H. S. MONTGOMERY & H. A. TOBELMANN.

ELECTROLYTIC STARTING SHEET SUSPENDER.

APPLICATION FILED NOV. 13, 1917.

1,269,485. Patented June 11, 1918

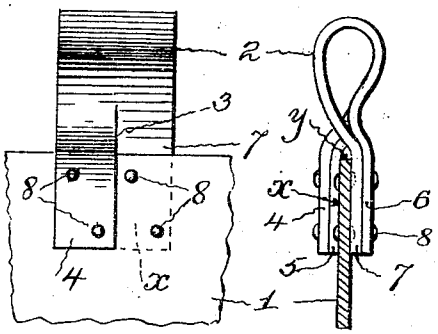


Fig. 1.

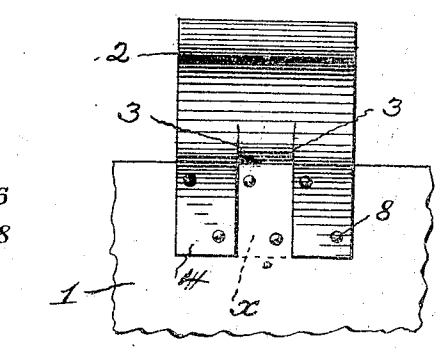


Fig. 2.

Fig. 3.

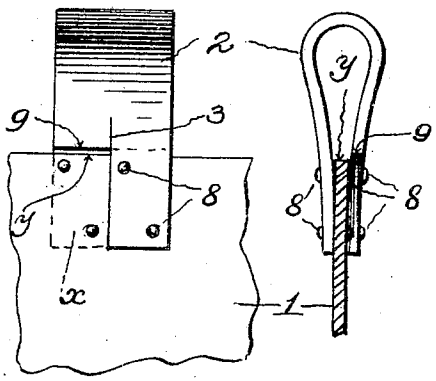


Fig. 4.

Fig. 5.

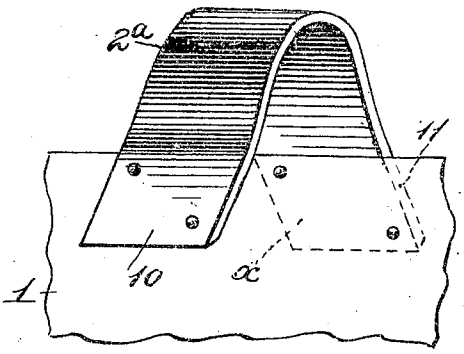


Fig. 6.

Inventors
Henry S. Montgomery
& Henry A. Tobelmann
by Henry Orth Jr
atty

UNITED STATES PATENT OFFICE.

HENRY S. MONTGOMERY AND HENRY A. TOBELMANN, OF AJO, ARIZONA.

ELECTROLYTIC STARTING-SHEET SUSPENDER.

1,269,485. Specification of Letters Patent. Patented June 11, 1918.

Application filed November 13, 1917. Serial No. 201,801.

To all whom it may concern:

Be it known that we, HENRY S. MONTGOMERY and HENRY A. TOBELMANN, both citizens of the United States, and residents of Ajo, Pima county, Arizona, have invented certain new and useful Improvements in Electrolytic Starting-Sheet Suspenders; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

Our invention relates to electrolytic starting sheet suspenders, and has for its object a structure obviating the inconveniences due to the solution of the starting sheet at the points where the suspenders are riveted, clenched, hooked or otherwise attached thereto.

Heretofore a strip of metal was bent to form a loop and the sheet placed between the ends of this loop and riveted or otherwise secured thereto. The loops, usually two to a sheet, suspend the sheet below the electrolyte level from bus-bars.

The sheet does not build up at the edge between the loop ends, but, on the contrary, is dissolved at a rate greater than the building up on the body of the sheet and on the outer surface of the loop ends, so that the sheet drops off of the suspender loops before sufficient metal has been deposited on it.

We have discovered that in order to maintain the loops and sheet connected, the ends or legs of the loops should be so connected to the sheet that there will be no metal of the sheet between the layers formed by the loop legs, so that at the point where the loop legs are secured there will always be an equal area of the sheet on the opposite side thereof exposed to the electrolyte.

In order to accomplish this the loop may be variously formed, and in order to more fully explain the nature of our invention reference will be made to the accompanying drawings, in which like parts are similarly designated, and in which—

Figure 1 is an elevation, and

Fig. 2 is a side view of a loop having two non-overlapping connecting ends.

Fig. 3 is an elevation of a like loop having three non-overlapping connecting surfaces.

Fig. 4 is an elevation, and

Fig. 5 is a side view showing single thicknesses of the loop secured to each face and spaced apart.

Fig. 6 is another view of a loop formed of a single strip of metal folded on the bias so that the ends are spaced apart on opposite sides of the sheet.

As already stated, the manner of securing the loops to the sheet is immaterial, and it may be by rivets as shown, or the ends of the loops may have hooks on them taking into slots cut in the sheet, as is now customary.

In the drawings 1 indicates a portion of the upper edge of the starting sheet.

Referring to Figs. 1 and 2, the two ends of the loop 2 are brought together and a slit 3 made from the bottom edge upwardly about midway of the width. This leaves four ends to the loop, 4, 5 and 6, 7. One pair of these superposed ends, 4, 5, are bent to lie on one side of the sheet 1, and the other pair 6, 7, to lie on the other side of the sheet, as more clearly shown in Fig. 2. Rivets 8 or other fastening means secure the ends to the sheet near its upper edge. It will thus be seen that there is always an area, as x, on one side of the sheet exposed to the electrolyte and not covered by any portion of the loop. This area builds up with the rest of the sheet, as does also the surface of the end 6, so that there is always a connection between the sheet and loop. On the other side of the sheet, opposite the end 4 there is a like surface x directly exposed to the electrolyte, and it will be seen from the drawings that these two parallel surfaces do not overlap.

Fig. 3 is similar to Fig. 2, but wider, there being two cuts or slits 3 leaving three pair of ends, two pair being secured to one face of the sheet 1, and the middle pair secured to the other face. These pairs of ends may be increased at will with the width of the loop used.

Instead of placing two thicknesses of the

loop metal on each side of the sheet, we may have only one thickness secured to each face, as shown in Figs. 4–6.

In Figs. 4 and 5 the loop is formed the same as in Figs. 1 and 2, but one thickness, namely one of the ends is cut away so as to form an edge 9.

In Fig. 6 the strip of metal forming the loop 2^a is bent over on the bias so that one end 10 lies against and is secured to one side of the sheet and the other end 11 lies against and is secured to the opposite face of the sheet, but spaced from the end 10, so as to always expose one face of the sheet at the loop to the electrolyte.

The operation is obvious from the above description. There is but little metal deposited between the loop ends at the upper edge of the sheet, point y, but the loop ends secured to the sheet build up, as do also the opposite faces of the sheet exposed to the electrolyte and indicated by x thus the loop and sheet will hold together until sufficient deposit has accumulated.

We claim—

1. An electrolytic starting sheet suspender in which the ends of the suspender loop are secured to the faces of the sheet so as to include no metal of the sheet between the surfaces of said ends contacting with the sheet.

2. An electrolytic starting sheet suspender in which the suspender loop ends are secured to opposite faces of the starting sheet but spaced laterally to include no metal of the sheet between the surfaces of said ends contacting with the sheet.

3. An electrolytic starting sheet suspender in which the ends of the suspender are slit longitudinally and secured to opposite faces of the sheet to include no metal of the sheet between the surfaces of said ends contacting with the sheet.

4. An electrolytic starting sheet suspender having slit ends, an end at one side and an end at the opposite side of the strip being cut away, thereby securing but one thickness of non-overlapping suspended metal to opposite faces of the sheet.

In testimony that we claim the foregoing as our invention, we have signed our names hereto.

HENRY S. MONTGOMERY.
HENRY A. TOBELMANN.