the supporting tube, which contained in some of its parts both bolster and step bearings, and thus constituted a combined bolster and step. He seems to have tied up his patent to this method of construction, and thus to have permitted the defendants to take the vital part of his invention, without infringement of the claims of the patent. The order of injunction pendente lite is reversed, with costs.

RYNEAR CO. v. EVANS.

(Circuit Court, S. D. New York. November 12, 1897.)

1. PATENTS-INVENTION-SWAGING METAL ARTICLES.

In view of the prior state of the art, there is no invention in applying the process of swaging or striking up metal blanks into articles of manufacture to the making of artificial tooth crowns or caps.

2. Same.

The Rynear patent, No. 305,238, for an artificial metal tooth-crown cap struck up from a blank by dies, is void for want of invention.

This was a suit in equity by the Rynear Company against George Evans for alleged infringement of a patent for artificial metal tooth crowns or caps. Final hearing.

James C. Chapin, for complainant. Francis Forbes, for defendant.

COXE, District Judge. This is an equity suit for the infringement of letters patent No. 305,238, granted to Moses Rynear, September 16, 1884, for an artificial metal tooth-crown cap. The specification states that prior to the alleged invention metallic tooth crowns had been constructed by fitting a band around each root at its upper end. After being fitted to the contour of the root the band was removed and soldered, forming a ring. The top or grinding surface of the tooth was subsequently soldered to the ring. After pointing out the disadvantages of this mode of procedure the patentee states that the object he has in view is to facilitate the setting of crowns in a more expeditious and less costly way by providing dentists with "metallic caps" already formed in the shape of artificial teeth so that, having selected a cap of the proper size and shape, it can easily be fitted to the root. The alleged invention consists "in the peculiar cap as a new article of manufacture" made entirely of the same piece of metal "without seam or joint." The drawings show six figures representing the blank from which the cap is stamped, the completed cap, and the intermediate stages of stamping and drawing.

The patentee says:

"I am aware that it has been proposed to make cup-shaped sockets or hollow shells in the form of human teeth for forming artificial tooth crowns; but such crowns have been made in two pieces, as before explained, or they have been formed in one piece by cutting al. I bending sheet metal into shape, and completed by soldering meeting edges. Both these forms, however, possess the disadvantages already explained. I am not aware that a seamless metallic cap in the shape of a natural tooth has before been produced and used for forming an artificial tooth crown. What I claim is: As a new article of manufacture,

a seamless metallic cap for forming an artificial tooth crown, having the shape of a natural tooth upon its grinding surface, substantially as set forth."

The principle defense is lack of Infringement is established. novelty and invention. Dr. Rynear did not invent a metallic tooth crown. Crowns, nearly identical in appearance with the crown of the patent, were known and tooth caps were made by the method described in the patent; namely, stamped from metal by the use of male and female dies, long prior to 1883. The words "crown" and "cap" are used interchangeably in the record, but the word "cap" is here used as having reference to a structure more shallow than a crown and designed to be placed over the natural crown of the tooth, not as a substitute for it. At least one of the witnesses called by the defendant swears to a complete anticipation. He testified that a seamless crown was made for him by a dentist in St. Louis, was placed in his mouth in 1877 and was still there at the time of his examination. This crown was examined by Dr. Rynear. The testimony is criticised because the crown was not put in evidence, but, as was suggested at the argument, it is not unfair to assume that the witness may have interposed an objection to having his teeth marked as exhibits in this cause, preferring, rather, that they should remain in his own mouth, so long, at least, as it continued to be "a going concern." Other witnesses testify to work done by them prior to 1883, and it cannot be doubted that in several instances the cap or crown made by them, if not a complete anticipation, is dangerously near the mark. The complainant has endeavored to demonstrate that this testimony is untrustworthy, and its expert has introduced a series of experiments to show that the method described by the defendant is incapable of producing a seamless cap. That the complainant's expert should prove the defendant's method inoperative is not surprising. An experience of 14 years in patent litigation has convinced the court that when an expert undertakes to prove that his adversary's process or machine is a failure he always scores a success. It is much easier to make a machine that will not work than one that will.

Again, it is urged that the defendant's witnesses describe caps and not crowns; that they were much shallower and shorter than the crown of the patent and designed to subserve a very different In many instances this is true; the difference is sufficiently marked to remove the device from the anticipatory group. It is unnecessary to decide the question whether prior use is established beyond a reasonable doubt for the reason that the court prefers to rest the decision upon another ground, namely lack of invention, regarding which no doubt is entertained. It will be observed that the patentee claims a seamless tooth crown, and though the specification describes how it is made—stamped from a gold plate—the claim covers such a crown no matter how constructed. A crown which is molded, drilled, reamed, swaged, annealed and burnished, or made by any other method, if seamless, is as much within the claim as if made by the patented formula. In short, if the patent be valid, no one can hereafter make a seamless tooth

crown without paying tribute to the complainant. A claim so broad and sweeping should be scrutinized with unusual care. What has the patentee added to the art? Assuming, to avoid argument, that he was the first to make a seamless crown the entire value and virtue of his contribution is found in this single feature. There is nothing else and nothing else is pretended. An effort has been made to show that a seamless crown possesses extraordinary advantages over a nonseamless crown. Most of these are speculative and imaginary. Upon this record it is by no means certain, considering its defects as well as its advantages, that the seamless crown is an improvement upon the crowns of the prior art. These crowns were made in various ways. The methods most commonly employed are aptly described in the language above quoted from the specification. Crowns thus made so closely resemble the patented crown that the differences can only be detected by an expert and then, in some instances, only by the use of a blow pipe. The patentee, if he did not have the exact device, certainly had before him a soldered crown and a seamless cap struck up from metal by the use of dies. Did it require invention to make tooth crowns by a method formerly used in making tooth caps? It is thought not.

But this is not all. The court can almost take judicial knowledge of the fact that the art of striking up metals by the use of a series of male and female dies was archaic at the date of the application for the patent. It is, however, unnecessary to do this for the record teems with instances where the art was practiced, and stamping machines were not only notoriously in use, but could be purchased by any one who had need for one. Articles much longer and deeper than tooth crowns were constantly being made and had been made for decades before the patent. Thimbles, buttons, capsules, eyelets, ferrules, cartridge cases, percussion caps, and caps for lead pencils, umbrellas, canes and fishing rods, are familiar examples. Rynear simply made a well-known article by a well-known process. This process was so familiar to every metal worker that it seems almost incredible that it should have escaped the attention of the tooth-crown makers; it was the most natural and obvious way to make a crown. When they say that they used it the presumption is strongly in their favor. The failure to adopt it in some instances may, perhaps, be accounted for by the fact that the art seems to have been exclusively in the hands of dentists, and though many of them were metal workers it is fair to assume that the majority were occupied more especially with the science of their profession. This may account for the fact that they continued working on the old lines, when, had the art been in the hands of expert metal workers, the feasibility of striking up a crown from a disc of gold would have been axiomatic. After the demand for readvmade crowns had become apparent, if a dentist had taken a crown to a goldsmith and asked him to reproduce it, there can be little doubt that one of the ways, if not the only way, of doing this suggested by him would have been stamping by the use of dies. One whose principal occupation was the care of human teeth, might adopt a

different method, the goldsmith would not. A dentist is not entitled to pose as an inventor because by pain and travail he reaches a result which would have been explained to him for the asking by a metal worker's apprentice. The most skillful surgeon would undoubtedly encounter innumerable difficulties should be undertake the construction of an artificial limb, the expert chiropodist would in all probability leave the construction of the shoe for an injured foot to the cobbler. Had the art of making gold teeth been in the hands of the goldsmiths it is fair to assume that it would not have occurred to any of them that it required an exercise of the inventive faculties to strike up a crown from a gold plate. Such a crown would be affabrous undoubtedly, but it would possess no unusual or mysterious virtues.

This cause has been prepared and argued with such painstaking ability upon the part of the complainant's counsel that the record has been examined with care to discover a theory upon which the patent can be sustained without running counter the controlling weight of authority upon this subject, but without success. If the patent be held valid it is difficult to see how hereafter invention can be denied to one who produces a well-known metal article by the use of dies which had previously been made in some other way.

The law upon this question is well settled. In Locomotive Works v. Medart, 158 U. S. 68, 15 Sup. Ct. 745, the court say, at page 81, 158 U. S., and page 750, 15 Sup. Ct.:

"If a certain device differs from what precedes it only in superiority of finish, or in greater accuracy of detail, it is but the carrying forward of an old idea, and does not amount to invention. Thus, if it had been customary to make an article of unpolished metal, it does not involve invention to polish it. If a telescope had been made with a certain degree of power, it involves no invention to make one which differs from the other only in its having greater power. If boards had heretofore been planed by hand, a board better planed by machinery would not be patentable, although in all these cases the machinery itself may be patentable."

In Kilbourne v. W. Bingham Co., 1 C. C. A. 617, 50 Fed. 697, the claim was for "a sink, made of a single sheet of wrought steel or iron, without joint, seam, or interior angle." In holding this claim void, the court say:

"The art of swaging metals into any required form was venerable long anterior to the patent. The drop press, drop hammer, dead-stroke hammer, dishing ram, dies, die press, forcers, and stamping machines have long been familiar to metal workers as implements by which hollow ware in all its forms and varieties has been manufactured for over half a century, and are regarded in the art as simply equivalent machines or tools for swaging; that is, beating or drawing the ductile metals into desired shapes. The use of one or the other of these agencies is merely a preferential application by the workman of the power required for the work in hand. The variety of manufactures by this process has been limited, only by the art of designing, the ductility of metals, and the possibilities of machinery."

In Manufacturing Co. v. Holtzer, 15 C. C. A. 63, 67 Fed. 907, the court say:

"The only advance alleged to be covered by either claim is in the fact that the cover, cup, and lip are cast solid, instead of being made of several parts soldered together, or otherwise secured to each other. • • • The right to

improve upon prior devices by making solid casting in lieu of constructions of attached parts is so universal in the art as to have become a common one."

See, also, Burt v. Evory, 133 U. S. 349, 10 Sup. Ct. 394; Strom Manuf'g Co. v. Weir Frog Co., 75 Fed. 279; Knapp v. Morss, 150 U. S. 221, 14 Sup. Ct. 81.

The defendant's motion to strike out testimony is denied. The

bill is dismissed.

AMERICAN TOBACCO CO. v. STREAT.

(Circuit Court of Appeals, Fourth Circuit. November 3, 1897.)

No. 210.

1. PATENTS—COMBINATIONS—NOVELTY AND INVENTION.

The fact that every element of a combination was well known at the date of a patent does not show lack of invention, if such elements were then for the first time utilized in a new combination, so as to produce new results.

2. Same—Patentable Combination.

An article manufactured in a machine in the manner and for the purposes contemplated when the machine itself was made cannot be considered a part of the machine itself, so as to constitute an element in the combination covered by a machine patent.

8. SAME—TEST OF INFRINGEMENT.

A device cannot be held to be an infringement unless it would have been held, if used earlier than the patent, to have been an anticipation thereof.

4. Same—Cigar Makers' Implements.

The Streat patent, No. 290,811, for improvements in "cigar makers' implements," and which covers a combination in which a clamp and a rolling apron are the characteristic elements, construed, and held valid, and not infringed by a machine from which the rolling apron is absent.

Appeal from the Circuit Court of the United States for the Eastern

District of Virginia.

This was a suit in equity by Thomas Streat against the American Tobacco Company for alleged infringement of a patent for improvements in cigar makers' implements. In the circuit court a decree was entered sustaining the patent, finding infringement, and granting the The defendant thereupon appealed to this court.

Charles S. Stringfellow, M. B. Philipp, and W. W. Fuller, for appellant.

Rutherfoord & Page, for appellee.

Before GOFF and SIMONTON, Circuit Judges, and BRAWLEY, District Judge.

GOFF, Circuit Judge. On the 25th of December, 1883, the United States granted to Thomas Streat letters patent No. 290,811, for improvements in "cigar makers' implements." On the 13th of June, 1893, the United States granted letters patent No. 499,488, to Philip Whitlock, assignor to the American Tobacco Company, for "binder clamp for cigar bunching machines." The bill of complaint in this cause was filed by the said Thomas Streat on the 17th day of April, 1893, in