

No. 630,214.

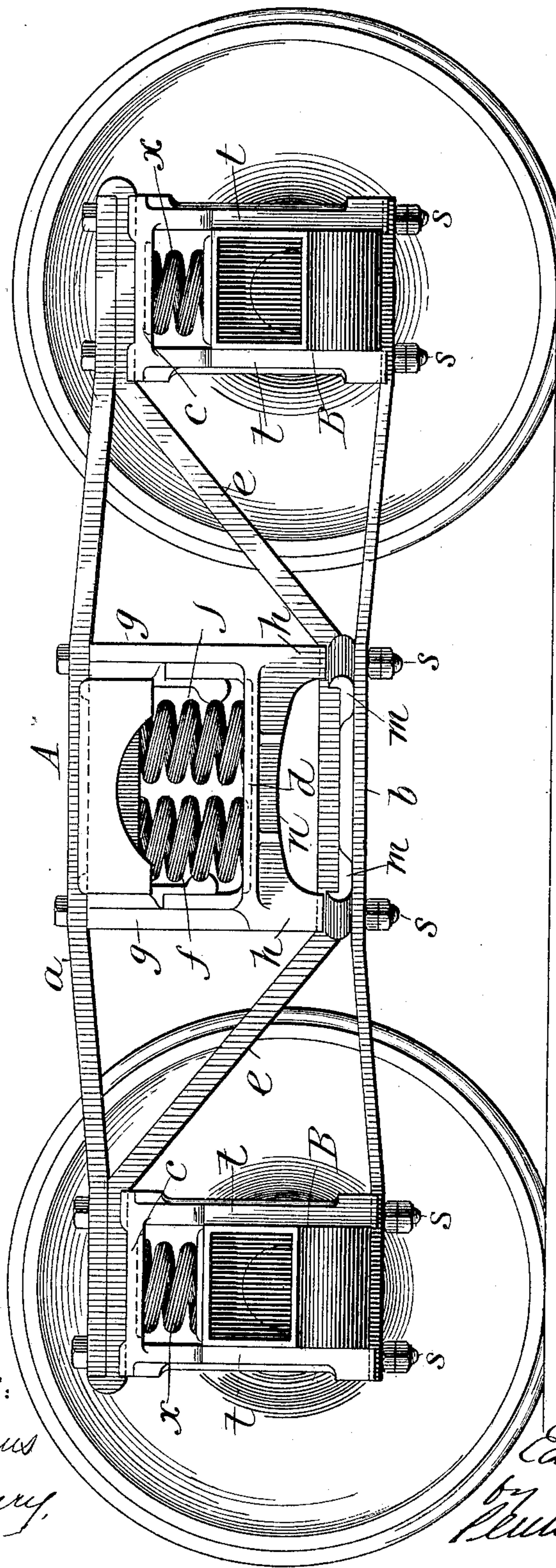
Patented Aug. 1, 1899.

E. F. GOLTRA.
CAR TRUCK SIDE FRAME.

(Application filed Aug. 27, 1893.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses:
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Inventor.
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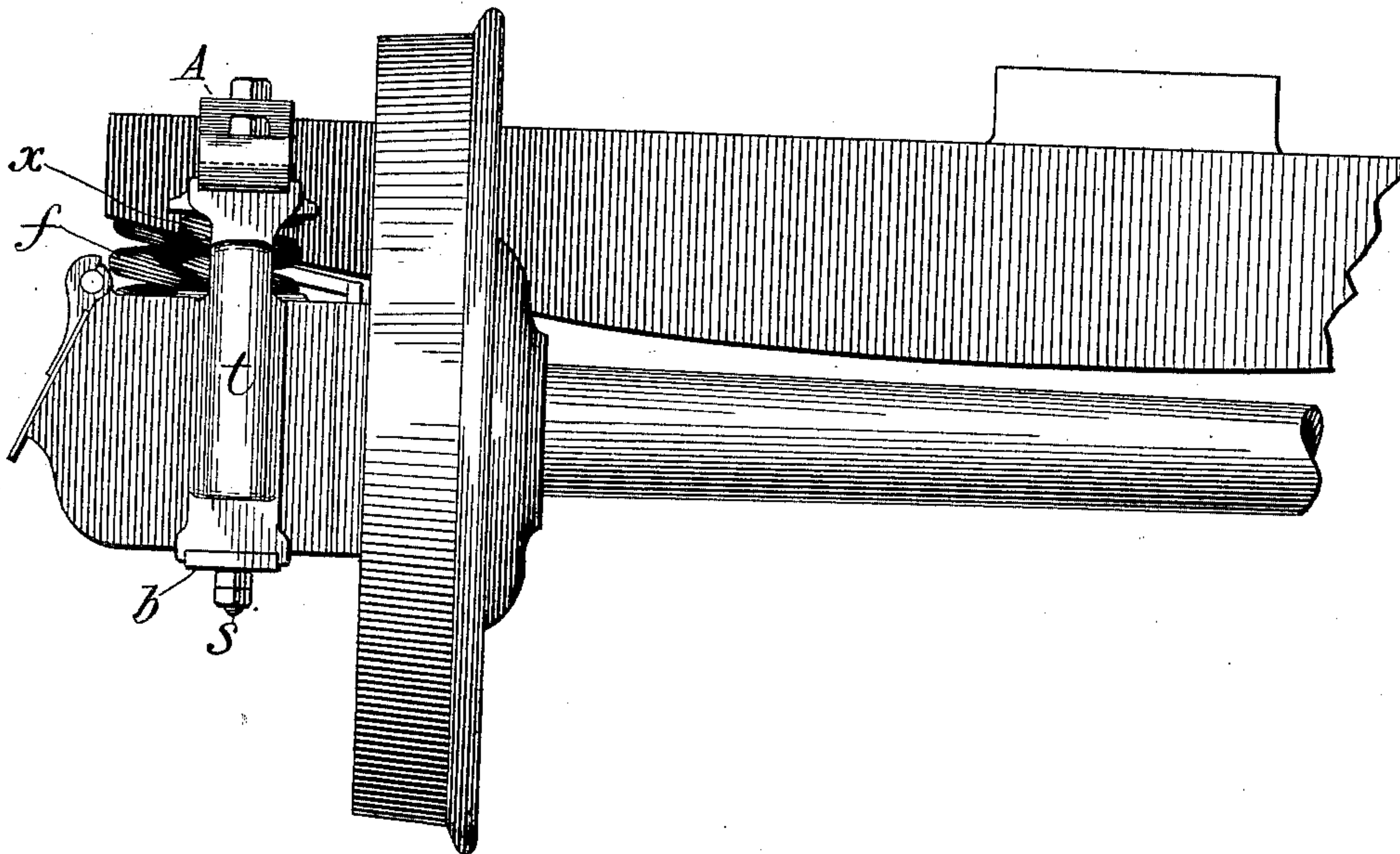
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2 Sheets—Sheet 2.

Fig. 2.



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UNITED STATES PATENT OFFICE.

EDWARD FIELD GOLTRA, OF ST. LOUIS, MISSOURI.

CAR-TRUCK SIDE FRAME.

SPECIFICATION forming part of Letters Patent No. 630,214, dated August 1, 1899.

Application filed August 27, 1896. Serial No. 604,133. (No model.)

To all whom it may concern:

Be it known that I, EDWARD FIELD GOLTRA, a citizen of the United States, residing at St. Louis, State of Missouri, have invented certain new and useful Improvements in Car-Truck Side Frames; and I 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.

My invention relates to certain new and useful improvements in side frames for car-trucks, and has for its object the production of a side frame which will retain its original stability during long-continued use and wherein particularly the relation of the pedestals to the axle-boxes and the bolster-pedestal guides to the bolster will be maintained invariable during the life of the side frame regardless of the stress and strains to which it may be subjected when in use.

In the accompanying drawings, Figure 1 represents a side elevation of a car-truck provided with my improved side frame; and Fig. 2 represents an end elevation thereof, partly broken away.

Similar letters of reference indicate similar parts in both views.

Referring to the drawings, *a* indicates the top or journal bar of the side frame, and *b* the lower or tie bar thereof. Both of these bars are arched centrally, so as to increase their carrying capacity, and between them is interposed the truss-bar *e*. Upon the middle horizontal portion of the truss-bar *e* rests the bolster-pedestal, comprising integral therewith a spring-seat *d* for the reception of the bolster-springs *f* and columns *g*, between which the bolster *A* is adapted to move. This pedestal is preferably provided with feet *h*, which rest upon the truss-bar *e* and which are spanned by an arch *n*, extending beneath the spring-seat.

Intermediate of the tie-bar *b* and the truss-bar *e* are located the upturned ends of the cross-struts *m*, and the bolster-pedestal, journal-bar, truss-bar, cross-struts, and tie-bar are all united in rigid relationship with each other by means of bolts *s*, passing through them and provided with suitable nuts, as shown, whereby they may be disassembled when desired.

Between the upper horizontal portion of the truss-bar *e* and the tie-bar *b* are interposed the pedestals for the axle-boxes *B*. These pedestals are provided with spring-seats *c* and with columns *t* on opposite sides of the axle-boxes, the seat and columns being integral parts of the pedestal, and springs *x* are interposed between the spring-seats and the tops of the axle-boxes, and the pedestals are held in place by means of bolts *s*, provided with nuts, as shown.

The axle-box pedestals are of inverted-U shape, and they, as well as the bolster-pedestals, are formed or cast in a single integral piece.

When in use, the first strain to which the side frame is subjected when a car is put in motion is transmitted to it from the body of the car through the intermediacy of the truck-bolster. This strain is exerted against the one or the other of the column-guides *g* of the bolster-pedestal, according to the direction in which the car is started. On account of the great weight of the truck and its consequent inertia great stress is put upon the column-guide before the truck itself begins to move. The tendency of this stress, alternately exerted upon the one or the other of the column-guides, is to widen the space between them, and thereby ultimately cause them to lose their function as guides for the truck-bolster. In my construction, however, this tendency is successfully resisted, because of the fact that the column-guides are integral with each other through the intermediacy of the connecting-arch *n*, and because they are rigidly connected to the truss-bar *e*, the cross-struts *s*, the journal-bar *a*, and the tie-bar *b*, and because of the further fact that both the journal-bar and tie-bar are arched centrally, so as to assist in compensating for and distributing the strains. In the general combination the guides *t* of the axle-box pedestals likewise form a substantial and stable part of the structure, for the reason that they are joined integrally by the spring-seat *c* and are rigidly connected to the journal-bar, truss-bar, and tie-bar, so as to retain an invariable guiding relationship to the axle-boxes.

Having thus described my invention, what I claim is—

1. A car-truck side frame, comprising a top

or journal bar, a bottom or tie bar, axle-box pedestals having column-guides connected integrally at top and forming spring-seats at this point, and a bolster-pedestal having
5 guides connected integrally at bottom and forming a seat for springs at this point, the top and bottom tie-bars being arched at their middle portions, and having an intermediate truss-bar extending diagonally upward and
10 outward from the bottom of the bolster-pedestal to the top of the axle-box pedestals; substantially as described.

2. A car-truck side frame, comprising an

arched top or journal bar, an arched bottom or tie bar, an intermediate truss-bar, cross- 15 struts projecting between the tie-bar and truss-bar, axle-box pedestals having column-guides connected integrally at top, and a bolster-pedestal having guides connected integrally at bottom; substantially as described. 20

In testimony whereof I affix my signature in presence of two witnesses.

EDWARD FIELD GOLTRA.

Witnesses:

C. R. KELLY,

JOHN C. PENNIE.