Aug. 29, 1933. B. H. FLYNN 1,924,779

OVERPASS

Filed June 17, 1932 3 Sheets-Sheet 1

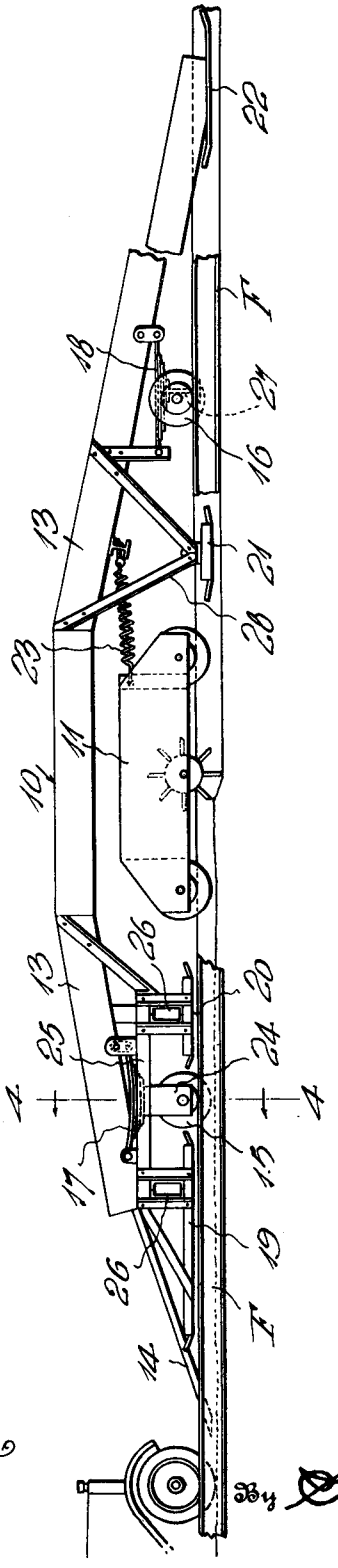


Fig. 1.

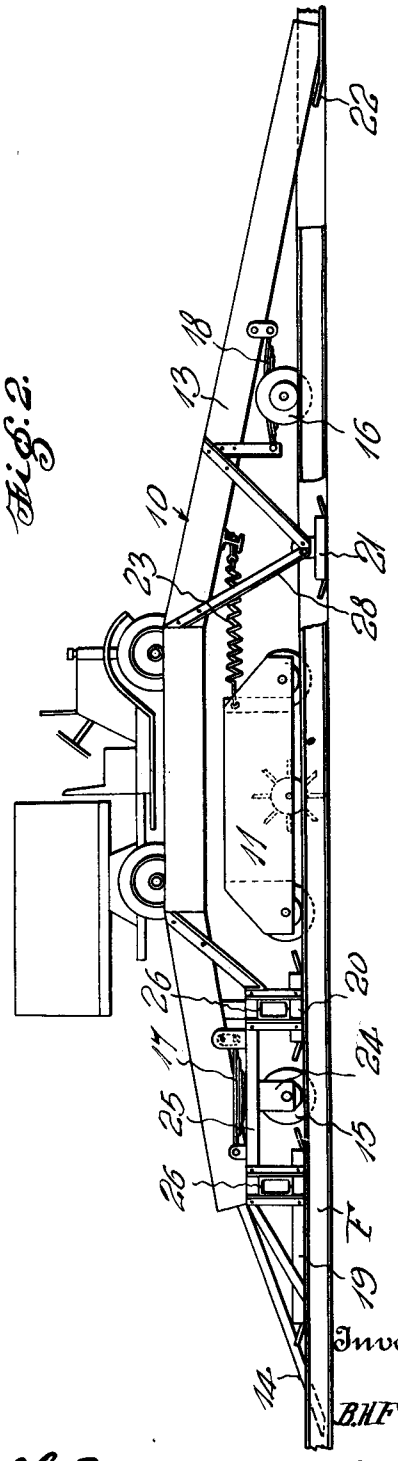


Fig. 2.

Witness
H. Woodard

Inventor
B. H. Flynn

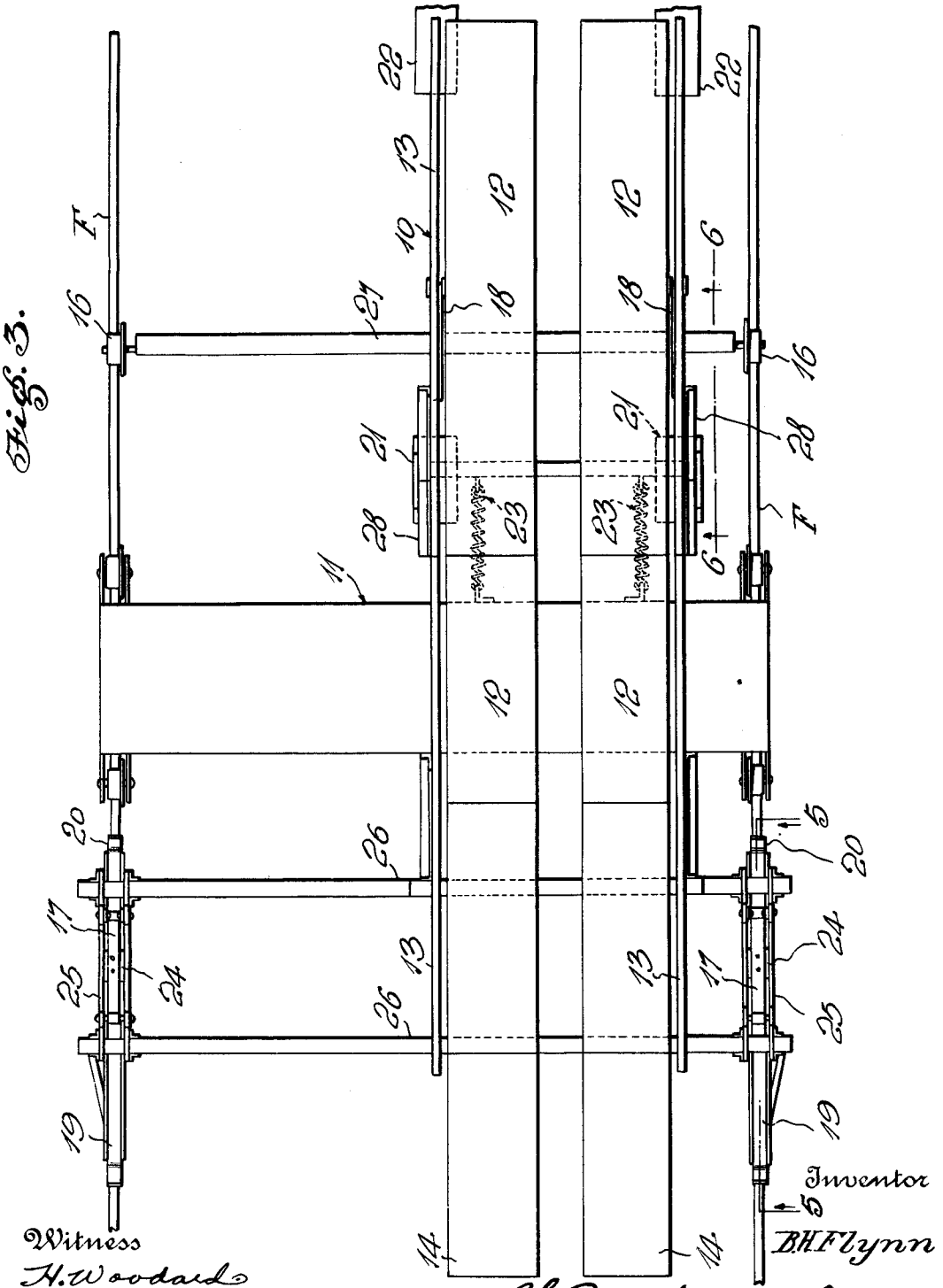
By H. B. Williamson & Co
Attorneys.

Aug. 29, 1933. B. H. FLYNN 1,924,779

OVERPASS

Filed June 17, 1932 3 Sheets-Sheet 2

Fig. 3.



Witness
H. Woodard

Inventor
B. H. Flynn

By H. B. Williamson & Co
Attorneys.

Aug. 29, 1933. B. H. FLYNN 1,924,779

OVERPASS

Filed June 17, 1932 3 Sheets-Sheet 3

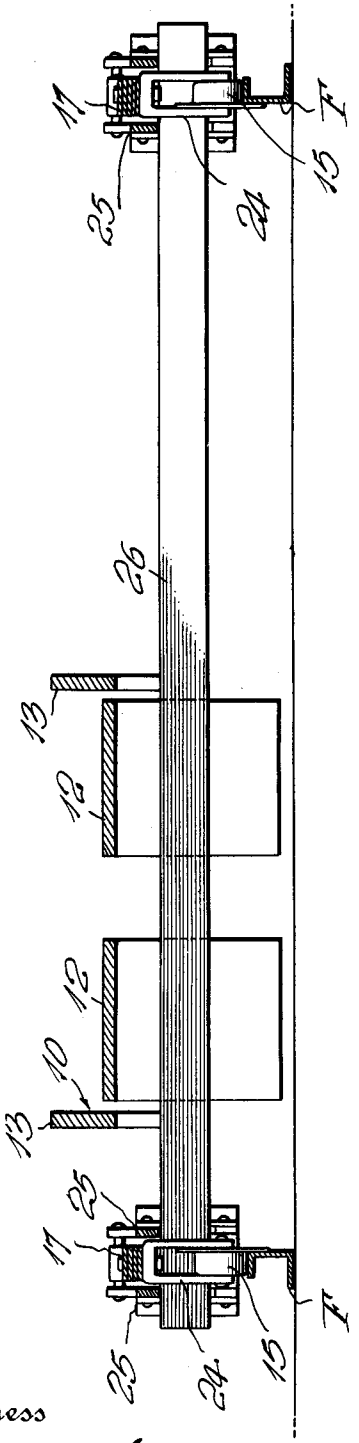


Fig. 4.

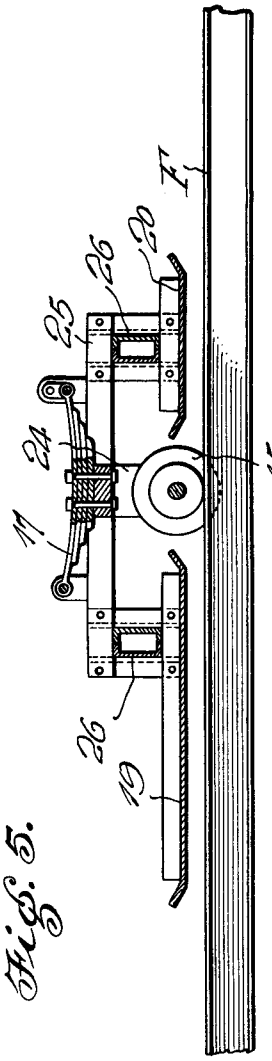


Fig. 5.

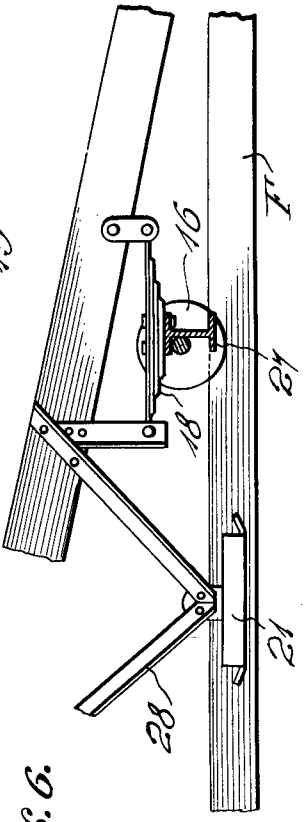


Fig. 6.

Witness
H. Woodard

Inventor
B. H. Flynn

By H. B. Williamson & Co
Attorneys.

Patented Aug. 29, 1933 1,924,779

UNITED STATES PATENT OFFICE

1,924,779

OVERPASS

Benjamin H. Flynn, Alexandria, La.

Application June 17, 1932. Serial No. 617,856

12 Claims. (Cl. 37—108)

The invention aims to provide a novel and advantageous overpass designed primarily to permit the driving of motor trucks over a highway grading machine, for the purpose of carrying materials to the paving machine which lays the pavement upon the grade prepared by said grading machine.

The grading machine usually advances almost continuously, and a further object of the invention is to provide novel means for connecting the overpass with said grading machine to normally advance therewith, and to allow advance of said grading machine with respect to said overpass whenever the latter is supporting the weight of a truck, said means serving after passage of the truck, to advance the overpass into its normal relation with the grading machine.

Yet another object is to make novel provision for supporting the weight of the overpass and a truck thereon, upon the ground, the tracks of the paving machine, or both, whenever a truck is being driven over said overpass, thereby relieving the wheels of said overpass from strain and preventing them from exerting concentrated strain upon the tracks by which they are supported. These tracks are conventional and constitute the side forms between which the pavement is laid.

A further object of the invention is to provide a rather simple and inexpensive structure, yet one which will be efficient and desirable.

With the foregoing in view, the invention resides in the novel subject matter hereinafter described and claimed, description being accomplished by reference to the accompanying drawings.

Fig. 1 is a side elevation partly broken away and in section, showing the normal relation between the overpass and the grading machine.

Fig. 2 is a view similar to Fig. 1 but showing the manner in which the overpass is supported while a truck is passing thereover.

Fig. 3 is a top plan view.

Fig. 4 is a vertical transverse sectional view on line 4—4 of Fig. 1.

Fig. 5 is a detail longitudinal sectional view on line 5—5 of Fig. 3.

Fig. 6 is a detail vertical longitudinal sectional view substantially on line 6—6 of Fig. 3.

The construction shown will be rather specifically described, with the understanding however that within the scope of the invention as claimed, variations may be made.

The numeral 10 denotes a longitudinally arched bridge to extend over a grading machine 11, said bridge having an appropriate floor upon which motor trucks may be driven, so that any truck may pass from the front to the rear of the grading machine or vice versa. In the present showing, planks, tread plates or the like 12 are employed to support the truck wheels, and guide rails 13 are shown at the outer edges of said parts 12. The front portions 14 of the members 12 and the rear ends of these members are normally spaced somewhat above the ground to allow the bridge 10 to normally advance with the machine 11, said bridge being provided with front and rear flanged wheels 15 and 16 to travel upon the conventional side forms F which constitute tracks along which the grading machine 11 advances. Front springs 17 and rear springs 18 form parts of the wheeled supporting means for the front and rear ends of the bridge 10 and allow depression of said bridge under the weight of a truck, as seen in Fig. 2. To support the weight of the truck and bridge when the latter is thus depressed, I provide various horizontal feet 19, 20, 21 and 22. There are two of the feet 19 disposed in advance of the wheels 15, two of the feet 20 disposed behind said wheels 15, two of the feet 21 immediately behind the grading machine 11, and two of the feet 22 at the rear extremity of the bridge 10. The feet 19 and 20 rest upon the side forms or tracks F when the bridge 10 is depressed but ordinarily are spaced somewhat above said side forms or tracks, as illustrated in Fig. 1. Due to the general roughness of the ground before acted upon by the grading machine 11, it would not be practicable to have the feet 19 and 20 rest directly upon such ground, and these feet are for this reason positioned to rest on the side forms or tracks F. The other feet 21 and 22 however are behind the grading machine 11 and hence may rest with stability upon the prepared grade. These feet are therefore positioned between the side forms or the like F. Whereas all of the feet 19, 20, 21 and 22 are normally clear of the side forms or the like F and the grade, respectively, as seen in Fig. 1, whenever a truck travels over the bridge 10 and the springs 17—18 permit depression of this bridge, the feet 19 and 20 rest upon the members F, and the feet 21 and 22 rest upon the ground, thereby solidly supporting the bridge while the truck is passing over it.

Provision is made for so connecting the bridge 10 with the grading machine 11, as to cause the former to advance with the latter. Preferably, the connecting means consists of coiled pull springs 23 which may be provided if desired with

any appropriate means (not shown) for limiting the extent which they may stretch. Due to the provision of the springs 23, the grading machine 11 need not be stopped while a truck is passing over the bridge 10, for while said bridge is supported by the various feet above described and is hence temporarily arrested as to forward travel, the grading machine 11 may continue to advance due to the stretching of the springs 23. When a truck leaves the bridge 10, these springs return to their normal lengths, thereby forwardly pulling the bridge 10 into its prior normal relation with the grading machine 11.

The specific features of construction of the machine may of course be varied in numerous ways. In the structure shown, the two wheels 15 support two forks 24 upon which the springs 17 are mounted, said springs having their ends suitably connected with longitudinally extending side frames 25 which carry the feet 19 and 20, said side frames being secured to and connected by transverse beams 26 which are instrumental in supporting the bridge 10. The wheels 16 are preferably mounted directly upon the ends of another transverse beam 27 upon which the springs 18 are mounted, the ends of these springs being suitably connected with the bridge structure 10. The feet 21 may well be carried by struts or the like 28 secured thereto and to the bridge 10.

Excellent results are obtainable from the general construction shown and described and this construction may therefore be followed if desired. However, within the scope of the invention as claimed, numerous variations may be made as above stated.

I claim:—

1. An overpass comprising a longitudinally arched inherently rigid bridge having a floor upon which motor trucks may be driven, wheeled means supporting said bridge and including means allowing depression of said bridge under the weight of a truck, and normally idle feet for supporting said bridge when depressed.

2. An overpass comprising a longitudinally arched inherently rigid bridge having a floor upon which motor trucks may be driven, supporting means for said bridge having flanged wheels to travel upon tracks, said supporting means including means allowing depression of said bridge under the weight of a truck, and normally idle feet for supporting said bridge when depressed.

3. An overpass comprising a longitudinally arched bridge having a floor upon which motor trucks may be driven, wheeled supporting means for said bridge, said supporting means being provided with springs normally supporting said bridge above the ground but allowing depression thereof under the weight of a truck, and normally idle feet carried by said bridge for supporting the latter when depressed.

4. An overpass comprising a bridge arched to extend over a highway machine and having a floor upon which motor trucks may be driven, wheeled supporting means for said bridge, and elastic means for connecting said bridge with said machine to cause the former to advance with the latter, the elasticity of said connecting means allowing advance of said machine with respect to said bridge while a truck passes over the latter and serving after the truck leaves the bridge to advance the bridge to its normal relation with the machine.

5. An overpass comprising a bridge arched to extend over a highway machine and having a floor upon which motor trucks may be driven, wheeled supporting means for said bridge, said supporting means being provided with springs normally supporting said bridge above the ground but allowing depression thereof under the weight of a truck, normally idle feet carried by said bridge for supporting the latter when depressed, and elastic means for connecting said bridge with said machine to cause the former to advance with the latter, the elasticity of said connecting means allowing advance of the machine while the bridge rests on said feet and serving after the truck leaves the bridge to advance said bridge to its normal relation with said machine.

6. An overpass comprising a bridge arched to extend over a track-supported highway grading machine, said bridge having a floor upon which motor trucks may be driven, supporting means for said bridge having flanged wheels to travel upon the supporting tracks of said machine, said supporting means including springs which normally support the bridge above the ground but allow depression of said bridge under the weight of a truck, and normally idle feet for supporting said bridge when depressed.

7. An overpass comprising a bridge arched to extend over a track-supported highway grading machine, said bridge having a floor upon which motor trucks may be driven, supporting means for said bridge having flanged wheels to travel upon the supporting tracks of said machine, said supporting means including springs which normally support the bridge above the ground but allow depression of said bridge under the weight of a truck, and normally idle feet for supporting said bridge when depressed, at least some of said feet being positioned to rest on said supporting tracks when said bridge is depressed.

8. An overpass comprising a bridge arched to extend over a track-supported highway grading machine, said bridge having a floor upon which motor trucks may be driven, supporting means for said bridge having flanged wheels to travel upon the supporting tracks of said machine, said supporting means including springs which normally support the bridge above the ground but allow depression of said bridge under the weight of a truck, and normally idle feet for supporting said bridge when depressed, at least some of said feet being positioned to rest upon the grade behind the grading machine when said bridge is depressed.

9. An overpass comprising a bridge arched to extend over a track-supporting highway grading machine, said bridge having a floor upon which motor trucks may be driven, supporting means for said bridge having flanged wheels to travel upon the supporting tracks of said machine, said supporting means including springs which normally support the bridge above the ground but allow depression of said bridge under the weight of a truck, and normally idle feet for supporting said bridge when depressed, some of said feet being near the front end of said bridge in position to rest on said supporting tracks, others of said feet being positioned to rest upon the grade behind the grading machine.

10. In an overpass, axially alined flanged wheels to travel upon tracks, springs supported by said wheels, two longitudinal side frames supported by said springs, feet carried by said side frames, said feet being adapted to rest on said tracks to support said side frames when the latter are depressed, a transverse beam secured to and supported by said side frames, an

arched bridge mounted at one of its ends on said beam, and wheeled supporting means for the other end of said bridge.

11. In an overpass, an arched bridge, supporting means for said bridge having flanged wheels to travel on tracks, said supporting means including means allowing depression of said bridge under load, flat horizontal plates under said bridge adapted to rest upon the ground when said bridge is depressed, and struts secured to said bridge and plates.

12. In an overpass, two axially alined flanged front wheels to travel upon highway side forms, longitudinally extending vehicle springs supported by said wheels, two longitudinal side frames supported by said springs and projecting both forwardly and rearwardly beyond said wheels, longitudinally extending feet rigidly carried by said side frames in front of and behind said wheels respectively and adapted to rest on said side forms to support said side frames when the latter are depressed, front and rear transverse beams secured to and supported by said side frames, an arched bridge mounted at its front end on said beams, two flanged rear wheels to travel upon the side forms, a rear transverse beam supported by said rear wheels, spring means supporting the rear end of said bridge upon said rear beam, flat horizontal foot plates under the rear portion of said bridge adapted to rest upon the grade between the side forms when the bridge is depressed, and struts secured to said bridge and to said foot plates.

BENJAMIN H. FLYNN.