Oct. 29, 1935. E. P. KINNE 2,019,311

DRAFT GEAR

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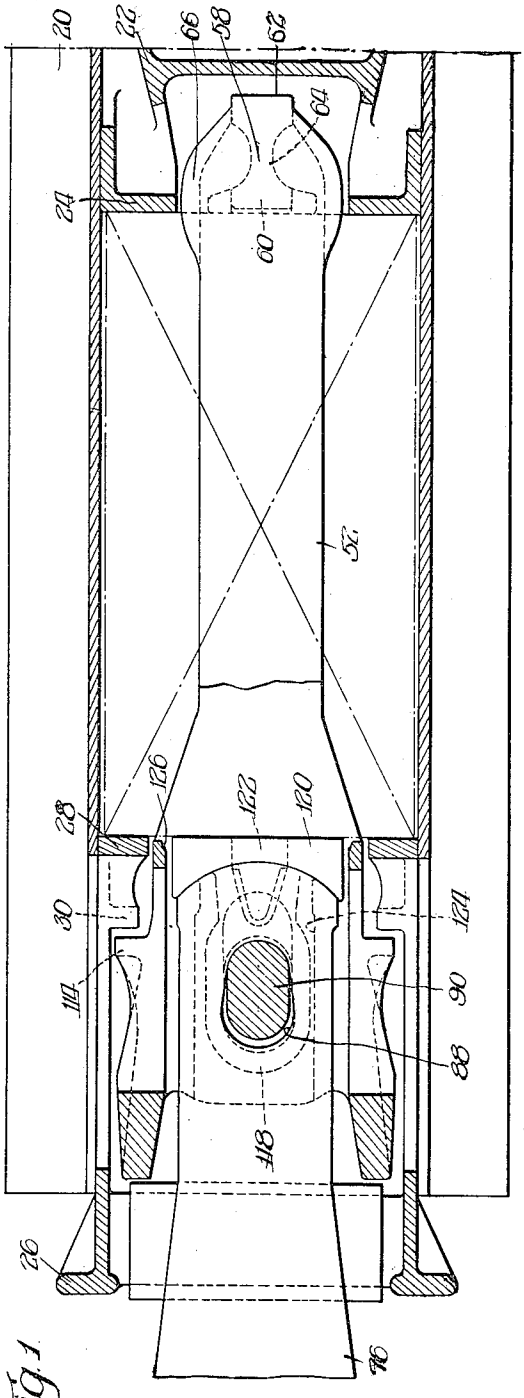


Fig. 1

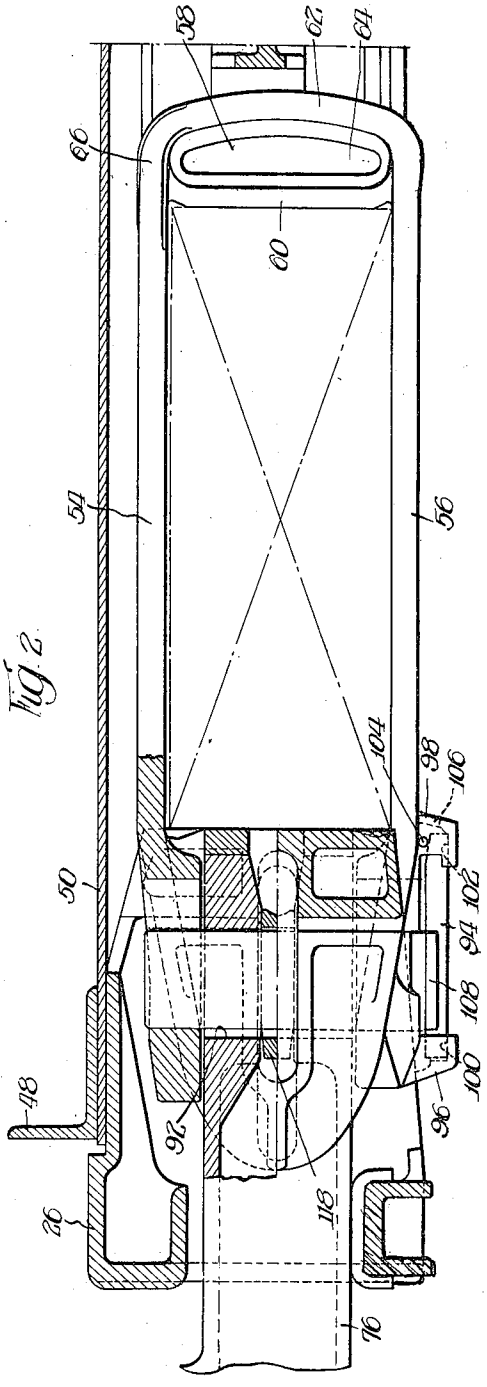


Fig. 2

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Oct. 29, 1935. E. P. KINNE 2,019,311

DRAFT GEAR

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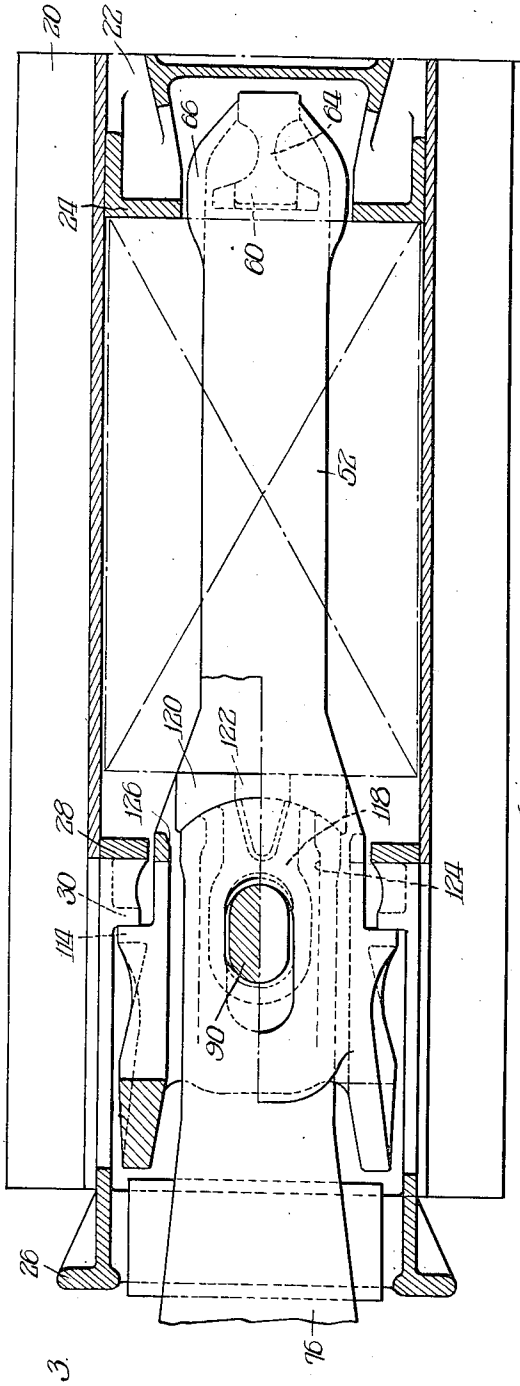


Fig. 3.

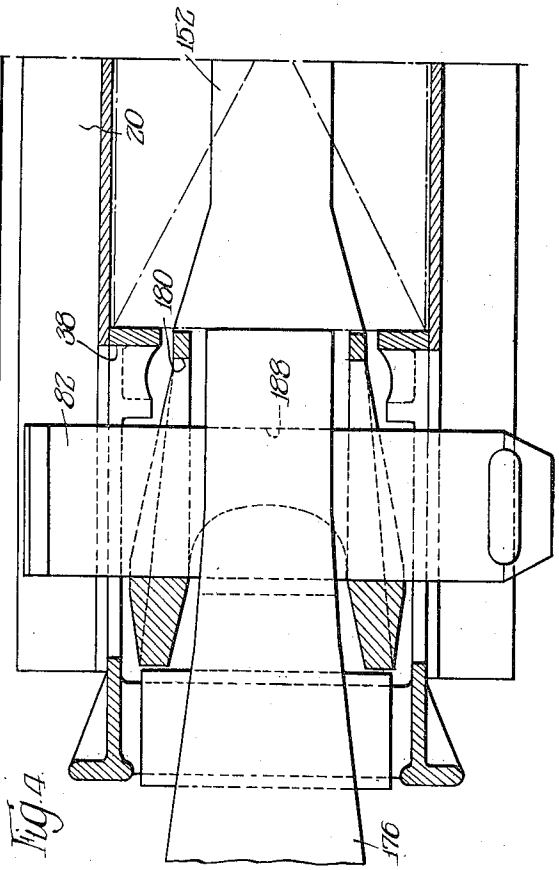


Fig. 4.

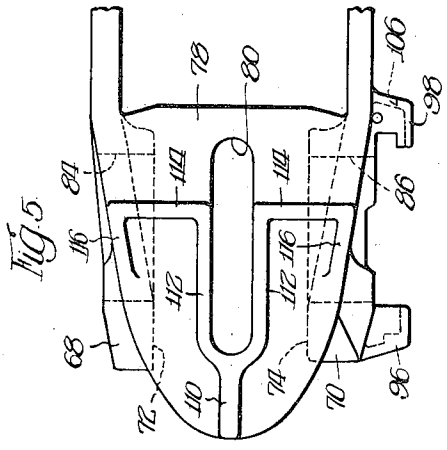


Fig. 5.

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DRAFT GEAR

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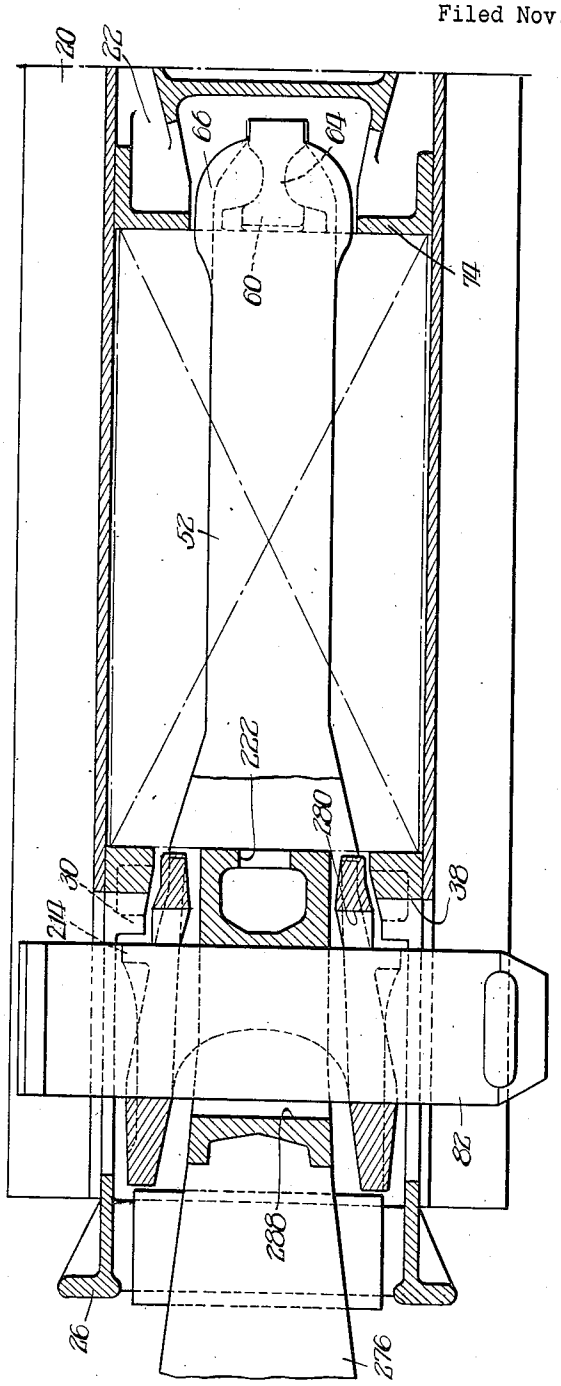


Fig. 6.

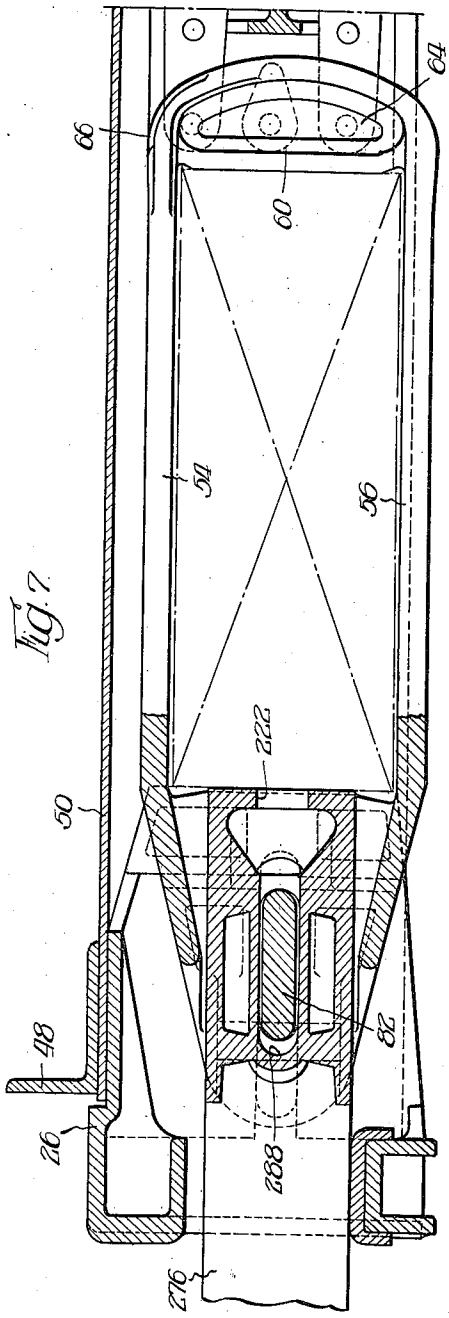


Fig. 7.

Witness:
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Oct. 29, 1935. E. P. KINNE 2,019,311

DRAFT GEAR

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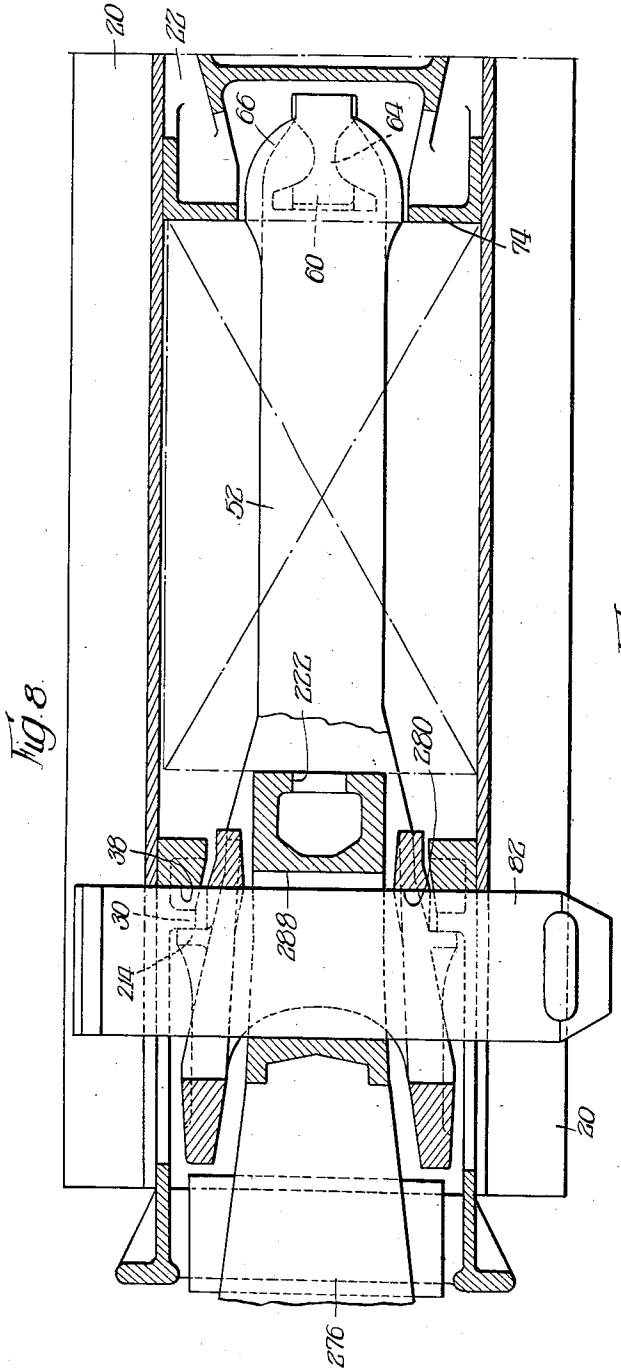


Fig. 8.

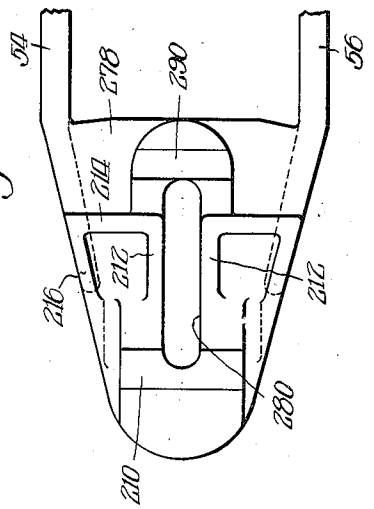


Fig. 9.

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DRAFT GEAR

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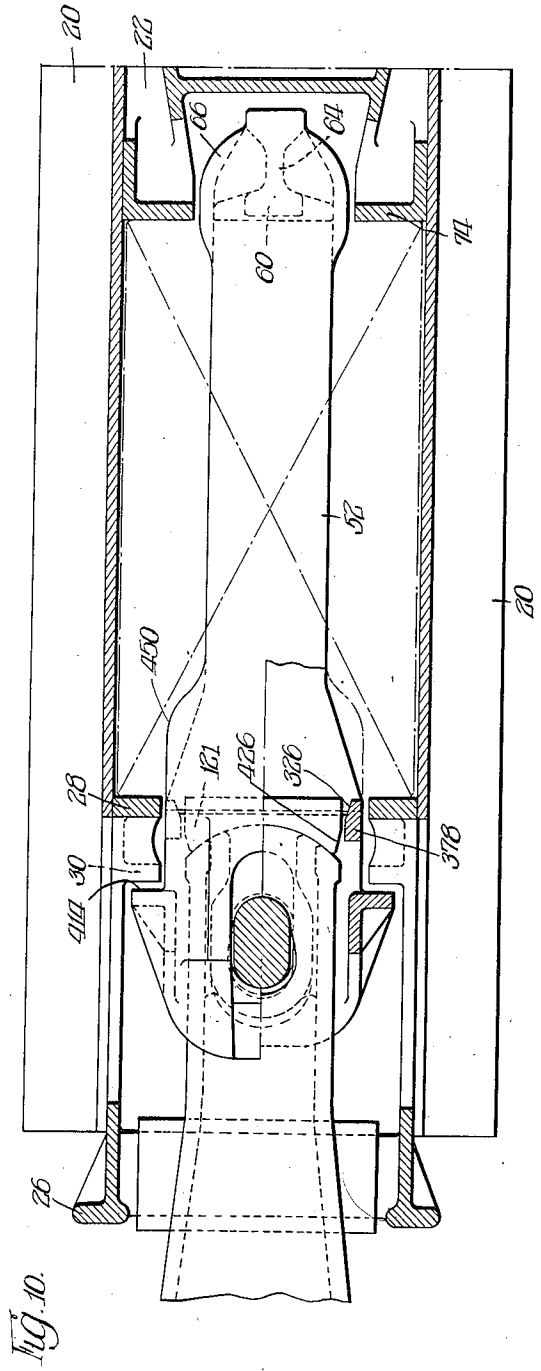


Fig. 10.

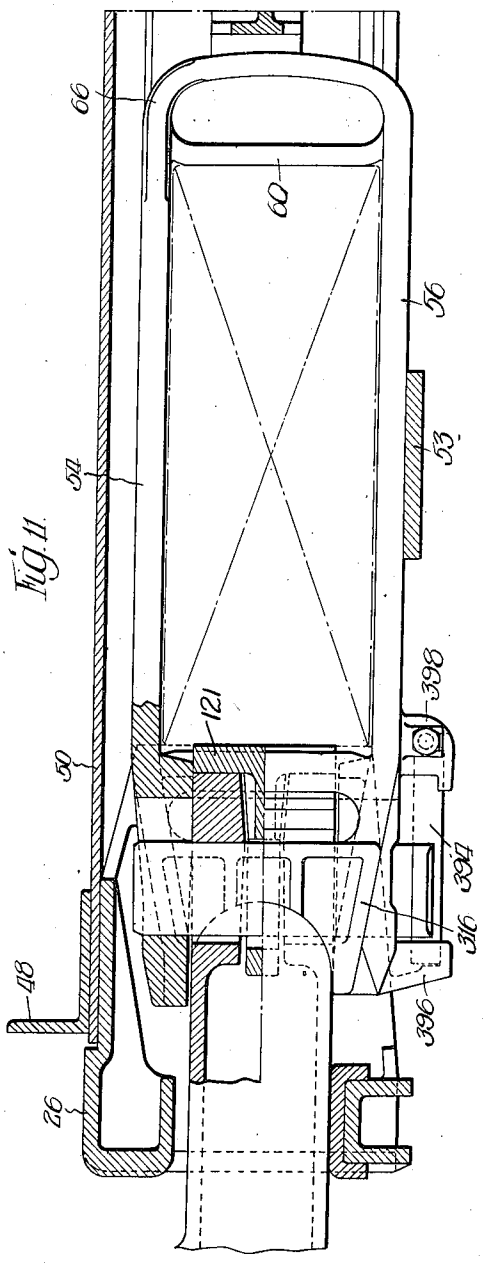


Fig. 11.

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DRAFT GEAR

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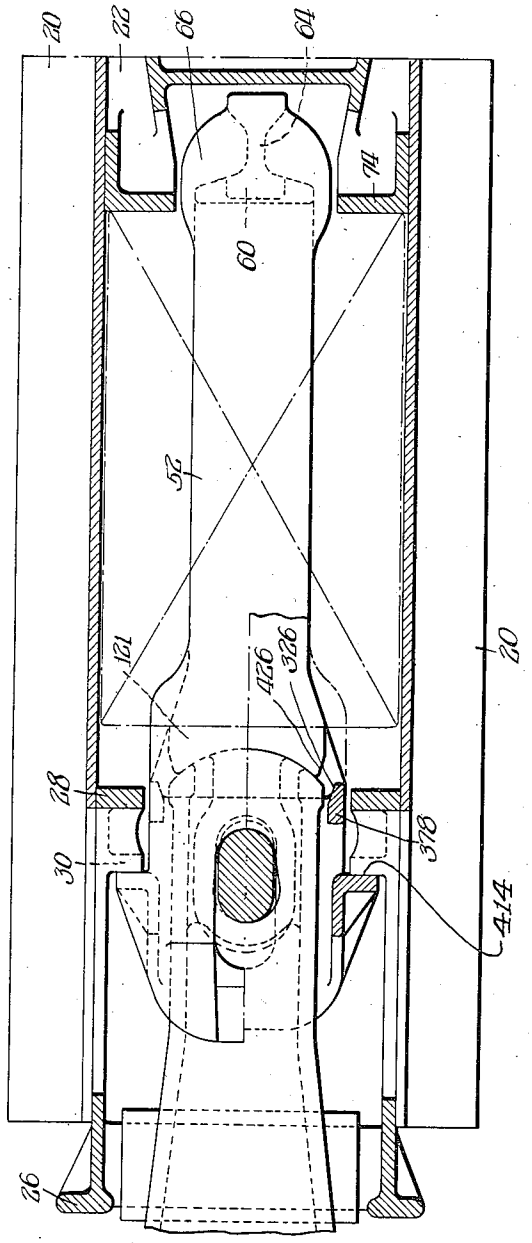


Fig. 12.

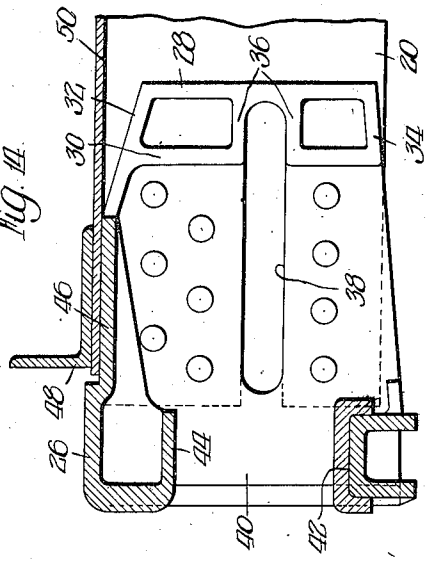


Fig. 11.

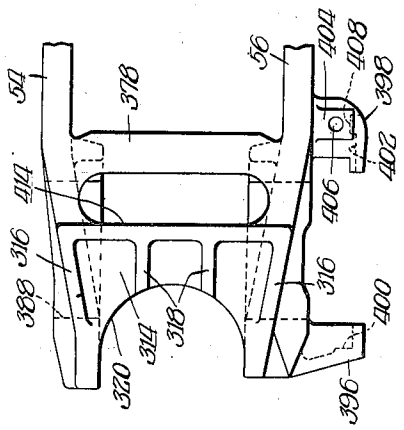


Fig. 13.

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DRAFT GEAR

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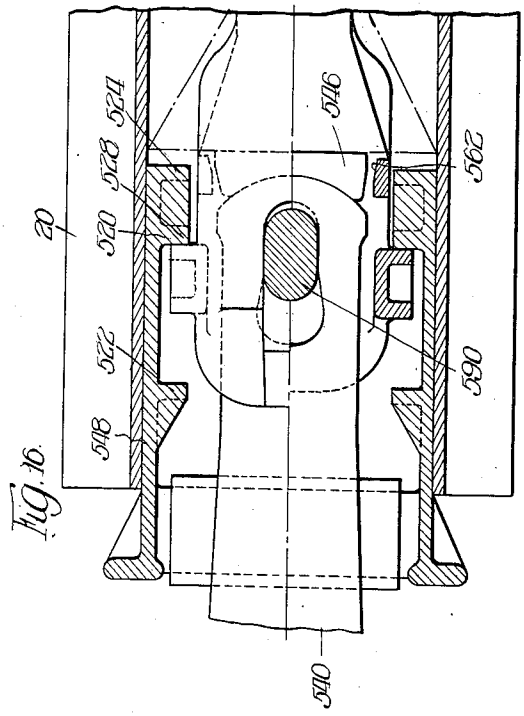


Fig. 16.

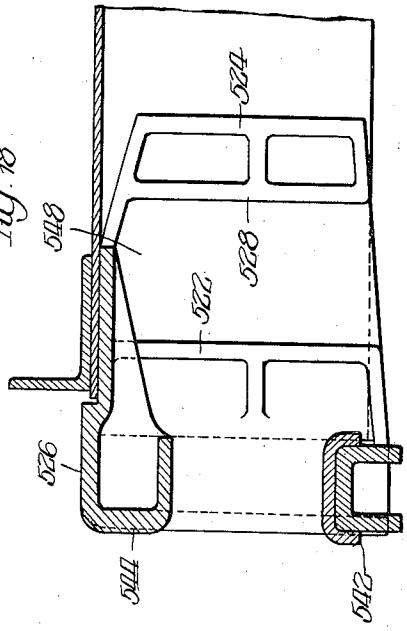


Fig. 18

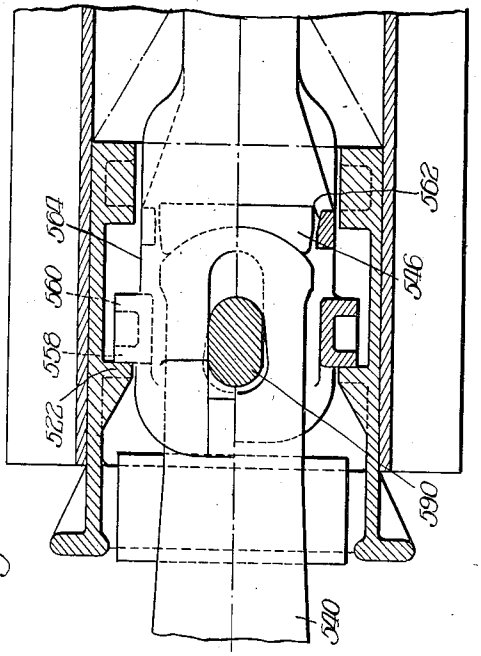


Fig. 15.

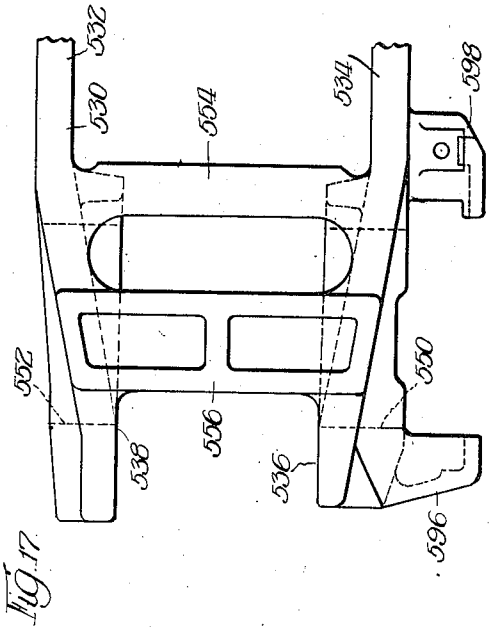


Fig. 17

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Patented Oct. 29, 1935 2,019,311

UNITED STATES PATENT OFFICE

2,019,311

DRAFT GEAR

Edmund P. Kinne, Alliance, Ohio, assignor to American Steel Foundries, Chicago, Ill., a corporation of New Jersey

Application November 25, 1929, Serial No. 409,496

18 Claims. (Cl. 213—50)

This invention pertains to draft rigging for railway rolling stock, and more particularly to that class of draft rigging especially designed for application to the underframes of railway cars, the same including means for connecting couplers to draft mechanism and means whereby there is direct cooperative relation between a portion of the draft gear and the sills for transmitting stresses directly from said draft gear to said sills.

This case is a continuation in part of application Serial No. 318,350, filed November 10, 1928.

It is an object to obtain a strong and serviceable radial shank connection in the simplest possible manner, one which will have the least possible surfaces subject to wear, which result in slack in the connection, one in which radial (or angling) action of the coupler shank is provided for while maintaining equalized pull on the yoke jaws in tension, and full butt end contact area and equalized pressure on draft gear or follower under buffing stresses.

An additional object is to provide an arrangement whereby emergency pulling contact will be had between the forward end of the yoke and the back of the buffer casting in case of failure of the draft gear or yoke straps, and one in which there is provided a coupler shank of ideal design having a simple key slot as with the present standard shank and being of great strength both under tension and compression, the shank having sides providing an ideal column construction to resist upsetting or distortion under buffing action.

Another additional object is to provide a construction wherein the coupler shank permits of its being applied to cars having the accepted A. R. A. standard design for integral striking casting and coupler carrier, and wherein the angling of the coupler is limited only by the contact of shank sides against the sides of the coupler opening in the striking casting and not by contact with the yoke jaws as in some arrangements.

Yet another object is to provide a construction wherein the pivotal action between the coupler and yoke is provided for by the same piece which connects them for pulling action, that is, the vertical key, wherein there is no superfluous connections with keys or small bearing pieces and wherein the vertical key is of ideal design to provide large bearing surface, free pivotal action and large area to resist shearing.

A further object is to provide a construction wherein generous bearing area is provided at key bearings and butt bearings, insuring minimum wear, and wherein large sectional areas in tension, compression and shear are also provided.

Still further object of the arrangement is to provide a construction in which the coupler is permitted to angle freely regardless of the compression in the draft gear to thereby permit coupling on curves without delay or effort and in order to eliminate transmission of side movement to the coupler key to thereby avoid wear of the key and keyways and to prevent any blows on the cotter or other key fasteners.

Yet further object is to provide a coupler retaining the advantages of the standard A. R. A. coupler and one which includes an efficient guide to maintain the coupler shank in proper position, adequate provision for vertical angular movement without pinching the key in either the coupler or yoke, positive emergency connection in the event of yoke or draft gear breakage, ready removal and replacement of coupler and draft gear and the entire draft attachments, and also to provide an arrangement which includes all of the advantages claimed for the so-called "swivel butt" arrangement, and includes additional advantages, such as greater simplicity, increased strength and increased bearing surfaces.

Another further object is to provide a construction which is inexpensive to make and maintain and one which fulfills all requirements of manufacture and service, and which also is readily replaceable by parts of standard construction without material changes in the car or draft appliance.

Still further additional object is to provide coupler mechanism having a buffing piece separate from the coupler shank, permitting designing of the coupler structure to secure maximum strength in buffing areas to resist compressive stresses, and to provide a coupler of such construction that if said coupler fails, it is only necessary to remove and replace the coupler proper.

Another object is to provide a construction whereby a construction similar to a swivel butt coupler arrangement may be associated with any type of draft appliance.

A different object is to provide a coupler and buffing block arrangement whereby the block will follow the coupler and whereby the arrangement may be replaced by the standard coupler arrangement.

Another different object is to provide coupler mechanism wherein part of the stresses incident to buff may under certain conditions of load be transmitted directly from the coupler to the draft

sills whereby strain on the draft gear is relieved.

Still another different object is to provide coupler mechanism wherein the yoke is designed to transmit stresses directly to the draft sills under certain conditions of operation of the draft gear, said yoke being so arranged as to be used with the standard A. R. A. coupler or be replaceable by the standard A. R. A. yoke.

Yet different object is to provide a draft gear construction wherein a key arrangement is used for connecting the coupler and yoke, and wherein the key is retained in operative position by means insuring a larger measure of safety than heretofore used.

Yet another different object is to provide a draft gear construction wherein the yoke is so arranged and constructed with respect to the associated structure as to be maintained in the same parallel relation to the sills regardless of the operation of said draft gear.

With these and various other objects in view, the invention may consist of certain novel features of construction and operation, as will be more fully described and particularly pointed out in the specification, drawings and claims appended hereto.

In the drawings, which illustrate embodiments of the device and wherein like reference characters are used to designate like parts—

Figure 1 is a top plan view partly in section of a portion of the draft sills of a railway car, showing the application thereto of draft gear embodying the invention;

Figure 2 is a side elevation partly in section of the structure illustrated in Figure 1;

Figure 3 is a sectional top plan view of the mechanism shown in Figure 1, showing the same in buff position;

Figure 4 is a fragmentary sectional top plan view of the sills and striking casting of the mechanism illustrated in Figures 1 to 3 inclusive, the same showing the application thereto of the standard A. R. A. coupler and yoke;

Figure 5 is a fragmentary elevation of the end portion of the yoke illustrated in Figures 1 to 3 inclusive;

Figure 6 is a top plan view partly in section of a portion of the draft gear embodying the invention, showing a modified form of yoke associated therewith in conjunction with a horizontal key coupler;

Figure 7 is a sectional side elevation of the structure illustrated in Figure 6;

Figure 8 is a sectional top plan view of the structure shown in Figure 6, the same showing the draft gear in buff;

Figure 9 is a fragmentary side elevation of one end of the yoke structure shown in Figure 6;

Figure 10 is a top plan view partly in section of a portion of the draft sills and draft gear, showing a modified form of structure;

Figure 11 is a sectional side elevation of the structure illustrated in Figure 10;

Figure 12 is a sectional top plan view of the structure illustrated in Figure 10, showing the same in full buff position;

Figure 13 is a fragmentary side elevation of one end portion of the yoke of the modified structure illustrated in Figures 10 to 12 inclusive;

Figure 14 is a fragmentary sectional elevation of the striking casting and integral cheek plates;

Figure 15 is a fragmentary top plan view partly in section of a further modified form of the coupler and yoke and associated stop structure, showing the same in draft;

Figure 16 is a fragmentary top plan view partly in section of the draft mechanism disclosed in Figure 15, the coupler and yoke thereof being in buff;

Figure 17 is a fragmentary side elevation of the hooded end of the yoke structure illustrated in Figures 15 and 16; and

Figure 18 is a fragmentary sectional elevation of the striking casting as disclosed in Figures 15 and 16, showing the arrangement of the stops thereon.

Referring first of all more particularly to the structure illustrated in Figures 1 to 5 inclusive, and Figure 14, the spaced car draft sills **20** are provided with a center bearing **22** provided with stops **24** for cooperation with suitable followers (not shown) or other portions of the draft gear, indicated in dot and dash lines. Said sills are provided with striking casting **26** extending inwardly of said sills and provided with a plurality of stops or lugs which may take the form of draft lugs **28** for cooperative relation with the front followers or other portion of the draft gear, and buffing stops **30**, said stops, as particularly shown in Figure 14, being reenforced by suitable gusset portions **32** and **34**, adjacent the top and bottom of said casting, and substantially horizontal gusset portions **36** disposed adjacent the keyway **38** provided in the cheek plate portions of the striking casting and in the sills.

The striking casting, as shown in Figure 14, is provided with a suitable opening **40** defined by the lower coupler bearing **42** and an upper return portion **44** of the striking casting, which portion provides a stop for the front portion of the yoke in draft in case of failure of the draft gear or its associated mechanism. The striking casting is also provided with a top horizontal portion **46** which is adapted to be secured to the end sills **48** and floor **50** in any suitable manner. The yoke **52**, shown as of the vertical plane type, is supported on the sills, as shown in Figure 11, by suitable carry irons **53** and includes upper and lower substantially horizontal members or straps **54** and **56** embracing the draft gear and joined at their inner ends by the end portion **58**, said end portion being of the reinforced type, including a substantially flat inner wall **60** cooperating with the end follower or draft gear and an outer substantially curved portion **62** joined to said inner portion by means of the web **64**.

It will be seen that in normal position the end of the yoke is disposed between the spaced stops **24**, and in order to prevent angling of the yoke, the upper strap **54** is provided with a guide or locally enlarged portion **66** extending from the upper strap downwardly into the member **62**, said portion **66** being adapted to have engagement with the stops **24** for maintaining the yoke substantially parallel to the sills, in this manner preventing stresses from being concentrated at any point on the inner wall **60** and at any point on the associated draft gear. It will also be noted that the enlarged portion is formed with curved surfaces, these surfaces serving to guide the rear end of the yoke into the recess of the center bearing **22** between the stops **24** upon return of said yoke from draft positions.

The yoke is of the hooded end type, including upper member **68** and lower member **70**, said members each being provided with substantially parallel horizontal bearing surfaces **72** and **74** having bearing engagement with the shank **76** of the coupler which extends into said hooded

end. The upper and lower portions of the end are joined by means of vertically extending walls or straps 78, said straps being provided with aligned horizontal keyways 80 for the reception of the transverse key 82, where such is used. The upper and lower portions of the hooded end however are provided with aligned keyways 84 and 86, said keyways being adapted to receive the vertical key 90 extending through said keyways and the keyway 92 provided in the coupler butt, keyway 92 being slightly enlarged at its forward end as at 88 to permit angling of the coupler.

The vertical key 90 is insertable through the lower keyway 86 and is retained in place by means of a retainer 94. The retainer 94 is of substantially circular section and is retained in the members 96 and 98, said members forming a cage therefor. Member 96, disposed adjacent the forward end of the yoke, is provided with a socket portion 100 for receiving the forward end of the retainer 94, and the member 98 is provided with a socket portion 102 for receiving the after end of the retainer 94, member 98 being provided with aligned apertures 104 for the reception of suitable fastening means for locking the retainer 94 in operative position. The cage member 98 is provided with an aperture 106 disposed so that the pin 94 may be moved into its normal operative position as shown through the opening between the members 96 and 98, or the pin may be insertable through the aperture 106.

The vertical key 90 is provided with a head 108 having a channel portion therein for slidable engagement with the retainer 94, all as particularly described in application Serial No. 318,350, filed November 10, 1928. The forward end of keyway 80 is reenforced by members 110 and 112, members 112 preferably defining the sides of said keyways and terminating in vertically extending stops 114 extending to a point adjacent the edge of the strap 78 and being reenforced with forwardly extending reenforcements 116. The member 110 is disposed in alignment with the keyway 80 and merges into the members 112 at the said keyway. The vertical key 90 extends through an aperture or slot in the forwardly extending tongue 118 on the buffing piece 120, which as shown is apertured at 122 for the reception of the forwardly extending prong, if used, with the Farlow type of draft gear, the tongue 118 extending into a suitable slot 124 provided in the coupler butt 76, all as particularly pointed out in application Serial No. 318,350, filed November 10, 1928. It will be noticed that the rear edges of the strap 78 are beveled as at 126 to provide guiding means for the buffing piece 120 so as to prevent the same from being wedged against the yoke in draft. With this construction, a very strong coupler arrangement is provided and one which gives maximum bearing area in buff no matter what position the coupler may occupy.

The use of the striking casting with the buffing stops and draft lugs will in no wise affect the use of the standard coupler and yoke, such as shown in Figure 4, wherein the standard yoke 152 has been substituted for the improved yoke 52, and the standard coupler with the standard butt 176 has been substituted for the improved coupler with butt 76, in which case draft key 82 extends through the keyways 38 provided in the striking casting and corresponding keyways provided in the sills 20, and through aligned keyways 189 provided in the vertical straps of the yoke, and through a suitable transverse keyway 188 provided in the coupler butt, it being contemplated that the same type of draft gear will be used in cooperation with this yoke and coupler butt.

In operation of the improved form of yoke, in draft the coupler moves toward the left, as viewed in Figure 1, whereupon the rear portion of the vertical keyway 92 contacts the key 90, moving the same to contact the forward portions of the keyways 84 and 86, if it is not already in contact therewith, whereby the yoke 52 is moved toward the left, compressing the draft gear between the wall 60 and the draft lugs 28. Angling of the coupler is permitted by virtue of the flared portions 88 and 92 of the yoke and coupler keyways, and should the yoke be biased by this angling, no jamming will occur between the yoke and stops 24 as the yoke will be guided into substantial parallel position with the sills by means of the enlarged rounded portions 66, thereby preventing concentration of stress on the followers or on portions of the yoke.

In buff, the coupler moves toward the right, as viewed in the figures, compressing the draft gear until such a point when the draft gear has been compressed to its solid height, at which time the lugs 114 contact with buffing stops 30, whereby the over-solid blow is distributed directly to the sills. The stress in buffing is transmitted then through the coupler shank to the forward end of the key 90, and also through the butt of the coupler to the buffing piece 120 to compress the draft gear. Further movement is distributed from the key to the yoke on the after edge of the keyways 84 and 86 until such a point when the draft gear goes solid, at which time further stresses are transferred through the lugs 114 to the buffing stops 30 and thence to the draft sills, thereby relieving the draft gear of further strains.

The form of draft gear illustrated in Figures 6 to 9 inclusive, shows an adaptation wherein the standard A. R. A. type of coupler is used in which the coupler butt 276, apertured at 222 for the draft gear prong, is provided with the horizontal keyway 288, which is adapted to receive the transverse key 82 extending through keyways 38, keyway 288 and the transverse keyway 280 provided in the yoke 52, said yoke, as has already been described, being provided with the stops 114, which stops are adapted to have cooperative engagement with buffing stops 30 provided on the striking casting 26. The end of the yoke may be modified slightly, as shown in Figure 9, whereby the horizontal straps 54 and 56 are secured adjacent their ends by vertically extending straps 278, said straps being provided with horizontal keyways 280. The straps are rounded adjacent their forward ends and are provided with sloping portions 210 forming reenforcements for the edge of the keyway 280, the straps being further reenforced by means of reenforcements 212 which merge into vertical shoulders 214 forming buffing stops, said stops being provided with edge reenforcements 216. The after edge of the keyway 280 is provided with a sloping reenforcement 290 which may be of substantially boss formation, extending to a point adjacent the after edge of the straps 278.

In buff, it will be noticed that the stops 214 and 30 function in a manner similar to the stops 114 and 30, the key 82 being moved rearwardly by the coupler butt 276 to contact the after portion of the keyway 38 and also the after portion of the keyway 280, it being understood that the

stops 214 and 30 are also in engagement to transmit the oversolid blow.

In the modification illustrated in Figures 10 to 13 inclusive, the structure is substantially the same as has already been described, with the exception that no horizontal keyway is provided in the forward hooded portion of the yoke. In this case, the straps 54 and 56 are provided with vertically extending connecting straps 378 which are spaced from the vertically extending draft gear protection stops 314 formed integral with the forward portions of the straps 54 and 56 which are formed to approach each other. The stops 314 are provided with vertically extending plane faces 414 reenforced by upper and lower members 316 and intermediate members 318, the stop 314 on its forward edge being inwardly curved as at 320. The top and bottom portions of the straps are provided with vertically extending keyways 388, and cage members 396 and 398 are provided for the reception of the horizontally disposed substantially circular pin 394, the members 396 and 398 being formed with socket portions 400 and 402 for that purpose. The bosses 404 formed on cage member 398 are provided with the apertures 406 for the reception of suitable fastening means for the pin, it being seen that the socket 402 terminates in upwardly extending wall portion 408, forming an aperture for the insertion or withdrawal of the pin 394, it being understood that said pin can also be moved into operative position as shown through the space between the cage members. As shown in this modification of the invention, the straps 378 are disposed in spaced relation to the stops 314 which provide a lighter structure than if the same were formed integral therewith. The straps 378 are provided with a sloping portion 326 on the inner rear edges of said straps adapted to have cooperative engagement with a corresponding sloping portion 426 provided on the buffing piece 121 whereby the buffing piece cannot be wedged behind the straps no matter what the angle or position of the coupler may be.

In the modification illustrated in Figures 15 to 18 inclusive, the draft sills 20 are perferably not apertured adjacent the striking casting 526, and in this instance, of course, the striking casting is not apertured. The striking casting is provided with upper and lower portions 544 and 542, forming an aperture and bearing for the coupler butt. The striking casting extends inwardly and between the draft sills, being provided integrally with spaced members 548, each of said spaced members being provided with spaced stops 520 and 522, the stops 522 being vertically disposed and being provided adjacent the spaced members 542 and 544. The rear stop 520 is provided with spaced portions 524 and 528, the portions 524 being adapted to have cooperation with the draft gear disposed between the yoke arms and the portions 528 being adapted to engage stops provided on the yoke, as will be more fully described. The yoke 530 is provided with spaced arms 532 and 534, the yoke being shown as a vertical plane yoke, the ends of said arms being provided with spaced wall portions 536 and 538 for the reception of the coupler butt 540 and buffing piece 546, this coupler butt taking the form as has already been described with respect to Figure 1.

A vertical key 590 extends through apertures 550 and 552 and is retained in the cage 596 and 598, similar to the cage 396 and 398. The hooded end of the yoke is formed by vertically extending straps 554 which are spaced from the straps 556 on which front and rear stops 558 and 560 are formed, said stops being adapted to have abutting relation with the stops 522 in draft and abutting relation with the portions 528 of the stops 520 in buff, whereby stresses are transmitted directly to the draft sills from the yoke. The front and rear straps of course form guiding means for the coupler butt and buffing piece, the rear straps being slightly tapered as at 562, whereby in proceeding from buff to draft the buffing piece will always be centered. The forward end of the hood is provided with parallel portions 564 forming guiding means with the rear stops 520, whereby the coupler is guided in relative movement with respect to the sills, the rear of the coupler being formed as has been described with respect to the other modifications. It will therefore be seen that the axis of the yoke remains substantially equi-spaced from the sills.

In operation, of course, movement of draft is transmitted from the coupler through the key 590 to the yoke, forward movement of the yoke being arrested substantially at the time the draft gear goes solid by contact between the stops 558 and 522, whereby additional load is transmitted directly to the sills from the yoke. In the reverse direction, that is, in buff, the stresses are transmitted from the coupler through the pin 590 to the yoke, the rearward movement of the yoke being arrested by contact between the stops 560 and the stops 520 at the time the draft gear goes solid, whereby the stresses in buff are transmitted directly to the sills from the yoke.

With the structures illustrated and above described, it will be seen that very compact, efficient and advantageous structures are provided, and it is to be understood that I do not wish to be limited by the exact embodiment of the device shown, which is merely by way of illustration and not limitation, as various and other forms of the device will of course be apparent to those skilled in the art without departing from the spirit of the invention or the scope of the claims.

I claim:

1. In draft mechanism for cars, the combination of spaced draft sills having stops thereon, a yoke carried between said sills and having draft gear therein, a coupler movably secured by a key to said yoke and sills and cooperating with said draft gear, said key being disposed to abut said yoke upon movement in buff, said yoke having stops thereon disposed in spaced relation to said first named stops when said mechanism is in normal position and adapted to contact said first named stops when said mechanism is in buff, said key also being adapted to abut said coupler yoke and a portion of said first named stops when said mechanism is in buff.

2. In draft mechanism for cars, the combination of spaced draft sills having stops thereon, a yoke carried between said sills and having draft gear therein, a coupler keyed to said yoke and cooperating with said draft gear, said yoke having stops thereon disposed in spaced relation to said first named stops when said mechanism is in normal position and abutting said first named stops when said mechanism is in buff and substantially at the time said draft gear goes solid.

3. In a draft mechanism for cars, the combination of spaced draft sills having stops thereon, and a yoke between said draft sills and having draft gear therein, said yoke having stops thereon disposed in spaced relation to said first-named stops when said yoke is in its normal position and adapted to contact said first-named stops

when said mechanism is in buff and substantially at the time said draft gear goes solid and during the time said gear remains solid.

4. In draft mechanism for cars, the combination of spaced draft sills, a striking casting provided with stops and secured to said sills, and a hooded yoke between said draft sills and having a draft gear therein, said yoke having stops thereon disposed in spaced relation to said first-named stops when said yoke is in its normal position and adapted to contact said first-named stops when said mechanism is in buff and substantially at the time said draft gear goes solid and during the time said gear remains solid.

5. In a yoke, the combination of spaced longitudinal straps formed integral with a connecting end portion, a hooded end formed integral with said straps, said hooded end including straps connecting said first-named straps, said second-named straps being formed with horizontally extending slots, reinforcing members for said slots and substantially vertically extending lugs projecting laterally of said second-named straps and terminating in said reinforcing members.

6. In a yoke, the combination of spaced longitudinal straps formed integral with a connecting end portion, a hooded end formed integral with said straps, said hooded end including straps connecting said first-named straps, said second-named straps being formed with horizontally extending slots, reinforcing members for said slots, said members merging at the forward end of said slots, a reinforcing member extending from the forward end of said second-named straps to the point of merging of said first-named members, and substantially vertically extending lugs projecting laterally of said second-named straps and terminating in said reinforcing members.

7. In draft mechanism for cars, the combination of spaced draft members having stops thereon, a yoke between said draft members and having a draft gear associated therewith, said yoke having stops thereon engageable with the stops of said draft members in buff, said stops on opposite sides of said yoke being spaced apart substantially the same amount when said yoke is in its normal central position, and means for guiding said yoke during movement in buff whereby engagement of said second-named stops with said first-named stops is substantially simultaneous for even distribution of buffing forces to said draft members.

8. In draft mechanism for cars, the combination of spaced draft members having stops thereon, a yoke between said draft members and having a draft gear associated therewith, said yoke having stops thereon engageable with the stops of said draft members in buff and being provided with extended plane surfaces, said stops on opposite sides of said yoke being spaced apart substantially the same amount when said yoke is in its normal central position, and means for guiding said yoke during movement in buff whereby engagement of said second-named stops with said first-named stops is substantially simultaneous and over said extended plane surfaces for even distribution of buffing forces to said draft members.

9. In draft mechanism for cars, the combination of spaced draft members having stops thereon, a yoke between said draft members and having a draft gear associated therewith, said yoke having stops thereon engageable with the stops of said draft members in buff, said stops on opposite sides of said yoke being spaced apart substantially the same amount when said yoke is in its normal central position, and means for guiding said yoke during movement in buff whereby engagement of said second-named stops with said first-named stops is substantially simultaneous for even distribution of buffing forces to said draft members, said means including a hooded end and an enlarged end portion on said yoke cooperating with members on said draft members.

10. In draft mechanism for cars, the combination of spaced draft members having stops thereon, a yoke between said draft members and having a draft gear associated therewith, said draft gear cooperating with certain of said stops, said yoke having stops thereon engageable with the stops of said draft members in buff, said stops on opposite sides of said yoke being spaced apart substantially the same amount when said yoke is in its normal central position, and means for guiding said yoke during movement in buff whereby the engagement of said second-named stops with certain of said first-named stops is substantially simultaneous for even distribution of buffing forces to said draft members, said means including an enlarged rear end portion of said yoke cooperating with certain of the stops for said draft gear.

11. In draft mechanism for cars, the combination of spaced draft members having stops thereon, a yoke between said draft members and having a draft gear associated therewith, said draft gear cooperating with certain of said stops, said yoke having stops thereon engageable with the stops of said draft members in buff, said stops on opposite sides of said yoke being spaced apart substantially the same amount when said yoke is in its normal central position, and means for guiding said yoke during movement in buff whereby the engagement of said second-named stops with certain of said first-named stops is substantially simultaneous for even distribution of buffing forces to said draft members, said means including a hooded end and an enlarged rear end portion on said yoke cooperating with said stops for said draft gear.

12. In draft mechanism for cars, the combination of spaced draft sills having spaced stops thereon, and a yoke between said draft sills and having draft gear therein, said yoke having stops thereon normally disposed between said spaced stops and in spaced relation thereto, said yoke stops being adapted to contact certain of said draft sill stops when said mechanism is in buff and substantially at the time said draft gear goes solid and during the time said draft gear remains solid and being adapted to contact other of said draft sill stops after a predetermined movement of said yoke in draft.

13. In draft mechanism for cars, the combination of spaced draft sills, a striking casting provided with spaced stops thereon and being secured to said sills, and a yoke between said draft sills and having draft gear therein, said yoke having stops thereon normally disposed between said spaced stops and in spaced relation thereto, said yoke stops being adapted to contact certain of said draft sill stops when said mechanism is in buff and substantially at the time said draft gear goes solid and during the time said draft gear remains solid and being adapted to contact other of said draft sill stops after a predetermined movement of said yoke in draft.

14. In draft mechanism for cars, the combination of spaced draft members having front and

rear stops thereon, a yoke between said draft members and having draft gear therein, said yoke having stops thereon engageable with the stops of said draft members in draft and buff, the stops on opposite sides of said yoke being spaced from said rear stops substantially the same amount and from said front stops substantially the same amount when the yoke is in its normal central position, and means for guiding the yoke during movement in draft and buff whereby engagement of the stops on opposite sides of the yoke is substantially simultaneous for even distribution of forces to said draft members.

15. In draft mechanism for cars, the combination of spaced draft members having front and rear stops thereon, a yoke between said draft members and having draft gear therein, said yoke having stops thereon engageable with the stops of said draft members in draft and buff, the stops on opposite sides of said yoke being spaced from said rear stops substantially the same amount and from said front stops substantially the same amount when the yoke is in its normal central position, and means for guiding the yoke during movement in buff whereby engagement of the stops on opposite sides of the yoke is substantially simultaneous for even distribution of forces to said draft members.

16. In a yoke, the combination of spaced longitudinal straps formed integral with a connecting end portion, a hooded end formed integral with said straps, said hooded end including straps connecting said first-named straps, said second-named straps having horizontally extending slots, said second-named straps having substantially vertically disposed lugs projecting laterally thereof, and reinforcing members terminating in said lugs and extending laterally thereof, certain of said members being disposed adjacent said slots and providing reinforcement therefor.

17. In a railway draft mechanism, a coupler, a yoke having upper and lower arms integrally connected at their rear ends, a connection between said yoke and coupler for causing the yoke to move with the coupler in both draft and buff, car sills having means projecting inwardly therefrom and providing stops for said draft mechanism, a draft gear engaging said means and enclosed by said yoke, and lateral extensions on said yoke normally in spaced relation to stops on said means and movable in draft into contact therewith to limit the pulling travel of said coupler.

18. In a railway draft mechanism, a coupler, a yoke having upper and lower arms integrally connected at their rear ends, a connection between said yoke and coupler for causing the yoke to move with the coupler in both draft and buff, car sills having abutment means projecting inwardly therefrom and providing stops for said draft mechanism, a draft gear engaging said means and enclosed by said yoke, and lateral extensions on said yoke normally in spaced relation to the abutment means therefor and movable in draft into contact with said abutment means to limit the pulling travel of said coupler.

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