C. E. DATH.

TANDEM DRAFT RIGGING.

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1,187,976.

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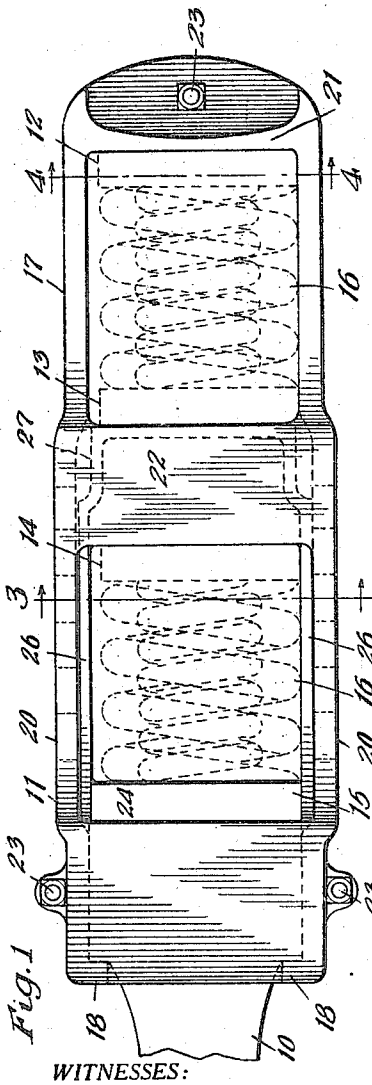


Fig. 1

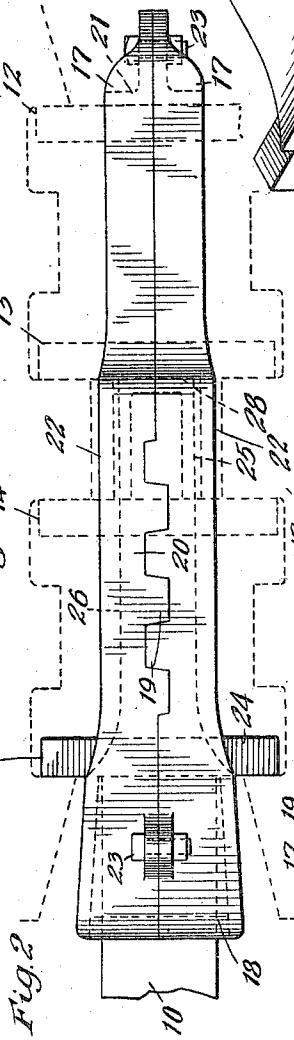


Fig. 2

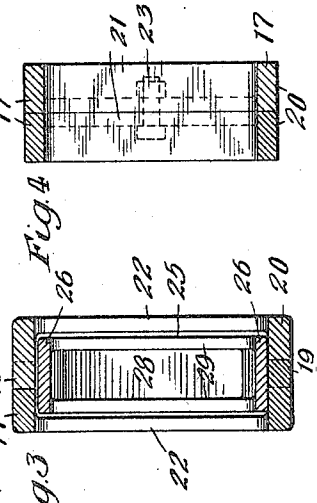


Fig. 3

Fig. 4

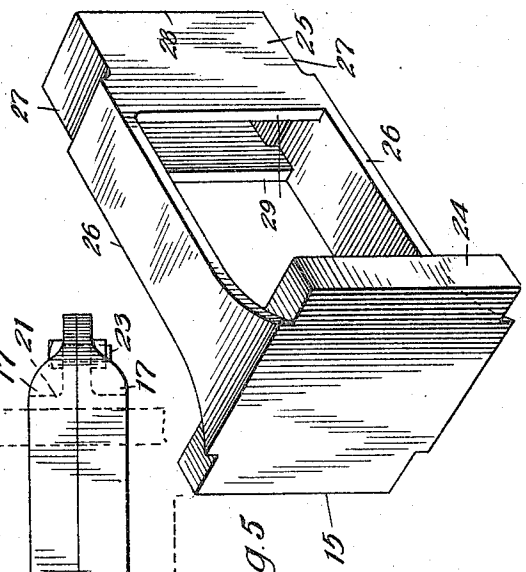


Fig. 5

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TANDEM DRAFT-RIGGING.

1,187,976. Specification of Letters Patent. Patented June 20, 1916.

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To all whom it may concern:

Be it known that I, CHARLES E. DATH, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Tandem Draft-Riggings, of which the following is a full, clear, concise, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

This invention relates to improvements in tandem draft riggings.

An object of the invention is to provide a draft rigging wherein pressure is transmitted directly from the front follower to the rear intermediate follower to minimize as much as possible the forces that have to be transmitted through the yoke to the rear intermediate follower under buff and thus prevent spreading of the yoke arms at the center.

The invention furthermore consists in the improvements in the parts and devices and in the novel combinations of the parts and devices, as herein shown, described and claimed.

In the drawing forming a part of this specification, Figure 1 is a side elevation of a portion of a draft rigging showing my improvements. Fig. 2 is a top plan view of the structure shown in Fig. 1 and showing in dotted lines the contour of the usual tandem stop castings. Figs. 3 and 4 are transverse vertical sections taken substantially on the lines 3—3 and 4—4 respectively of Fig. 1, and Fig. 5 is a detail perspective view of the front follower employed in my invention.

In said drawing, 10 denotes the draw-bar, 11 the tandem yoke, 12 the rear follower, 13 the rear intermediate follower, 14 the front intermediate follower, 15 my improved front follower and 16—16 the gears which, in the form shown, each comprises an inner and an outer coil spring.

The yoke 11, as shown, comprises two like members 17—17 having inturned shoulders 18 to engage the usual draw-bar shoulders, coöperating inter-engaging tongues and grooves 19 along their upper and lower arms 20—20, rear connecting wall 21 and side walls 22 connecting the upper and lower arms substantially at the center thereof, said side walls 22 forming the usual intermediate thimble of a draft yoke. As clearly shown in Fig. 1, the arms of the yoke at the rear of the intermediate thimble are nearer together than the portions of the arms in front thereof, the reason for this appearing hereinafter. The two yoke members 17—17 are connected by any suitable means such as the bolts 23—23.

The front follower 15, as shown, comprises a follower plate proper 24, a hollow box-like inner end 25 connected to the plate by means of upper and lower horizontally-extending arms 26—26, it being noticed that the inner portion of the box-like end 25 is reduced in vertical height as indicated at 27 to thereby adapt it to slide within the rear portions of the arms 20 of the yoke. The box-like inner end 25 of the front follower slides between the upper and lower arms of the yoke and also the side walls 22 thereof which form the intermediate thimble. Said end 25 has the rear edges 28 thereof normally in engagement with the rear intermediate follower 13 and the front edges 29 of said box-like end 25 normally engage the rear face of the front intermediate follower 14.

In buff, it is apparent that the draw-bar butt which is slidable within the box-like end at the front end of the yoke, engages directly the front follower 15 and compresses the front spring between the follower plate 24 and follower 14 and simultaneously therewith the rear intermediate follower 13 is pushed rearwardly since it is engaged by the moving box-like end 25 attached to the front follower plate 24. This relieves the strains on the yoke and, as a matter of fact, the yoke need not move rearwardly at all under buff. This is an important consideration since it prevents any tendency of the yoke arms to spread, which is a difficulty commonly encountered in the operation of tandem gears. By employing the box-like inner end 25 of the front follower I obtain a large bearing against the rear intermediate follower 13 and danger of tilting of the latter in this action is minimized. Furthermore, by connecting the box-like end 25 with the front follower plate proper 24 by means of arms 26 located outside of the springs and above and below the normal level of the upper and lower edges of the followers, I am enabled to employ the standard M. C. B. springs of the G-type, since none of the space within the spring is occupied by any member connecting the

front follower plate with its rear inner end 25. My construction also permits the use of other types of gears other than the springs, such for instance as friction units which could not be used if a plunger were employed to transmit the pressure from the front follower to the rear intermediate follower.

I claim:—

1. In a tandem draft rigging, the combination with a yoke having an intermediate thimble, of a front follower having rearwardly extended arms paralleling and slidable within the yoke arms, the rear ends of said follower arms being connected and slidable within said thimble and arranged to engage the rear intermediate follower in buff.

2. In a tandem draft rigging, the combination with a yoke having side walls connecting the arms thereof substantially at the longitudinal center, of a front follower having a box-like inner end connected therewith and slidable between said side walls of the yoke.

3. In a tandem draft rigging, the combination with stop castings, draw-bar, and vertical tandem yoke, the draw-bar being slidable relatively to the yoke in buff, of a front follower slidable between the arms of said yoke and actuated by the draw-bar in buff, said front follower having an integral, inner box-like end slidable between the arms of said yoke.

4. In a tandem draft rigging, the combination with stop castings, draw-bar, and vertical tandem yoke, the draw-bar being slidable relatively to the yoke in buff, of a front follower slidable between the arms of said yoke and actuated by the draw-bar in buff, said front follower having an integral, inner box-like end slidable between the arms of said yoke, said box-like end being connected to the follower plate proper by upper and lower arms slidable within the arms of the yoke, said upper and lower arms of said front follower being so arranged that a cushioning medium may be inserted laterally therebetween.

5. In a tandem draft rigging, the combination with a tandem yoke, of a front follower slidable between and engaging the arms of said yoke, said front follower having upper and lower arms extended rearwardly and between which is adapted to be received a spring, said follower arms being connected at their rear ends by vertical partitions arranged to engage and actuate the rear intermediate follower under buff.

6. A follower for draft riggings comprising a follower plate proper, a box-like portion spaced from said plate, and integral spaced arms connecting said plate and the upper and lower faces of said box-like portion.

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