

This is shown by various patents which have been taken out for different forms of stop mechanism. The present device is composed of a pair of spring arms supported parallel with the track, and opening outward at their free ends. The forward end of the approaching car runs between the spring arms, which then bear against the sides of the car, and, through friction, gradually bring it to a stop. This form of stop is not found in the prior art. The White patent, already referred to, describes an inclined spring blade which comes into collision with a projection on the car. This may work well with a gravity track, but not with a horizontal track, where it is necessary to bring the car gradually to rest. The Higgs patent, dated November 26, 1878, is a spring latch or catch, rather than a spring stop. No prior device disclosed in the record has the construction or mode of operation of the Osgood stop. The invention covered by this claim may be a narrow one, but the device seems to be new and useful, and adapted especially to a cash-carrier system operated upon the impulse plan. The defendants' car is provided near each end with a spring. These springs are in line with the track and wheels, and press elastically towards the wheels. At the end of the track where the car is to be stopped, the track has a tapering enlargement, so that the forward wheel of the approaching carrier is gradually clasped and finally held by means of the spring and the enlargement of the track. We regard this device as an equivalent of the Osgood spring stop.

The two patents now in suit were sustained at final hearing in this court by Judge Carpenter in the case of *This Complainant v. Whipple*, 75 Fed. 27. As, however, the defendants in the present suit contend that that suit was not contested bona fide, or at least not strenuously, I have preferred to consider the motion in this case on its merits, and independently of the former suit, or of the effect the decree in that case should have as a prior adjudication upon the determination of the present motion. Motion granted.

THOMSON-HOUSTON ELECTRIC CO. v. ATHOL & ORANGE ST. RY. CO.

(Circuit Court, D. Massachusetts. September 27, 1897.)

No. 644.

1. PATENTS—INFRINGEMENT.

The Blackwell patent, No. 470,817, for a railway motor of such an organization and construction that the armature and other parts which need frequent attention can be readily inspected or removed, and, when in operation, the less delicate parts of the motor protect those more delicate, is void for want of patentable invention.

2. SAME—MOTOR SUSPENSION FOR RAILWAY WORK.

The Rice patent, No. 448,260, for a motor suspension for railway work, the essential characteristics of which consist in the introduction of a double hinge, and in utilizing the motor frame for one leaf of the hinge, and the motor itself for the other leaf, the first leaf being journaled upon the driven axle, so that the car axle constitutes the pivot for the first leaf of the hinge, while the armature axis serves as the pivot for the other leaf, analyzed and construed, and held not infringed.

This was a suit in equity by the Thomson-Houston Electric Company against the Athol & Orange Street Railway Company for alleged infringement of two patents relating to electric railway motors.

Fish, Richardson & Storrow, for complainant.

Mitchell, Bartlett & Brownell, N. Sumner Myrick, and J. Albert Brackett, for defendant.

PUTNAM, Circuit Judge. This bill is brought on two patents, which it is claimed by the complainant are capable of joint use, and which were in fact so used by the respondent. One patent is that issued to Francis O. Blackwell, March 15, 1892,—No. 470,817. As to this, the complainant says that the claims in issue relate wholly to such an organization and construction of a railway motor that the armature, and other parts which need frequent attention, can be readily inspected or removed, and that when in operation the less delicate parts of the motor protect those more delicate. The court was impressed at the hearing with the view that there is nothing covered by this of a patentable nature, and its subsequent examination of the record and briefs has not changed this impression. This patent seems to fall within the principles of *Priest v. Manuf'g Co.*, 81 Fed. 615.

The other patent issued to Edwin Wilbur Rice, Jr., March 17, 1891,—No. 448,260. Its preamble claims the invention of a certain new and useful motor suspension for railway work. As to this patent, the court must confess that the results which it feels compelled to reach are not without doubt. The court especially finds itself not free from embarrassment arising from the multiplicity of claims on which the complainant relies, and the difficulty of analyzing them with relation to each other. A fundamental question in the case is whether the claims in issue are to be construed as covering a broad invention, or whether they are limited to mere mechanical details. Though some of them are doubtful of construction, yet many are clearly of a broad character, and the court finds itself bound to hold that the invention, as submitted to it, is of that nature. The complainant's device, so far as concerns the case in issue, is described in the specification practically as follows:

"The frame, being supported at one end by the car axle, is elastically supported at its other end by some portion of the truck frame. The opposite end of the field magnet may be supported in any desired manner. I prefer to support it elastically from the car body or from the truck frame,—as, for instance, by means of an elastic support, or by a flexible ball and socket joint. It will be observed that by means of this support for the motor, independent of the frame carrying the bearings therefor, said frame is relieved of the weight of the motor, and the weight is transferred to a support independent of such frame, while the rigid motor frame around the motor preserves an accurate alignment of the armature shaft and the driven axle of the vehicle. The particular manner of supporting the yoke end of the field magnet elastically or flexibly does not form any part of my present invention, and other means besides those shown may be employed in connection with the particular means hereinafter described for supporting the opposite end of the motor. Other special devices may be employed, instead of those shown, for supporting the end of the motor independently of the motor frame."

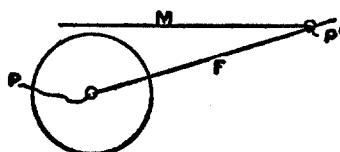
The function claimed by the specification, arising from this method of construction, is stated therein as follows:

"By my construction of supporting frame and mounting of the parts, hereinbefore described, I not only secure stiffness and rigidity when the apparatus is subjected to strain, but also an adaptation of the mechanism to vibrations, jars, or movements of the car and supporting parts, which will maintain the mechanism in unchanged relation during all conditions of working."

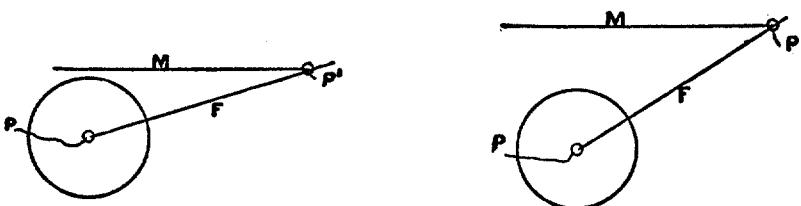
The different directions of the lines of force tending to produce vibrations and jars, and the serious evils resulting therefrom, were clearly pointed out at the hearing. No function additional to that stated in the extract we have made from the specification has been brought to our attention by the complainant, although devices contained in the patent, and referred to in claims not submitted to the court, cover others.

The complainant at the hearing described the alleged invention in issue as follows:

"The fact is, the exigencies of the street-railway art demanded two inconsistent things. One was the fixed relation which must be preserved between the motor gear wheel and the axle gear wheel, and the other was the capacity of the motor to be perfectly unconfined and free to 'float' with relation to this same car axle. The construction of the Rice patent in suit we think will be made clear by the following figure:



"In this figure, F represents the frame, and M the motor. The frame, F, is journaled to the driven car axle, P, so that this car axle serves as a pivot for the frame. The motor, M, is, in turn, hinged to the frame at the point, P'. It will be seen that, by this construction, Rice has introduced and made use of a double hinge, and, as a result of the compound motion thus obtained, the upper leaf of this hinge can do more than simply rotate. It is enabled to move bodily upward in space, without the necessity of any rotation, as illustrated by the two positions for the upper leaf shown in the following figures:



"The mere conception of a double hinge would not have accomplished the long-desired end in the street-railway art of maintaining a fixed relation between the motor gears and the gears of the driven axle, if Rice had not, in making his double hinge, utilized as the leaves for his hinge the motor frame and the motor, and for the pivots of his hinge the driven axle and the motor armature. For his first pivot, Rice utilized the driven axle of the car, and for the second pivot he utilized the armature shaft, cutting the motor free from its frame, and thus permitting the motor to turn upon a part of itself, namely, the armature shaft. It will now be seen that the motor, M, of the Rice patent, can, for the first time in the art, float bodily up or down, with relation to the driven axle of the car; and, in spite of this freedom of the motor to move

bodily up and down with relation to the car axle, the fixed relation or mesh between the motor gear wheel and the axle gear wheel is absolutely maintained, as illustrated in the preceding sketches."

The complainant emphasizes the advantages of its construction as follows:

"In the Rice motor neither the motor as a whole, nor any part of it, is compelled to 'jump' with the car axle."

And it points out the essential elements of its device as follows:

"The essential characteristics of this construction consist, not merely in the introduction of the double hinge, but in utilizing the motor frame for one leaf of the double hinge, and the motor itself for the other leaf of the hinge. Furthermore, it is essential to the Rice construction that the first leaf should be journaled upon the driven axle, so that the car axle constitutes the pivot for the first leaf of the hinge, while the armature axis serves as the pivot for the other leaf of the hinge. Finally, there must be combined with the above mechanism, arranged and pivoted as we have described, a pair of spring supports, one of which, at least, must be independent of the frame."

The element of sleeving the frame on the car axle makes it practicable that the gear wheel mounted on the armature axis, or receiving its motion from that axis, shall always mesh with the gear wheel mounted on the car axle, whatever position the motor may take by reason of the elastic support described. The principle underlying this seems very simple, when once stated. It is involved in the fact that, if the frame is thus sleeved, the circumference of the gear wheel receiving its motion from the motor must always be in the circumference of the gear wheel mounted on the car axle. The element of the so-called "double hinge," which co-operates with the devices for elasticity, we find clearly new, in this particular connection, and no doubt useful. The other element is the spring, or other elastic support. Thus, there are three elements, namely, the contrivance for keeping the gears in mesh, and the double hinge, combined with the springs in such way that the complainant maintains that there results a capacity on the part of the motor to float bodily up and down, with relation to the car axle. This means only that the motor is entirely held up or supported by springs, so that no part of it rests on a fixed basis incapable of elasticity. The first-named element is shown in almost every prior device discussed before us; and that it is common in the arts, so far as this case is concerned, is settled by the opinion of Judge Sanborn, speaking for the court of appeals for the Eighth circuit, in Adams Electric Ry. Co. v. Lindell Ry. Co., 23 C. O. A. 223, 77 Fed. 432, 443, 447. Therefore, in making use of this element, the respondent borrowed nothing from the complainant. What it did beyond this was as follows: The motor used by the complainant, and shown in its patent, is styled by the respondent to be of the "double-reduction form." This admits of such a location of the armature axis, shown in the complainant's illustrations which we have already reproduced, as permits the motor, with the parts putting it in relation with the armature axis, to assume normally the form and functions of one leaf of a hinge, as also represented by the complainant. On the other hand, the respondent's motor, as used in its manufactures, is what it styles the "symmetrical form of single-reduction mo-

tor." This normally shows the armature axis as the axis of a motor of a cylindrical form, with the weight distributed in every direction from it. Therefore the respondent's motor and armature, with the parts putting them in mutual relation, do not normally take the form of the leaf of a hinge, nor normally perform its functions, although in the case at bar we are satisfied it does perform them, and we would be holden to determine the suit for the complainant if this were the only issue. This last observation is also true as to respondent's claim that its motor supports the armature axis, instead of being supported by it, and as to its claim that its motor is lifted on springs, instead of depending from them, and also that its peculiar arrangement relieves the car axle by a larger proportion than the complainant's. Details of this character cannot be pressed successfully on the attention of the court in connection with an alleged invention so broad as that claimed by the complainant. It is plain that everything urged by the respondent with reference to the brushes is equally irrelevant.

The simplest way of solving this case is to return to a consideration of what the respondent has in fact done, and, bearing in mind that the device by which, in combinations of this class, the gears are kept in mesh, is a matter of common right, to inquire at once whether whatever in addition thereto the respondent has availed itself of is not also within the like right. In many patent causes this is a much simpler and safer method of solving the questions at issue than to inquire first as to patentability, and second as to infringement. In answering this question, it is to be borne in mind that the matter of elastic suspension by springs, and of otherwise giving either entire or partial independent support, is so common in the arts, and has taken on such innumerable forms, that it cannot easily be perceived that any method not heretofore used remains. The presumption is therefore against patentability in any mere form of elastic suspension, unless under exceptional circumstances. We do not understand that the complainant holds otherwise, as we think nothing patentable is claimed for the mere method of adjusting or attaching or locating the springs, or for anything relating to them independently of the peculiar double hinge which the patent describes. Also, it cannot be denied that the respondent was within its right in using its peculiar motor, which normally locates its armature at its axis, and, as a necessary element to the operation of its motor, in using its armature shaft as a pivot. All this is in the common field of mechanical construction. What would remain would be the question of holding the motor in position. This would, in ordinary course, be by support either at its center or at its radial poles, and, in either case, rigidly or elastically. In the normal work of construction the mechanical engineer must select, and, in an art of so common a character as that of so suspending heavy working parts elastically as to minimize the shock, he might rightfully select either. This is all which has been done by the respondent. Therefore, if complainant's patent is so broad as to cover respondent's device, it is too broad to be sustained. The case undoubtedly shows difficulties in the way of adjusting and disposing of the weight of an electric motor so as to relieve the superstructure and the car from the

effects of shock, and to minimize the consequently increased cost of maintenance; but it does not show that electrical engineers had been endeavoring to overcome them, except incidentally, or that they considered that there was involved anything more than the usual problem of easing the shock common to all road vehicles. The state of the art, as proven by the complainant's expert, covers the history of this matter. The prior efforts shown by him, and explained by the complainant, were looking especially towards finding a method of attaching the motor to the car axle instead of to the car body, and also to increasing the tractive power of the wheels. Moreover, we have not been referred to proofs that the complainant's device actually overcame in practice the difficulty described, or minimized it to any considerable degree. The evidence in these respects falls far short of that class of proof sometimes accepted as overcoming a presumption that what was accomplished was within the scope of ordinary mechanical work. On the whole, we must conclude that the complainant fails to maintain its suit. Let a decree be entered, as provided in rule 21 of this court, dismissing the bill, with costs.

CAMPBELL MACH. CO. v. EPPLER WELT MACH. CO.

(Circuit Court, D. Massachusetts. October 8, 1897.)

No. 645.

1. PATENTS—VALIDITY AND INFRINGEMENT—WAX THREAD SEWING MACHINES.

The Campbell patent, No. 253,156, for improvements in wax thread sewing machines, whereby the conjoint and opposed movements of the thread arm and eye are dispensed with, and the abrasion incident thereto obviated, construed, and held valid and infringed as to the nineteenth claim.

2. SAME.

The Campbell patent, No. 374,936, for an improvement in wax thread sewing machines, consisting of a device for reducing the momentum of the take-up mechanism, and thereby securing greater uniformity in the locating of the lock, is void for want of patentable invention.

This was a suit in equity by the Campbell Machine Company against the Eppler Welt Machine Company for alleged infringement of two patents, for improvements in wax thread sewing machines.

James E. Maynadier, for complainant.

Fish, Richardson & Storrow, for defendant.

BROWN, District Judge. This is a suit for an injunction and account based upon the nineteenth claim of patent No. 253,156, dated January 31, 1882, and upon the first claim of patent No. 374,936, issued December 20, 1887. Both patents were issued to the complainant as assignee of D. H. Campbell, and relate to wax thread sewing machines. The questions are of validity and of infringement.

The nineteenth claim of patent 253,156 is as follows:

"19. The combination, substantially as hereinbefore described, of a hook needle, a thread arm, a thread eye, and operating mechanism for the arm and eye, which causes said eye to first carry and deliver the thread to the arm and thence deliver thread to the needle, and also causes the arm to merely re-