The question is whether this process is that of the patent. If claim 1 is to be literally construed, it is void, for it is simply for the application of heat for a purpose, and of a character and amount, not expressed, the addition of new material, and the usual smoothing and burnishing; but no contention is made that it is not to be construed for the process substantially as described,—that is, that the old material shall be heated until it is softened or partially melted, shall be agitated, and that the new material is to be mixed with, and become a part of, the old material. The claim could hardly be construed to permit the omission of any of the described steps of the process, unless such omission had been recognized in the specification. Claims 1 and 2 do not, therefore, materially differ from each other.

The patented process omits the use of tar as a solder, and does not look to the use of any material for that purpose. The defendant, after the burned or crusted portion of the surface had been scraped off, sprinkled the hole with asphalt cement. The sprinkling, though the amount of the cement which was applied was very small, was for the purpose of causing the new material to adhere to the old. It was for a solder, and not for the purpose of fusion. The sprinkling shows the existence of another variance between the two processes which is substantial. In the Perkins process, the old and melted material is used. It is agitated so as to become thoroughly plastic, is mixed with the new material, and the two become homogeneous. In the defendant's process, the hole is scraped, the softened asphalt is removed with a rake, which leaves the lower surface in a rough state, "the surface of the patch is sprinkled with asphalt cement," which shows that the old material had practically disappeared, and new asphalt is shoveled into the hole and tamped down. The Perkins process places stress upon the perfect commingling of old and new asphalt as a result of the agitation of the particles of old and new material. The defendant's process places no reliance upon this kind of commingling, but scrapes or cleans out the depression, sprinkles a little cement upon the bottom and edges, to be of some benefit in causing the old and new to adhere, and shovels in and tamps down the new material. Wherein the defendant's process differs from that of Perkins it corresponds with that of Crochet. The decree of the circuit court is affirmed, with costs.

UNION WRITING MACH. CO. v. DOMESTIC SEWING-MACH. CO.

(Circuit Court, D. New Jersey, June 20, 1899.)

PATENTS—Construction and Infringement—Typewriting Machines.

The Brooks patent, No. 454,845, for improvements in typewriting machines, if valid at all, in view of the prior state of the art, must be limited, as to claims 5, 6, 7, 8, and 9, to the specific construction shown and described, and said claims are not infringed by the Williams typewriter.

In Equity.

H. D. Donnelly and Charles E. Mitchell, for complainant. Harry E. Knight and Edmund Wetmore, for defendant. ACHESON, Circuit Judge. This suit is brought for the alleged infringement of letters patent No. 454,845 to Byron A. Brooks, dated June 30, 1891, and issued upon an application filed July 31, 1890, for improvements in typewriting machines. The defendant's alleged infringement consists in its manufacture for the Williams Typewriter Company of what is known as the "Williams Typewriter." The typewriting machine shown by the patent in suit belongs to an old and well-known class of machines in which each type bar carries a plurality of characters, and the platen, besides traveling in a longitudinal direction, also shifts transversely to the lines of printing. The defendant's expert succinctly, and, I think, fairly, explains the characteristic features of the structure of the patent in suit in the words following:

"The typewriting machine shown and described in this patent is constructed with a cylindrical platen, around which the paper is carried, which has a longitudinal movement for letter spacing and rotary movement for line spacing, and with type bars, each carrying three letters or characters, either of which may be printed upon the paper, according to position of the platen. The platen normally rests in a central position relatively to the letters on the type bar, so that in this position the central character of the three will be impressed upon the paper, and, to adapt the platen to either of the other letters, it is moved forward or backward, so as to be in position for the printing of the front or rear letter of the three. This shifting of the platen is accomplished by a pair of levers separately linked to the respective extremities of a beam, the oscillation of which imparts a rocking motion to a shaft on which it is mounted, and from which project arms which carry a shifting bar connected with a sliding frame in the platen carriage in a manner well known in machines of this class, so as to impart a forward or backward movement to the slide in which the platen has its bearings. On being released, the slide carrying the platen is automatically restored to its normal position by a centering spring or springs, two different forms of which are shown, the action of which is limited by a stop so as to restrict their effect to the movement of the slide and platen from either direction to the normal central position."

The plaintiff charges the defendant with infringement of the fifth, sixth, seventh, eighth, and ninth claims of the patent. These are all combination claims, relating to the same general subject-matter, and the differences between them are so slight that it is thought to be necessary to quote only the fifth claim, which is as follows:

"(5) In a typewriting machine, the combination of a shifting and longitudinally traveling platen, a plurality of shifting key levers attached to the same moving part by which the platen is caused to move in both directions from a central and normal position, a shifting bar, and mechanism, substantially as described, for returning the platen to its normal position, for arresting it and holding it there."

While the application for this patent was not made until July 31, 1890, it is alleged by the plaintiff that the invention was completed as early as the year 1886. This is controverted, the defendant claiming priority for the Williams machine. It will not be necessary, however, to determine this question of priority, in the view I take of the case. For a like reason I shall not consider the defense based upon the alleged taint of champerty in the arrangement which underlies this suit, nor the defense which rests upon the alleged estoppel arising from the acts of the plaintiff or its privies. I pass these matters, because I regard the question of infringement as lying at the threshold

of the case, and as decisive of it. Of course, whether the defendant infringes this patent depends much upon the construction to be put on the claims in view of the prior state of this art.

To this phase of the subject, then, attention is first to be given. Prior to the earliest date assignable for the invention of the patent in suit the Remington typewriter was in common use. That machine as then organized had swinging type bars, each bearing two characters, and each operated by its individual key, a shifting and longitudinally traveling platen, two key levers in the keyboard arranged to shift the platen either forward or back from one extreme position to another, and a spring which was shiftable so as to hold the platen normally in either extreme position. The shifting key levers were connected to the platen by broken levers and a shifting bar engaging lugs on the platen carriage, so that the platen could be shifted at any stage of its longitudinal travel. All these parts in that machine were constructed and operated exactly as are the same parts in the machine of the patent in suit, the only difference being that in the Remington typewriter the platen was not moved in both directions from a central normal position, and returned to and held in such position. Here patent No. 170,239, dated November 23, 1875, to Lucien S. Crandall, for an improvement in typewriting machines, is a document of This patent shows a typewriting machine in prime importance. which each type bar carries six types arranged in three groups of two types each, and a longitudinally traveling and transversely shifting platen, which is normally in central position, but is shiftable in both directions from that position to bring the required character Crandall's specification states:

"The platen, D, of my typewriter is arranged to move, not only in the common ways in longitudinal direction, but also to vibrate in the direction of the type bars, the supporting frame and ways being moved therewith, and operated by thumb keys from or near the finger levers and suitable connecting mechanism. The vibrations of the platen may be multiplied in proportion to the number of types to be provided for. For most purposes, however, the vibration of the platen from the central or normal position, in forward or backward direction, will be sufficient, in which case two operating thumb keys and levers are required."

The drawings show the thumb keys, the finger levers, and the vibratory platen, but not the suggested "suitable connecting mechanism" for transversely shifting the platen from its central normal posi-Nevertheless, under the proofs in this record, it is not to be doubted that at the date of this Crandall patent any mechanic skilled in this art with Crandall's drawings and specification before him could have provided such operative mechanism. Loom Co. v. Higgings, 105 U. S. 580. Beyond question, this was the judgment of the patent office, otherwise more particularity in description would have been And, as we shall hereafter see, this view was declared and adhered to by the patent office in the proceedings attending the grant of the patent in suit, and in fixing the claims thereof. Another patent worthy of special mention in this connection is No. 202,923, dated April 30, 1878, and issued to Byron A. Brooks, the same person to whom the patent in suit was afterwards granted. The Brooks patent of 1878 shows and describes a typewriting machine having type bars

each carrying two characters, and a longitudinally traveling and transversely shifting platen which rests normally in a position for printing one of the characters, is shiftable transversely to a position for printing the other character, and is then restored to its normal position automatically by a spring. The specification of this patent states:

"The main object of my invention is to produce a machine which, without having duplicate keys and type bars, will print both capital and small letters, so that the depression of each key will cause the printing of an upper or lower case letter, as may be desired. The improvements are, however, applicable for printing any other two characters by one key. The invention consists in the combination of type bars, each having two or more letters or characters, with a vibratory platen, which may be adjusted instantly to receive the impression of either letter required. It is obvious that the construction and arrangement of the details may be varied without departing from the limits of my invention, which covers, broadly, the idea of combining, in such manner as to have a vibratory movement in relation to each other, a platen and a series of type bars, each of which carries an upper and a lower case letter, so that, by means of the one key, either character may be printed at will."

The device here shown for shifting the platen is a pull rod and a spring, which, when released, restores the platen to its normal position. The specification, however, states:

"It is obvious \* \* \* that, instead of the rod, H, a lever or other equivalent device may be arranged, to be operated by the hand or foot to vibrate the platen."

The specification also contains the following significant observations:

"It is obvious that the manner of moving the platen may be varied; that, instead of moving the platen, the entire series of type bars may be moved; and also that, instead of having the large and small letters on each bar, two or more characters of any other kind may be used."

As pertinent to the statement contained in the last quotation from the Brooks patent of 1878, that the moving of the type system relatively to the platen is the obvious equivalent of the shifting of the platen relatively to the type bars, attention is now called to patent No. 326,178, dated September 15, 1885, to Franz X. Wagner, which shows and describes in a typewriting machine the combination of a longitudinally traveling platen, a type-bar system, shiftable, transversely, in either direction from a central and normal position, a shifting handle or bar, and spring mechanism operating to return the platen to its normal position, and to hold it there. Now, certainly selfcentering devices were very old in the arts, and this Wagner patent not to speak of other prior patents in evidence—shows the application of such centralizing spring mechanism to a typewriting machine. Without further citations from this voluminous record, enough, I think, has already appeared to demonstrate that, if the claims of the patent in suit here involved are not void for lack of invention, they must at any rate be narrowly construed. And just here it may be well to quote from the file wrapper in the application for this patent the declaration of the patent office examiner in rejecting some claims originally asked for. He said:

"Claims 5, 6, 7 are rejected on patents to Lake, cited, and to Crandall, No. 170,239, November 23, 1875, as, in view of the disclosure made in the Crandall

specification, it is entirely within the skill of the mechanic to so connect up the platen and key levers of such a machine as to secure the results herein specified; they being but the same results set forth therein. This would be especially easy, in view of the fact that Lake's construction shows one means by which it may be done to effect one of the movements from, and return to, the normal position. Applicant will be allowed only such claims as cover his specific construction by which these results are attained, but not claims to any and all mechanism, as manifestly he is not a pioneer."

Upon a thorough examination of the proofs, I am entirely satisfied that, in view of the state of the art at the time of the invention in question, the plaintiff's case falls within that class of patents in which the inventor is to be limited to his own precise devices, and held rigidly to his claims. Railway Co. v. Sayles, 97 U. S. 554; Wright v. Yuengling, 155 U. S. 47, 15 Sup. Ct. 1; Dashiell v. Grosvenor, 162 U. S. 425, 16 Sup. Ct. 805; Johnson Co. v. Tidewater Steel Works, 17 U. S. App. 57, 5 C. C. A. 412, and 56 Fed. 43.

And now let us institute a comparison to the extent needful between the two machines here in conflict. In the machine of the patent in suit the shifting of the platen is accomplished by two key levers independently pivoted on the main frame, and severally connected by what the patent styles "broken levers" to the respective ends of a transverse beam fixed to a rock shaft. From this rock shaft project fixed vertical arms on which is rigidly mounted a shifting bar, which engages between lugs depending from the sliding frame by which the platen is supported on its carriage. Then, as one or the other of the two key levers is depressed, the rock shaft is actuated, and the platen, through the shifting bar, is caused to move from its normal central position forward or backward. We thus understand the significance of the call for "a plurality of shifting key levers" in each of the claims under consideration. The patent specifically describes two separate key levers attached, respectively, to the opposite arms of a rocking shaft, and, as one or the other key lever is operated, the desired motion is communicated, through the rocking shaft, to the shifting bar. No such train of mechanism is to be found in the Williams machine. On the contrary, in that machine the shifting of the platen is effected by a single tilting lever centrally fulcrumed and double-keyed, connected with a horizontal sliding bar projecting forward from the plat-To this sliding bar a horizontal movement in either direction is imparted by the tilting lever. The effect is that the platen and the entire platen support are shifted, whereas in the machine of the patent in suit only the platen and its immediate supporting frame I cannot see that the Williams machine has the shifting are shifted. Nor can I agree that there is bar described in the Brooks patent. any plurality of shifting key levers in the Williams structure, within the meaning of the claims of this patent. Upon any fair reading of these claims, they must be held to refer to the plural levers, the form, function, and operation of which are particularly set forth in the The claims distinctly specify a plurality of shifting specification. This is decisive. Keystone Bridge Co. v. Phœnix Iron Co., 95 U. S. 274. Again, the spring mechanism employed in the Williams machine for returning the platen to its normal position, and holding it there, is altogether different from that first described in

the Brooks patent. The alternative spring mechanism and stop mentioned in the patent, and exhibited in Fig. 4, in construction and operation are identical with the spring and stop of the Wagner patent, No. 326,178, already referred to. In the Williams machine this Wagner mechanism is employed but in connection with a positive and unyielding stop, whereby the platen is automatically caught on reaching its normal position, and is there firmly held until it is unlocked by the manipulation of the tilting lever. This locking device is indispensable to rapid and accurate work. This mechanism, as a whole, in operation and function is radically different from the yielding stop mechanism of the patent in suit. We are not here dealing with a primary invention in respect to which a greater latitude of construction might be allowable. At the best, the improvements in question are of a subordinate character, and the claims must be limited, under the authorities, to the specific devices shown. Upon the whole case, I am of opinion that infringement does not appear. Let a decree be drawn dismissing the bill of complaint, with costs.

## NELSON et al. v. A. D. FARMER & SON TYPE-FOUNDING CO. et al.

(Circuit Court of Appeals, Second Circuit. May 25, 1899.)

No. 160.

## 1. PATENTS—COMBINATIONS.

A combination of old elements is patentable when, by a novel arrangement thereof, these devices, by their joint action, produce a useful result, which has never before been successfully accomplished.

 SAME—Molds for Casting Type.
 The Hochstadt, Wenzel, and Heinebach patents, Nos. 352,869 and 354,060,
 for improvements in molds for casting type, were not anticipated by the Mason patent, No. 187,880, for a type-casting mold. In the former patent claims 1, 3, and 4 are valid, but claim 6 is void for want of invention; in the latter, claims 1, 2, 3, and 4 are valid.

The Rettig patent, No. 354,935, for improvements in molds for casting type, construed, and held not anticipated, valid, and infringed as to claims 6 and 7, and void as to claims 4 and 5. 91 Fed. 418, modified.

Appeal from the Circuit Court of the United States for the Southern District of New York.

The complainants, as trustees for the American Type Founders Company, and assignees of the letters patent hereinafter mentioned, brought a bill in equity in the circuit court for the Southern district of New York against the defendant, a corporation, and some of its officers, which was based upon their infringement of three letters patent, viz. No. 352,869, dated November 16, 1886, and No. 354,060, dated November 7, 1886, each of them having been granted to Carl Hochstadt, Philipp Wenzel, and Herman Heinebach, and No. 354,935, dated December 28, 1886, granted to George Rettig, each patent being for improvements in molds for casting type. The three patents are known in the case as patents A, B, and C, these letters being applied to them in accordance with their numerical order. The circuit court found that the defendants had infringed claims 1, 3, 4, and 6 of patent A, claims 1, 2, 3, and 4 of patent B, and claims 4, 5, 6, and 7, of patent C, and decreed accordingly for an injunction and an accounting. From that decree the present appeal was taken. The several ant, a corporation, and some of its officers, which was based upon their infringean accounting. From that decree the present appeal was taken. The several claims are as follows: