H. C. GERLACH & W. H. THOMPSON.

SAFETY SWITCH CHAIN.

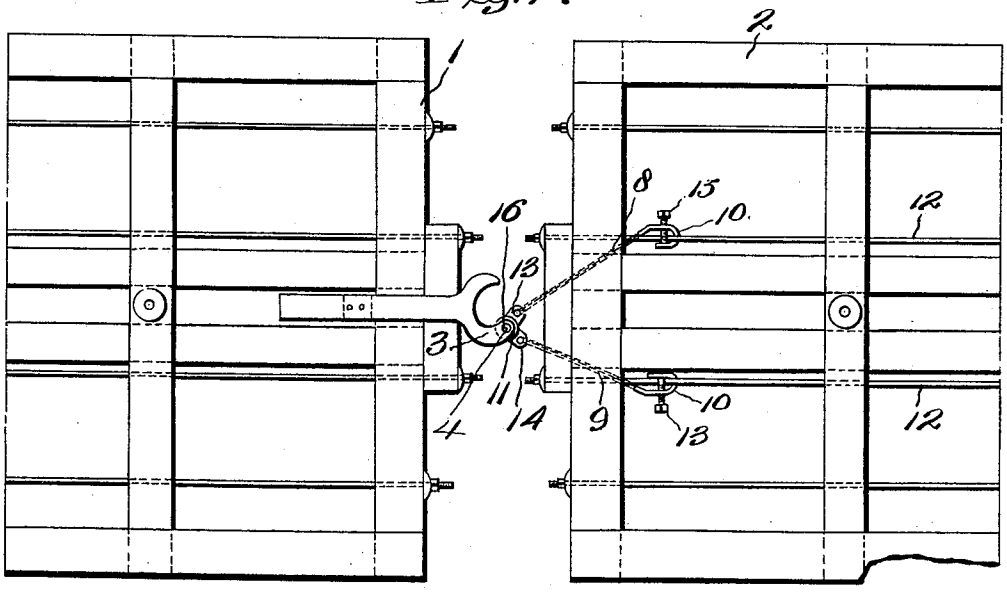
APPLICATION FILED DEC. 7, 1912.

1,095,393.

Patented May 5, 1914.

2 SHEETS—SHEET 1.

Fig. 1.



Witnesses
Edwin Belber.
Wm. H. Wolff Jr.

Inventors.
Harry C. Gerlach.
W. Hugh Thompson.
By Jas. E. Dodge.
Attorney

COLUMBIA PLANOGRAPH CO., WASHINGTON, D. C.

H. C. GERLACH & W. H. THOMPSON.

SAFETY SWITCH CHAIN.

APPLICATION FILED DEC. 7, 1912.

1,095,393.

Patented May 5, 1914.

2 SHEETS—SHEET 2.

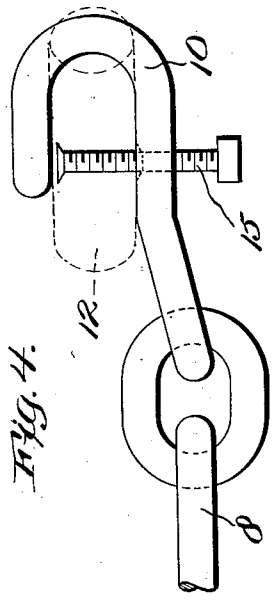


Fig. 4.

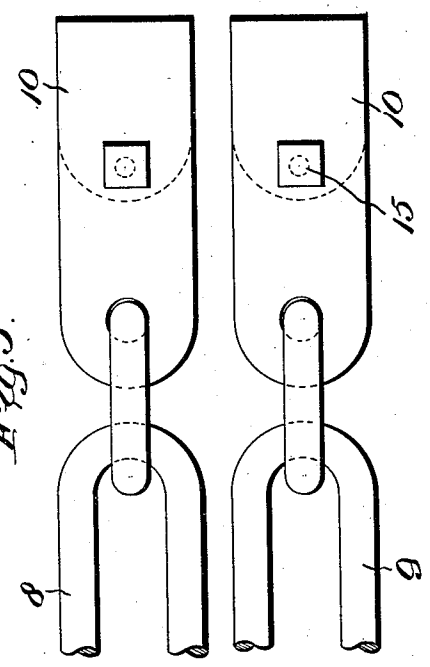


Fig. 5.

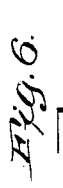


Fig. 6.

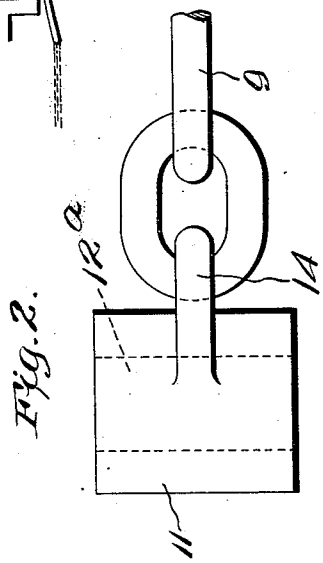


Fig. 2.

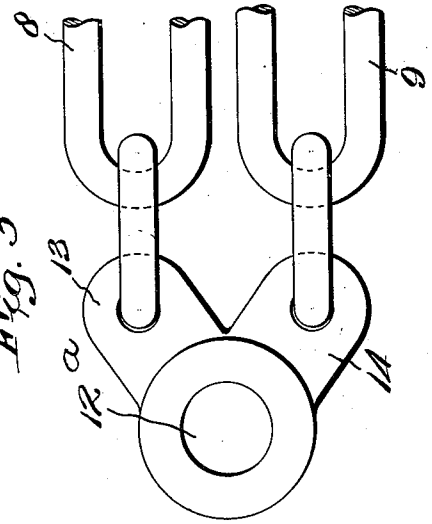


Fig. 3

Witnesses.
Edwin J. Beller.
Wm. H. Woolf Jr.

Inventors.
Harry C. Gerlach
W. Hugh Thompson.

By Jas. E. Dodge.

Attorney

COLUMBIA PLANOGRAPH CO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

HARRY C. GERLACH AND WILKIE HUGH THOMPSON, OF FORT WORTH, TEXAS.

SAFETY SWITCH-CHAIN.

1,095,393. Specification of Letters Patent. Patented May 5, 1914.

Application filed December 7, 1912. Serial No. 735,426.

To all whom it may concern:

Be it known that we, HARRY C. GERLACH and WILKIE HUGH THOMPSON, citizens of the United States, residing at Fort Worth, in the county of Tarrant and State of Texas, have invented certain new and useful Improvements in Safety Switch-Chains, of which the following is a specification.

This invention relates to new and useful improvements in a device for removing cars that have become disabled through having their draw-heads pulled out or have been otherwise crippled up.

The object of the invention is to do away with the present chain in common use, which has to be attached to the disabled car, by being placed around the center pin and transom, necessitating using from two to three men while applying the same; one or more having to put themselves in a position under the car thereby subjecting themselves to loss of life or limb.

A further object is to eliminate the great weight of the present chain and to provide one which can be handled by a single man and applied in a shorter length of time, not requiring such person to place himself in a hazardous position.

A still further object is to do away with the old style chain having a link in one end and a hook in the other, as this is unsatisfactory because the link applied to good order couplings invariably bends the knuckle pin and causes considerable time and labor to be expended in removing the bent knuckle pin from the good order coupler.

Another object is to provide such a device which will rid the old style chain of its unsatisfactory features and at the same time answer all the purposes required.

With these and other objects in view the invention has relation to certain novel features of construction and operation, an example of which is described in this specification and illustrated in the accompanying drawings, wherein:

Figure 1 is a bottom plan view of two rail road cars having our safety switch chain applied; Fig. 2 represents an enlarged side elevational view of our improved cuff; Fig. 3 a top plan view of the parts illustrated in Fig. 2; Fig. 4, enlarged top view of our improved clamp with safety chain attached; Fig. 5, side elevational view of the clamps with chains attached; and Fig. 6 is a view showing clamp attached to the metal underframe of cars.

Referring to the drawings in which like numerals designate like parts in all the views the numeral 1 represents the rear end and 2 the forward end of similar railroad cars. A coupler 3 is attached to the car 1 in the ordinary manner, and has the usual knuckle, not shown, provided with a knuckle pin 4.

At the present time when the coupler 3 pulls out or becomes crippled on a freight or passenger coach, it becomes necessary for the train crew to get out the big chain used for connecting the cars in case of an accident, and therefore necessitates crawling under the cars and fastening the chain around the transom or body bolster. To make this connection, as previously stated, three men are required, one on either side of the trucks, and the third guarding the train and making the connections around the draw-head of the car. Several trainmen have lost their lives while under cars making these connections and to avoid such accidents our chain has been provided.

As shown in Fig. 1, our invention has two chains 8 and 9, fastening into hooks 10 at one end and into a steel cuff 11 at the other. This cuff takes the place of the knuckle in the draw-head, and the clamps fasten on the truss rods 12 as are shown in Fig. 1, as representing a wooden underframe. As shown in Fig. 6 these hooks 10 fasten onto the middle end sill of the metal underframe of the cars. The cuff 11 consists of a tube having a bore 12^a and provided with two integral lugs 13 and 14 extending at angles from the center of the cuff 11 to which links of chains 8 and 9 are connected. It is clearly obvious that one chain must be of greater length than the other.

Hooks 10 as shown in Fig. 4, carry set screws 15 so that fastenings can be made on the flange of the steel end sills. (Also see Fig. 6). These set screws, which are inserted through the shanks of the clamps pass to the heads of their respective clamps which extend a short distance beyond the end of the screws. These chains 8 and 9 connect the shank ends of the clamps. The cuff 11 is held in place by the usual knuckle or retaining pin 16.

The device connecting the chains 8 and 9 to the coupler gives an equalizing or center-

ing action. When a sidewise pull is exerted on one of the chains, the lugs or lever-arms 13 and 14 will transmit the pull to the other chain, so that an equalizing action, tending to transmit pull equally through both chains, will occur.

It is obvious that those skilled in the art may vary the details of construction and combination of parts without departing from the spirit of our invention, and

Therefore what we claim as new and desire to secure by Letters Patent is:

In combination, a device comprising a cuff, and integral diverging lever-arms extending therefrom, said cuff being adapted to be secured to a car coupler, chains connected to the ends of the lever-arms and means for connecting the free ends of the chains to the truss rods of a car.

In testimony whereof we affix our signatures in presence of two witnesses.

HARRY C. GERLACH.
WILKIE HUGH THOMPSON.

Witnesses:
MARVIN H. BROWN,
CHAS. MAYS.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."