

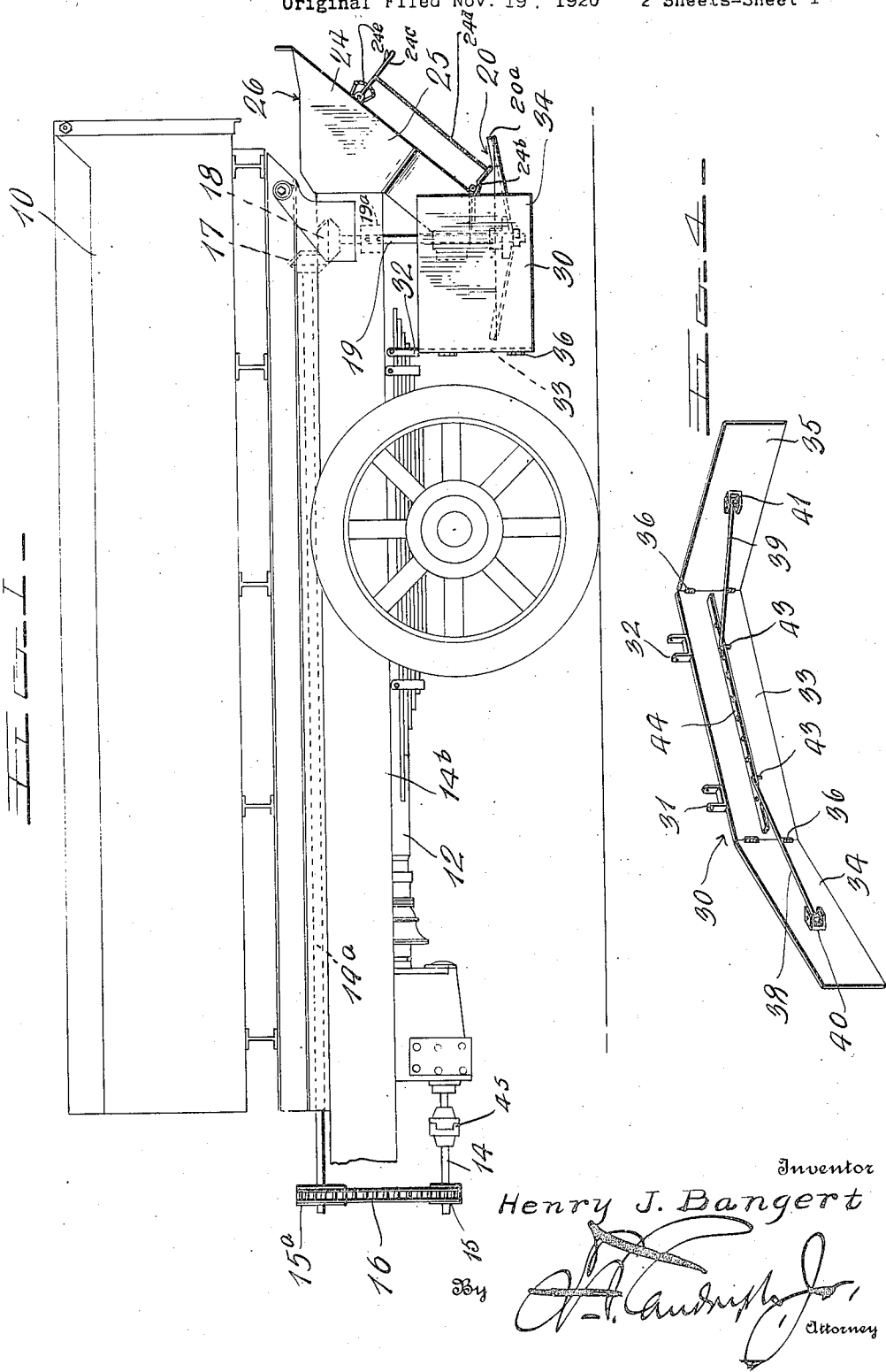
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MATERIAL SPREADER

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MATERIAL SPREADER.

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To all whom it may concern:

Be it known that I, HENRY J. BANGERT, a citizen of the United States, residing at Ferguson, in the county of Saint Louis and State of Missouri, have invented certain new and useful Improvements in Material Spreaders; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to a material spreader of the type described and claimed in my Patent No. 1,312,226, granted August 5th, 1919.

One object of the invention is to provide for employing a spreading device in connection with a motor truck having a dumping body operated preferably by a hydraulic hoist, the spreading device being however adapted for use on any standard motor truck.

A further object is to provide for imparting motion to the rotatable disk, by which the material is spread, from a longitudinal driving shaft which in turn is driven from the main transmission of the motor truck.

A still further object is to provide for conducting the material being discharged from the dumping body to the rotary spreading device.

A still further object is to provide means for varying, or gauging, the spread of the material being discharged from the rotary disk.

With the foregoing and other objects in view, the invention consists in the novel construction, combination and arrangement of elements hereinafter described and claimed.

In the drawings:

Figure 1 is a view in side elevation showing the main drive of a motor truck, and a supplementary drive for imparting motion to the spreading disk referred to herein.

Figure 2 is an end elevation of the device, the dumping body being omitted.

Figure 3 is a vertical section through the hopper and spreading disk, a fragment of the dumping body being shown.

Figure 4 is a perspective view of the adjustable shield, detached.

Figure 5 is a view illustrating the manner in which the shield is secured to the springs of the truck.

In order to show the manner of mount-

ing and operating my device, I have illustrated the latter as being applied to a motor truck of standard type, the truck being shown more or less conventionally or a portion thereof being so illustrated.

In the type of truck shown, the dumping body 10 is operated and controlled by means of a hydraulic hoist (not shown). The line shaft 12 imparts motion to the rear axle and rear wheels in the usual manner. Driven from the main transmission is a shaft 14 carrying a sprocket wheel 15 about which a chain 16 passes. This chain also passes about a sprocket wheel 15^a carried by a horizontal shaft 14^a which extends centrally and longitudinally of the machine and which is journaled in suitable bearings carried by the sides 14^b of the frame of the machine. On the rear end of the shaft 14^a is a bevel gear wheel 17 meshing with a bevel gear wheel 18 on a vertical shaft 19. This shaft is journaled in bearings 19^a carried by the machine frame and has secured to its lower end a horizontal spreading disk 20. The disk 20 has a concave upper surface and a plurality of material scattering flanges 20^a. The material discharged from the dumping body passes through a hopper 24 and is discharged from the hopper into the upper side of the disk 20 on each side of its longitudinal center. The disk throws the material upwardly and outwardly, and as the result spreads it as the truck moves either forwardly or rearwardly. The width of the stream of material passing from the disk 20 is controlled by an adjustable shield, which partly surrounds the disk and opens toward the rear.

The hopper 24 which is secured to the sides 14^b in any suitable manner includes an upper portion 25 having an inlet opening 26 for receiving material discharged from the dumping body. The hopper also includes a lower portion 27 having a discharge opening 27^a through which material passes directly into the concave side of the spreading disk on each side of the longitudinal center thereof.

The discharge of the material from the hopper 24 is under the control of a pair of dampers 24^a which are hinged to the lower, rear end of the hopper as at 24^b. Each damper is under the control of a hand lever 24^c pivoted to the rear side of the hopper above the dampers. A rod 24^d connects each lever 24^c to its damper 24^a, and each lever

is adapted to be held in any position into which it may be moved by the pawl and rack mechanism 24^a. When both dampers 24^a are opened to an equal degree an equal amount of material will be deposited on the disk 20 on each side of its longitudinal center. In spreading material over the surface of a road having a crown of such curvature as to tilt the machine to one side, the hopper would, if the dampers were opened to an equal degree feed more material to the lower side of the disk than to its higher side, and the disk would discharge more material for its higher side than for its lower side, resulting in an uneven distribution of the material. To bring about a uniform distribution of the material when the machine is tilted it is only necessary to so adjust the dampers that less material will be fed to the lower side of the disk than its higher side.

In order to gauge the width of the strip to be covered by the material, I provide, as already stated, an adjustable shield which as a whole is designated 30. This shield is suspended from the rear springs of the truck, by means of hangers 31 and 32, and the shield comprises a main or central portion 33 with which the side members 34 and 35 are hingedly connected as shown at 36.

The adjustable feature of the shield is of importance in connection with the present construction, and adjustment is effected by means of the rods 38 and 39 pivotally connected at 40 and 41 with the hinged elements 34 and 35. These pivoted rods are each provided with a hook 43 on the inner end, the hook cooperating with the apertured element 44 extending longitudinally of the central element 33 of the shield to secure the side members 38 and 39 in adjusted position.

It will be understood that in the use of the device, the dumping body may be elevated to such position that the material will be gradually fed into the hopper, and will pass through the latter to the spreading disk, the upper concave surface thereof serving to distribute the material when the disk is in motion, in the manner described in my previous patent. The width of the stream of material is accurately controlled by the

adjustable shield. It should be added that the rotary disk is thrown into and out of operation by means of a clutch such as that shown at 45. It will be further understood that the distributor functions equally as well when the truck moves rearwardly as when the truck moves forwardly. This is of considerable importance as the material, such as gravel or stone chips, may be spread over a road surface freshly treated with tar, asphalt, oil or any other road surface treating material in advance of the wheels of the truck, and in view thereof the wheels of the truck will not disturb the road surface spreading material.

While the preferred embodiment of this invention is shown and described it will be understood that minor changes in the details of construction and arrangement of parts may be resorted to within the scope of what is claimed without departing from the spirit of the invention.

Having thus described the invention, what I claim is:

1. In a device of the class described, a hopper, a rotary spreading device and mounted in a horizontal plane below the lower end of the hopper, a shield including a plurality of hingedly mounted wing elements, each swinging about a vertical axis, and adjustable bracing devices pivotally connected with said wings, for determining the position of the wings and the width of the stream of the material passing from the spreader.

2. In a device of the class described, a vehicle including a dumping body, a hopper mounted in position for receiving material passing from said dumping body, a spreading device receiving material from the hopper, and adjustable means controlling the material during its discharge from the spreading device, said means last named including a plurality of hinged elements movable angularly with reference to each other.

In testimony whereof I affix my signature in presence of two witnesses.

HENRY J. BANGERT.

Witnesses:

A. E. L. GARDNER,
S. MARK DODD.