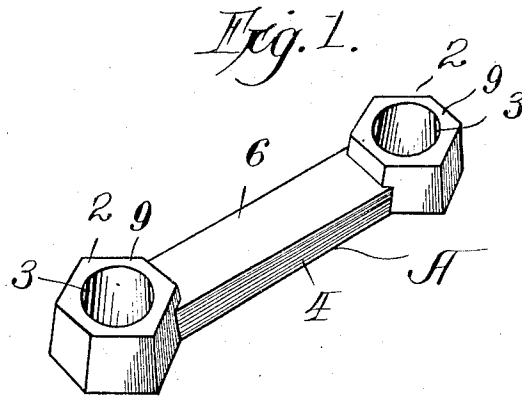
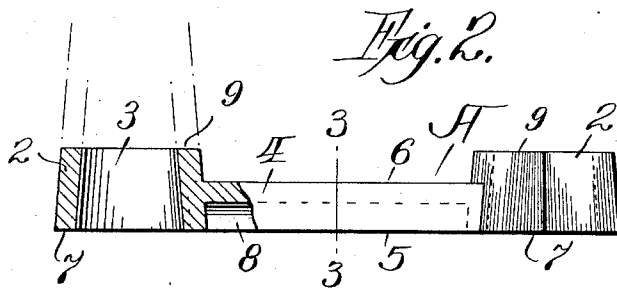
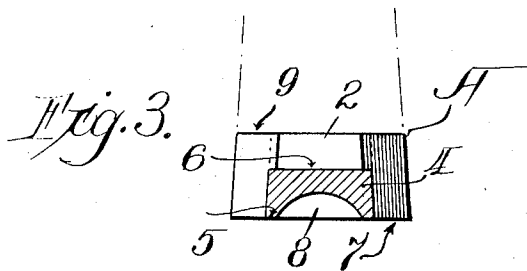


L. J. SHIELDS.
STORAGE BATTERY CONNECTOR.
APPLICATION FILED AUG. 8, 1918.

1,382,129.

Patented June 21, 1921.



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UNITED STATES PATENT OFFICE.

LYTTON J. SHIELDS, OF ST. PAUL, MINNESOTA.

STORAGE-BATTERY CONNECTOR.

1,382,129.

Specification of Letters Patent. Patented June 21, 1921.

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To all whom it may concern:

Be it known that I, LYTTON J. SHIELDS, a citizen of the United States, residing at St. Paul, in the county of Ramsey and State of Minnesota, have invented a new and useful Improvement in Storage-Battery Connectors, of which the following is a specification.

This invention relates to storage battery terminal connectors and is particularly adapted to a connector for adjacent cells where a series of cells are adapted to be connected together for use in automobiles, lighting plants, etc.

The primary object of this invention is to provide a device or connector of a convenient shape with sufficient strength to form a rigid connection between the cells still having a shape which requires the smallest possible amount of material to make the same. In the manufacture of storage batteries it has been found unnecessary to use cell connectors of a large bulky design which only add to the weight of the battery and do not increase the efficiency of the same. My improved connector provides a device which is simple in construction having sufficient strength to rigidly connect the terminals of the cells and requiring only a small amount of material.

The peculiar features of construction and objects of this invention will be clearly defined in the following specification and claim.

In the drawing forming part of this specification:

Figure 1 is a perspective view of my connector.

Fig. 2 is a side elevation of the connector part of which is broken away to illustrate a portion in cross section.

Fig. 3 is a cross section on the line 3—3 of Fig. 2.

In the drawing A represents a battery cell connector which is formed with hexagonal frustumal pyramidal shaped heads 2 having a frustumal conical shaped opening 3 through the same. The heads 2 of the connector A are joined together by the shank portion 4 which is formed integral with the heads 2 and its lower face 5 is wider than its upper face 6 so that the cross section of the same would be the shape of a trapezoid with its upper and lower faces parallel and the sides equal but not parallel. The lower face 5 of the shank 4 is adapted to extend

flush with the bottom face 7 of the head portions 2 and is formed with a concave longitudinally extending recess 8. The recess 8 reduces the cross section of the shank 4 without weakening the same and in fact owing to its concave shape strengthens the shank. The upper face 6 of the shank 4 is positioned below the upper face 9 of the heads 2 which allows the heads 2 to be easily attached to the cell terminals of a battery without having the shank 4 in the way where it is apt to get bent or injured when the heads 2 are being attached to the cell terminals.

When the connector A is fitted to the terminals of the cells of a battery the openings 3 are adapted to be fitted to the cylindrical or conical shaped terminals of the battery plates and during the fitting it is customary to tap the heads 2 on the surface 9 with a hammer or other suitable instrument until the connector A is tightly secured to the cell terminals, after which the heads 2 are rigidly attached to the terminals by fusing the same together. For this reason it is desirable to have the upper surface 6 of the shank below the upper surface of the heads 2.

The frustumal pyramidal shaped heads 2 give a connector with a strong construction and the head portion is considerably lighter than where the same is shaped round with an outer cylindrical shaped-surface. The same is true of the connecting shank 4 which has the longitudinal recess 8 along its lower surface. It is desirable to have the recess 8 formed along the lower surface of the shank 4 concealing it from view when the connector is in position on the battery and giving a shank with a smooth upper surface 6 which will not collect dirt or acid from the battery to injure the shank or detract from the neat appearance of the same.

This construction of battery connector provides a connecting means which is comparatively light in weight, strong and durable and with a sufficient electrical conducting body to provide an efficient battery connector and requiring only a small amount of material. The peculiar construction of the heads and the shank with the concaved recess 8 reduces the weight of the connector and strengthens the same.

In accordance with the patent statutes, I have described the principles of operation of my invention, together with the apparatus which I now consider to represent the

best embodiment thereof, but I desire to have it understood that the construction shown is only illustrative and that the invention can be carried out by other means and applied to uses other than those above set forth within the scope of the following claim:

In a battery terminal connector having frustumal pyramidical shaped head portions, a shank connecting said head por-

tions, the lower surface of said shank extending flush with the lower surface of said head portions and the upper surface of said shank being positioned below said head portions, a frustumal conical shaped opening extending through said head portions and a longitudinally extending recess formed in the lower surface of said shank.

LYTTON J. SHIELDS.