No. 685,272. Patented Oct. 29, 1901.

F. L. GRANGER.

DRAW BAR.

(Application filed Jan. 16, 1901.)

(No Model.)

Fig. 1.

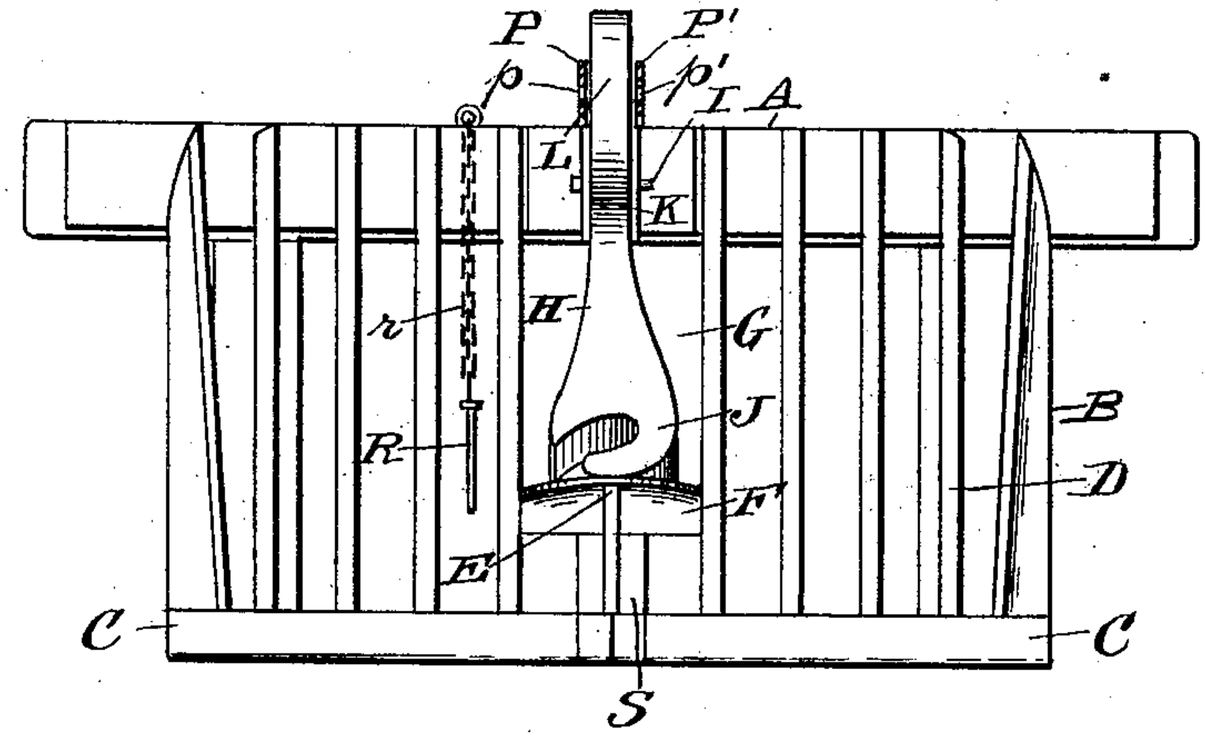


Fig. 2.

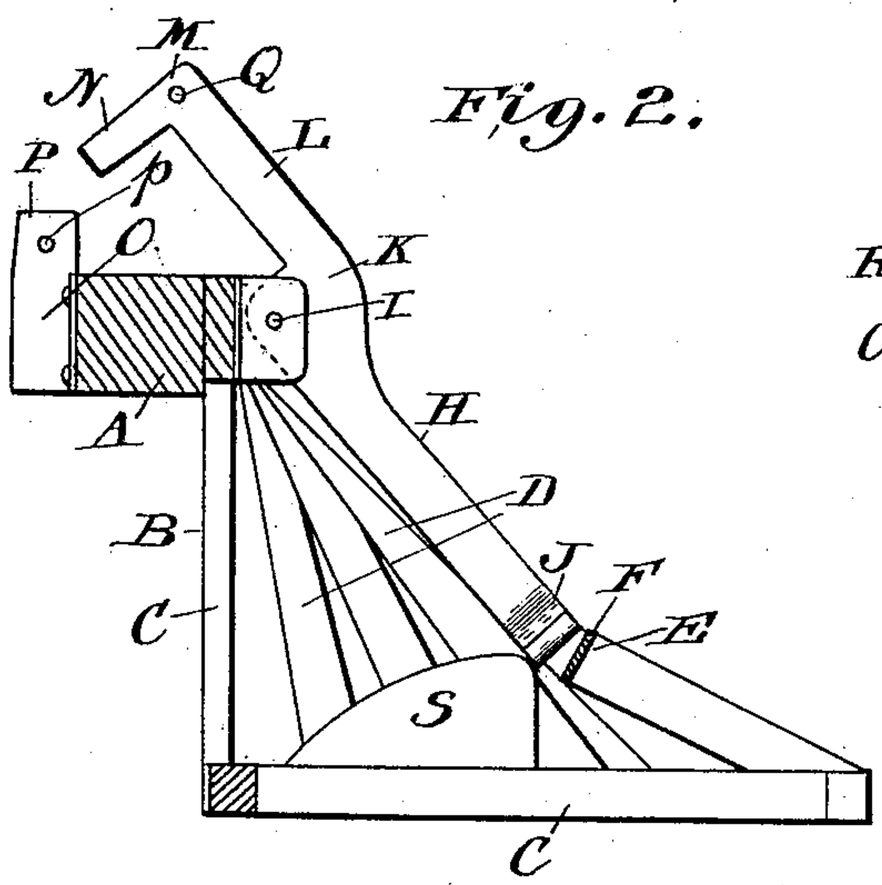


Fig. 3.

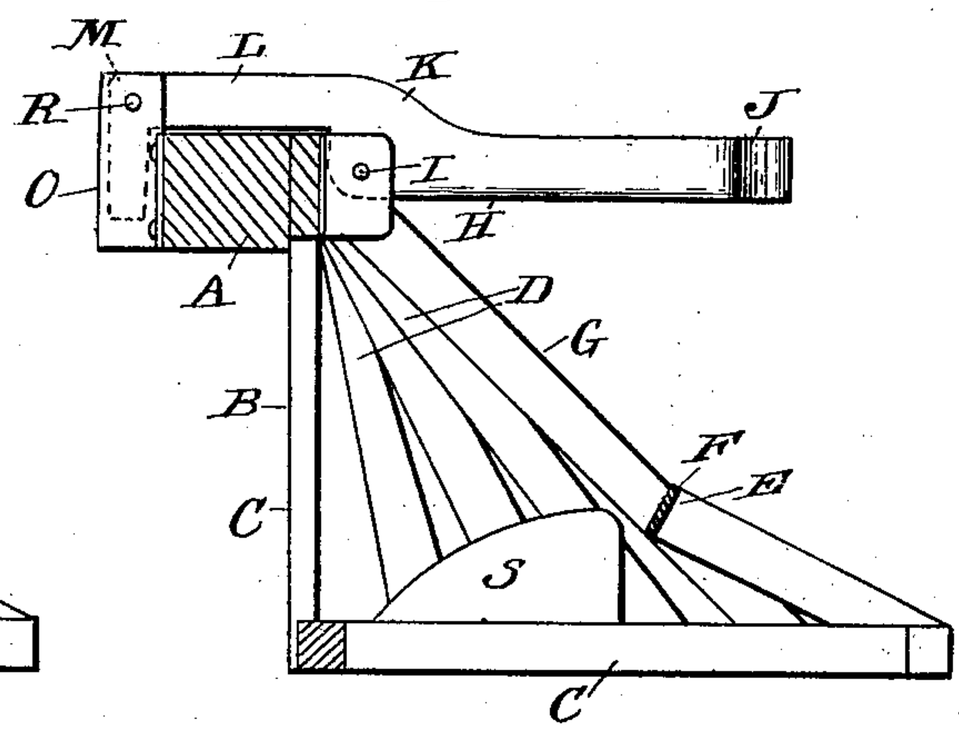
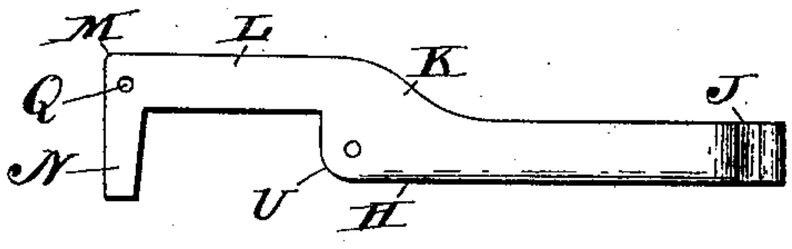


Fig. 4.



Witnesses

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DRAW-BAR.

SPECIFICATION forming part of Letters Patent No. 685,272, dated October 29, 1901.

Application filed January 16, 1901. Serial No. 43,494. (No model.)

To all whom it may concern:

Be it known that I, FRANK L. GRANGER, a citizen of the United States, residing at Sioux City, in the county of Woodbury and State of Iowa, have invented certain new and useful Improvements in Draw-Bars, of which the following is a specification.

My invention relates to draw-bars for use on locomotives, and has for its object to provide a device that is simple and inexpensive in construction and effective in operation and which is adapted to be mounted on the pilot-beam of a locomotive.

The invention consists of the several features and combination of features, as more fully hereinafter described and claimed.

Referring to the drawings, Figure 1 is a front elevation of a locomotive-pilot, showing the position of the draw-bar when not in use. Fig. 2 is a side view, partly in section, showing the draw-bar in the same position as in Fig. 1. Fig. 3 is also a side view, partly in section, showing the draw-bar in a position to couple cars. Fig. 4 is a side view of the draw-bar removed from the pilot-beam.

Referring to the drawings, in which like letters of reference denote like parts in all the views, A represents a beam in the front of the frame of a locomotive, to which is attached the pilot B, having a triangular base made up of a framework of beams C and slats or rods D. The middle slat or rod is cut off, as shown at E, and the free end steadied by a rod F, running from the slats or rods immediately to the right and left of the middle slat, thus forming a space G and leaving room on the front of the beam A to pivot a draw-bar H at I, having at its coupling-head J any desired coupling device, the one shown in the drawings being of the twin-hook type. Above the point I, where the draw-bar H is pivoted to the beam A, the draw-bar is extended upward at K and backward at L on a line parallel with the front of the draw-bar in length the width of the beam A and is turned downward at M, forming a lug N, which is slightly tapering and is adapted to seat in a socket O on the back of the beam A. The socket O may be integral with the beam A or may be formed by a U-shaped piece of metal bolted to the back of the beam. Extending upwardly from the sides of the socket O are two ears P P′, having holes $p\,p'$, that register with a hole Q in the draw-bar H near the angle formed at M, into which a pin R is run to hold the draw-bar H in an operative position when desired. The pin R may be attached to the beam A by a chain r, if desired. When not in use, the front of the draw-bar drops into the space G, its downward movement being limited by a lug S on the middle beam of the framework C.

It will be readily seen that by the arrangement of the parts in my device there is provided a shoulder T, that abuts against the front of the beam A when the draw-bar H is in operative position and adds great rigidity thereto when the locomotive is pushing a train, while the lug N adds rigidity when the locomotive is pulling a train by its head end, and thus relieves the strain that is usually sustained by the pivot-pin on the front of the beam. The angle formed by the shoulder T and the bottom of the coupling-bar E is slightly rounded at U to permit the coupling-bar to be readily raised or lowered. It will also be noted that the parts L, M, and N act as a partial counterweight for the front of the draw-bar H, thus making the labor of raising it into operative position much less than in the old form of locomotive draw-bars. The front of the draw-bar, however, is of sufficient weight to cause it to drop into the space G and rest on the lug S when the pin R is withdrawn.

The operation is as follows: The draw-bar H being in the position shown in Figs. 1 and 2, the coupling-head J resting on the lug S, and it being desired to couple cars to the pilot end of the locomotive, a brakeman standing on the beam A or frame of pilot C presses down on the part L, causing the lug N to enter the socket O until the holes $p\,p'$ and Q register, when the pin R is pushed into place and the device is in a position to couple cars. When not in use, the pin R is removed and the coupling-head J drops down against the lug S.

I do not wish to be limited to the precise construction herein shown and described, as the same may be varied somewhat without departing from the spirit of my invention.

Having thus described my invention, what I claim as new is—

1. In a draw-bar for a locomotive-pilot

adapted to be pivoted to the front of the locomotive, an upwardly and rearwardly extending portion, a socket on the rear of the buffer-beam of the locomotive and means for fastening said upwardly and rearwardly extending portion therein, as and for the purpose shown and described.

2. In a draw-bar, pivoted to the front of the buffer-beam of a locomotive, a bar provided with a coupling device, an upwardly and rearwardly extending portion integral therewith forming a shoulder, a lug at the end thereof, and means for securing said lug at the rear of said buffer-beam, as and for the purpose shown and described.

3. In a draw-bar, for a locomotive-pilot, pivoted to the front beam of the locomotive, an upwardly and rearwardly extending end adapted to rest on the top of said front beam when the draw-bar is in operative position said beam thereby limiting the upward movement of the coupling end of the bar, substantially as shown and described.

4. In a draw-bar for a locomotive-pilot, adapted to be pivoted to the front beam of a locomotive, an upwardly and rearwardly extending portion, a lug at the end thereof, a hole therein, and a socket on the rear of the beam and a hole therein to register with the hole in said lug, substantially as shown and described.

5. In a draw-bar for a locomotive-pilot, adapted to be pivoted to the front beam of a locomotive, an upwardly and rearwardly extending portion, forming a shoulder, and a depending lug at the rear end of the draw-bar, a socket on the rear of said front beam and means for fastening said depending lug in said socket, substantially as shown and described.

6. In a device for coupling cars to the pilot end of a locomotive, the combination of a draw-bar, pivoted to the front beam of the locomotive, having an upwardly and rearwardly extending portion, a lug on the end thereof, a socket on the rear of the front beam of the locomotive and means for fastening said lug in said socket, substantially as shown and described.

7. In a device for coupling cars to the pilot end of a locomotive, the combination of a draw-bar, pivoted to the front beam of the locomotive, having an upwardly and rearwardly extending portion, a lug on the end thereof, a hole therein, and a socket on the rear of the beam having the sides extending upward to form ears and holes in said ears, substantially as shown and described.

8. In a device for coupling cars, the combination with a pilot of a locomotive having its middle bar partly removed to form a space, of a draw-bar pivoted to the front beam of the locomotive above the center of said space, said draw-bar having an upwardly and rearwardly extending portion, a socket on the rear of said front beam, and means for fastening said depending lug in said socket, substantially as shown and described.

9. In a device for coupling cars, the combination with the pilot of a locomotive having its middle bar partly removed to form a space and a lug on the lower framework of the pilot, of a draw-bar pivoted to the front beam of the locomotive above the center of said space, said draw-bar having an upwardly and rearwardly extending portion and a depending lug, a socket on the rear of the front beam of the locomotive, and means for securing said lug in said socket, substantially as shown and described.

10. In a device for coupling cars to a locomotive, a draw-bar pivoted to the front of the buffer-beam of a locomotive, provided with a suitable coupling device, an upwardly and rearwardly extending portion, means for securing said draw-bar in an operative position at the rear of said buffer-beam, and a pilot having its middle bar removed to form a space to receive the coupling end of the draw-bar when in an uncoupled position, substantially as shown and described.

11. In a device for coupling cars to a locomotive, a draw-bar pivoted to the front of the buffer-beam of a locomotive, provided with a suitable coupling device, an upwardly and rearwardly extending portion, a depending lug on the end thereof, a socket on the rear of said buffer-beam, means for securing said lug in said socket, a pilot having its middle bar removed to form a space to receive the coupling end of the draw-bar, and a lug on the lower framework of the pilot, substantially as shown and described.

12. In a device for coupling cars to a locomotive, a draw-bar pivoted to the front of the buffer-beam of a locomotive, an upwardly and rearwardly extending portion, adapted to lie upon the top of the buffer-beam, forming a shoulder adapted to abut against the front of the buffer-beam, a lug on the rear of said upwardly and rearwardly extending portion, adapted to fit in a socket on the rear of said buffer-beam, means for fastening said beam in said socket, a pilot having its middle bar removed to form a space for the reception of the coupling end of the draw-bar, and a lug on the lower framework of the pilot, substantially as shown and described.

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

FRANK L. GRANGER.

Witnesses:
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C. E. HORIGH.