July 28, 1931. P. S. WESTCOTT 1,816,063

ELECTRIC CONNECTER

Filed Jan. 25, 1930

Fig. 1.

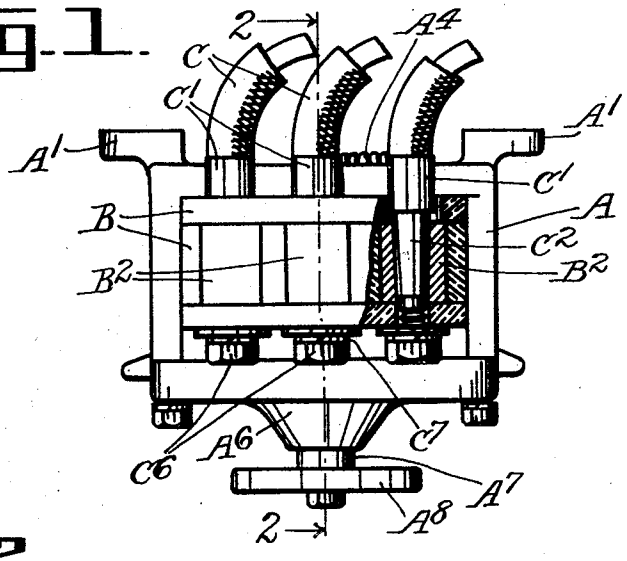


Fig. 2.

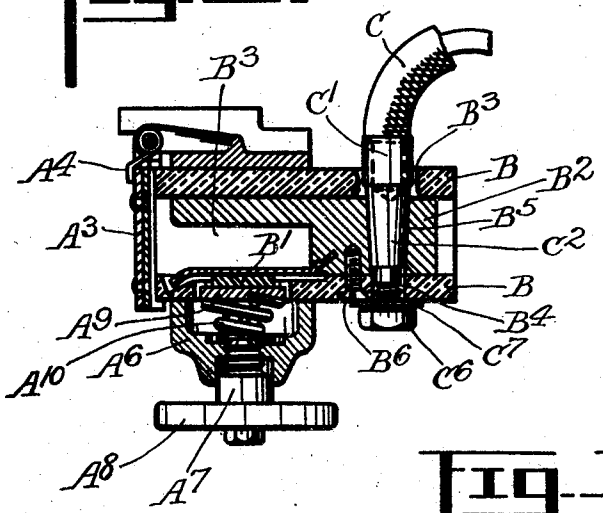
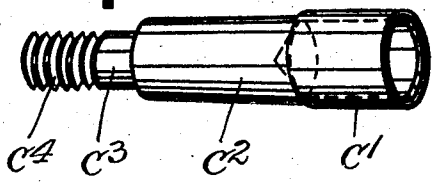


Fig. 3.



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UNITED STATES PATENT OFFICE

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ELECTRIC CONNECTER

Application filed January 25, 1930. Serial No. 423,299.

My invention relates to improvements in electric connecters for railroad car electric systems and the like and has for one object to provide a new and improved means for fastening together the conductors, the conductor socket and the housing therefor. Other objects will appear from time to time throughout the specification and claims.

My invention is illustrated more or less diagrammatically in the accompanying drawings, wherein—

Figure 1 is a rear elevation of housing assembly with parts in section;

Figure 2 is a transverse section along the line 2—2 of Figure 1;

Figure 3 is a perspective view of one of the terminal elements.

Like parts are indicated by like characters throughout the specification and drawings.

A is a supporting yoke. It has legs A^1 which may be bolted, screwed or otherwise suitably attached such as to the car frame or the like. The front end of this yoke has a pivoted cover A^3 having a spring A^4 which closes the cover. The box A^6 projects downwardly below the cover and has threaded therein a shank A^7 provided with a hand wheel A^8 and adapted to engage a locking plate A^9. A^{10} is a spring encircling the shank and interposed between the locking plate A^9 and the interior of the boss A^6 tending yieldingly to urge the locking plate A^9 in the same direction as it is positively forced by the threaded shank.

B is an insulating socket forming a housing enclosed within the yoke. This socket projects forwardly through the yoke into the same plane as and is closed by the door A^3. B^1 is an insulating plate resting on the lock plate A^9 and adapted to engage a conductor socket B^2 which socket is cut away as at B^3 to provide an aperture to receive a holding connecter member not here shown. The housing B is provided at the top with a relatively large aperature B^3 and at the bottom with a relatively small aperture B^4, these two apertures being in line, and in line with them is a tapered aperture B^5 in the body of the terminal socket B^2. B^6 is a holding screw that passes through the housing and is threaded through the block or socket B^2 to assist in holding it in position.

C is the conductor cable, it is soldered or otherwise fastened in the socket C^1 formed in the end of the connecter spool C^2, which spool is reduced in diameter at its end as at C^3 and threaded at C^4. By this means, there is a close intimate terminal electrical and physical connection between the spool C^2 and the conductor or cable. The parts are assembled by inserting the spool through the large aperture B^3, seating it in the aperture B^5 and having the threaded portion C^4 project outwardly through the aperture B^4. C^6 is a nut threaded on such portion C^4 and associated with a washer C^7 engaging the housing.

The clamp bar is held by the threaded shank against the housing and against the conductor to hold the parts in position in the yoke. The small screw assists in holding the conductor socket in the housing and when the nut C^6 is tightened up, it draws the tapered spool tightly into its socket or seat in the block B^2 and also tightly holds the block B^2 in position in the housing, thereby serving both to make a strong mechanical connection to draw and hold the parts together and a satisfactory tight electrical contact to provide a satisfactory electrical connection.

I claim:

1. In combination, an insulating housing, a block socketed to removably engage a connecter, means for holding the block in position in the housing, a conductor, a tapered terminal spool on the end thereof, socketed in the block, threaded at its end, a nut on the threaded end engaging the exterior of the housing to simultaneously make a firm electric contact between the spool and the block and hold the block in position in the housing.

2. In combination, an insulating housing, a block socketed to removably engage a connecter, means for holding the block in position in the housing, a conductor, a tapered terminal spool on the end thereof, socketed in the block, threaded at its end, a nut on the threaded end engaging the exterior of the housing to simultaneously make a firm elec-

tric contact between the spool and the block and hold the block in position in the housing, a yoke, a clamp adapted to hold the housing in fixed position on the yoke and means associated with the clamp for holding the housing in the yoke and for holding the block in position in the housing independent of the means above referred to for holding the block in the housing and independent of the spool.

3. In combination, an insulating housing, a block socketed to removably engage a connecter, means for holding the block in position in the housing, a conductor, a tapered terminal spool on the end thereof, socketed in the block, threaded at its end, a nut on the threaded end engaging the exterior of the housing to simultaneously make a firm electric contact between the spool and the block and hold the block in position in the housing, a yoke, a clamp adapted to hold the housing in fixed position on the yoke and means associated with the clamp for holding the housing in the yoke and for holding the block in position in the housing independent of the means above referred to for holdng the block in the housing and independent of the spool, the yoke being adjacent the socketed end of the block, the terminal extending from the housing at a point removed from the yoke.

4. In combination, an insulating housing, a block socketed to removably engage a connecter, means for holding the block in position in the housing, a conductor, a tapered terminal spool on the end thereof, socketed in the block, threaded at its end, a nut on the threaded end engaging the exterior of the housing to simultaneously make a firm electric contact between the spool and the block and hold the block in position in the housing, a yoke, a clamp adapted to hold the housing in fixed position on the yoke and means associated with the clamp for holding the housing in the yoke and for holding the block in position in the housing independent of the means above referred to for holdng the block in the housing and independent of the spool, the yoke being adjacent the socketed end of the block, the terminal extending from the housing at a point removed from the yoke, a cover plate pivoted on the yoke adapted to close the end of the housing and enclose the socketed end of the block.

5. In combination, an insulating housing, a block socketed to removably engage a connecter, means for holding the block in position in the housing, a conductor, a tapered terminal spool on the end thereof, socketed in the block, threaded at its end, a nut on the threaded end engaging the exterior of the housing to simultaneously make a firm electric contact between the spool and the block and hold the block in position in the housing, the housing being apertured on opposed sides in line with the tapered aperture in the block which is engaged by the spool, both said apertures being of such size as to be out of contact with the spool.

6. An electric connecter comprising a yoke, an insulating housing contained therein, a socketed conductor block contained within the housing, a clamp member associated with the yoke, adapted to hold the housing rigidly in position in the yoke and the socketed block in position in the housing, means interposed between the housing and the block at a point removed from the socketed portion therefor for holding them in predetermined relation, a tapered conductor spool socketed in the block projecting through both walls of the housing and means associated with the spool and the housing for drawing the spool longitudinally through the block to make an electric contact between them and for holding the housing and the block firmly together.

Signed at Chicago, County of Cook and State of Illinois, this 16th day of January, 1930.

PHILIP S. WESTCOTT.