

July 11, 1950

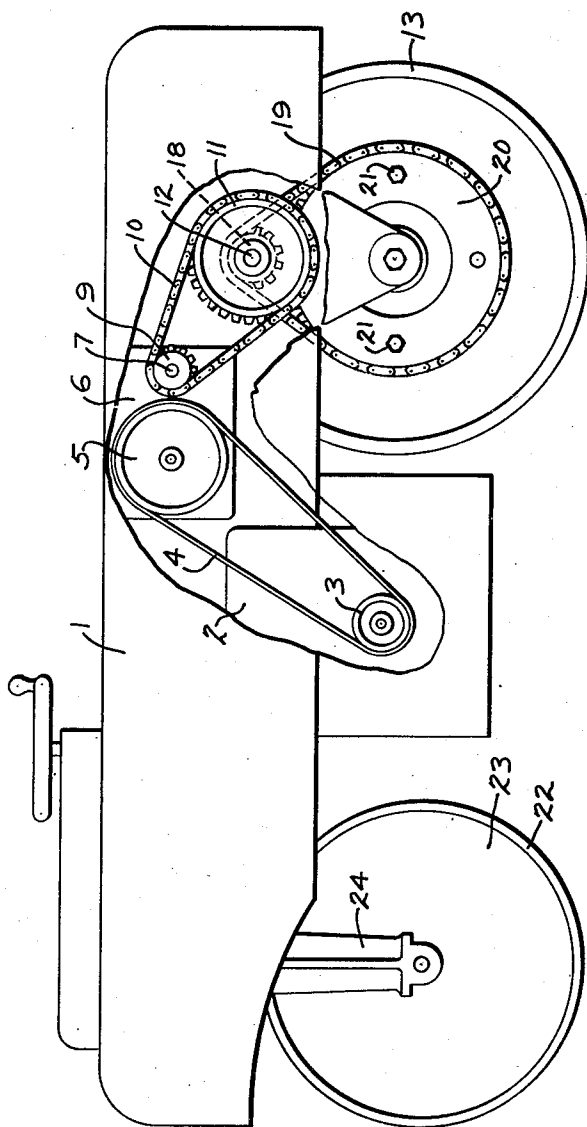
H. W. LEWIS
TANDEM ROAD ROLLER

2,514,711

Filed Aug. 12, 1946

2 Sheets-Sheet 1

Fig. 1.



Inventor
H. W. Lewis

By *Attorneys*. Attorneys.

July 11, 1950

H. W. LEWIS
TANDEM ROAD ROLLER

2,514,711

Filed Aug. 12, 1946

2 Sheets-Sheet 2

Fig. 2.

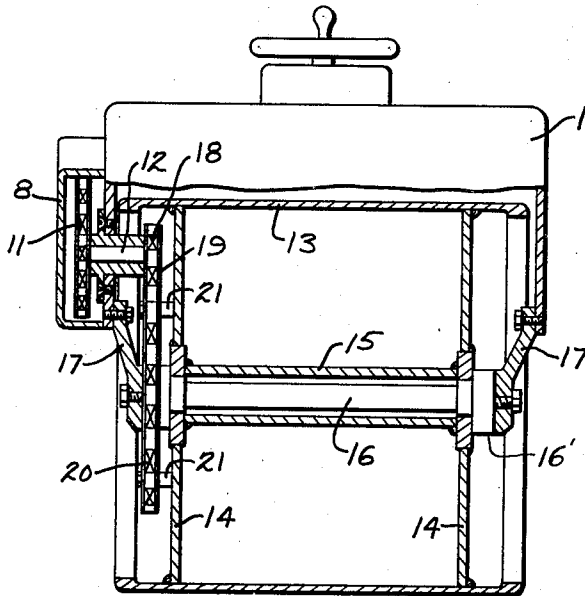
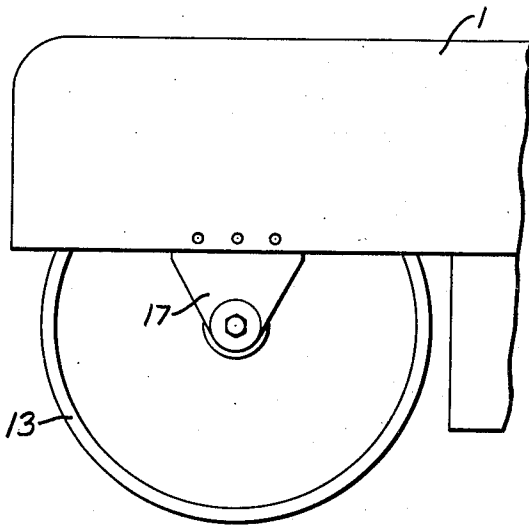


Fig. 3.



Inventor
H. W. Lewis

By *CA. Anonilo.* Attorneys.

UNITED STATES PATENT OFFICE

2,514,711

TANDEM ROAD ROLLER

Hardy W. Lewis, San Antonio, Tex.

Application August 12, 1946, Serial No. 689,834

2 Claims. (Cl. 180—20)

1

This invention relates to tandem road rollers, one of the objects being to provide a roller which permits road rolling operations to be carried close to obstructions, such as curbs, building forms, etc., for a greater height than heretofore has been possible.

As far as the applicant is aware all tandem rollers thus far developed make allowance for a certain distance of road surface adjacent to such obstructions which must be left unrolled due to the overhanging frames and driving mechanism.

It is an object of the present invention to avoid this objectionable feature by driving and braking the roller from inside the roller edges so the rollers thus can be brought up to the curb or other side obstruction.

With the foregoing and other objects in view which appear as the description proceeds, the invention consists of certain novel details of construction and combinations of parts hereinafter more fully described and pointed out in the claims, it being understood that changes may be made in the construction and arrangement of parts without departing from the spirit of the invention as claimed.

In the accompanying drawings the preferred form of the invention has been shown.

In said drawings:

Figure 1 is a side elevation of the tandem roller, parts being broken away.

Figure 2 is a vertical transverse section showing the drive mechanism for the roller, said mechanism being located at one side of the roller.

Figure 3 is an elevation of a portion of the machine showing the bearing at the opposite side of said roller.

Referring to the figures by characters of reference, 1 designates the body of the twin roller which can be of any suitable design and proportions, it merely being essential that all portions of this body be located well above the level of the axes of rotation of the front and back rollers. The term "body" as here used means every part of the road rolling machine except the motor, rollers, and power transmission extending from the motor to the driven roller. This body carries a suitable motor indicated generally at 2 adapted to transmit motion by any suitable means, such as a pulley or sprocket 3 through a belt or chain 4 to a pulley or sprocket 5 forming part of a suitable transmission 6 which has not been illustrated in detail but which can be of any type such as commonly employed for the purpose of obtaining the desired speed and directional

2

changes in the movement of the mechanism. A power take off shaft 7 is extended laterally from and forms a part of the transmission 6 and projects into a narrow housing 8 located on one side of the body 1. A sprocket 9 or the like is carried by that portion of the shaft 7 within the housing 8 and serves to transmit motion through a chain 10 or the like to another sprocket 11 also located in the housing 8. This sprocket 11 or the like is located at the outer end of a shaft 12, the inner end of which is supported within one of the open ends of a road roller 13. As shown particularly in Figure 2 this roller 13 has its heads 14 set inwardly from the ends of the roller so that ample clearance thus is left between one of the heads and the adjacent end of the roller to accommodate that portion of the driving mechanism which is located at points below the axis of rotation of the roller. Both heads of the roller are set inwardly as shown in Figure 2 and are joined by a tubular core 15. In this core is centered a shaft 16 which is extended loosely through bearings 16' joined to the heads and rotatable with the core. The ends of the shaft 17 are secured firmly to bearing brackets 17, the upper ends of which are attached to the inner sides of the superstructure consisting of the body 1 and the housing 8, these brackets being extended downwardly along converging lines so that the lower ends thereof to which the shaft 16 is attached are supported well within the space defined by the ends of the roller 13.

The inner end of the shaft 12 is extended into the space defined by the adjacent end of roller 13 and carries a sprocket 18 or the like adapted to transmit motion by a chain or other means 19 to a sprocket 20 which is completely surrounded by the adjacent open end of the drum or roller 13, said sprocket being attached to the adjacent head 14 of the roller by means of connecting bolts or lugs 21.

It is to be understood, of course, that the front roller 22 will also have open ends with the inset heads 23 so that the brackets 24 which connect the roller to the main structure will not project beyond the sides of the rollers at any point below the axis of rotation of the roller.

It is thought that the advantages of the present structure will be apparent from the foregoing. There is no part of the structure below the axle of the roller which projects laterally beyond the ends of the roller where it could contact with a curb, form or other obstruction at the side of the road. The motor indicated generally at 2, while extending below the body 1, is set inwardly

from the sides thereof and between the middle portions of the rollers.

As a result of the structure described the roller can be moved close to and can really rub against the curb or form at the side of the road so that time heretofore wasted in going along the sides of a rolled road with a small roller or with tamping irons is eliminated and the cost of a completed job is materially reduced.

What is claimed is:

1. In a road rolling machine a body including depending side walls and spaced axles carried by the side walls; front and rear rollers mounted on the axles; a motor mounted on the body; and means mounted on one side wall and extending from the motor to one roller for driving said roller, said means including transmission elements extending from a point along the side wall to the driven roller below, said elements being disposed inwardly of one end of said roller, said axles being carried by the side walls therebelow, all portions of said body, motor, and drive means that are lower than the axle of the driven roller being confined to a space defined between the ends of said roller, so that below its axle, the ends of said roller are the outermost parts of the machine at opposite sides of the machine.

2. In a road rolling machine a body including depending side walls; spaced axles carried by the side walls; front and rear rollers mounted on the axles and having their upper portions enclosed by the side walls; a motor mounted on the body and confined within an area bounded at its ends by the rollers and at its sides by the side walls; and a power transmission extending from the

motor to one roller for driving said roller, said transmission extending upwardly from the motor to the side wall, along the side wall to the driven roller, and to the enclosed upper portion of the driven roller, said transmission including transmission elements extending from a point along the side wall to the driven roller below, said elements being disposed inwardly of one end of said roller, said axles being carried by the side walls therebelow, all portions of said body, motor, and transmission that are lower than the axle of the driven roller being confined to a space defined between the ends of said roller, so that below its axle, the ends of said roller are the outermost parts of the machine at opposite sides of the machine.

HARDY W. LEWIS.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
939,877	Todd et al.	Nov. 9, 1909
1,345,109	Seeley	June 29, 1920
2,154,720	Biles	Apr. 18, 1939
2,334,086	Greiner	Nov. 9, 1943

FOREIGN PATENTS

Number	Country	Date
230,760	Great Britain	Mar. 19, 1925
318,955	Great Britain	Sept. 13, 1929
553,419	Germany	June 28, 1932