cap having a flexible tip, and the use of diagonally cut hair-cloth strips with an angular seam to form the side crown of such a cap being old, was it patentable to use, for such a crown, a diagonally cut wire cloth strip with an angular seam? The complainant's expert is of opinion that a skeleton for the side crown formed of wire cloth having the diagonal arrangement of wires, and having its ends joined by a diagonal seam, is patentable. It is not important to consider whether the claim is for inclined wires and an angular seam, or could be construed to be for wires, however cut. and an angular seam: for nobody supposes that wires not inclined and an angular seam are a feature to be desired. The practical construction of the patent must be in accordance with the expert's theory, and the question is therefore reduced to the patentability of this mode of joining the ends of inclined wires. It being apparent that when the wires are cut diagonally an angular seam is the natural method of sewing the ends together, and it having been shown that an angular seam was the usual method of joining the diagonal ends of hair-cloth side crowns, there is nothing patentable in thus uniting the ends of a wire-cloth strip. After the patentee had abandoned the claim that he had made a patentable improvement in a cap having a flexible tip, by making the skeleton of the side crown from wire cloth, whether cut upon lines parallel or diagonal to the tip, there is no room for the contention that the manner in which the ends of the strip should be joined together required the help of invention. The patentee adopted the known mechanical practice of his predecessors.

The decrees of the circuit court are reversed, with costs, and the cases are remanded to that court, with instructions to dismiss the bills, with costs.

EAGLE LOCK CO. v. CORBIN CABINET LOCK CO.

(Circuit Court of Appeals, Second Circuit. December 3, 1894.)

No. 11.

- 1. PATENTS-INVENTION.
 - There is no patentable invention where the peculiar structure necessarily resulted from the fact that the patentee wanted to combine old and familiar elements, and a person skilled in the art would naturally group the elements of the combination in the way the patentee adopted.
- 2. Same—Claim.

 An unclaimed peculiarity of construction is rarely read into a claim, the life of which consists in minor improvements upon an old article, and in which the patentee has undertaken to point out minutely the distinctive features which differentiate his combination from that of pre-existing devices.
- 8. Same—Trunk Locks.

 Mix's patent, No. 337,187, for a trunk lock consisting of a hasp plate secured to the cover of the trunk, and a lock plate secured to the body of the trunk, and constructed with a cup or frame for the reception of the hasp lock, the hasp plate and lock plate constructed so as to extend to the meeting edges of the cover and body of the trunk, and the hasp plate provided with a dowel that engages in a socket in the lock plate, in combination with a hasp, hinged to the hasp plate at a considerable

distance above the lower edge, and provided on its free end with a lock, held, in view of the prior state of the art, to be vold for want of patentable invention.

Appeal from the Circuit Court of the United States for the District of Connecticut.

This was a suit by the Corbin Cabinet Lock Company against the Eagle Lock Company for infringement of certain patents. The circuit court sustained the bill as to one of the claims (52 Fed. 980), and defendant appeals.

Wilmarth H. Thurston, for appellant.

Charles E. Mitchell and J. P. Bartlett, for appellee.

Before WALLACE, LACOMBE, and SHIPMAN, Circuit Judges.

SHIPMAN, Circuit Judge. The bill in equity in this case was founded upon the alleged infringement of the first and fifth claims of letters patent No. 285,916, dated October 2, 1883, and of each of the two claims of letters patent No. 337,187, dated March 2, 1886. Each patent was granted to Frank W. Mix for an improved trunk lock. The circuit court for the district of Connecticut, upon "final hearing" of the cause, dismissed the bill as to letters patent No. 285,916, and as to claim 1 of No. 337,187, and directed an injunction and an accounting as to the second claim of the later patent. 52 Fed. 980. From that part of the interlocutory decree which related to the second claim, this appeal was taken by the defendant. As infringement is practically admitted, the validity of this claim is the only question before this court. The correctness of the other conclusions of the circuit court has not been considered, as the decree was not a final one.

Common knowledge, as well as the evidence in the case, shows that a hasp plate, a hasp hinged thereto, a keeper plate and lock mechanism for locking the hasp bolt into engagement with the keeper, were well-known elements of a trunk lock prior to the date of the invention. It also appears from the proofs in the case that lock mechanism in a cup form had been mounted on the free end of the hasp, the hasp being fastened to the body of the trunk, the lock being received in a recess in the keeper plate upon the lid This form is shown in letters patent No. 235,130, of the trunk. dated December 7, 1880, and issued to George Crouch. It does not appear that lock mechanism of this form had ever been mounted upon the free end of the hasp, when the hasp was secured to the cover of the trunk. It was also old to provide a trunk lock with a spring arranged to press upon the hasp with a constant tendency to throw it out of engagement with the keeper plate when the hasp is opened, and to provide the structure in which the lock is formed with a dowel pin or pins upon the lid of the trunk, which are received in a socket or sockets at the meeting edges of the two plates, for the purpose of protecting the cover against lateral strain. These two peculiarities appear in the earlier Mix patent. The dowels and sockets also existed in the Star lock, which, at the time of the invention of the first Mix lock, was a well-known form of trunk lock, having an old-fashioned hinged hasp entering the body of the lock on the body of the trunk, and secured by a lock bolt. In the lock of Mix's first patent, a hasp upon the body engaged with a keeper plate upon the lid of the trunk, and in different drawings of the patent the lock mechanism was mounted upon the hasp or was embodied in the keeper plate. In other pre-existing locks the hasp plate was secured to the lid, and the keeper plate was secured to the body of the trunk. In this state of the art the patentee constructed his lock, which is said, in his behalf, to have been a convenient and attractive device, possessing features in combination in one structure which neither the Crouch nor any other single lock possessed, and therefore to have been received with public favor. The second claim of letters patent No. 337,187 is as follows:

"(2) A trunk lock consisting of a hasp plate adapted to be secured to the cover of the trunk, and a lock plate adapted to be secured to the body of the trunk, and constructed with a cup or frame for the reception of the hasp lock, the hasp plate and lock plate, constructed and arranged to extend to the meeting edges of the cover and body of the trunk, and the hasp plate provided with a dowel or extension that engages in a socket or recess in the lock plate, in combination with a hasp hinged to the hasp plate at a considerable distance above its lower edge, and provided on its free end with a lock, substantially as set forth."

It is manifest that no single structure, before the date of the second Mix invention, possessed all the elements of the combination of this claim, with the described peculiarities of construction. lock, as a whole, has the requisites of novelty and of utility. The only question is whether it possessed patentable novelty. The patentee having constructed and made known to the public a lock which contained the minor elements of a dowel upon the part of the lock fastened to the lid, which met and entered a socket in the part attached to the body of the trunk, and a spring which threw the hasp out of engagement with the keeper, made another lock which, retaining these elements, had its advantages arising from the location of its lock mechanism. The defendant insists that the improvement consisted simply in the selection by the patentee of an old and familiar form of lock mechanism to be used in connection with his dowel and socket lock. This statement does not fully meet the facts of the case, because the construction of the new structure required more than a selection; it required an adaptation of old elements. The complainant insists that the new lock was a reorganization of the Crouch type, and that the details of the reconstruction demanded and evinced inventive skill. It was not claimed in the argument that there was invention in placing the Crouch lock, whether the location of the respective plates was changed or not, in combination with dowel, socket, and spring. These elements had been so often exhibited in locks that they had become a part of the common knowledge of the lock maker, and invention could not consist in adding them to or withdrawing them from a lock structure. Neither, in view of the state of the art which has been recited, would the simple change of position of the two Crouch plates with reference to each other be considered an invention, and, furthermore, a mere change would have made a clumsy and imperfect article, of no pecuniary value. But it is said that the means by which a change could be satisfactorily accomplished, and the details of the reorganization, if a convenient and useful lock was to be the result, required more than a mechanical insight, and that the conception, as worked out and embodied, constituted invention. The question in the case turns upon the truth of this proposition.

It is true that, to make a convenient lock, it was necessary to do more than change the location of the lock-holding hasp. If dowels and sockets were to be used, the two plates must meet each other; and, to permit the use of a spring, the hasp must be hinged to the hasp plate "a considerable distance above the lower edge." It was also important to construct the keeper plate so that the hasp which carried the lock case should not project from the surface of the plate, and thus be exposed to breakage. This was done by making a flange on the front face of the keeper plate, whereby the lower end of the hasp was received in a recess. That portion of the changes in the organization of the Crouch type of lock which consisted in placing the hinge of the hasp at a distance above the lower edge of the hasp plate, and in locating the cup part of the keeper plate near the meeting edges of the two plates, was a mechanical expedient or necessity, which would naturally suggest itself to the lock maker of ordinary skill. The character of this modification is magnified on the part of the patentee beyond its proper proportions. The meeting of the edges of the two plates and the hinging of the hasp necessarily resulted from the fact that the patentee wanted to use a dowel and socket connection and a springpressed hasp, and the locksmith would naturally group the elements of the combination in the way that the patentee adopted. second change, which consisted in having a flange upon the front face of the keeper, and thus forming a recess, is not mentioned in the claim, which was carefully drawn so as to include all the limitations and the peculiarities of construction upon which the patentee An unclaimed peculiarity of construction is rarely read into a claim, the life of which consists in minor improvements upon an old article, and in which the patentee has undertaken to point out minutely the distinctive features which differentiate his combination from that of pre-existing devices. Moreover, if the countersunk recess is properly to be read into the claim, it does not apparently strengthen the patentable character of the improvement.

The interlocutory order of the circuit court, granting an injunction against an infringement of the second claim of No. 337,187, is reversed, with costs.

A suit was brought by complainant against the same defendant in the circuit court of Connecticut, for infringement of the first claim of reissued letters patent No. 10,361, granted to Henry L. Spiegel, July 31, 1883, and of original patent No. 316,411, granted to Spiegel, April 21, 1885, and assigned to plaintiff, for improvements in cabinet locks. The patents were held void for want of novelty, and a decree was entered dismissing the bill (37 Fed. 338), which was afterwards affirmed by the supreme court on appeal. 150 U. S. 38, 14 Sup. Ct. 28.

ALLEN v. STEELE.

(Circuit Court, W. D. Pennsylvania. March 1, 1894.)

No. 37.

- 1. PATENTS-INVENTION-IMPROVEMENT.
 - Where the development of a certain industry has created a constant demand for new appliances, which the ordinary skill of those versed therein is generally adequate to devise, and which devising is the natural outgrowth of such development, the industry will not be burdened with a monopoly to each improver for every advance made, except where marked by invention somewhat above ordinary mechanical or engineering skill.
- 2. Same—Anticipation.

 Allen's patent, No. 332,318, for a device for transmitting motion in oil-pumping apparatus, held to have been anticipated by Shippen's device.

This was a suit in equity by George Allen against R. W. Steele for infringement of a patent granted to complainant for a device for transmitting motion in oil-pumping apparatus.

J. H. Osmer and Jas. C. Boyce, for complainant. W. C. Rheem and L. M. Plummer, for defendant.

BUFFINGTON, District Judge. George Allen brings this bill against R. W. Steele for alleged infringement of letters patent No. 332,318, to him granted December 15, 1885, for a device for transmitting motion in oil-pumping apparatus. The answer traverses the infringement charged, denies patentability, and sets up anticipation in a device of E. W. Shippen. The case necessitates a brief statement of the method of pumping oil wells. Originally, each had a boiler and engine of its own. The pumping was done by communicating power to sucker rods, which extended from the top to the bottom of the well. Later, a single boiler was used, and from it steam was carried to separate engines at each of several contiguous wells. In time this method was superseded by one engine and one boiler for the entire lot, by means which we now describe.

Such engine and boiler are placed at a central point, and connection made, by a belt, with a band wheel (as much as 20 feet in diameter), and distant about 50 feet. This space is required to prevent the belt from slipping, and to obtain the best mechanical results. On either end of the shaft of the band wheel were cranks, which connected by pitmen with an oscillating pull wheel. This wheel formed the center from which rigid rods, called "pull rods," radiated to the several wells, where they were connected with the sucker rods, or pumping mechanism. Over the engine, band wheel, and pull wheel, respectively, separate buildings were then erected. This method was expensive, the appliances cumbersome, and the mechanism scattered. It was in general use in 1883, and was used by E. W. Shippen at that time in pumping his wells at Sugar Creek, Venango county, Pa. In 1882 he conceived the idea of doing away with the band wheel, its substantial foundations, and its separate