March 29, 1932. G. M. MYERS 1,851,642

STOKER SUPPORT

Filed Nov. 27, 1929

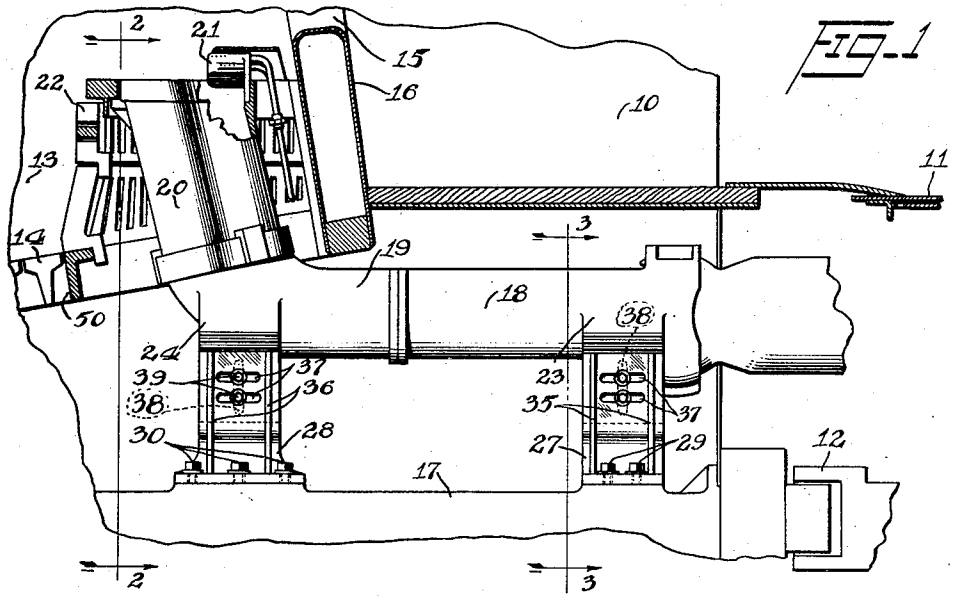

FIG. 1

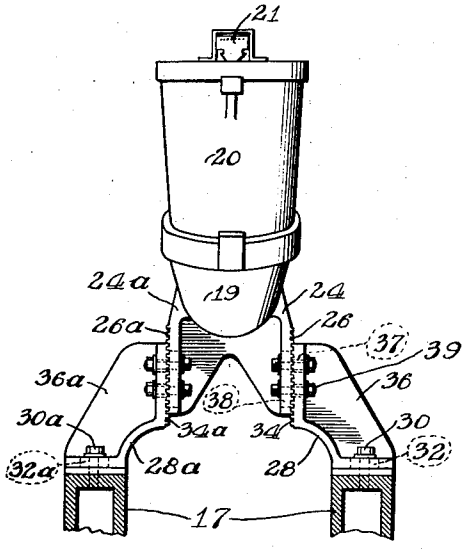

FIG. 2

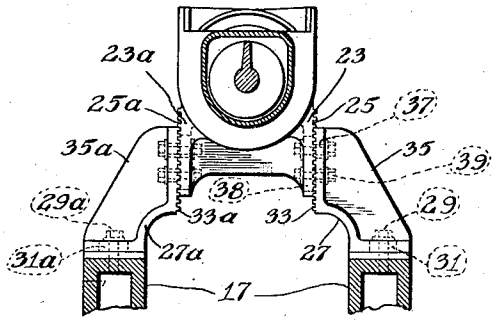

FIG. 3

INVENTOR
Guy M. Myers
BY
E. Archer Turner
ATTORNEY

Patented Mar. 29, 1932 1,851,642

UNITED STATES PATENT OFFICE

GUY M. MYERS, OF CLARENDON, VIRGINIA, ASSIGNOR TO THE STANDARD STOKER COMPANY, INCORPORATED, A CORPORATION OF DELAWARE

STOKER SUPPORT

Application filed November 27, 1929. Serial No. 410,035.

This invention relates to improvements in mounting stokers on locomotives.

The principal object of the invention is the provision of new and improved means whereby a great portion of the weight of the stoker is securely supported on the locomotive frame, and more particularly in such supporting means that it will readily and conveniently permit of vertical, longitudinal, and lateral adjustments of the stoker, especially when being installed on the locomotive.

A further object of this invention is to provide adjustable supporting means for a stoker and which is simple in construction, is easily manipulated, readily installed, permits quick adjustment, and requires no moving, dismantling or alteration of any fixed parts of the stoker or locomotive.

Other and further objects and advantages will appear from the following description taken in connection with the accompanying drawings, in which

Fig. 1 is a central vertical longitudinal section of a portion of a locomotive, showing the invention in position thereon;

Fig. 2 is a section on the line 2—2 of Fig. 1; and

Fig. 3 is a section on the line 3—3 of Figure 1.

When applying a stoker on a locomotive it is usually difficult to install the apparatus according to the plans, for the variations in the parts making up the locomotive are such as to make it necessary to depart from the plans or application drawings when installing the stoking device. This often requires making new supports for the stoker, relocating bolt holes in the locomotive frame work, or other similar changes all of which delay progress of construction and increases production cost.

This invention eliminates these difficulties by providing a new and novel stoker supporting means capable of adjustment to meet the variations in locomotive parts.

On the drawings, the reference character 10 designates the rear portion of a locomotive and 11 a portion of its tender. At 12 is shown a conventional coupling mechanism for connecting the locomotive and tender. The locomotive is provided with a firebox 13 having in its lower portion a grate 14, and a door opening 15 in the backwall 16 thereof, all of which are of the usual or well known construction. The locomotive frame is represented at 17.

The stoker shown is of the type delivering fuel within the firebox 13 upwardly through the grate 14 and comprising a conduit system for carrying the fuel from the tender to the firebox having a portion of the tender, not shown, leading forwardly to a portion mounted on the locomotive frame, this latter portion including a horizontally disposed conduit section 18 extending longitudinally with and centrally of the locomotive frame 17; an upturned elbow section 19 forming a continuation of the section 18, and a housing or mouth section 20 seated in the elbow section to form a continuous conduit therewith. The housing 20 projects loosely through the grate 14 and extends upwardly within the firebox to a height therein sufficient to permit distribution of the fuel in aerial paths from the delivery end of the housing by a pressure fluid blast adapted to issue from a distributor 21 disposed at the rear of the housing.

That portion of the housing 20 extending above the grate is protected from the heat of the fire by a vertically and horizontally divided protecting wall 22 which is mounted on a center grate bearer bar 50, and partially surrounds the housing. The protecting wall in effect is a part of the firebox structure. Its relation to the housing is such as to provide clearance between, permitting expansion or contraction of the firebox without interfering with the housing 20 or changing its position. The housing of course is rigid with the locomotive frame 17.

This much of the specification describes a stoking device of a form widely used in practice and need not be further described. It will be realized this form of stoker has been selected for the purpose of illustrating the invention only, and that any form of stoker or feed conduit system to which the novel feature of the invention is applicable may be used.

The present invention consists in the means

for adjustably supporting the stoker or stoker feed conduit from the locomotive frame as will now be described.

Integral with the forward conduit section 18 and the elbow section 19 are formed respectively, the depending flanges 23, 23*a* and 24, 24*a*, having their outer sides formed with serrations 25, 25*a* and 26, 26*a* respectively. The depending flanges 23, 23*a* are supported from the brackets 27, 27*a* and depending flanges 24, 24*a* are supported from the brackets 28 and 28*a*.

The brackets are rigidly secured at the base of each of the frame members 17 in a suitable manner as by bolts or studs 29, 29*a* and 30, 30*a*. The base of the brackets 27, 27*a*, and 28, 28*a* are provided with transverse elongated openings or slots 31, 31*a* and 32, 32*a* respectively, to allow for lateral adjustments of the brackets. The inner vertical faces of brackets 27, 27*a* and 28, 28*a*, are provided with serrations 33, 33*a* and 34, 34*a* arranged to engage the serrations 25, 25*a* and 26, 26*a* respectively of the depending flanges from the conduit sections 18 and 19. These brackets 27, 27*a* and 28, 28*a* are further provided with ribs 35, 35*a* and 36, 36*a* respectively to strengthen the same.

The vertical extension or upright leg of each of the brackets is provided with one or more, preferably a pair, of horizontally disposed elongated openings or slots as at 37 and each of the depending flanges 23, 23*a* and 24, 24*a* are provided with vertically disposed elongated openings or slots as at 38 communicating with the horizontal slots 37. The brackets and the depending flanges are suitably secured together as by the bolts 39 which pass through the horizontal slots 37 and the vertical slots 38. These slots permit longitudinal and, or vertical movement or adjustment of the stoker or its conduit sections 18 and 19 with respect to the frame member 17.

The invention permits of adjusting the stoker in a simple, easy and expeditious manner without disturbing its component parts or without altering any of the locomotive parts, merely by loosening the bolts connecting the depending flanges and the frame to the brackets, moving the stoker conduit in desired position and tightening the bolts.

This invention is not limited in its application to this particular construction herein illustrated as various changes might be made in the construction shown without departing from the spirit of the invention or the scope of the appended claims.

I claim:

1. In combination, a locomotive having a frame, a stoker including a section on said locomotive, and means rigidly supporting said section from said frame, said means adjustable to permit vertical, longitudinal and lateral adjustments of said stoker section.

2. In combination, a locomotive having a frame, a feed conduit on said locomotive, and means for rigidly but adjustably supporting said conduit from said frame, said means comprising a plurality of depending flanges extending downwardly from said conduit and a plurality of brackets laterally adjustable on said frame and adjustably cooperating with said flanges to permit vertical and longitudinal adjustment of said conduit.

3. In combination, a stoker conduit section, a frame on which said conduit section is supported, and means for rigidly but adjustably supporting said section on said frame to permit vertical, longitudinal and lateral adjustment of the conduit on the frame including a bracket detachably mounted on said frame and being laterally adjustable thereof and being detachably and adjustably connected with said section to provide vertical and longitudinal adjustment of such section.

4. In a supporting means for supporting a feed conduit from a frame, the combination of a bracket having a base and an upright leg portion for supporting said conduit from said frame, said bracket having transverse elongated openings in its base and having horizontally disposed elongated openings in its upright leg portion, and fastening bolts extending through said elongated openings for detachably securing the base of said bracket to said frame and the upright leg portion to said conduit, said transverse elongated openings permitting lateral adjustment of the bracket on said frame and said horizontally disposed elongated openings permitting longitudinal adjustment of said conduit.

5. In a locomotive having a frame and provided with a stoker, the combination of a fuel conveyor conduit having members depending therefrom, supporting members fixedly mountable on said frame and fixedly attachable to said depending members, and means provided in said depending members and in said supporting members permitting longitudinal, vertical and lateral adjustments of said conduit.

6. In a locomotive having a frame and provided with a stoker, the combination of a forward conveyor conduit and an elbow conduit, depending members formed therewith, supporting members fixedly mountable on said frame and fixedly attachable to said depending members, and means provided in said depending members and in said supporting members permitting longitudinal, vertical and lateral adjustments of said forward conveyor conduit and said elbow conduit.

7. In a boiler having a frame and provided with a stoker, the combination of a fuel conveyor conduit, flange members depending therefrom, and means connecting said depending members with said frame having transversely and longitudinally extending elongated openings adapted to receive secur-

ing means to permit of adjusting the conveyor conduit with respect to said frame.

8. In a locomotive having a frame and provided with a stoker, the combination of a fuel conveyor conduit, members depending therefrom provided with serrations, means connecting said depending members with said frame having serrations engageable with the serrations on said depending members and openings arranged to receive securing means and to permit of adjusting the conveyor conduit with respect to said frame.

9. In a locomotive having a frame and provided with a stoker, the combination of a fuel conveyor conduit, members depending therefrom provided with serrations, brackets connecting said depending members with said frame having serrations engageable with the serrations on said depending members and openings in said brackets and said depending members arranged to receive securing means and to permit of adjusting the conveyor conduit with respect to said frame.

10. In a locomotive having a frame and provided with a stoker, the combination of a fuel conveyor conduit, depending members formed therewith, a locomotive frame member and brackets connecting said frame member and said depending members, said brackets and depending members having engageable serrated faces, elongated openings in the base of said brackets adapted to receive means securing said brackets to said frame, elongated openings in the upright leg of said brackets and in said depending member adapted to receive securing means, said elongated openings being arranged to permit of adjusting said conveyor conduit.

11. In a locomotive having a frame and provided with a stoker, the combination of a fuel conveyor conduit, depending members formed therewith, a locomotive frame member and brackets connecting said frame member and said depending members, said brackets and depending members having engageable serrated faces, elongated openings in the base of said brackets adapted to receive means securing said brackets to said frame, said elongated openings permitting lateral adjustments of said conduit, and horizontal elongated openings in the upright leg of said brackets and vertical elongated openings in the depending members adapted to receive means for securing said brackets to said depending members, said elongated openings permitting vertical and longitudinal adjustments of said conveyor conduit.

In testimony whereof I affix my signature.

GUY M. MYERS.