of the mold while the mold is open, whereby the type and jet are automatically broken apart when the mold opens, and the jet ejected therefrom.

(6) In a type-casting machine, the combination of the mold and a jet-discharging arm, attached to and receiving motion from a moving part of said machine, substantially as described.

(1) In a type-casting mold, the combination of the upper or vibrating member having a type-retaining device, and the lower or stationary member having a recess or recesses to form detents upon the jets, substantially as described.

(2) In a type-casting machine, the combination, with a fixed mold section provided with recesses, of an arm actuated by a moving part of the machine, and moving close to the jet end of the mold, substantially as described.

(3) In combination, substantially as set forth, the mold having in one member a type detainer, and in the other, or companion, member a jet detainer, and a wiper or jet-discharging arm, actuated by a moving part of the machine, independently of the mold, and moved past the jet end of the jet-detainer member as the mold opens.

(4) In a type-casting machine, the combination, with the lower or stationary member of the mold, provided with recess or recesses to form detents to detain the jet therein, of an arm actuated by a moving part of the machine, and located and adapted to move close to and parallel with the jet end of the mold, to engage the jet, and release the detents from the mold, substantially as described.

(4) In a type-casting machine, in combination with the fixed member of the mold and the arm which actuates the vibrating member, the arm, D, actuated by means of suitable connection with the arm which actuates the vibrating member of the mold, but independently of said member, and located and adapted to move close and parallel to the rear face of the fixed member of the mold while the same is open, substantially as set forth.

(5) In combination with the jet-retaining member of the mold, an arm pivoted on the mold-carrying frame, and actuated during the opening of the mold past the jet end of said jet-retaining member, substantially as and for the purpose set forth.

(6) In a type-casting machine, the fixed member of the mold, A, having recesses to form detents on the jet, the arm, D, the link, D', and the arm, E; combined and co-operating as and for the purpose set forth.

(7) In a type-casting machine, the mold having in its vibrating member detents to detain the type, and in its fixed member devices to detain the jet, in combination with the arm, E, the link, D', and the lever, D, substantially as and for the purpose set forth.

The defenses set up are want of patentable invention, anticipation in prior patents, the nearest and most important of which is that to Mason, and prior knowledge and use, the most apt being what were involved in the operation of machines made after the Mason patent. The working faces of the shoulders of the recesses in the jet mold of the Mason patent appear to slant away from the body mold, so that, as the mold blocks separate, they slide like cams on the shoulders of the casting in the recesses, and force the jet away from the body of the type lengthwise, and break them apart; and witnesses testify that, in the operation of the machine, the castings hold the jet in the lower block, while the raising of the body in the upper block, by that motion crosswise, breaks them apart. The machine is said to have been a failure. It appears, however, to have been operative as a mechanism in all its parts, but

not profitably for its purposes, and not a financial success. It cannot be disregarded as having been wholly abandoned.

The connection to be broken by these machines between the body of the type and the jet is so small, and the movements necessary to break it are so slight, that it would seem difficult to tell that the separation was not effected in the Mason machine by the lengthwise motion before the blocks would be separated far enough to do it by the crosswise motion; especially as the recesses do not appear to be adapted to hold the jet firmly down in its place as cast in the lower mold so but that it might follow the crosswise motion of the body of the type till separated by the lengthwise motion, without being separated by the crosswise movement. That it operated to break crosswise unexpectedly, instead of lengthwise, as the inventor intended, does not seem to be established beyond any reasonable doubt, as is necessary in proving anticipation to defeat a patent. So, this anticipation must stand upon the Mason patent itself, which appears to be for the peculiar shaped recesses in the jet mold for drawing the jet away from the body of the type, and loosening it in the mold, rather than for holding it in the mold while the body of the type is broken away from it; as the use under it must be considered to have produced merely that operation. The other alleged anticipations are so much more remote than this that no discussion of them, after disposition of this, seems to be at all necessary. None of them comes anywhere near holding the jet in the lower half of the mold while the body of the type is carried away in the upper half, and separated from it. The claims involved are, in this view, considered to be valid for these improvements.

The denial of infringement has not been made prominent at the argument, the principal contention being as to the validity and scope of the claims, which being established, the plaintiff is entitled to a decree. Decree for plaintiff.

NEW YORK FILTER MFG. CO. v. LOOMIS-MANNING FILTER CO.

(Circuit Court, S. D. New York. February 26, 1898.)

1. PATENTS—PRELIMINARY INJUNCTION—EFFECT OF PRIOR DECISIONS.
   On motion for a preliminary injunction, where the validity of complainant's patent has been established by repeated adjudications, and no new evidence is offered, the question is not an open one.
2. SAME—SUITS FOR INFRINGEMENT—LACHES.
   Where the owner of a patent proceeds with reasonable diligence in the prosecution of test suits for infringement, he will not be held guilty of laches which will defeat suits against other infringers because such suits are not commenced until the validity of his patent has been established.
3. SAME—IMPROVEMENT IN WATER FILTERS.
   The Hyatt patent, No. 293,740, for an improvement in the art of filtration of water, *held* valid and infringed, on motion for preliminary injunction.

This is a suit in equity by the New York Filter Manufacturing Company against the Loomis-Manning Filter Company for the infringement