Oct. 8, 1929. O. S. FLATH 1,730,606

SIGNAL AND SWITCH CARRIER SUPPORT

Filed July 10, 1925

Fig. 1.

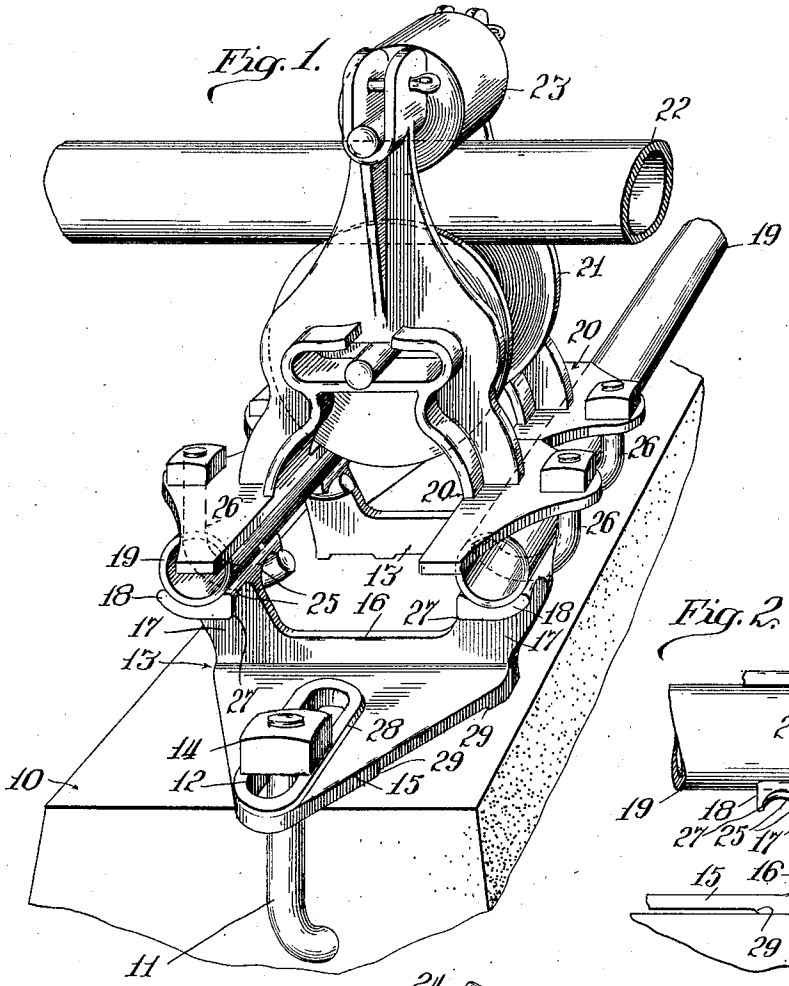


Fig. 2.

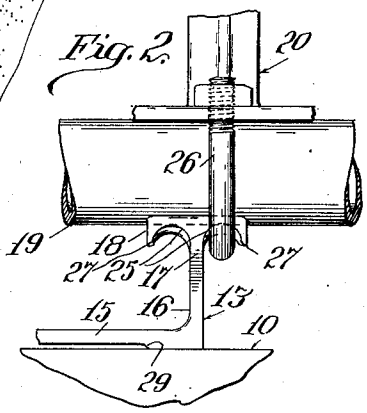
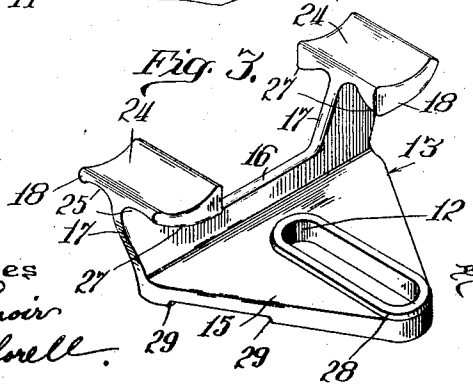


Fig. 3.



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Patented Oct. 8, 1929 1,730,606

UNITED STATES PATENT OFFICE

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SIGNAL AND SWITCH CARRIER SUPPORT

Application filed July 10, 1925. Serial No. 42,667.

My invention relates to supports for the pipe carriers or brackets of railway signal systems and has for its object the provision of a support which eliminates the use of special base or foundation plates, while at the same time providing a construction which will permit adjustment of the rails or pipes, for carrying the brackets or carriers, to be easily and quickly made so as to enable proper alignment of the brackets or carriers of the signal system regardless of the exact or true alignment of the foundation or piers.

Another object of my invention is to provide a support which may be easily and quickly assembled in a system and which at the same time will prevent displacement of the fastening elements or bolts by the vibration and jars encountered in the operation of the signal system.

The invention also has for its object the provision of a support with as few projections or protruding portions and hence a support which may be comparatively cheap to manufacture and which will not easily become broken.

The objects and advantages of my invention will all be more readily understood and comprehended from the detailed description of the accompanying drawing, wherein:—

Figure 1 is a perspective view of a portion of a signal system with my improved support; the upper portion only of a foundation or pier being shown.

Figure 2 is a side elevation of my improved support and a portion of the foundation, supporting rail or pipe and lower portion of the standard or bracket.

Figure 3 is a detail perspective view of my improved support.

In the particular exemplification of my invention, the top or upper portion of the usual foundation or pier is shown at 10, of conventional form usually employed in the installation of the lead outs of signal systems; side walls of the piers or foundations being usually provided with a recess or socket to receive the heads or hook-portions of the tie rods or bolts, one of which is indicated at 11 in Figure 1. The upper threaded end of the bolt 11 is intended to extend through the slot 12 of my improved supporting member or pedestal which is generally indicated at 13; the support being firmly clamped onto the top of the foundation or pier by the nut 14 which is of greater width than the slot 12 and therefore straddles the same as shown in Figure 1.

The support 13 comprises a substantially flat or horizontally disposed base 15 of any suitable configuration, being preferably of the triangulated form shown for the purpose of cheapness in manufacture by the use of as little metal as possible and at the same time having the necessary strength. One side, namely the flared or wide side of the base portion 15, is provided with an upstanding web 16, which at its ends is formed into the upward extension or portions 17, 17 and these in turn terminate in the horizontally and transversely disposed portions 18, 18 formed to extend on opposite sides of the median line of the web 16.

My improved support is especially intended for use in connection with tubes or pipes 19 for supporting the carriers or brackets 20 which latter are of the conventional form employed, having a loosely journaled pulley 21 for the switch or signal operating rods or tubes 22 which are held against vertical displacement by the roller 23 secured in the upper ends of the brackets or carriers 20. As the brackets per se are of the usual construction and form no part of my invention, a specific detailed description thereof need not be entered into.

In order to adapt my support to the use of tubes or pipes 19, the transversely disposed portions 18 are preferably dished or hollowed out on their upper surfaces as at 24 in order to more or less fit the contour of the tubes or pipes 19 and thus provide a good seat therefor. The under sides of the transversely disposed portions 18 are preferably given an arcuate formation or curvature 25 in a direction transversely of the upper dished surface 24 and on each side of the extension 17 of the webs, so as to more or less conform with the curvature of the head or hook portions of the hook-bolts indicated at 26. These under surfaces 25 are also preferably somewhat dished

or grooved so as to provide the depending lip portions 27 at the ends of the portions 18 in order to prevent accidental displacement of the hook-bolts; that is to say, to prevent the hook-bolts 26 from becoming disengaged from the extension 18 as might result during the continuous jarring or vibration encountered by the various elements in the repeated operation of the signal or switch system.

My improved support is preferably provided with the head portions or extensions 18 on opposite sides of the median line of the web 16 so as to permit of adjustment of the brackets in a direction transversely of the supports and thus permit of proper alignment of the respective brackets or carriers on the various piers or foundations in order that the respective brackets or carriers of a particular unit or lead may all be aligned to receive the continuous tubes or pipes 22 whereby the signal or switch is shifted or operated. That is to say, in certain instances, the hook-bolts 26, which not only clamp the carriers or brackets to the carrier rods or pipes 19 but also secure the superposed elements to the pedestals or supports 13, in certain instances may engage with the extension or head on one side of the web 16 while the hook-bolts 26 of an aligned bracket or carrier on the next adjacent pier or foundation may engage with the extension or head 18 on the opposite side of the web 16 of the correlated support or pedestal.

As is apparent from the construction shown, the same means for fastening the carrier or bracket in place is also employed for securing the supporting tube to the pedestal or support, so that the necessity of using numerous bolts and consequent adjustments is obviated and therefore a lesser number of parts to become loose through the constant vibration of the entire system results.

The slot 12 in the base portion 15 of my improved support or pedestal is preferably disposed in a direction lengthwise of the base portion so as to enable suitable adjustments of the pedestals or supports relative to the piers or foundations 10 in order to provide proper alignment of all of the elements of a signal or switch operating system; and the slot, for the purpose of reenforcement and to ensure a proper seating and gripping relation of the nut 14, is preferably surrounded by a reenforcing rib or flange at 28. The under surface of this base portion 15 is also preferably provided with longitudinal ribs as at 29, to adapt the support or pedestal to the more or less uneven surface frequently encountered on the foundations or piers; and therefore to provide a firm seating of the pedestal or support on the pier.

My improved support or pedestal consists of a single casting or piece, T-shape in cross section having an extended base on one side which is also preferably tapered or somewhat V-shape as shown so as to materially reduce the cost of manufacture and at the same time provide a light structure having the requisite strength adapted to withstand the jars and vibrations to which it may be ordinarily subjected; at the same time a structure is provided, which, as can readily be seen, may be quickly installed and replaced when necessary; the installation and replacement merely necessitating the loosening or unscrewing of the nuts on the pier engaging hook-bolt 11 and of the two hook-bolts 26. At the same time a structure is provided which, after being properly installed, will maintain the superposed elements in proper relation and position.

It is evident that the under surfaces of the heads or extensions 18 may be given any configuration commensurate with the configuration of the head or hook portion of the clamp bolts 26; the lips 27 preventing movement or shifting of the head of the bolts 26 off of the heads or extensions 18; and the support or pedestal may be modified in certain other minor respects without, however, departing from the spirit of my invention.

What I claim is:—

In combination with a foundation, a carrier support arranged adjacent to a side of the foundation, comprising a single piece pedestal composed of a substantially flat plate constituting the base portion and an integral upstanding portion along one of the marginal edges of the plate, the base portion having a closed ended slot extending transversely of the outer end of the plate toward said upstanding portion, both ends of said upstanding portion terminating in laterally disposed heads having dished upper surfaces, while the lower surfaces of the heads at their ends have depending ribs disposed transversely of the heads and of the dished surfaces.

OTTO S. FLATH.