Case No. 8,706. [10 Blatchf. 350; 6 Fish. Pat. Cas. 254; 3 O. G. 33.]¹

Circuit Court, S. D. New York.

Jan. 9, 1873.

PATENTS-COTTON TIES-NOVELTY-VALIDITY-INFRINGEMENT.

- 1. The invention described in the letters patent granted to Frederic Gook, March 2d, 1858, for an "improvement in metallic ties for cotton bales," explained.
- 2. The third claim of said patent, namely, "The herein described slot, cut through one bar of clasp, which enables the end of the tie or hoop to be slipped sidewise underneath the bar in clasp, so as to effect the fastening with greater rapidity then by passing the end of the tie through endwise," defined.
- 3. Such claim is infringed by the tie described in letters patent granted to George N. Beard, December 27th, 1870, for an "improvement in cotton-bale ties."

4. Such claim is new and valid.

[Cited in Atwood v. Portland Co., 10 Fed. 284.]

 1 [This was a suit in equity [by Mary F. McComb against Ira Beard] under letters patent [No. 19,490] for "an improvement in metallic ties for cotton-bales," granted to Frederic Cook, March 2, 1858, and duly assigned to complainant. The infringement charged was under the third claim of the patent. The accompanying engravings represent the form of the Cook tie, upon which the third claim is based. The mode of use described in the patent was as follows:



[One end of the band was passed over the first bar on the left, through the first slot, under the second bar, through the second slot, and around the third bar; it was then brought back under the second bar, and thrust through the first slot, and over the first

bar, being thus confined between the first bar and the body of the band. The other end, after being passed around the bale, was passed under the fourth bar, through the third slot, over the third bar under and around the second bar; thence back over the third bar, through the third slot, and under the fourth bar, being thus confined between the fourth bar and the main body of the band.

[In sheet 1 of his drawings, the patentee shows this fourth bar as solid; a construction that required the end of the band to be thrust endwise under it, which, by reason of the rigidity of the ordinary band-iron, was a difficult manipulation. To obviate this difficulty, Cook introduced a slot into this fourth bar, representing the same in sheet 2 of his drawings. This modification he at first filed in the patent office as an "additional improvement," but subsequently incorporated it in his original application, which was still pending. This part of the Cook invention is set forth in the patent in the following words: "This part of my invention consists in the cutting of a slot, H, through the bar I of the buckle or clasp K. under which bar the end of the tie or hoop is pushed or slipped sidewise easily by hand. After the tie is drawn through the clasp and bent over it, it is slipped underneath the bar I sidewise through the slot H. The hole (through clasp) marked L is longer than the other two holes, for the purpose of pushing the end of the tie enough to one side after it is through the slot H to get it under the bar I When it is all under, it can again be brought in line with the rest of the tie into the center of the clasp. This slot enables the tie to be fastened much quicker and more easily than by pushing the end of the tie endwise under the bar I, when not cut through by a slot. The slack in the tie, when around the bale before the press is relaxed, can also be taken up and held better by the buckle with a slot in it, for the tie can be bent short over the part of the clasp or buckle marked M, where it is looped on and put under the bar I sidewise, as described, instead of endwise."

[The third claim of the patent is in these words: "The herein described 'slot,' cut through one bar of clasp, which enables the end of the tie or hoop to be slipped sidewise underneath the bar in clasp, so as to effect the fastening with greater rapidity than by passing the end of the tie through endwise."

[The "Eureka," or Beard tie, charged to be an infriLgement, was made under letters patent [No. 110,539] granted to George N. Beard, December 27, 1870; and is shown in the accompanying engraving.



[The slit or slot was in one side of the buckle, and not in one of the bars embraced by the loops of the band. The mode of using this tie was to form the free end of the band into a loop before entering it into the buckle, after which it was simply hooked on to the buckle by passing the loop sidewise through the slot.

[Defendant's counsel contended that the claim in controversy was to be narrowly interpreted, being limited to a clasp having a slot cut in the "outer one of four bars, under which, without the cut, the end would have been slipped endwise;" that the position and the functions of the slot in the Beard lie were wholly different from those in the Cook tie-being in the former in the side-bar, and in the latter in the end-bar; being in the former an opening, through which the loop itself, previously formed in the band, was slipped or inserted, and in the latter an opening, through which the mere end of the band, after the loop had been formed, was to be slipped sidewise; that in the Beard tie the resistance to the strain was met by the strength that was given to one side of the tie by the fillets cast or rolled upon it, the other side being open to admit the loop, while in the Cook tie the strain was received upon a bar, supported on either hand by the sides of the tie or buckle; that the fourth bar of the Cook buckle performed the function of holding down the end of the band, being in this respect analogous to the loop used in connection with the common buckle for fastening the otherwise free end of an ordinary strap, the slot in connection with the "loop" constituting the tie in Beard's arrangement, while in Cook's arrangement the "slot" merely furnished a means of easily disposing of the end after the tie had been made; that the Cook and the Beard ties belonged to distinct categories, and operated upon entirely different principles, the one finding its friction within itself, and

the other depending exclusively upon outside friction; and that Cook's tie was an impracticable device, and was abandoned by him as valueless.

[Complainant's counsel contended, on the other hand, that Cook was the first person to make a cotton-tie with an open slot, through which a band of hoop-iron could be introduced sidewise, instead of thrusting it under endwise; that this was in itself an invention distinct from the peculiar form of buckle to which he originally applied it; that he fully understood the advantages connected with the invention of the open slot, independently of the other features of his tie, as set forth in his specification; that these advantages attached to any form of buckle, in which a slot, passing from the outside of the frame to the mortise in which the ends of the band rest, enables the free end of the band to be inserted sidewise; and that the office of the "slot" in the Beard tie was indentically the same as in the Cook tie—i. e., it permitted the easy passage of the band into the clasp sidewise, instead of the cumbrous and tedious method of thrusting it through endwise.

[On the question of novelty it was insisted by the defendant that the buckle shown in Hall's English patent of 1801, fig. 16, anticipated the invention covered by Cook's third claim, under the interpretation put upon the claim by the complainant. The accompanying engraving shows the Hall buckle referred to. Reliance was also placed by the defendant upon the prior use of open rings for fastening trace-chains to the hames of harness-collars, and kindred devices.]²



Fisher & Duncan and Keller & Blake, for complainant.

J. H. Latrope and S. J. Gordon, for defendant.

BLATCHFORD, District Judge. This suit is brought on letters patent, owned by the plaintiff, granted to Frederic Cook, March 2d, 1858, for an "improvement in metallic ties for cotton bales." The patent was, on the 17th of February, 1872, extended, for seven years from the 2d of March, 1872, but

this suit is not brought on the extended term. Cook's invention is a friction buckle or clasp, to be used with an iron hoop or tie. The drawing of the patent represents the buckle as a flat rectangular plate, in length a little more than double its width, with three closed slots in it, parallel to each other, running crosswise of the plate, thus making four cross-bars, which bars are set off from the plane of the body of the plate, in alternation, the first and third bulging from one face of the plate, and the second and fourth from the other. Approaching the plate from either end of it, the end of the hoop is passed over the first bar, then under the second bar, then over the third bar, then around the further side of the third bar, then back again under the third bar, then under the hoop that is beneath the second bar, and then over the first bar, and between it and the hoop that is above it, such end of the hoop being left to project. The buckle, with the hoop thus arranged in it, being laid on the cotton bale, with the long body of the hoop uppermost, and such body being cut off at the desired length for the bale, the hoop is brought around the bale, and the unconfined end is then passed under the fourth, bar, then over the hoop that is above the third bar, then under the second bar and between it and the hoop that is beneath it, then around the side of the second bar, then back again over the second bar, then over the two hoops that are above the third bar, and then under the fourth bar, and between it and the hoop that is beneath it, such end of the hoop being left to project. There are, thus, two loops in the hoop, one around the second bar and one around the third bar, the first and fourth bars serving as friction bars, to prevent the loops from slipping, by tightly confining, between such friction bars and the main body of the hoop, the parts of the hoop which are in contact with such friction bars. The parts of the hoop which form the loops pass by each other, so that when the loops, by the strain of pulling on the hoop, are brought to pull against the bars, the tendency is to turn the buckle over, end for end, and such turning over is prevented only by the action, before mentioned, of the first and fourth, or outer, or end, bars, as friction bars. The hoop is arranged in the buckle while the bale is under compression in a press, and, when the strain comes on the hoop, by the relaxation of the press, the greater the strain the greater is the action of the friction bars in holding the loops from slipping.

In addition to showing a buckle with four solid bare, the patent shows the fourth bar with a slot or slit cut through it, crosswise of its length, but at an angle, and a little to one side of the centre of its length, and with the adjacent slot in the plate made longer than the other two slots, so as to enable the hoop to be put under the fourth bar, when put under it the second time, by slipping it through the slit, and so under the fourth bar, and to be so arranged as to bear, with its upper side, against the under side of such bar, on each side of the slit. This dispenses with the necessity of putting the end of the hoop, the second time, under the fourth bar, and drawing the hoop through to its proper position, and enables the operation of completing the fastening to be effected more quickly. By the

use of the slit, the slack in the hoop before the press is relaxed can be taken up and held better, as a short bend can be made at once to make the loop around the second bar, without leaving such loop to be made by drawing the hoop through under the fourth bar.

The patent has three claims: (1) "The friction clasp or buckle, for attaching the ends of iron ties or hoops, for fastening cotton bales and other packages, so that the ties are prevented slipping by the friction against a certain portion of the buckle." (2) "The looping of the ends of iron ties or hoops for bales into a buckle, by the form of which they are prevented slipping by friction, when the strain of the expansion of the bale comes on the ties, the ends of the hoops or ties not being attached together in any way, the connection being formed by a distinct buckle or friction clasp." (3) "The herein-described slot, cut through one bar of clasp, which enables the end of the tie or hoop to be slipped sidewise underneath the bar in clasp, so as to effect the fastening with greater rapidity than by passing the end of the tie through endwise." The application for Cook's patent was filed in October, 1857.

Advantages in compressing cotton, and other articles, tightly in bales are, in greater facility of handling equal weights, occupation of less room in transportation, and diminution of liability to loss by burning or wetting. Advantages in using iron ties over rope ties are in cheapness, durability, strength, resistance to the expansive force of the bale, and less liability in the tie to be severed by cutting or burning. Iron ties for compressed bales have come to supersede all others, since efficient modes have been devised of securing the ends of the iron ties. At first, such ends were fastened together by riveting. This was too slow a process. On the 17th of June, 1856, David McComb obtained a patent, in the United States, for an "improvement in non-elastic bands for bales of cotton and other fibrous materials." He cut the hoop of the proper length, and then formed each end of it into a hook, and hooked the two hooks into each other, the end of each hook fitting closely into the bend of the other hook, the piece bent over to form each hook being about as long as the width of the hoop. Over these hooks, when put together, he placed a flat link or slide, which secured the hooks from opening when the pressure of the bale was applied, on the removal of the compressing power.

In September, 1856, Charles Swett applied, in the United States, for a patent for an "improvement

in cotton" bale ties." Swett's application was twice rejected, was then rejected again, on appeal, fry the commissioner of patents, in April, 1857, and afterwards, in October, 1866, on appeal to the chief justice of the supreme court of the District of Columbia, a patent was ordered to issue. It was issued October 23d, 1866, to Charles G. Johnsen, as assignee of Swett, and antedated to April 23d, 1866. The invention of Swett consisted in so securing the metallic bands on the bales, that the elasticity of the cotton becomes an active means of fastening the band. Swett employs a metal plate, in which are two slots, parallel with each other, across the plate, the length of the slots being equal to the width of the hand. From the lower and inner edges of the slots, projections extend out obliquely beneath the slots, nearly covering their lower openings. One end of the band is passed through one slot, and bent back against and under the band. The band is then passed around the bale while under pressure, and its other end is put through the other slot, and drawn tight, lapping beyond the first slot, so as to lie up against the first end of the band, out to its end. When the bale is relieved from pressure, the cotton, by its elasticity, presses the ends of the band so firmly, that they cannot be withdrawn from under the body of the band.

On the 24th of September, 1858, George Brodie applied, in the United States, for a patent for an "improvement in metallic bands for baling." The patent was granted to him March 22d, 1859. The general idea of this patent is to bend the ends of the hoop, and insert within the bend a metallic pin longer than the width of the hoop, and have a connecting link to join the two ends of the hoop. Figure 6 of his drawings shows a connecting link made by bending metallic wire into such shape that the opening in the middle of the link is wider than at its ends, the ends of the wire which forms the link meeting at or near one end of the link, where, as the specification says, its ends may be jointed and fastened together or it may be used without any such fastening. Figure 13 shows how the connecting link in figure 6 may be used without any pin in the bend of the hoop, by slipping the ends of the link into the bent ends of the hoop. In the course of Brodie's application, the patent office, in a letter to him, suggested that Cook's patent showed "the plate or link split, for more readily slipping in the end of the band."

On the 19th of September, 1859, Kollin M. Taylor applied, in the United States, for a patent for an "improvement in iron ties for cotton bales." He had a link or buckle of metal, with a rectangular hole cut in its centre to receive the loops of the hoop, and an inclined slit or slot cut in one of its sides, the slit being adapted to the thickness of the iron used for the hoop. The ends of the hoop were bent over, so as to form loops. The buckle could open laterally at the slit, to facilitate the hooking or locking of the loops. The bent ends of the hoop were to he hooked over the two sides of the frame that were next to the side in which the slit was, and the bent ends of the hoop were to he placed next to the bale. Taylor's claim, as applied for, was, the use of the buckle, formed with a slit

and opened laterally, in combination with loops, to form the tie. Taylor's application was rejected, in September, 1859, on the strength of figures Nos. 6 and 13 in the drawings of Brodie's patent, and was withdrawn in December, 1860. Taylor's invention, as applied for, had been assigned to James J. McComb, the husband of the plaintiff. He had unsuccessfully attempted to introduce into use the tie of David McComb, as patented. Taylor's tie attracted his attention. After the application for a patent for that was rejected, James J. McComb modified the Taylor tie into the "arrow tie" hereafter mentioned.

On the 19th of November, 1859, John T. Butler obtained, in the United States, a patent for an "improvement in fastening metal hoops on cotton bales." His device is a plate of metal with a rectangular hole cut in it, and no slit in its frame, with hooks formed of the ends of the hoop, and hooked around opposite sides of the plate, so that the ends will lie against the bale, and be held in place by the pressure of the hale against them. His claim is to such combination, and is, in fact, like Taylor's, except as to the slit in the frame.

On the 29th of January, 1861, James J. McComb obtained, in the United States, a patent for an "improvement in iron ties for cotton bales." He takes a plate of metal, with a five-sided hole in it, whose two longest sides are opposite each other and equal and parallel, and equal in length to the width of the hoop to be used. From one of such longest sides, through the frame, to the outside, a slit or slot is cut, one side of which is turned outward a little, to facilitate the insertion of the end of the hoop. The hole is lengthened, in the shape of an arrow, or in the form of two sides of an equilateral triangle, from the ends of its two longest sides, so that the point of the arrow and the side opposite to it are about equidistant from the outside of the frame. The slit is nearer to the side opposite the point of the arrow, than it is to the place where the arrow shape commences. One hook of the hoop covers the slot, and the other is hooked around the opposite side. The claim is to the arrow-shaped hole. The specification says, that the design of the arrow-shaped end is not only to force the hoop over the slot, which it does with certainty, when the bale expands after being released from the press, but also to secure an equal bearing on the separate parts of the slit side. James J. McComb put this "arrow tie" into the market, and, being threatened by Cook with a suit for infringing

the third claim of his patent, in respect of the slit, a purchase of Cook's patent was made, and it was assigned to the plaintiff. Since the close of the war, in 1865, James J. McComb has kept the market at the South fully supplied with the "arrow tie" constructed under his own and Cook's patents, and being what is called an "open slot" tie. Open slot ties made by other persons began to appear in 1869.

In March, 1872, a suit at law, brought by the plaintiff and her husband, in the circuit court for the district of Louisiana, against George Brodie, for an infringement of the third claim of the Cook patent, by making and selling an open slot tie, was tried before a jury. There was a verdict, and a judgment, for the plaintiffs. In the same month, provisional injunctions were granted by the same court, in six suits, founded on the Cook patent, against six different forms of the open slot tie—the Gooch tie, the Wallis tie, the Alligator tie, the Dunn tie, the tie proceeded against in the suit at law against Brodie, and the tie known as the Beard tie, which is the one involved in the present suit. The suit at law, and these suits in equity, were before Judge Woods, the circuit judge. The extension of the Cook patent was opposed by the proprietors of the Beard tie and of the Alligator tie, and others.

The control of the use of the open slot tie is very valuable pecuniarily, as that tie has practically superseded the closed slot tie. Hence, the zeal and ability with which this suit has been prosecuted and defended, and the importance of the questions involved to the parties and to the public. The Beard tie, (known also as the "Eureka tie,") which is the one sold by the defendant, is described in a patent granted, in the United States, to George N. Beard, December 27th, 1870, for an "improvement in cotton bale ties." It is a plate with a rectangular oblong central hole in it, the two long sides of the hole being intended to receive and lie in the bends of the hooks formed by bending the ends of the hoop. The edges of such two long sides, instead of being straight lines, are slightly convex from end to end. The plate outside of the hole is made thicker and wider on one of the two sides which do not receive the hooks, than on the other side, and through the latter a slit or slot is cut from the outside into the central hole, to admit of the slipping of the bend of the hook through the slit into the central hole. The lips of the slit are turned down so as to bite into the bale. The tie is sold with one hook set in place. The other is readily slipped into its place, through the slit. The ends of the hoop lie next the bale. The tie is an effective one. It differs but little from the Taylor tie. As in that tie, there is no hook, in the Beard tie, pulling against the side in which the slit is cut, which is a feature of the "arrow tie." The Swett tie and the Butler tie had closed slots and no slit. It cannot be doubted, that the form of tie with the slit so arranged that all there is to be done, of manipulation, to make the connection of the second end of the hoop with the tie-plate, after the hoop is brought around the bale, is to slip the hook, made by bending down the second end, through the slit, and into its place of bearing, is a great improvement over the

complicated form of tie devised by Cook, and which, as the evidence shows, has gone wholly out of use. Nevertheless, it is claimed that the Beard tie, in common with all the other slit or open slot ties, embodies, by reason of the use of the slit to slip the bend of the hook in the hoop over the arm, the invention claimed in the third claim of the Cook patent. A determination of this question involves the construction and meaning of such third claim.

It is urged, for the defense, that what Cook does is to cut a slit or slot in the loop of a buckle, so as to slip the hoop through the slit sidewise and flatwise, instead of pushing the end under an unslit loop, endwise, and then pulling the hoop through till it becomes flat; that, in the Beard tie, the slot is in one of the walls of the quadrangle which forms the clasp itself, of which arrangement Cook gives no hint; that Beard uses such slot to dispense with passing the end of the hoop through a buckle, of which arrangement Cook gives no suggestion; and that Cook must pass both ends of the hoop through his buckle, and then uses the slit to get the projecting bit of hoop under the loop, which is not the buckle or clasp, but merely an appurtenance to it. It is true, that the Beard tie has no such loop as Cook has, and no slit in any such loop, and uses a quadrangle with a slit through one of its walls, as a clasp. But, these points of difference are, by no means, decisive of the question. Cook, in his third claim, speaks of slipping the end of the hoop sidewise underneath the bar, in contradistinction to passing such end through endwise. When there is no slit, the end of the hoop is passed through under the bar endwise; but, when there is a slit, such end is slipped sidewise underneath the bar. The use of the slit enables the part of the hoop which is required to lie against the bar, to receive the pressure of the bar above it from the pressure of the bale below, to reach its proper place by being slipped through the slit, instead of reaching such place by following the drawing or pushing of the part of the hoop intervening to the end, through underneath such bar. It is necessary for Cook to put the hoop in such place. If he did not, the strain of the compressed cotton would be likely to pull the hoop so as to destroy the loop around the second bar, and ultimately pull the second end of the hoop entirely out of the buckle. Therefore, the bar through which Cook cuts the slit, to enable the otherwise free portion near the second end of the hoop to reach its proper place, is a part of the clasp or buckle, as

much so as any other necessary part of it. Cook completes his tie, of hoop and clasp, more readily and quickly, by the slipping operation through the slit It is true, he has previously done something towards securing the hoop to the buckle, after bringing the hoop around the bale, but what he has done is ineffective, unless the fourth bar is made to surmount the otherwise free part of the hoop. He, therefore, invented and has claimed cutting the slit or slot through such bar, (which covers the cutting it through an equivalent bar or part of the clasp,) so as to enable the part of the hoop which is to rest under a bar of the clasp to be slipped sidewise through the slit or slot, and avoid putting the end of the hoop endwise through beneath such last named bar. There is no connection between this claim and what is previously done with any other part of the hoop, or any other part of the clasp. The claim is, distinctly, to the use of the slit or slot, so cut, to effect the result indicated, for the object indicated. It would make no difference, in Cook's arrangement, if, instead of lengthening the open space adjacent to his fourth bar, and cutting a slit in such fourth bar, he had left such open space as it was, and not slit the fourth bar, but made a slit through to the outside from one end of such open space. Such arrangement would have embodied his invention, and its use now would infringe his third claim, because it would effect the result indicated, for the object indicated, by substantially the same means and mode of operation.

With this view of Cook's invention and third claim, it is very clear, that it is infringed by the Beard tie. Beard, by using his slit, enables the part of the hoop which is required to lie against the bar, to receive the pressure of the bar above it from the pressure of the bale below, to reach its proper place, by being slipped through the slit. But for that, it would have to reach such place by being brought over the top of the bar and through the open central space, all the while following the drawing or pushing of the part of the hoop intervening to the end, through underneath such bar. Beard must put the hoop in such place. If he did not, he would have no loop around such bar, and no tie. Such bar is a part of his clasp, and the bar through which his slit is cut is a part of his clasp; and it makes no difference, in the essential use of Cook's invention, that the bend of the hoop, in the Beard tie, does not embrace the side in which the slit is cut. Nor does it make any difference, that, in the Beard tie, the part of the hoop which is slipped under the arm is nearer to the bend of the loop than is the part which is slipped under the bar in the Cook tie; nor any difference, that, in the Beard tie, the bend of the loop is slipped through the slit The part to be necessarily put in place is put in place by the same means.

In the drawings of the English patent granted to George Hall, November 28th, 1801, for an invention of "elastic fastenings for the shoes, and also for bands, garters, or ornaments for the knees, waist, arms, neck and head," there is an open slit or slot in the body of a quadrangular buckle, with four walls, to enable the bend of a loop to be passed through the open slot into the space within, so as to make the loop embrace the walls

adjacent to the open slot. But, rising from within, and pointing in the same direction as the entrance through the slit, and close to the gateway, on each side, is a sharp spike. On these two spikes the elastic fabric is to be impaled, and only through them is it to reach and embrace the walls on each side of the gateway. The apparatus was not to be used with a metallic band or hoop, nor with a rigid band, but with elastic bandages or strings. The spikes are made, by the specification and drawings, an indispensable accompaniment of the open slot. It is impossible to say, with truth, that Hall's arrangement would suggest, or contains, either Cook's arrangement or Beard's. Notwithstanding the open slot of Hall, the application of the principle of looping over a hook, or slipping under a bar, by means of an opening beyond the end of the hook, or of the bar, or in the bar, to making a cotton tie to be used with rigid metallic hoops, required experiment and involved the exercise of invention.

As to the English provisional specification of Frederic James Pilliner, dated July 7th, 1856, for "improvements in clasps or fastenings for waistbands, and other descriptions of bands or straps," the counsel for the defendant conceded, on the hearing, that Pilliner's clasp had no open slot.

The link testified to by M. W. Smith, as used in New Orleans as early as 1848, to connect the hames on a harness collar with the trace chains, and enable the two to be rapidly united, the link being stationary on the hames, and the trace being slipped sidewise, in loop, into the link, is an elongated split ring, wholly unadapted to make a cotton bale tie, and not suggestive of Cook's arrangement or of Beard's.

Being satisfied of the clear right of the plaintiff in the premises, I must decree to her an account of profits and damages, in respect to the third claim of the Cook patent. As the present suit it not on the extended term, and the first term has expired, there can be no injunction in this suit

[For other cases involving this patent, see note to McComb v. Brodie, Case No. 8,708.]

¹ [Reported by Hon. Samuel Blatchford, District Judge, and by Samuel S. Fisher, Esq., and here compiled and reprinted by permission. The syllabus and opinion are from 10 Blatchf. 350, and the statement is from 6 Fish. Pat. Cas. 254.]

² [From 6 Fish. Pat. Cas. 254.]