To all whom it may concern:

Be it known that I, ALBERT C. MURPHY, a citizen of the United States, and resident of the city and county of New York and State of New York, have invented an Improvement in Columns for Railway-Trucks, of which the following is a specification.

My invention has reference to columns for car trucks and consists of certain improvements which are fully set forth in the following specification and shown in the accompanying drawings which form a part thereof.

The object of my invention is to provide an efficient construction of steel column for trucks which may be made in an economical manner from rolled steel channel bars. By my improvement, I provide a most satisfactory guide for the bolster and a strong and efficient means of attachment for the column to the top and bottom arch bars of the truck frame.

My invention consists of a column formed of a single piece of channel shaped steel bar in which portions of each of the flanges near the ends of the bar are removed and the flanges at said ends bent outwardly and downwardly in the reverse direction to their normal position, and the said bar having its ends, so formed, bent backward over the ends of the remaining vertical flanges, whereby there is provided a vertical channel bar guide section with top and bottom horizontal or lateral extensions respectively provided with upwardly and downwardly extending flanges to form top and bottom sockets for the reception of the top and bottom arch bars of the truck frame.

My invention further consists in the column, above described, combined with a plate welded to one of the flanges of the vertical portion of the structure and said plate provided with a brake carrying bracket.

My invention also comprehends details of construction, which, together with the feature above described, will be more fully understood by reference to the drawings, in which:

Figure 1 is a perspective view of the column structure embodying my invention; Fig. 2 is a side elevation of the same; Fig. 3 is a front view of the same; Fig. 4 is a cross sectional view of the same on line α—α of Fig. 2; and Fig. 5 is a perspective view of the preferred form of the channel bar immediately preceding the bending over of the end portions thereof to form the top and bottom extensions therein.

The entire column, other than the portion thereof which is intended to support the brake device, is formed of one integral piece of channel bar prepared as a preliminary operation, in the illustration appearing in Fig. 5, in which, 2 represents the shape of a steel channel bar or beam and which is maintained at the middle portion of the bar. Portions of the flanges are cut away corresponding to the parts 5, and the flanges at each end portion 3 of the beam or bar are bent outward and downward, as indicated at 4, to provide flanges to the body of the bar directed oppositely to the normal flanges at the middle of the bar. This bar, so formed, is further provided with the two large holes 6, 6, for the column bolts and said holes are in the portion of the bar which corresponds to the parts in which the flanges are cut away and hence intermediate of the parts 2 and 3. The end portions of the body are further provided with the smaller rivet holes 7 and, in addition thereto, rivet holes 8 may be provided in the body near one end of the middle portion 2. When the bar is prepared in this manner, it is then heated and bent in the form illustrated in Figs. 1 and 3, in which the end portions 3, which are beyond the normal flanges of the channel bar are bent over in the direction of said flanges and so that these bent portions of the body may rest upon the ends of the flanges, as clearly illustrated in Figs. 1 and 2. The end portions 3, with the oppositely directed flanges 4, will then project beyond the main portion of the bar and its flanges as clearly indicated in Fig. 2, said flanges 4 of the overhanging end parts 3, respectively projecting upwardly and downwardly and forming sockets 10 for receiving the usual top and bottom arch bars of the side frame of the railway truck.

The vertical part of the channel bar forms vertical guides 9 with clearly defined rectangular corners and unobstructed sides for the bolster guides. The holes 7 in the overhanging portions 3 are intended to provide means for riveting the said parts to the upper and lower arch bars. The holes 8 near the bottom of the vertical portion 9 of the column are for riveting the column of the channel beam which supports the bolster
springs. It is evident that these various rivet holes may be made in any suitable place or in any suitable number to meet the requirements in commercial practice.

It is the brake bracket and is secured to a plate 12 by rivets 13; said plate 12 being welded at 14 to the inner part of one of the vertical flanges of the part 3 constituting the vertical portion of the column so that the outer portion thereof is left with a perfectly smooth guiding surface. It is evident, however, that this plate 12 may be secured to the column or to the flange thereof in any suitable manner, in place of welding. The upper part of the plate 12 is preferably made to fit close against the underside of the upper portion 3 and is also preferably of a width sufficient to extend out to the end of the said part 3, as indicated in Fig. 4, though this particular proportion is not essential.

While I prefer to remove the flanges at the places 5 for a length substantially equal to the depth of the flange on the main part 25 of the bar or beam, so as to avoid having the flanges 4 extend over the vertical portion of the column in the finished article (see Figs. 1 and 2), the width of the removed portions of the flanges may be varied, without departing from the spirit of the invention, that is to say, said portions removed may be greater or less, as desired.

The general construction of my invention embodies a reasonably smooth finish to the vertical guiding portion of the column and clearly formed sockets for top and bottom arch bars without the necessity of machining, and hence, is economical in construction and the bolted union of the column with the arch bars may be so close as not to be liable to work loose by jarring.

Having now described my invention what I claim as new and desire to secure by Letters Patent is:

1. A column for a railway truck consisting of an integral piece of metal comprising a vertical body portion of channel shape in cross section having its parallel side flanges extending substantially the full height and top and bottom laterally projecting portions, bent over and resting on the flanges of the vertical body portion and respectively provided with upwardly and downwardly extending flanges to form sockets.

2. A column for a railway truck consisting of an integral piece of metal comprising a vertical body portion of channel shape in cross section having its parallel side flanges extending substantially the full height and top and bottom laterally projecting portions, bent over and resting on the flanges of the vertical body portion and respectively provided with upwardly and downwardly extending flanges to form sockets, said projecting portions at top and bottom being provided with large holes adjacent to the vertical body portion and between the flanges thereof for column bolts and small holes for permitting said flanges to be riveted to the upper and lower arch bars.

3. The column for a railway truck consisting of an integral piece of metal comprising a vertical body portion of channel shape in cross section and having parallel side flanges extending substantially the full height and top and bottom laterally projecting portions of greater width than the flanged body bent over the flanges of the vertical body portion and respectively provided with upwardly and downwardly extending flanges to form sockets of a width substantially equal to the full width of the body portion, said projecting portions at top and bottom being provided with large holes for column bolts, and further provided with a brake supporting bracket structure welded to the vertical channel shaped body portion of the column.

4. A column for a railway truck consisting of an integral piece of metal comprising a vertical body portion of channel shape in cross section having its parallel flanges extending substantially the full height and top and bottom laterally projecting portions bent over the flanges of the vertical body portion and respectively provided with upwardly and downwardly extending flanges to form sockets of approximately the full width of the body portion, said projecting portions at top and bottom being provided with large holes for column bolts and small holes for permitting them to be secured to the upper and lower arch bars, and combined with a brake supporting bracket structure under one of the lateral projecting portions and secured to the inner face of one of the vertical flange portions of the channel shaped part.

5. A column for a railway truck consisting of an integral piece of metal comprising a vertical body portion of channel shape in cross section having its parallel flanges extending substantially the full height and top and bottom laterally projecting portions bent over the flanges of the vertical body portion and respectively provided with upwardly and downwardly extending flanges to form sockets, said projecting portions at top and bottom being provided with large holes for column bolts and small holes for permitting them to be secured to the upper and lower arch bars, combined with a brake supporting bracket structure arranged under one of the lateral projecting portions and secured to the inner face of one of the vertical flange portions of the channel shaped part by a welded connection.

6. A column for a railway truck formed from a straight plate having side flanges at its middle or body portion projecting from.
one side of the plate and side flanges from its end portions projecting from the opposite face of the plate, and in which the end portions are bent backward and rest upon the flanges of the middle portion to provide a body part having parallel flanged sides throughout its whole length and with oppositely projecting flanges at the top and bottom.

7. A column for a railway truck formed from a straight plate having side flanges at its middle or body portion projecting from one side of the plate and side flanges from its end portions projecting from the opposite face of the plate and separated a greater distance apart than are the flanges of the middle or body part, and in which the end portions are bent backward and rest upon the flanges of the middle portion to provide a body part having parallel flanged sides throughout its whole length and with oppositely projecting flanges at the top and bottom.

8. A column guide for a railway truck formed of an integral piece of metal consisting of a long flat plate having parallel side flanges extending from one of its faces and over the middle portion of its length and with parallel flanges extending from the opposite face adjacent to each of its ends and said plate having no flanges on that portion between the flanged middle portion and the flanged end portions, and further provided with a hole through the plate at that portion thereof between the middle flanged portion and the end flanged portions.

In testimony of which invention, I hereunto set my hand.

ALBERT C. MURPHY,

Witnesses:

JOHN H. ALLEN,
WM. F. MADILL.