S. GRIFFIN.

ROAD SCRAPER.

APPLICATION FILED MAY 13, 1909.

945,088.

Patented Jan. 4, 1910.

2 SHEETS—SHEET 1.

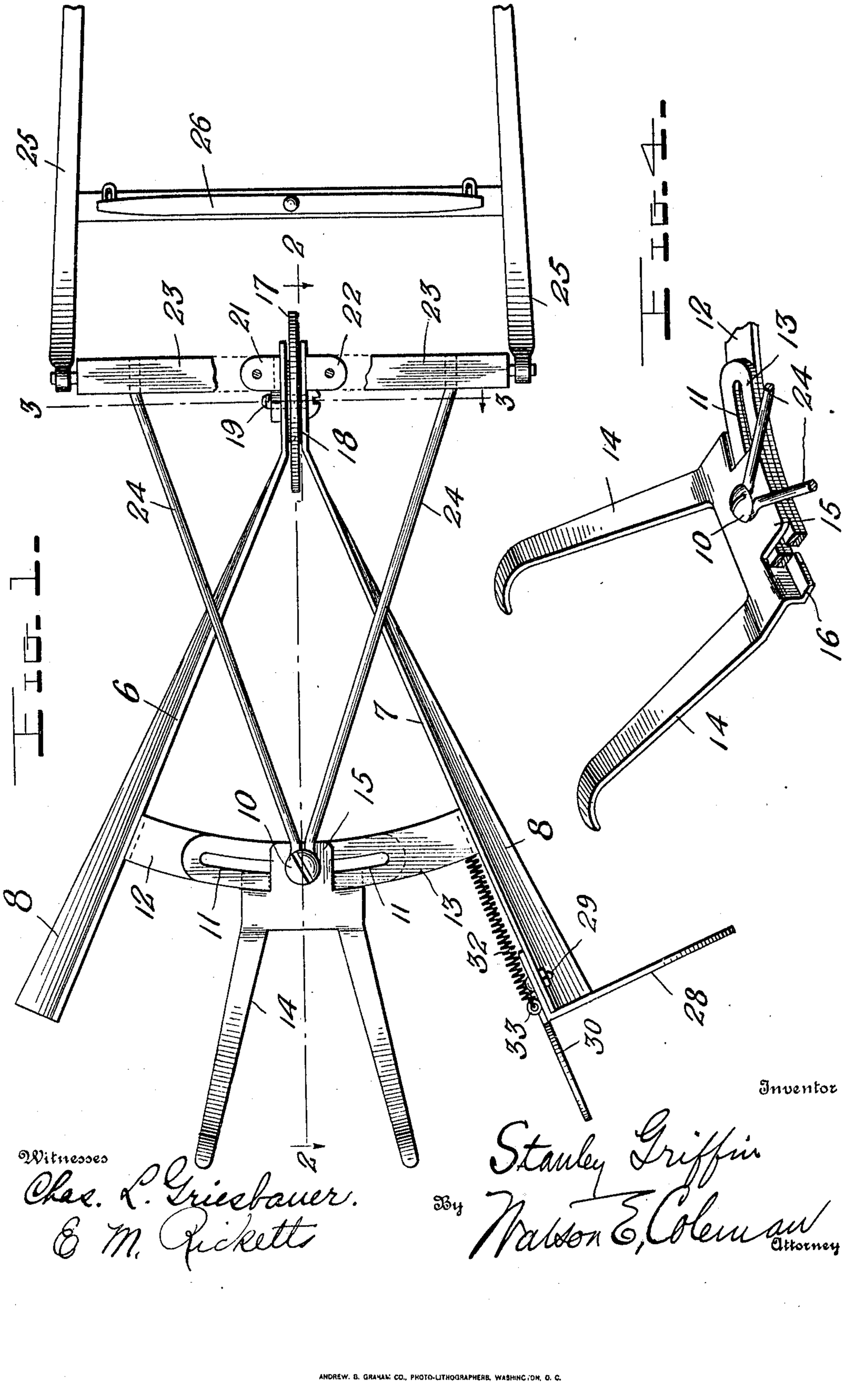

FIG. 1.

Witnesses

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2 SHEETS—SHEET 2.

FIG. 2.

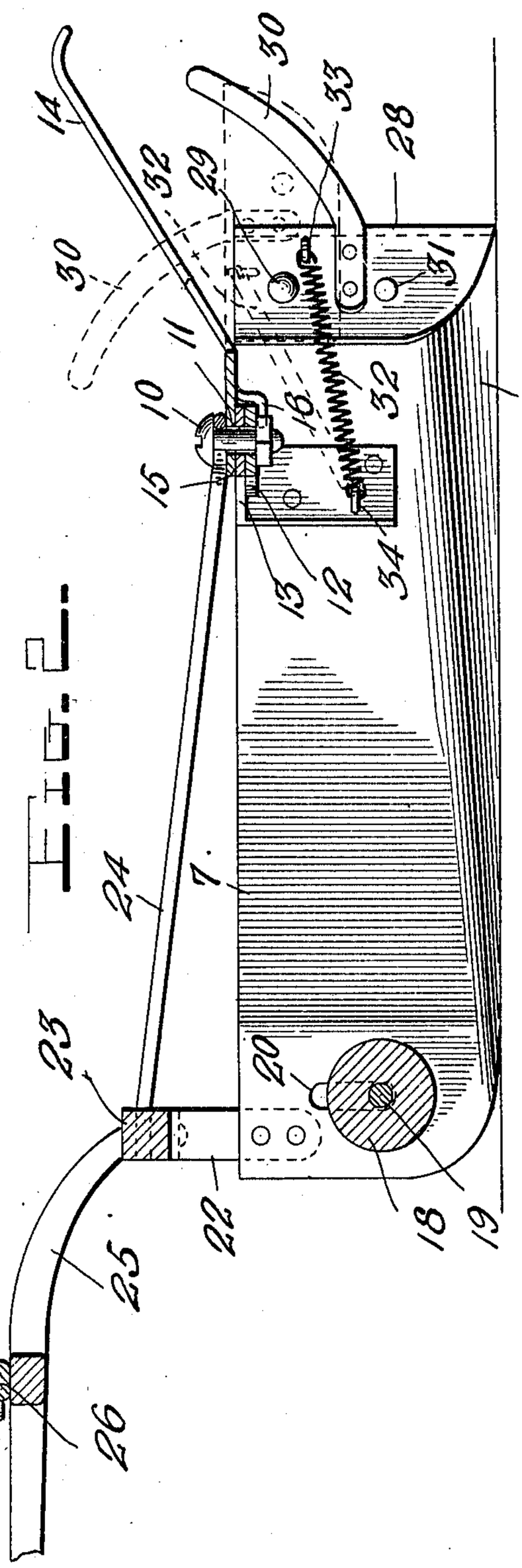

FIG. 3.

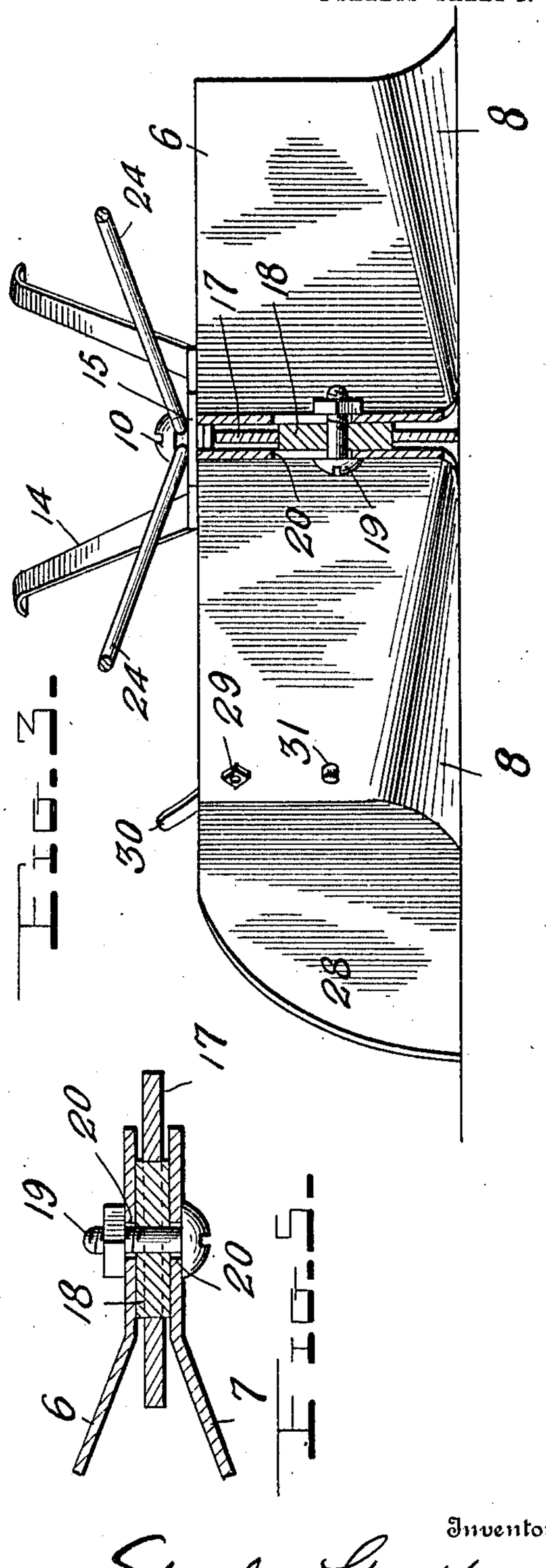

FIG. 5.

Witnesses

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UNITED STATES PATENT OFFICE.

STANLEY GRIFFIN, OF ELYRIA, OHIO.

ROAD-SCRAPER.

945,088. Specification of Letters Patent. Patented Jan. 4, 1910.

Application filed May 13, 1909. Serial No. 495,611.

To all whom it may concern:

Be it known that I, STANLEY GRIFFIN, a citizen of the United States, residing at Elyria, in the county of Lorain and State of Ohio, have invented certain new and useful Improvements in Road-Scrapers, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to machines for cleaning or scraping snow, dirt or mud from road-ways.

The object of the invention is to provide a simple, comparatively light, strong and economically constructed machine which may be used as a road scraper, with or without an attachment for piling up the dirt, and as a snow plow, as occasion may offer.

With this object in view my invention consists in certain novel features of construction and combination of parts which will be hereinafter fully described and afterward specifically claimed.

In the accompanying drawings: Figure 1 is a plan view of a machine embodying my invention with the dirt piling attachment secured thereto in position for operation. Fig. 2 is a central vertical section on the plane indicated by the broken line 2—2 in Fig. 1, looking in the direction of the arrow. Fig. 3 is a vertical sectional view through the axis of the wheel, on the plane indicated by the broken line 3—3 of Fig. 1, looking from the front. Fig. 4 is a perspective view of the handle piece and adjoining parts, and Fig. 5 is a sectional view of the wheel and its supporting parts on a horizontal plane passing through its axis.

Like numerals of reference mark the same parts in all of the figures of the drawings.

Referring specifically to the drawings, 6 and 7 indicate the blades of my machine which are preferably constructed of sheet metal and are turned outward along the lower edge as indicated at 8 to properly throw aside the dirt or snow after the manner of a plow. These blades, 6 and 7, are normally, when in operation, in vertical position, their forward ends being closely adjacent to each other, while their rear ends diverge into a substantially V-shape, the angle of the V being increased or diminished by the adjustment of the blades by means of a bolt 10 which passes through slots 11 in connecting bars 12, 13, horizontally arranged and bolted or otherwise connected to the blades 6 and 7.

14 indicates the handles of the machine which may be made of wood although I prefer to make them of metal as shown. They are joined to a central plate or sheet 15 which ordinarily rests upon the top of the connecting bars 12, 13, and are secured thereto by the same bolt 10 which secures the connecting bars together. The outer edges of the plate 15, in the rear of and substantially in continuation of the handles 14, are bent downward and horizontally, as at 16, and project forwardly under the connecting bars 12, 13, and thus assist in supporting said bars.

Between the forward ends of the blades 6 and 7, which are substantially parallel with each other, is mounted a wheel 17, its journal being a washer 18, slightly thicker than the wheel, rigidly held between the ends of the plate by a bolt 19 which passes through vertical slots 20 in the plates whereby the height of the journal, and consequently of the wheel, may be adjusted. The journal may be of any suitable material, preferably some metal which will not require lubrication. The wheel 17 is made comparatively thin so that it will dig into the snow or ground and prevent a lateral shifting of the plow. It will be understood, however, that the primary function of this wheel is to prevent the front ends of the scraper blades from catching upon a brick or other obstruction in the sidewalk, street, road or other surface over which the device is drawn.

Secured to and projecting above each blade at its forward end, is a right angle bracket, as at 21, 22, upon the upper horizontal arms of which is secured a cross bar 23, braced by yoke rods or hounds 24, whereby it is retained rigidly in position, the yoke rods being secured by the bolt 10 which secures the connecting bars and handle piece together. Thills 25 are pivotally attached to the ends of the cross bars 23 and are provided with the usual whiffletree 26 to facilitate the propulsion of the machine by a horse.

The machine as thus far described is ready for operation as a snow plow and such operation is so well understood that a particular description of it is not deemed necessary here. The machine as thus constructed may also be used as a road grader, cleaner or scraper but it is sometimes desirable, in a road scraper, that means be provided for piling up the dirt thrown aside by the blades.

This I have provided for as follows: At 28 is shown a right angle scraper or piler which I prefer to pivotally connect to the rear end of one of the blades, in this instance, the blade 7, by means of a removable bolt 29, whereby it may be attached or removed at will and whereby also it may be thrown up on said bolt as a pivot, into the position shown in dotted lines in Fig. 2, when it is desired to pass over any obstruction in the road-way such as a stone or raised brick, such tilting or raising being facilitated by a handle 30. It is desirable that this piler be yieldingly secured so that if it should strike any obstruction, it will rise of itself without the use of the handle. This yielding may be provided for by the use of a plug 31, placed in adjacent apertures near the lower edge of the blade and the piler, said plug to be of wood or some other yielding material which will break when a strain is brought against it. To supplement the action of this plug and to be operative for the same purpose if the plug should be lost I provide a spring 32 secured at one end as at 33 to the piler and at the other end as at 34 to the blade. The location of the points of attachment of this spring are such that the spring will exert its force, when the piler is down, to hold it in position, and when the piler is up, to hold it in its raised position, this being due to the fact that during the raising of the piler, the spring 32 passes across the axial line of movement of the piler on its pivot 29.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a machine of the character described, a pair of blades converging toward and substantially parallel with each other at their forward ends, in combination with a journal tightly clamped between said ends and a wheel mounted to turn upon said journal, between said blades.

2. In a machine of the character described, a pair of blades converging toward and substantially parallel with each other at their forward ends, and vertically slotted, a journal mounted between the ends of the blades, an axial bolt passing through the journal and the slots and clamping the journal between the blades, and a wheel mounted on the journal between the blades, substantially as described.

3. In a machine of the character described, a pair of blades converging toward and substantially parallel with each other at their forward ends, means for securing them together at said forward ends, connecting bars secured to the inner sides of the blades projecting inwardly and overlapping each other and provided with registering slots, a handle piece resting upon said connecting bars and provided with handles, and a bolt passing through the handle piece and the slots of the connecting bars.

4. In a machine of the character described, a pair of blades converging toward and substantially parallel with each other at their forward ends, a wheel journaled between them at their forward ends, right angle brackets secured to said forward ends, a cross bar secured upon said brackets, connecting bars secured to the blades near their rear ends, yoke rods extending from the cross bar to said connecting bars, and a bolt securing the rear ends of the yoke rods and passing through the slots of the connecting bars.

5. In a machine of the character described, a pair of blades converging toward and substantially parallel with each other at their forward ends, a pair of connecting bars extending inwardly from the blades and overlapping each other, a handle piece resting upon the top of the connecting bars, flanges extending horizontally from the handle piece beneath the connecting bars, and means for securing the connecting bars and handle piece together.

6. A machine of the character described, having a diverging blade, a piler at right angles to said blade at its rear end pivotally connected to the blade, and means for holding the lower edge of the piler yieldingly in position.

7. A machine of the character described, having a diverging blade, a piler at right angles to said blade at its rear end pivotally connected to the blade, and a spring connecting the blade and the piler and arranged to hold the piler in either its raised or lowered position.

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

STANLEY GRIFFIN.

Witnesses:

QUINCY A. GILLMORE,

R. W. POMEROY.