well-known fact that corrugations make a good anchorage for plastic material it would seem that there was no room for invention in the mere method of fastening, certainly not in the substitution of crimps for what had been used before. The new studs and the old are alike in every way except that the celluloid is held in place by minute depressions and elevations called crimps instead of by minute depressions and elevations called lips. Conceding some advantage in the former method the change is what would naturally occur to a mechanic and falls far short of invention. The bill is dismissed.

NATIONAL FOLDING BOX & PAPER CO. v. STECHER LITHOGRAPHIC CO. et al.

(Circuit Court, N. D. New York. December 16, 1896.)

1. PATENTS—INVENTION—PAPER-BOX MACHINES.
In a machine for forming paper-box blanks, there is no invention in merely providing grooves in the counter-die to co-operate with the embossing rules of the die for creasing the fold line of the box blank.

2. SAME.
The Munson patent, No. 259,416, for improvements in the manufacture of paper boxes, consisting, particularly, in the formation of the dies for cutting out and creasing the box blanks, is void for want of invention.

This was a suit in equity by the National Folding Box & Paper Company against the Stecher Lithographic Company and others for alleged infringement of a patent relating to the manufacture of paper boxes.

Philipp, Munson & Phelps, for complainant.
Church & Church, for defendants.

COXE, District Judge. The defendants are charged with infringing letters patent No. 259,416, granted to Edward B. and Harvey S. Munson, June 13, 1882, for improvements in the manufacture of paper boxes. The patent is now owned by the complainant. The apparatus described has for its object the cutting out of blanks for paper boxes, and defining the lines of their ultimate foldings. This is accomplished by a die and counter-die, the former having cutting and embossing rules and the latter having channels corresponding to the embossing rules so that when the two dies are brought together the box plant is cut out by the cutting rules and the line of fold is indicated by creases formed by the embossing rules which emboss and upset the paper by pressing it into the channels of the counter-die so that the box may be folded up without rupturing or disfiguring its outer or face surface.

Whatever of novelty there is in this apparatus must be found in the counter-die. That the die containing the sharp cutting and blunt embossing rules, was old in each and all of its features is proved beyond question and is conceded by the complainant. The counter-die is preferably made up on a metal plate having secured to its face a packing sheet of paper in which are formed the channels

which register with blunt embossing rules. These channels are formed either by cutting them out or by indenting them by repeated contact with the die. No preference is given to either method. In short, the object being to crease a box blank so that it will fold easily, the patentees provide two dies, one having embossing rules to mark the line of fold and the other having grooves corresponding with the rules.

The defenses are lack of novelty and invention and that the apparatus used by the defendants since 1894 does not infringe. The controversy is, practically, narrowed to a single proposition, viz.: Did it involve invention to provide channels or grooves in the counter-die of a press to co-operate with the embossing rules of the die for creasing the fold line of a paper-box blank?

The record and briefs aggregate 1,162 printed pages. To one unfamiliar with the needless fecundity of patent litigation it would probably be matter of amazement that so much can be said upon a question so simple. The art of making paper boxes is very old. Long before the date of the alleged invention box blanks had been made with creases along the line of ultimate fold. This crease was made by a die and counter-die co-acting in a press, the box blank being pressed by the scoring rules upon the semi-soft material of the platen, thus forming a folding crease concave on one side and convex on the other. The art of embossing on paper was also old and was well known in the manufacture of paper bags, boxes and collars and other similar articles. Indeed, the proof shows that marketable box blanks had been made in large quantities where grooves had been formed in the packing of the counter-die by repeated impressions of the creasing rules, the line of fold being indicated by pressing the box material into these grooves by blunt embossing rules. The advance made by the patentees, from their point of view, is clearly stated by the learned counsel for the complainant as follows:

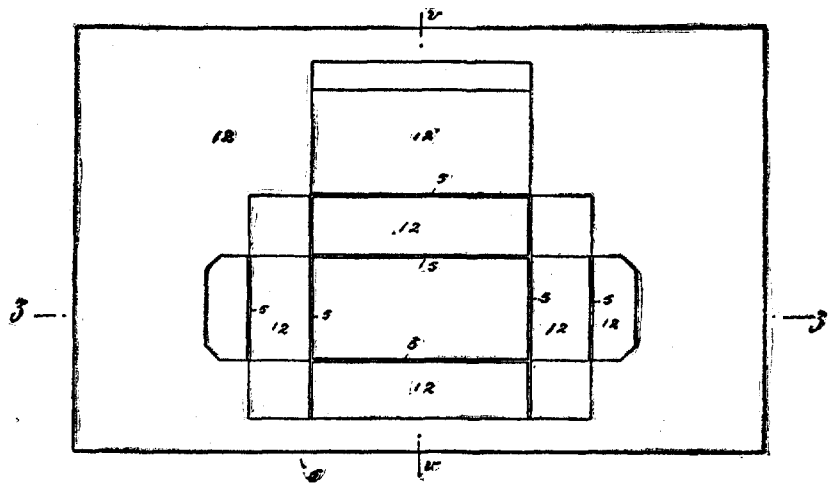
"The new mode of operation of the patent is, defining the lines of its ultimate foldings by so acting upon the material along such lines by means of embossing or creasing rules and co-acting recesses or channels, whereby the fibers of the material along such lines are stretched or moved relatively to each other so as to form elastic and flexible folding lines, which permits the box blank to fold readily along such lines, by the fibers taking on new dispositions relatively to each other, without undue strain, and without the material of the blank being ruptured or unduly weakened or disfigured, instead of crushing or breaking down the fibers of the material so as to form weakened lines to fold it upon."

In other words, as before stated, the question of invention is limited to the grooves upon the counter-die. All else was old. It is understood that this was conceded at the argument, at any rate there can be no doubt that it is proved beyond dispute. If, then, grooves were used in the prior art producing fold lines substantially like those referred to the patent cannot be sustained. Speaking generally the court is of the opinion that the patentees have added nothing to the art involving invention. Their machine acts upon the old principle. Their die and counter-die are constructed in the old manner and if their blanks differ at all from those of the

prior art it is only in degree. Whatever changes they have made are due to the natural evolution of the art. Whatever improvements they have introduced are those which would occur to the intelligent artisan after witnessing the shortcomings and defects of the prior mechanisms.

The theory that they were the first to introduce the art of embossing to indicate the fold line of paper articles and that its introduction was so magical that a revolution in box making was the immediate result, though ably and ingeniously presented, cannot be maintained. It is founded upon a mistake of fact and is supported by a mass of theoretical and technical learning which it is safe to say did not enter the heads of the patentees at the time of their experiments. In short, liability is reached by a process of contraction upon the question of invention and of expansion upon the question of infringement which is not warranted by the proof. "The platen," says the Munson specification, "is furnished with a counter-die, Fig. 4, composed of a packing-sheet, 12, of paper or similar firm material that is fixed upon the face of the platen in such relation to the embossing rules of the die as will provide recesses 5 for the same to register with."

Fig. 4.



It will be noted that this packing sheet may be paper or any other similar firm material. It is to be fixed to the face of the platen but how it is to be fixed is not pointed out. This was evidently supposed by the patentees to be quite immaterial, a matter that could be safely left to the judgment of the operator. It would seem that when directed to fix paper to a flat surface the use of glue might naturally occur to him. If the patentees had been familiar with the marvelous result produced by a combination of glue and blotting paper which has been developed since the commencement of this ac-

tion it is probable that they would have described the result and claimed the glue. They have done neither.

Again, the specification says:

"It is preferable that the whole surface of the platen shall be covered by the packing sheet, 12, in which the recesses, 5, are formed, either by cutting out a suitable channel or indenting it by repeated contact with the die, so that while said recesses perform their functions the cutting rules will also pass through the packing, 12, and have direct contact with the platen."

These quotations are all that the specification contains on the subject of a counter-die. The formation of the channels is made either by cutting out or by indenting. If the patentees prefer one method to the other they do not say so; they evidently regard them as equivalent methods.

It is not necessary to discuss what would be the result were the claims confined to cut out channels as the defendants do not use them. It is obvious, therefore, that a counter-die provided with channels indented by repeated contact with the scoring rules would infringe no matter what kind of paper is used and no matter how the paper is attached to the platen. Such a counter-die found in the prior art would, of course, anticipate. If there be anything in the patent limiting the claims to a particular variety of packing or fastening the court has not been able to discover it. A packing sheet of basswood veneer fixed to the platen by rubber bands would be as much within the claims as blotting paper fastened with glue.

The Shelton patent of October, 1876, has for one of its objects the creasing of box blanks on the fold line, precisely like the patent in suit. The Shelton specification says:

"The platen is provided with a semi-soft or compressible material, so that the rules may sink slightly into such material. * * * The character of the depressions or grooves formed by this operation in the Manilla paper is illustrated in Fig. 3, in which 'a' shows the grooves on the printed or outer side of the blank, and 'b' the corresponding ridges on that side, which becomes the inner side of the completed box."

In the application filed May 20, 1875, Shelton uses the following language:

"The platen is composed of a semi-soft compressible material, so that the rules will indent or press into such material."

The Munson patent says the grooves may be formed by indenting the packing sheet with the rules. A casual inspection of the Shelton grooves as illustrated by the drawings demonstrates the fact that they could not have been produced by crushing the paper against a rigid surface, the embossing or stretching of the material being due to the sinking of the creasing rules into the soft material of the packing.

An attempt is made to avoid this evidence by limiting the soft compressible material to a number of sheets of thin Manilla or white paper. This will not do. It is perfectly plain that a box maker had an undoubted right to use blotting paper or anything else for the compressible material of the Shelton patent and fasten it on in any way he saw fit. No one will pretend that the substitution of blotting paper for Manilla paper in the Shelton apparatus would constitute invention and yet this is, practically, all the change, as-

suming it to be a change, that the defendants have made. They are nearer to Shelton than Munson. If they infringe Shelton anticipates.

But assuming that the Shelton patent is not an anticipation, it certainly shows a person skilled in the art how to proceed. The differences between it and the Munson patent are the differences between 1876 and 1878. They are the improvements which would naturally be suggested by two years' use of the machine. It is true that Shelton's description of the grooves is not so full and minute as Munson's, but Shelton illustrates a machine that cannot operate for any considerable length of time without producing channels of the same character, substantially, as those produced by the indenting method of the Munson patent. That Shelton fully understood what kind of a fold line was needed and that he intended to accomplish and supposed he had accomplished exactly what is now claimed for the Munson patent, is demonstrated by the letter of May 20, 1875, to the examiner. The attorney says, speaking of railroad tickets, which had been cited by the examiner:

"In that case, the depression of one side is greater than the projection on the other, and the paper is, to a certain degree, broken or partially separated, so as to make the complete separation easy, whereas, in this invention, the paper is not broken, it is equally as thick at the angles or depression as at other points. The usual sharp line or cut, as made in railroad tickets, would be fatal in the making of paper boxes."

This was five years before the Munson application and no language in the record more clearly describes the alleged improvement of the Munson patent than this description of the improvement of the Shelton patent. Indeed, were there nothing in the prior art but the Shelton patent it is difficult to see how the patent in suit can be so construed as to hold the defendants.

But there is much else in the prior art. Embossing by the use of a male and female die was well known and the score thus produced was used as the fold line of many paper articles, notably paper collars which belong to an analogous art. For instance, the Snow patent of 1872 says:

"L, L, are plates having one edge curved, and also having a curved groove, o, formed in the face thereof, which, working with the male die, c, embosses a curved line upon the collar to determine the fold."

It also seems to be established that structures very similar to that of the patent were used by various box manufacturers. Cutting and creasing rules operating upon a counter-die having a packing of soft yielding paper were used to indicate the fold line. The criticism of most of the prior structures is that the crease was made by a "crushing action" which tore and injured the paper and not by the upsetting or stretching action of the dies of the patent. It is thought that this criticism is based largely upon theory unsupported by facts. There is no doubt that prior to the patent box makers knew how to crease on the fold line, they knew that if they cut the paper on this line it would be apt to break in folding, they knew how to emboss and they made immense numbers of merchantable boxes by methods which operated upon the same principle as

the patented method. Why, then, should the Munson method stretch and all others crush the paper? Why should a blunt creasing rule co-operating with a soft compressible paper packing, produce one result in 1876 and another in 1878? Why should it crush one year and stretch the next? Why should it produce a deplorable failure when known as the "Shelton Method" and a superlative success when bearing the name of Munson?

Unquestionably many of the prior structures were crude affairs; that some of them tore the paper at times cannot be denied, but the court cannot accept the theory that the patentees were the first to introduce the art of embossing in the business of making paper-box blanks. They may have produced a more perfect counter-die than their predecessors, but they added no novel mechanism and no new principle of operation. They have produced no new result. To adopt the language of the recent case of American Road-Mach. Co. v. Pennock & Sharp Co., 77 O. G. 633, 17 Sup. Ct. 1, it would seem that the change made by the patentees "was not the product of a creative mental conception, but merely the result of the exercise 'of the ordinary faculties of reasoning upon the materials supplied by a special knowledge, and the faculty of manipulation which results from its habitual and intelligent practice.'"

The bill is dismissed.

BERRY v. WYNKOOP-HALLENBECK-CRAWFORD CO. et al.

(Circuit Court, S. D. New York. January 6, 1897.)

PATENTS—INVENTION—IMPROVEMENT IN CHECKS, ETC.

The Berry patent, No. 268,988, for an improvement in checks or other papers representing value, and consisting in providing them with marginal tables of figures, to be torn off, so as to prevent raising or altering of the amount, is void for want of invention, in view of the prior state of the art.

This was a suit in equity by Marcellus F. Berry against the Wynkoop-Hallenbeck-Crawford Company et al. for alleged infringement of a patent for an improvement in checks or other papers representing value.

W. L. Goldsborough and Edwin H. Brown, for complainant.

Robert G. Monroe and Wallace Macfarlane, U. S. Dist. Atty., for defendants.

COXE, District Judge. This suit is based on letters patent No. 268,988, granted December 12, 1882, to the complainant for an improvement in checks or other papers representing value. The object of the patentee was to devise a plan which would prevent checks, money orders, certificates and similar papers from being raised or altered, by providing them with marginal tables of figures of different denominations which are to be torn so as to indicate the amount for which the paper is intended. After this is done any alteration must necessarily reduce the value of the paper. A special arrange-