March 26, 1935. E. H. BLATTNER 1,996,038

DRAFT RIGGING

Filed June 11, 1930

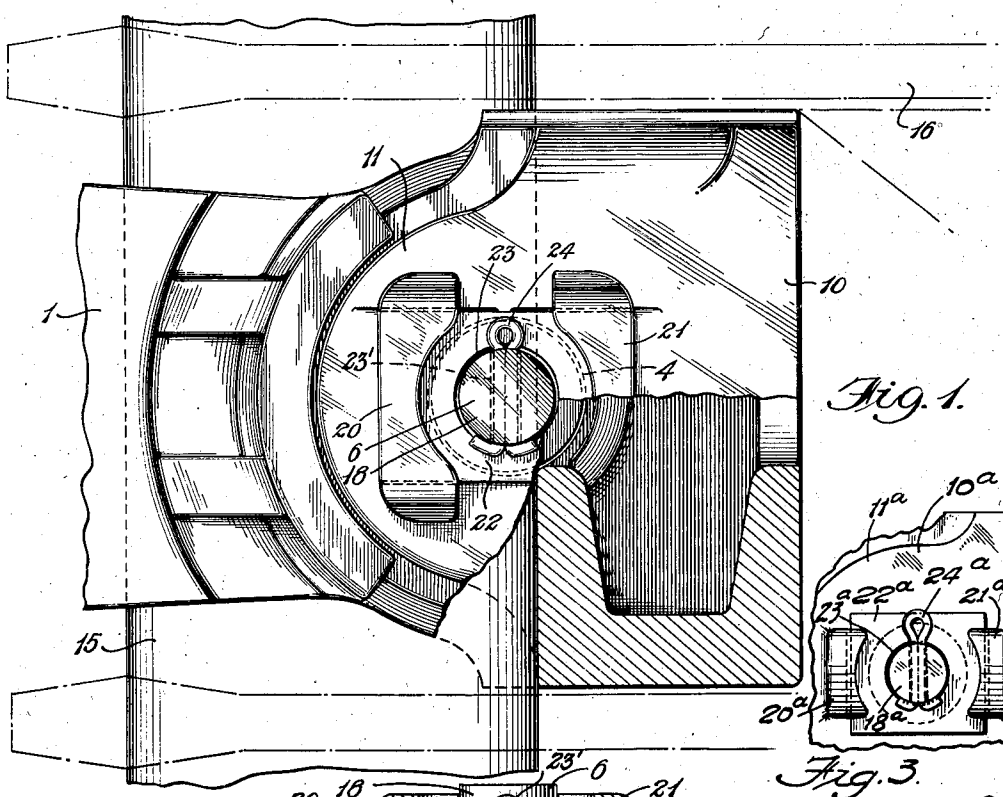
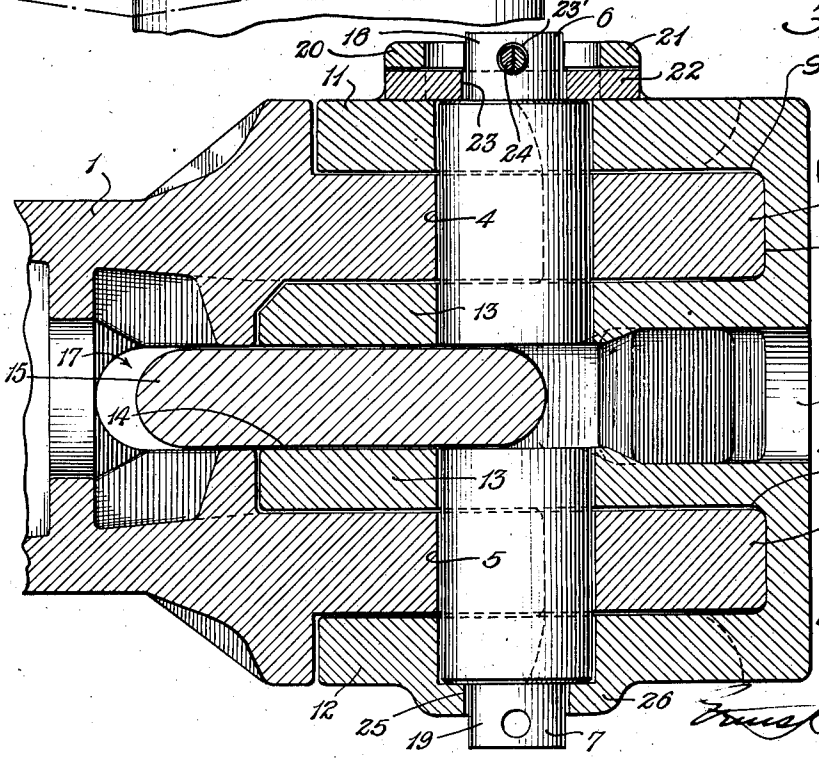


Fig. 1.

Fig. 3.



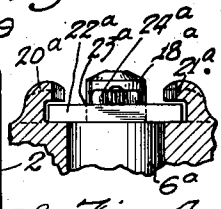


Fig. 4.

Fig. 2.

Inventor

EMIL H. BLATTNER.

Thos C. Wood
his Attorney

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DRAFT RIGGING

Emil H. Blattner, Rochester, N. Y., assignor to The Symington Company, New York, N. Y., a corporation of Maryland

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5 Claims. (Cl. 213—69)

This invention relates to draft rigging, and more particularly to a coupler with an articulated stem and means for holding the pivotal means in said stem in proper positions.

The principal object of my invention, generally considered, is to provide a swivel butt coupler in which the coupler stem and associated swivel block are formed with intercalated flanges having registering apertures for receiving pivotal means, said coupler stem and swivel block being slotted for receiving an associated draft key, pivot pins extending through the intercalated flanges of the coupler and swivel block, but not intersecting the slot, the head ends of said pins being held in position by the corresponding flanges on the swivel block and prevented from interfering with the key slot.

Another object of my invention is to so construct the swivel block and pivot pins of a swivel butt coupler that the upper and lower pins may be made identical and the upper pin will not drop below the top of the draft key slot in the coupler and will be prevented from undesired removal.

A further object of my invention is the provision of a swivel butt coupler with a pair of pivot pins connecting the parts thereof, both pins having heads reduced in section, the head of the lower pin passing through a supporting member on the lower flange of the swivel block, the upper flange of the swivel block being provided with guiding lugs, and a retaining plate held in place by said lugs and apertured for receiving the head of the upper pivot pin, said upper pin, when in place, having its head passing through the aperture in said retaining plate and locked by a cotter extending therethrough above said plate, whereby it is prevented from dropping below the upper surface of the draft key slot of said stem.

Other objects and advantages of the invention relating to the particular arrangement and construction of various parts will become apparent as the description proceeds.

Referring to the drawing illustrating my invention, the scope whereof is defined by the appended claims:—

Figure 1 is a plan of a swivel butt coupler embodying my invention, the associated draft key and yoke being fragmentarily illustrated.

Fig. 2 is a longitudinal vertical section of the coupler shown in Fig. 1, the pivot pins being illustrated in side elevation.

Fig. 3 is a fragmentary plan corresponding to Fig. 1, but showing a modification.

Fig. 4 is a fragmentary longitudinal vertical section of the coupler and associated pivot pin and retainer shown in Fig. 3.

Referring to the drawing in detail, like parts being designated by like reference characters, and first considering the embodiment of my invention illustrated in Figs. 1 and 2, there is shown the rearward end of a coupler stem 1 formed with rearwardly extending webs or flanges 2 and 3, which flanges are perforated or apertured at 4 and 5, respectively, for the reception of the respective pivot pins 6 and 7. The rear edges of the flanges are curved coaxially with respect to the perforations therethrough, as indicated at 8. The flanges 2 and 3 of the coupler preferably closely fit in corresponding pockets 9 provided in the swivel block or butt portion 10 of the coupler. The bottom or forward face of each pocket is curved coaxially with respect to the pivot apertures so that the flanges 2 and 3 on the stem are adapted to fit into said pockets with the coaxial portion of the pockets in pivotal engagement for the transmission of buffing forces therebetween.

The swivel block or butt portion 10 is provided with upper and lower flanges or webs 11 and 12, respectively, and an intermediate flange or web 13, which is intersected, as shown, by a slot 14 for receiving an associated draft key 15 connecting said coupler with the associated yoke 16, which is only diagrammatically illustrated. The slot 14 of the swivel block is preferably continued or supplemented by a corresponding slot 17 in the stem of the coupler 1, thereby providing an aperture of the proper size for receiving the key 15.

The pins or pivot members 6 and 7 are relatively short and provided with heads 18 and 19, respectively, for limiting inward movement with respect to the swivel block whereby the inner ends of said pins, and particularly the upper pin, do not extend into the slot 14 to interfere with the key 15. In order to retain the pins or pivotal members 6 and 7 in position, the upper flange 11 of the swivel block is preferably formed with a pair of lugs 20 and 21 slotted or grooved for guiding and retaining a preferably flat pin retainer 22. The retainer 22 is preferably apertured, as indicated at 23, for receiving the head 18 of the pin 6, said head beyond the plate 22, when in position, being preferably apertured, as indicated at 23', for receiving a cotter or other retaining means 24, normally engaging the upper surface of the plate 22, for locking the pin and retaining plate together and in position, thereby not only preventing undesired removal of the pin 6, but preventing it from dropping below

its normal position and interfering with the draft key 15. The retaining means or cotter is protected by being between and disposed below the tops of said lugs.

The lower pin 7 is desirably constructed to be identical with the upper pin 6, and the head thereof is normally received in an aperture 25 in the supporting web or shelf 26 formed on the lower flange 12 of the swivel block. Inasmuch as there is no tendency for the pin 7 to move upwardly, a cotter need not be used in the head aperture.

The manner of connecting the stem 1 and swivel block 10 may be as follows: The swivel block may be fitted over the flanges 2 and 3 on the stem and the lower pin 7 dropped into place through the registering pin-receiving apertures in the intercalated flanges of the members. The upper pin 6 may then be dropped from the top and it is preferably received on a tool or any desired means whereby after insertion of the plate 22 in place, the pin 6 may be raised to the position shown in Fig. 2 with its reduced head section passing through the aperture 23 in the plate 22, whereupon it may be locked in position by means of a cotter or the like 24.

Referring now to the embodiment of my invention illustrated in Figs. 3 and 4, there is shown a fragmentary portion of a swivel block or butt portion 10^a of a coupler such as shown in Figs 1 and 2 with an upper pivot pin 6^a corresponding to the pin 6 of the first embodiment. Although only the upper pivot pin and corresponding portion of the swivel block is illustrated, it will be understood that the lower pin and remainder of the coupler and swivel block, not illustrated, corresponds to that shown in Figs 1 and 2.

As in the first embodiment, the pivot pin 6^a is relatively short and is provided with a head 18^a for limiting inward movement with respect to the swivel block whereby the inner or lower end of said pin, not shown, does not extend into the coupler slot to interfere with the associated draft key, as in the first embodiment. In order to retain the pin 6^a in position, the upper flange 11^a of the swivel block is preferably formed with a pair of lugs 20^a and 21^a grooved for guiding and retaining a preferably flat pin retainer 22^a. The retainer 22^a is preferably apertured, as indicated at 23^a, for receiving the head 18^a of the pin 6^a, said head beyond the plate 22^a, when in position, being desirably apertured, as in the first embodiment, for receiving a cotter or other retaining means 24^a for locking the pin and retaining plate together and in position, thereby preventing undesired removal of the pin and preventing it from dropping below its normal position and interfering with the associated draft key.

It will be seen that the difference between the embodiment of Figures 3 and 4 and that of Figs. 1 and 2 is that the retainer plate 22^a is inserted and removed transversely of the coupler, while the retaining plate 22 of the first embodiment is inserted or removed longitudinally of the coupler and the lugs 20^a and 21^a are merely grooved for holding the edges of the retainer while the lugs 20 and 21 are slotted to receive the ends of the retainer. Except as specifically described, the embodiment of Figs. 3 and 4 desirably corresponds with that of Figs. 1 and 2.

From the foregoing disclosure, it will be seen that I have devised an improved swivel butt coupler in which the parts thereof are pivotally connected by a pair of identical pins which are retained in place so that not only is undesired removal or loss prevented, but the upper pin is not allowed to drop below its normal position into the key slot to interfere with the associated draft key.

Although I have disclosed a preferred embodiment of my invention, it will be understood that modifications may be made within the spirit and scope of the appended claims.

I claim:—

1. A coupler with an articulated shank comprising a stem portion and a block intercalated with respect to said stem portion and provided with registering apertures, a draft key slot in said shank, means for pivotally connecting said stem portion and block comprising a pivot member extending downwardly in said apertures from the top of said shank approximately to said slot, said pivot member having a reduced head section, the upper surface of said block having lugs upstanding therefrom on opposite sides of said apertures, a retainer guided by and extending between said lugs, said retainer having an aperture receiving the reduced head section of said pivot member, and cotter means passing through said reduced head section with the end portions normally resting on said retainer and protected by being between and disposed below the tops of said lugs.

2. A coupler with an articulated shank comprising a stem portion and a block intercalated with respect to said stem portion and provided with registering apertures, a draft key slot in said shank, means for pivotally connecting said stem portion and block comprising a pivot member extending downwardly in said apertures from the top of said shank approximately to said slot, said pivot member having a reduced head section, the upper surface of said block having lugs upstanding therefrom on opposite sides of said apertures, a retainer guided by and extending between said lugs, said retainer having an aperture receiving the reduced head section of said pivot member, and locking means passing through said reduced head section with the end portions normally resting on said retainer.

3. A coupler with an articulated shank comprising a stem portion and a block intercalated with respect to said stem portion and provided with registering apertures, a draft key slot in said shank, means for pivotally connecting said stem portion and block comprising a pivot member which extends downwardly from the top of said shank approximately to said slot and is received in said apertures, said pivot member having a reduced head section, the upper surface of said block having lugs upstanding therefrom on opposite sides of said apertures, a retainer guided by and extending between said lugs, said retainer having an aperture receiving the reduced head section of said pivot member, and holding means passing through said reduced head section above said retainer and protected by being between and disposed below the tops of said lugs.

4. A coupler with an articulated shank comprising a stem portion and a block intercalated with respect to said stem portion and provided with registering apertures, a draft key slot in said shank, means for pivotally connecting said stem portion and block comprising a pivot member extending downwardly in said apertures from the top of said shank approximately to said slot, said pivot member having a reduced head section, the upper surface of said block having lugs upstanding therefrom on opposite sides of said section and provided with apertures, a retainer with its ends received in said apertures and extending be-

tween said lugs, said retainer having an aperture receiving the reduced head section of said pivot member, and cotter means passing through said reduced head section with the end portions normally resting on said retainer and protected by being between and disposed below the tops of said lugs.

5. A coupler with an articulated shank comprising a stem portion and a block intercalated with respect to said stem portion and provided with registering apertures, a draft key slot in said shank, means for pivotally connecting said stem portion and block comprising a pivot member extending downwardly in said apertures from the top of said shank approximately to said slot, said pivot member having a reduced head section, the upper surface of said block having lugs upstanding therefrom on opposite sides of said apertures, and formed with portions extending toward one another and spaced from said upper surface, a retainer extending between said lugs and with edge portions underlying said spaced portions, said retainer having an aperture receiving the reduced head section of said pivot member, and cotter means passing through said reduced head section with the end portions normally resting on said retainer and protected by being between and disposed below the tops of said lugs.

EMIL H. BLATTNER.