Jan. 8, 1924. 1,480,147

F. BRANDT

STRINGER CLAMP

Filed June 28, 1920

Fig. 1

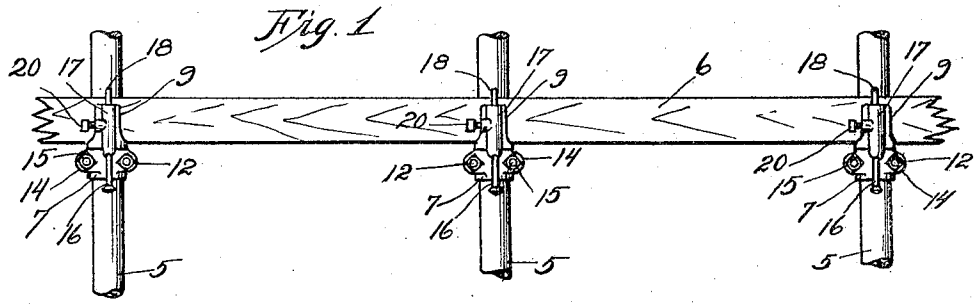

Fig. 2

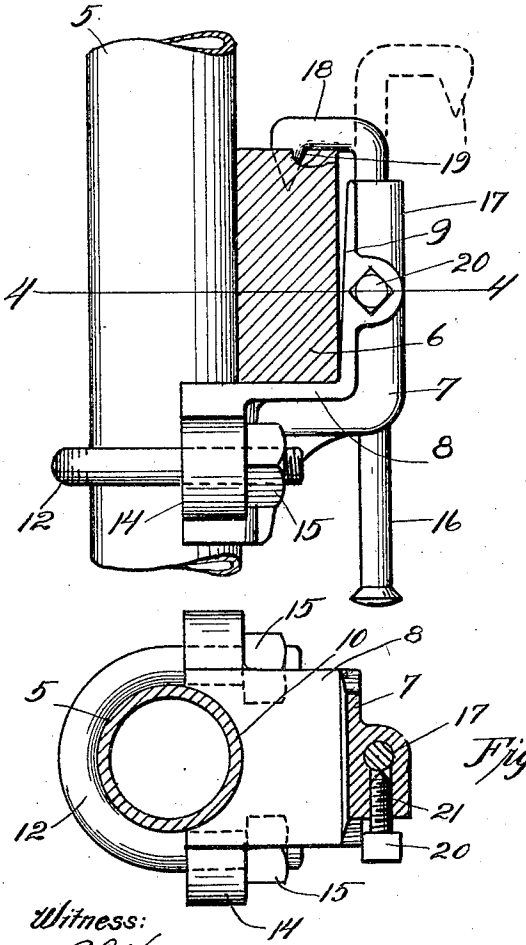

Fig. 3

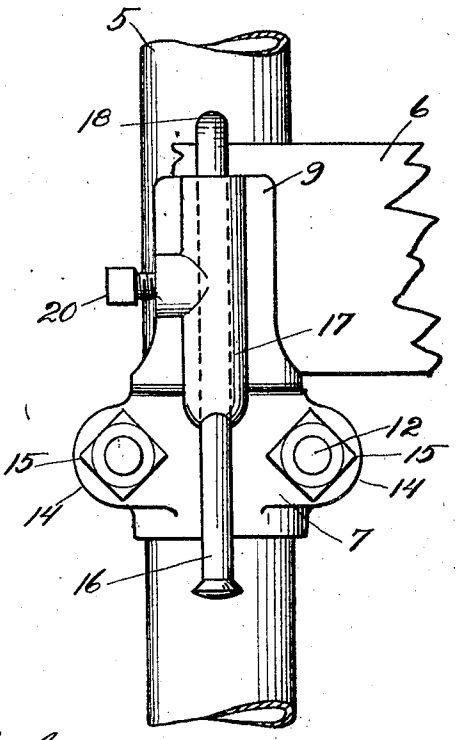

Fig. 4

Witness:
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Inventor;
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By Thorpe Gerard
attys.

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UNITED STATES PATENT OFFICE.

FOKKO BRANDT, OF KANSAS CITY, KANSAS, ASSIGNOR TO THE BRANDT & KRELL ENGINEERING COMPANY, OF KANSAS CITY, KANSAS, A CORPORATION OF KANSAS.

STRINGER CLAMP.

Application filed June 28, 1920. Serial No. 392,384.

To all whom it may concern:

Be it known that I, FOKKO BRANDT, a citizen of the Republic of Germany, and resident of Kansas City, in the county of Wyandotte and State of Kansas, have invented a certain new and useful Improvement in Stringer Clamps, of which the following is a complete specification.

The present invention relates to scaffolding or other supporting constructions of an analogous character, and aims to provide an improved means of attachment for enabling the stringer members to be secured to the framework of such constructions in supported relation.

Accordingly, I have devised an improved type of bracket structure whereby the various brackets may be attached to the upright members of the framework at any desired elevation, in position to receive the stringer members and allowing the latter to be assembled by a single workman in the most convenient manner possible, means being also provided for appropriate engagement with the upper edges of these stringers and retaining the same securely within the several brackets supporting any one of said members.

More specifically, the improved stringer supporting structure comprises a bracket adjustably mounted as described, and provided with anchoring means comprising a rod mounted for both vertical and angular adjustment within the bracket, the upper end of said rod being formed with an arm movable into and out of overhanging relation to the stringer member and formed with a spur adapted to be embedded in the upper edge of the stringer.

With this general object in view, the invention will now be described by reference to the accompanying drawing showing one form of construction which I have devised for embodying the improvement, after which the novel features therein will be specifically set forth and claimed.

In the drawing:

Figure 1 is a fragmentary side elevation illustrating a portion of a scaffolding structure, and showing a stringer member supported by bracket elements constructed in accordance with the present invention;

Figures 2 and 3 are enlarged detail views, each illustrating a fragmentary portion of one of the upright members and Figure 2 showing a side view of the bracket member, while Figure 3 shows a face view of the same; and

Figure 4 is a transverse section taken on the line 4—4 of Figure 2.

Referring now to the drawing in detail, this illustrates the improved construction in connection with a portion of a scaffolding comprising a plurality of upright members 5, to which are attached at intervals a series of stringer members 6 (only one of which is shown), the upright members 5 being provided with suitable bracket elements for securing the said stringer members in proper supported relation. In the present case, these supporting elements comprise bracket members 7 of angular form for providing a supporting ledge 8 engaging the under edge of the stringer 6, while the upright portion 9 of the bracket is adapted to engage the outer side face of said stringer, as illustrated in Figure 2. The lower or horizontal portion 8 of the bracket is formed with an arcuate recess 10 of a size adapted to conform to the upright 5 to which the bracket is attached, and for securing each bracket to the corresponding upright, a U bolt 12 is provided which is adapted also to embrace the upright from the opposite side, the ends of the U bolt being passed through the perforated ears 14 formed on the lower end of each bracket, and firmly secured by means of nuts 15, whereby the bracket 7 is held rigidly in any position to which it may be adjusted vertically along the upright 5.

Means is provided for allowing the stringer 6 to be let down freely within the bracket and thereafter securely holding the same within the bracket by engagement with the upper edge of the stringer. This means takes the form of an anchoring rod, the shank portion 16 of which is mounted for vertical adjusting movement within a hollow or tubular rib or sleeve 17 formed on the outer face of the upright portion 9 of each sleeve 7, the upper end of this anchoring rod being bent substantially at right angles to form an arm 18 terminating in a spur 19 which is adapted to be embedded into the upper edge of the stringer 6. With this arrangement, it is apparent that the arm 18 may be swung into or out of overhanging relation to the stringer 6, as illustrated in Figure 2, by virtue of the movement permitted the rod 16 about the axis

of its shank portion within the sleeve 17, while the arm may of course be elevated to different heights on account of the sliding movement permitted the rod 16 within said sleeve. A clamping screw 20 threaded through a lateral opening 21 into the sleeve 17 is utilized for securely retaining the anchoring rod in any of its positions by clamping engagement with the shank portion 16 thereof.

It is thus apparent that a bracket structure is provided for knock-down scaffolding purposes which not only permits of the assembling of the stringer 6 at any desired elevation, but permits the stringer to be mounted conveniently by the work of one man, who is enabled to mount these stringers in position as a whole or bodily within several brackets, or the stringers can be put in place by engaging the same with one of the brackets and thereafter swinging the stringer into position within the remainder of the brackets in an obvious manner and without danger of the stringer becoming disengaged and possibly falling to the ground on account of the workman losing his hold on the stringer. The provision of the anchoring rod with its arm 18 which is shiftable either into or out of overhanging relation with reference to the top of the stringer, permits of these described assembling operations of the stringer and at the same time provides a means for retaining engagement through the medium of the spur 19 adapted to be embedded in the top edge of the stringer and thereby securely hold the same within the bracket. The vertical adjustment of said anchoring rod by sliding the same within the sleeve 17 accommodates for various different widths of stringers in addition to the slight vertical movement necessary for allowing the spur 19 to be embedded in the stringer, which is accomplished by one or two blows with a hammer or the like before the clamping screw 20 is tightened.

An extremely simple, compact and yet efficient construction is thus provided for carrying out the desired objects of the invention, and while I have illustrated and described what I now regard as the preferred form of construction, I desire to reserve the right to make such changes as may fairly fall within the scope of the following claims:

What I claim is:

1. The combination with an upright, of a stringer, an angular bracket carried by said upright and supporting said stringer, and a vertically adjustable anchoring rod carried by said bracket and formed with an arm adapted to be clamped down upon the upper edge of said stringer.

2. The combination with an upright, of a stringer, an angular bracket carried by said upright and supporting said stringer, and a vertically and angularly adjustable anchoring rod carried by said bracket and formed with an arm movable into and out of overhanging relation to said stringer, said arm being adapted to be clamped down upon the upper edge of said stringer.

3. The combination with an upright, of a stringer, a bracket carried by said upright and supporting said stringer, and an anchoring rod having a vertical shank portion adjustable vertically with reference to said bracket, said rod being formed with an arm adapted to be clamped down upon the upper edge of said stringer, said arm being movable angularly with said rod about the axis of said shank portion for bringing said arm out of overhanging relation to the stringer, and a clamping screw for securing the rod in various adjusted positions.

In witness whereof I hereto affix my signature.

FOKKO BRANDT.