

EX PARTE SPRAGUE.

[3 App. Com'r Pat. 211.]

Circuit Court, District of Columbia. Sept. 3, 1859.

PATENTS—NOVELTY—INVENTION—BRIDGES.

[Sprague's invention of an improvement in bridges, consisting of a series of clutches in combination with tubular sections and with braces for making truss bridges, possesses novelty and utility, and is patentable.]

Appeal by Joseph W. Sprague from the decision of the commissioner of patents, rejecting his application for a patent for an improvement in bridges.

MORSELL, Circuit Judge. The specification presented with the application states: "My bridge is made chiefly of boiler-plate, or wrought iron, and it combines strength and lightness with comparative cheapness of construction. My invention consists of a series of clutches of a peculiar construction, in combination with tubular sections and with braces for making truss bridges. What I claim as new in the construction of bridges, and desire to secure by letters patent of the United States, is the above-described series of clutches, c, with bands, c, in combination with the tubular sections, B, for the purposes, substantially, as set forth."

The commissioner, in the report of the examiners, adopted by him, says: "Sprague now claims the above-described clutches, c, provided with bands, c, in combination with the tubular sections, B, for the purposes as substantially set forth. It will be perceived that the clutches with bands are not claimed in combination with any part of the bridge except the sectional tubes; and as these tubes are shown in the application of W. B. Moore for a patent for an improved pipe-coupling rejected July 25, 1855, we cannot discover why the conditions of Sprague's claim

are not therein fully met. Indeed the very terms of Sprague's specification may be used in describing Moore's coupling, and it is evident that in the one, as well as in the other, the coupling may be made to grasp the pipes by means of heat and shrinkage. In short, the couplings, including the bands, c, are identical in form and structure in both cases, as will be seen on a careful examination of the models, and may be applied to the same purposes or used interchangeably, and cannot in the one case perform functions which they do not in the other. Sprague has not, therefore, made any invention. He has produced a mere application of an old device to a new use, and thus, it is well settled, is not the subject of 957 letters patent." The recommendation in this report was followed by the commissioner, and the patent finally refused, June 26, 1858.

The appellant filed two reasons of appeal from this decision. They are very general: First, that the improvement in bridges made by the said Joseph W. Sprague is new and useful and therefore patentable. Second, the decisions of the commissioner of patents rejecting said Sprague's improvement in bridges are contrary to the law and the evidence in the case.

In reply to these reasons, the acting commissioner of patents says: "The appellant has had two different applications for a patent for improvements in bridge construction before this office, both of which have been rejected on substantially the same grounds. The first application, made or completed June 18, 1857, claimed, by an amendment filed July 14, 1857, the combination of independent connecting pieces of wrought or cast iron with tubular chords, or beams, braces, &c., of an iron bridge. The second application, made April 14, 1858, claimed a series of clutches with bands in combination with the tubular sections of a bridge. These cases were each twice rejected by the examiner, and a third time by the commissioner,

mainly on the ground that there appeared to be no novelty in the applicant's method of connecting the tubular sections by thimbles or collars, &c., as shown by the references adduced, although these connections were used in other relations, and that, as there was no novelty in forming the frames and trusses of bridges of tubular sections, there appeared to be no just grounds of patentable combination presented, &c."

Due notice of the time and place of hearing having been first caused to be given, the commissioner caused the said decision, reasons of appeal, report thereon, and all the original papers, with the references, to be laid before the judge. His argument in writing and the said case was submitted for consideration.

There is no doubt that if what Sprague has produced is, in the language of the commissioner, "a mere application of an old device to a new use," he is not entitled to a patent therefor. But he contends, and I think correctly, that his wrought iron tube, B, and the clutches, c, provided with shoulders for the support of the diagonal braces, and with bands, c, shrunk on said clutches, the whole being so arranged that the great strains to which that kind of bridge is subjected to shall be equalized by being distributed and transmitted from part to part in combination with, the whole bridge to which those devices are intended to apply, are new, substantially and important improvements of bridges of that construction; that is, of wrought iron truss bridges. That wrought iron truss bridges have in recent times been though greatly superior to cast iron bridges, and preferred on all occasions by the most experienced engineers, for truss bridges. That his bridge, in combination with which his new contrivances or devices, as arranged, are intended to operate, is almost entirely formed of wrought iron. That the judicious effect of said arrangement in the distribution of all the great strains to the various points appropriated and fitted for the purpose, makes it a

much stronger bridge than any others, and effected at considerably less expense than any of that kind, with the advantage of being lighter, also dispensing in every instance with the necessity of using rivets, thereby avoiding delay and expense and substituting what is more perfect. That by his new method he has overcome the difficulty of connecting together wrought iron tubes and wrought iron rods, heretofore an insuperable obstacle to their use in combination.

It would be well to notice here that, according to the view taken of it in the opinion and report of the commissioner, he thinks the combination is limited by the description of the claim to a combination with the clutches, c, provided with bands with tubular section, B, for the purposes substantially as set forth. On that subject, I think, if the whole specification is taken together in construction (which it ought to be where there is any doubt), it will appear that "the purposes set forth" as stated in the specification substantially are that they must be placed so as to operate in connection with the whole structure or bridge, in the relations to that whole structure as particularly described, and as forming united parts of it, and not to a more isolated condition. If such was the meaning, such the ascertained thing, is it like either of the references given by the commissioner?

First as to Harbach's bridge. The employment of tubes of iron in this bridge does, it is true, bear some resemblance to that of Sprague's, but the peculiar devices, it is believed, are very essentially different. The first difference I notice is in Harbach's bridge; the tubes have only a common lap joint, the end of one tube passing into the end of the other, without provision to meet and equalize the necessary strains, or for performing the other useful and necessary functions of the clutches of Sprague's bridge. Again, Harbach connects the tubes on the center of the panel, between two points of support. This is believed

to be the weakest point of the beam, and therefore the most improper for such a purpose as coupling. Sprague's break in the continuity of the tubes is made at a point which is in every way guarded against lateral flexures,—a most material difference. Harbach constructs his lower chord of tubes of boiler-plate iron riveted together. The only strain which can act upon the lower chord is one of tension. A riveted tube for this purpose and in that position is a bad form of construction. Sprague's tube everywhere, by his peculiar device, is in the best possible connection for transmitting and equalizing strains. 958 As to the other references,—Moore's application for an improved pipe-coupling rejected July 25th, 1855. The couplings of Moore are made of brass with a screw cut upon each end, which screws are then used to cut a corresponding screw in the soft leaden pipe as the joint is put together. How, according to the idea suggested in the report, can this be dispensed with and a band shrunk on, as in Sprague's? How could this be done to answer the intent and purpose of the inventor? If, indeed, it could for any purpose of either party, where would the shoulders, as in Sprague's clutch for the support of the diagonal braces, be placed for any useful purpose, in the couplings of the gas pipe, and how could they be used interchangeably as supposed? And so also as to Sprague's lower chord; what possible trace can be found of the least resemblance to the coupling of a gas pipe? Is there any principle in the two alike? The designs, objects and intent and operations of the two are entirely different; the one is to be occupied in the combination of a truss-bridge. The other as a gas pipe. I think, therefore, that there is sufficient novelty in the claim presented by the appellant, and that the opinion of the commissioner is erroneous and ought to be reversed.

MORSELL, Circuit Judge. I, James S. Morsell an assistant judge of the circuit court of the district of

Columbia, do certify to the Hon. the commissioner of patents that, after due notice given of the time and place of hearing the above-mentioned appeal, and after the decision reasons of appeal, report thereon, and all the original papers, with the references on the said day were laid before me by the said commissioner; and after the said Joseph W. Sprague, by his counsel, appeared, and filed his argument in writing, the said case was deliberately considered by me, and upon such consideration I am of opinion, and do so decide, that the said decision of the commissioner is erroneous and ought to be reversed, and the same is hereby reversed and annulled, and it is hereby ordered that a patent be issued by him to said Joseph W. Sprague for his invention aforesaid, as prayed.

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