

ENTERPRISE MANUF'G CO. *v.* SARGENT *ET AL.*

Circuit Court, D. Connecticut.

March 1, 1888.

1. PATENTS FOR INVENTIONS—ANTICIPATION BY PRIOR PATENTS—MACHINES FOR MINCING MEAT.

Letters patent No. 271, 398, issued January 30, 1883, to John G. Baker, for a machine for mincing meat, which combines a casing corrugated by longitudinal grooves with retaining shoulders, a perforated plate, a knife, operating against the inner face of the plate, and a forcing screw, the thread of which extends to and rotates with the knife, the cutting action being produced by the operation of the knife on the perforated plate, are not anticipated by the Miles patents of 1861 and 1864; which combine a case having spiral grooves near the hopper end, then longitudinal grooves, a rotating shaft with spiral blades, and a perforated plate against which the ends of the spirals revolve, in, which the principal part of the cutting is done by the revolving spiral blades in the body of the machine.

2. SAME—BY ENGLISH PATENT.

Letters patent No. 271, 398, for a machine for mincing meat, describing a combination consisting of a casing corrugated by longitudinal grooves with retaining shoulders, a perforated plate, a knife, operating against the inner face of the plate, and a forcing screw, the thread of which extends to and rotates with the knife, the cutting action being produced by the operation of the knife on the perforated plate, is not anticipated by the Dollman English patent which combines a case with a series of horizontal knives at the hopper end, with a series of screw-like blades on a hollow shaft passing through them, the other end of the shaft carrying an Archimedean screw, the case terminating with a perforated plate through which a solid shaft passes and carries on the outside radial cutting blades working on the perforated plate, the meat being cut into small pieces by being carried by the screw-like blades against the horizontal knives and thence carried by the screw to the end of the case, where it is forced through the perforated plate.

3. SAME—INFRINGEMENT.

The first, second, and sixth claim of letters patent No. 271, 398, issued to John G. Baker January 30, 1883, for a machine for mincing meat, which combine

a casing corrugated by longitudinal grooves with retaining shoulders, a perforated plate, a knife, operating against the inner face of the plate, and a forcing screw, the thread of which extends to and rotates with the knife, the cutting action being produced by the operation of the knife on the perforated plate, is infringed by a machine manufactured under the Shaw patent, dated March 9, 1886, reissue No. 10,717, dated April 27, 1886, which is substantially a copy of the Baker machine, except that the internal grooves, though longitudinal, describe a long spiral in a direction contrary to that of the feedscrew, but there is no cutting action until the meat reaches the knife.

4. SAME—EXTENT OF CLAIM.

The tenth claim of letters patent, No. 271, 398, for a machine for mincing meat, describing the combination of the casing and a perforated plate, adjustable therein, with a feed-screw, and with a knife constructed to turn with the screw, but otherwise free thereon to accommodate itself to the face of the perforated plate, is limited to the combination therein described, and is not infringed by the claim of the Shaw patent for a stationary plate and an adjustable knife.

5. SAME—PATENTABILITY—INVENTION.

The thirteenth claim of letters patent No. 271, 398, issued to John G. Baker, for a machine for mincing meat, describing a knife constructed to turn with the feed-screw, but removable there from for the purposes of repair, is void, there being nothing akin to invention about it.

In Equity. On bill for injunction and accounting.

Charles Howson and Chas. E. Mitchell, for Plaintiff.

John K. Beach and Benj. F. Thurston, for defendants.

SHIPMAN, J. This is a bill in equity to restrain the defendants from the alleged infringement of the first, second, sixth, tenth, and thirteenth claims of letters patent No. 271, 398, dated January 30, 1883, to John G. Baker, for improvements in mechanism for cutting up plastic or yielding substances. Upon a motion for a preliminary injunction in this case, the first and second claims of the patent, the history of the art, so far as then disclosed, and the patentability of the invention were examined. *Manufacturing Co v. Sargent*, 28 Fed. Rep. 185. It is not necessary to repeat the facts or the conclusions which were stated in the opinion upon that motion. The case has now been prepared with great care and has been argued with equal ability. The only important prior patent which was not used upon the motion, and which is now in the case, is the Miles patent of 1861. In the fact that the principal reliance for the cutting of the meat is upon the stationary and moving cutters in the body of the machine, before the meat is delivered to the perforated plate, the device does not differ from the Miles patent of 1864. The manner in which the cutting is performed in the earlier machine differs from the operation of the cutting knives of the later patent. The case is smaller at the delivery end than at the hopper end, and has inside of it, at the hopper end, spiral grooves which occupy about half the length of the case, the other half towards the delivery end having longitudinal grooves. The rotating shaft has spiral blades, the edges of which and the edges of the longitudinal ribs slide past each other, like the edges of a pair of shears, and the two edges constantly cut or shear the meat as it passes from one rib to the next. At the extreme end of the machine

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is a perforated plate against which the ends of the spirals move, the openings in the plate being

sharpened on one side, and some cutting is accomplished by the blade ends of the spirals against these sharpened edges, but the principal part is done, as in the Miles patent of 1864, by the revolving blades or knives in the body of the machine. There is no difference in the principle upon which the two Miles machines operate,—that of a cutting action upon the meat before it reaches the perforated plate. As will be more fully stated hereafter, the Baker machine abandoned cutting action by the and of cutters around the shaft, and relied upon a rotating knife on the inside of the perforated plate; and, while it is true that the blunt ends of the Miles spirals of the patent of 1861 moving against the sharpened edges of its perforated plate accomplished some cutting, there is no analogy between that sort of cutting action and that produced by a revolving knife blade passing over the edges of a perforated plate. The Baker machine is not so palpable an improvement over the Miles patent of 1861 as it is over the Miles patent of 1864, but it is an improvement of the same kind, which introduced a new operating principle into the machine, and evinced invention.

As much more time was spent, upon this hearing, in the discussion of the Dollman English patent than was given to it upon the hearing of the motion, the device of that patent requires especial mention. The case has a smooth interior, and a series of horizontal knives at the hopper end, which extend about half the length of the case. At the hopper end of the hollow shaft, within the case, is a series of oblique or screw-like blades, which, on the rotation of the shaft, pass between the fixed knives. The other part of the shaft carries an Archimedean screw, having nearly the same diameter as the interior of the cylinder. "That end of the case in which the Archimedean screw is situated is closed by a plate of hardened and tempered steel, having in it a series of either circular or oblong holes, the sides of which are inclined to either; the smaller diameter of the holes being on the external side of the plate. The end of the solid internal axis (within the hollow shaft) projects through the center of this plate, and carries one, two, or more radial, or nearly radial, cutting blades, working closely upon the perforated steel plate closing the case." The meat is carried by the rotating blades against the fixed knives, and is cut into small pieces, which are carried by the screw to the end of the case. The intent of the inventor was that these pieces should be forced through the holes in the plate, and that, as they were forced through, the rotating blades passing rapidly over the plate should form cutters with the sharp edges of the holes and mince the material. The patent also says: "The perforated plate, and cutters working against it, may be used alone for effecting the mincing, instead of in combination with the rotating blades and fixed horizontal knives, as described." The patentee mounts his rotary knife, which is outside the perforated plate, upon a shaft, independent of the feeding screw, in order that the knife may be enabled, by suitable gearing, to rotate at a higher rate of speed than that at which the feed-screw operates. This characteristic is not deviated from in the different forms of machine which

he suggests. The defendant seeks to maintain that if, discarding the independent gearing, the machine

is constructed in accordance with the alternative method which is suggested in the patent, viz., by the use of the perforated plate and gutters alone, it will, although the cutter is on the outside of the plate, be such an approximation to the Baker device that the latter possesses no patentable novelty. If, having discarded the independent gearing and the cutting mechanism inside the casing, the machine is constructed in other respects in accordance with the specification, it is admitted that it would be a failure. It requires the presence of ribs upon the inside of the case, and of a screw which is adapted to co-act with the case, and is therefore a forcing screw, to enable the Dollman machine to operate with alleged success. Upon its success, as thus modified, there is a clear divergence of opinion, but I leave that question undecided, for I have no doubt that the gap between Dollman's patent and success was so great that it could not be bridged except by the aid of invention. The patent contains another alternative suggestion, as follows: "A plate with a series of radial slits may be substituted for the perforated plate, represented in the drawings, and, in place of the rotating knife or knives, a perforated rotating disk may be used." The defendants construe this suggestion to mean that a sharp stationary four-bladed knife may be substituted in the place of the perforated plate, and that a revolving perforated plate takes the place of the rotating knife so that the meat is cut by the knife against the inner face of a perforated plate, and one of the defects in Dollman's first alternative suggestion, that of forcing meat which is uncut through a series of small holes, is thus avoided. The suggestion which the patentee makes is not clearly enough given to enable any body to determine with accuracy how he meant that the cutting should be effected, and one can only admire the ingenuity which evolved the cutter of the exhibit out of "the series of radial slits" of the patent. To make this modification work successfully, it is also necessary to use a screw which shall co-operate with the case and force the meat along in its path. From this more careful examination of the Dollman patent I do not perceive any reason to change my former opinion that it neither anticipated the Baker patent, nor deprived the Baker device of its right to be styled an invention.

The sixth claim of the Baker patent which, with the first and second claims, describes the device as a whole, is as follows:

"(6) The combination of a casing, E, having internal longitudinal grooves, each of which is inclined on one side, and presents an abrupt retaining shoulder on the other, with a perforated plate, knife, and feeding screw, as set forth."

The main object of the patentee was to construct a machine which should get rid of the supposed necessity of preliminary cutting or chopping knives, and rely for its cutting character entirely upon the plate and knife at the end of the casing. Thus the patentee said in his specification:

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“A perforated plate and a knife have been used in a cutting machine, but in combination with preliminary cutting or chopping knives, moving and stationary, acting independently of the plate, for mincing meat before it

reaches the said plate in a minced condition, the plate and knife being in this case for the purpose of preventing the escape of large lumps which may have escaped the action of the preliminary chopping knives. In my invention, reliance for cutting up the substance is placed entirely on the plate and knife and a device for imparting direct pressure to a crude uncut substance against the plate without any action on the substance during its passage to the plate, excepting that for effecting the desired pressure, the aim being to cut up the substance to uniform or nearly uniform sizes, a result which cannot be attained when there are intervening choppers to cut the substance up to different sizes, large and small."

But it does not follow that, the patentee meant, or that his patent is to be fairly construed as meaning, that the meat was to come to the plate in a condition in which no rubbing or no abrasion or no disintegration had taken place. He simply meant that, in contrast with the Miles machine, there was no cutting action in his device; that no reliance was placed, for cutting up the meat, upon anything else than the plate and the knife; and that the mass was forced to the plate without any other disturbance of its integrity than was incident to the forcing process. The screw must co-act with the case, in order to force the meat along, and therefore there is necessarily a rubbing, an abrasion, and a consequent disintegration of the meat. As was said in the former decision, "The language of the patentee was used with reference to the cutting qualities of the Miles knives, as compared with the non-cutting qualities of the screw," and there was no intention either to, provide against, or to inform the public that he had, provided against, abrasion of the meat. The preliminary non-cutting; characteristic of the invention is specifically mentioned in the first claim, and is to be recognized as existing in the construction of the second and sixth claims. The first claim includes a non-cutting, forcing device; whether piston or screw, is immaterial. The second, claim confines the non-cutting, forcing device to a forcing screw irrespective of the particular shape of the ribs or of the device which enables the screw to co-operate with the case. The sixth claim compels the casing to have the described internal longitudinal grooves.

The question, and the important one in the case, in regard to infringement of the first, second, and sixth claims remains to be considered. The defendants' machine is made in accordance with reissued letters patent No. 10,717, dated April 27, 1886; the original having been dated March 9, 1886, to John H. Shaw, assignor to the defendant corporation. The patented portion of the machine was its adjustment of the cutters with relation to the perforated plate. With reference to the first, second, and sixth claims, it is substantially a copy of the Baker cutter except that while the internal grooves of the Baker casing are straight, the internal grooves or ribs of the defendants' device, though longitudinal, describe a long spiral in a direction contrary to that of the feed-screw. Upon the hearing of the motion, the defendants claimed that their machine was adapted to cut, and did

cut, the meat, before it reached the perforated plate, in consequence of the action upon it of the spiral ribs in conjunction with the blades of the screw, and, without committing myself definitely to a conclusion, it seemed to me that there was a shearing

action upon the meat, between the edges of the spiral ribs and the revolving screw-blades, like that of a powerful, dull pair of shears. Considerable oral testimony has been taken upon this question. The silent evidence which the Shaw patent furnishes against its owners in this contention, is noticeable. The invention was made as an improvement upon the Baker cutter. The patentee substantially so said in his specification, and he says also therein that the principal object of the invention was to make a ready and easy adjustment of the cutter, with relation to the perforated plate. Although he describes the construction of the spiral ribs, and says that they run towards the perforated plate, the inclination of thread being by preference about 45 degrees, or considerably greater than the inclination of the spiral rib of the screw, he says nothing in the description, or in the claims, about the cutting action of the ribs, but leaves it to be inferred that the cutting is done entirely by the cutters at the plate. The patent was drawn by one of the most accomplished patent solicitors in the country, and it is impossible that he should have received any instructions from the patentee in regard to the cutting feature of the spiral ribs and screw. It is almost impossible that the inventor should have supposed that his device possessed this important difference from the Baker device, and not have communicated his opinion to his solicitor. The Shaw patent signifies that, if the device has an intermediate cutting action, such action was discovered by the inventor after the date of the application for the patent. Contrary to my former leaning, I now think that the shearing action does not exist in the defendants' machine; certainly not, when it is treated in the usual and natural way. There is a shearing action in the Miles machine of 1861, which has longitudinal ribs upon the case, and rotating lades of very long spiral, and in which the edge of one blade passes the edge of the other, the two blades forming an acute angle with each other. In the defendants and in the Blake machines, the longitudinal ribs are about at a right angle to the circumferential spirals of the screw, and when the screw turns, the meat is wiped around across the shoulders of the grooves, the faces of the blades of the screw sliding upon the faces of the ribs, and the object of the shoulders not being to cut, but to prevent, the meat from merely turning around in the screw, and to assist it in its forward movement. There is the same kind of grinding or disintegrating action in the two machines when the plastic meat is rubbed against the shoulders of the corrugations, but there is no shearing or cutting action as the meat pursues its path to the cutter.

The 10th and 13th claims are as follows:

“(10) The combination of the casing and a perforated plate, adjustable therein, with a feed-screw, and with a knife constructed to turn with the screw, but otherwise free thereon to accommodate itself to the face of the perforated plate, substantially as set forth.”

“(13) the Combination of the casing, E, closed at one end, and having a detachable perforated plate at the opposite end, with a feed-screw, and a knife constructed to turn with the said screw, but removable therefrom after detaching the plate, us set forth.”

These are a portion of the claims of small value, which seem to have been inserted for the purpose of covering every possible patentable feature of the invention. The tenth claim is for the purpose of covering the rocking motion of the screw against the perforated plate, by which it adapts itself to the face of the plate. In the defendants' machine, this rocking motion exists, but their plate is not adjustable; their knife is adjustable, and the plate is stationary. I think that this claim, which is merely for the purpose of protecting one of the minor details of the Baker machine, is to be strictly construed; and, as it requires that the plate should be adjustable, and as the defendants' machine has no adjustable plate, the claim is not infringed. I cannot conceive any patentable invention in the thirteenth claim. It is said by the plaintiff to relate to the mounting of the knife upon the end of the screw in such a manner as to be readily removable and detachable for the purposes of repair upon the removal of the perforated plate. I suppose that the plaintiffs' theory of the nature of the claim is a correct one, but I can see nothing which is akin to invention in the manner in which the knife is mounted upon the screw.

Let there be a decree for an accounting and an injunction against the infringement of the first, second, and sixth claims.