March 6, 1934. E. D. SULLIVAN ET AL 1,950,274

TONGUE ACTUATED BRAKE CONSTRUCTION

Filed Dec. 23, 1932 2 Sheets-Sheet 1

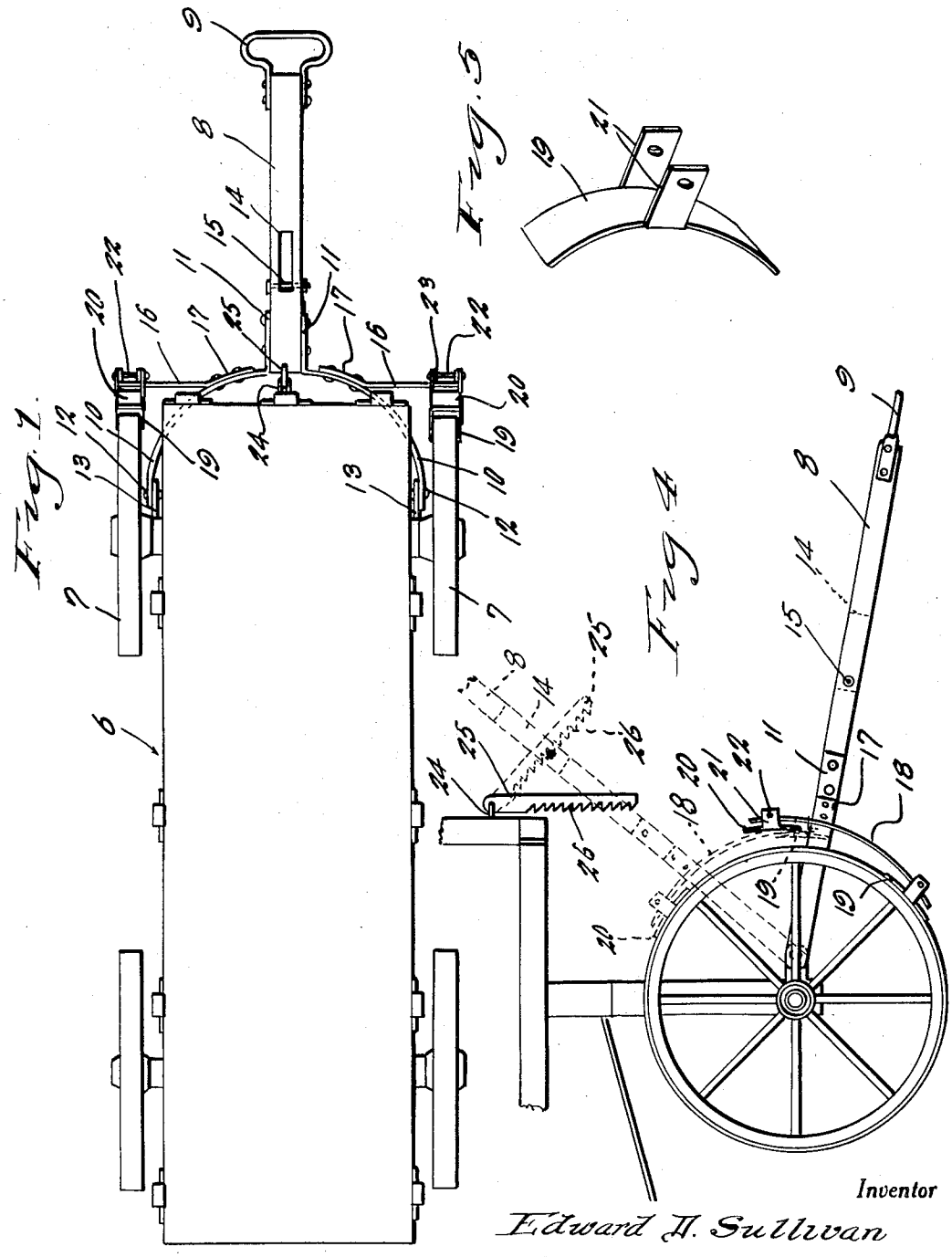


Fig. 1.

Fig. 5.

Fig. 4.

Inventor

Edward D. Sullivan

Julian R. Abbott

By Clarence A. O'Brien

Attorney

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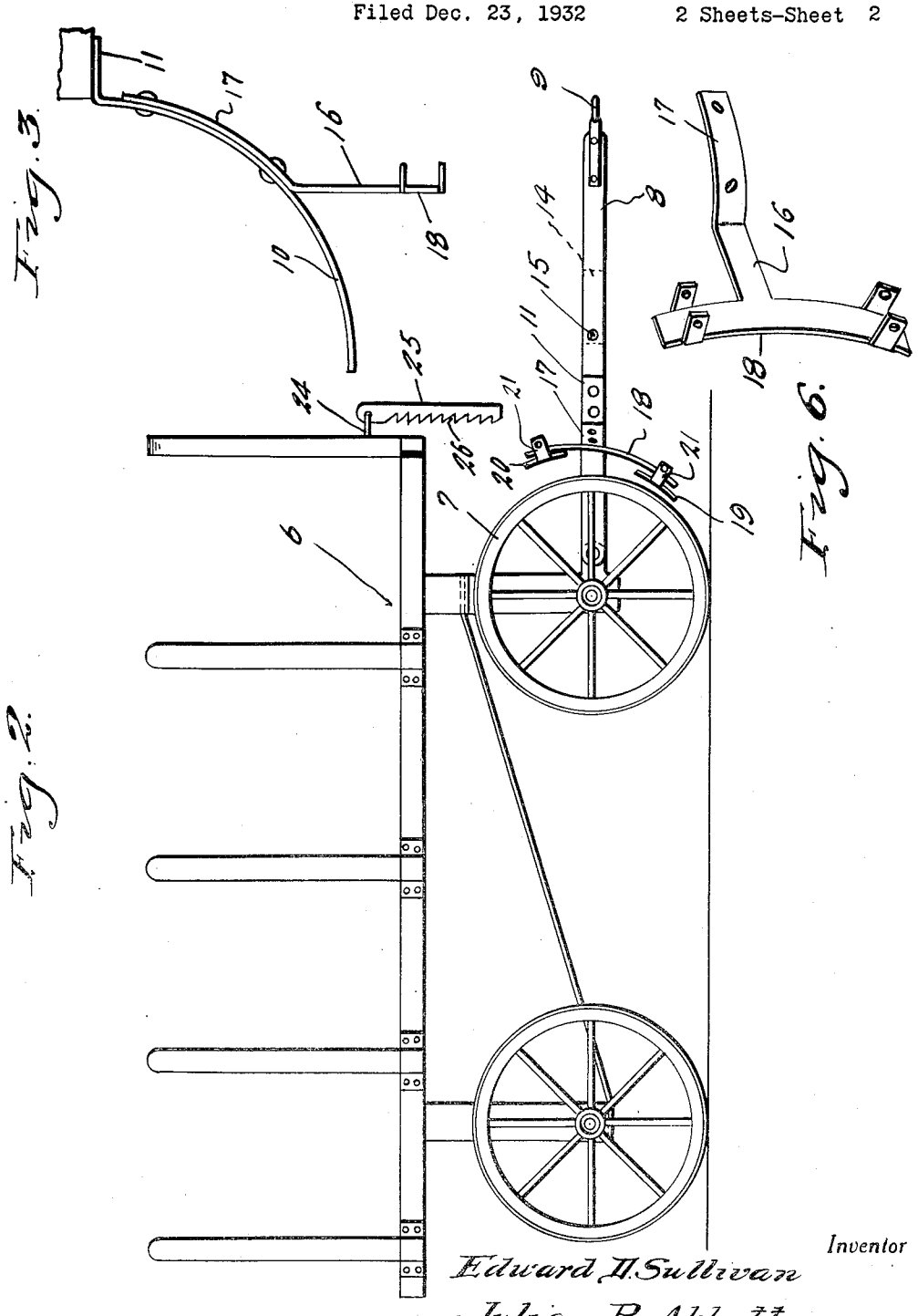


Fig. 3.

Fig. 6.

Fig. 2.

Inventor

Edward D. Sullivan

Julian R. Abbott

By Clarence O'Brien

Attorney

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TONGUE ACTUATED BRAKE CONSTRUCTION

Edward D. Sullivan and Julian R. Abbott,
Klamath Falls, Oreg.

Application December 23, 1932, Serial No. 648,670

1 Claim. (Cl. 188—119)

This invention relates to a novel, structurally refined brake assembly and tongue actuated means for operating the brake which invention is especially, but not necessarily, adapted for use in connection with a well-known type of baggage handling truck.

The foregoing paragraph is however briefly and broadly explanatory of the general nature of the invention, and we therefore wish to add by way of further introduction that the invention is equally well adapted for and applicable to regulation motor vehicle trailers, toy coaster wagons and the like.

Fundamentally, the invention is similar in general aspect to the structural arrangement disclosed in Patent 1,806,719, granted to Edward D. Sullivan under date of May 26, 1931.

The novelty of the present invention however has to do with a double purpose duplex brake shoe assembly which is so constructed as to permit the braking action to be applied to the front wheels of the truck when the tongue is in a downwardly declined position, or an upwardly inclined position whichever is preferred.

The explicit details especially designed and selected for accomplishing the aforesaid results will become more readily apparent from the following description and drawings.

In the accompanying illustrative drawings, wherein like numerals are employed to designate like parts throughout the same:

Figure 1 is a top plan view of the preferred embodiment of the invention as perfected in accordance with the principles of our inventive conception.

Figure 2 is a side elevational view of Figure 1 showing the tongue occupying a horizontal truck pulling position at which time the brake shoes are disengaged or in neutral positions.

Figure 3 is a fragmentary plan view of a portion of one of the yoke sections and the brake shoe carrier attached thereto.

Figure 4 is an elevational view showing the tongue in its declined brake applying position (in full lines) as well as in its upwardly inclined alternate brake applying position (shown in dotted lines).

Figure 5 is a perspective view of one of the brake shoes.

Figure 6 is a detail perspective view of the duplex brake shoe carrier per se.

Referring now to the preferred embodiment of the invention as shown in the accompanying pictorial drawings, it will be observed that the numeral 6 designates a conventional baggage carrying truck having the customary arrangement of wheels, the front wheels being distinguished by the numerals 7.

The tongue is indicated at 8 and provided at its outer end with a handgrip 9 and at its inner end with a substantially semi-circular yoke. This yoke is composed of a pair of duplicate arcuate half sections 10 whose outer ends are bent laterally as indicated at 11 and fastened to the inner end of the tongue. The inner ends of these sections are pivotally attached as at 12 to appropriate supporting lugs 13 carried by the frontal portion of the truck.

For a purpose to be hereinafter described, the intermediate portion of the tongue is provided with a longitudinally elongated guide and keeper slot 14 at one end of which is a retaining or keeper pin or bolt 15.

In order to equalize the braking action we provide a pair of duplicate brake assemblies, that is, one for each front wheel 7. Each brake assembly is the same in construction and a description of one will suffice for both. With this thought in mind, it will be observed that each assembly embodies a brake shoe carrier, the carrier including a horizontal arm 16 extending at approximate right angles to the longitudinal axis of the tongue and having its inner curved end 17 riveted or otherwise fastened to the yoke sections 10 within the vicinity of the tongue as shown plainly in Figure 3.

The horizontal carrier arm 16 is provided at its outer end with a segmental vertically disposed supporting band 18 located in alinement and in close proximity to the rim of the wheel. The curvature of this brake shoe band is such as to permit the same to have three definite positions; namely the neutral position represented in Figure 2, the lowered brake applying position shown in full lines in Figure 4, and the elevated or raised second brake applying position shown in dotted lines in the same figure. When in either one of the latter two positions the band assumes an approximately tangential position with respect to the wheel rim. Thus, due to the special arcuate formation of the band, and due to the fact that it is rigidly attached to the swingable tongue, it travels through an arc permitting the application of the brake shoes 19 and 20 respectively. These brake shoes are of simple construction and made to conform to the curvature of the rim of the wheel and provided with equally simple attaching ears 21 pivotally attached by a bolt or the like 22 to companion ears 23 carried by

the opposite ends of the segmental shoe carrier bands 18.

Manifestly, in order to accomplish the requisite double acting brake result, the carrier arms 16 are attached to the bands 18 at points between their center and one end. In other words, the point of attachment of the arm 16 is closer to the upper end of the band 18 than the lower end. Moreover, the simple pivotal mounting of the shoes 19 and 20 is such as to permit the shoes to be self-adjusting when brought into contact with the wheel rim. Consequently, when the tongue is in the declined or downwardly directed angular position shown in Figure 4, the lower brake shoe 19 is forced into braking contact with the wheel rim while the upper brake shoe 20 is simultaneously released or disengaged.

The reverse of this action takes place when the tongue is lifted to the upwardly inclined dotted line position shown in Figure 4, at which time the upper brake shoe 20 becomes operable and the lower brake shoe 19 ineffective.

We next call attention to a suitable hanger bracket 24 on the frontal portion of the truck to which a depending retaining latch 25 is pivotally connected. The latch is provided with rack teeth 26. Manifestly this latch is adapted to be inserted through the slot 14 and the teeth 26 engage with the pin 15 as shown in dotted lines in Figure 4 in order to hold the tongue up and the brake 20 applied at this time.

The gist of the invention is found in a double purpose duplex brake construction embodying a pair of duplicate brake shoe carriers attached to and operable with the swingable truck tongue wherein each brake carrier is constructed to properly locate the self-adjusting brake shoes in position to alternately engage the rim of the wheel above or below the horizontal axis of rotation of the wheel according to the position of the tongue. As before stated, this permits the brakes to be applied by simply dropping the tongue or raising the tongue to an upwardly inclined latch supported position whichever is desired or most convenient at the time.

Manifestly however, the brake shoes have a neutral position at which time both shoes are disengaged while the tongue 8 is in its normal substantially horizontal pulling position.

It is thought from the foregoing description that the advantages and novel features of the invention will be readily apparent.

It is to be understood that changes may be made in the construction and in the combination and arrangement of the several parts provided that such changes fall within the scope of the appended claim.

We claim:

In a structure of the class described, in combination, a truck including a body having a pair of front wheels, an operating tongue, a yoke connected rigidly to the inner end of said tongue and pivotally to the frontal portion of the body of the vehicle between said front wheels, a horizontally disposed carrier arm extending at approximate right angles to the longitudinal dimension of said tongue, said arm being rigidly secured at its inner end to an adjacent section of the aforesaid yoke, the outer end of the arm extending to a point adjacent the rim of one of said wheels, a substantially vertically disposed longitudinally bowed band secured to the outer end of said arm and occupying a position in close proximity to the rim of the wheel, the upper and lower ends of said band extending to positions above and below the horizontal center of the wheel, a pair of forwardly extending ears adjacent each end of said band, upper and lower brake shoes each formed with a pair of forwardly extending ears, means for pivotally connecting the ears of each shoe to a pair of ears of the band, said shoes being located between the wheel and the band.

EDWARD D. SULLIVAN.
JULIAN R. ABBOTT.