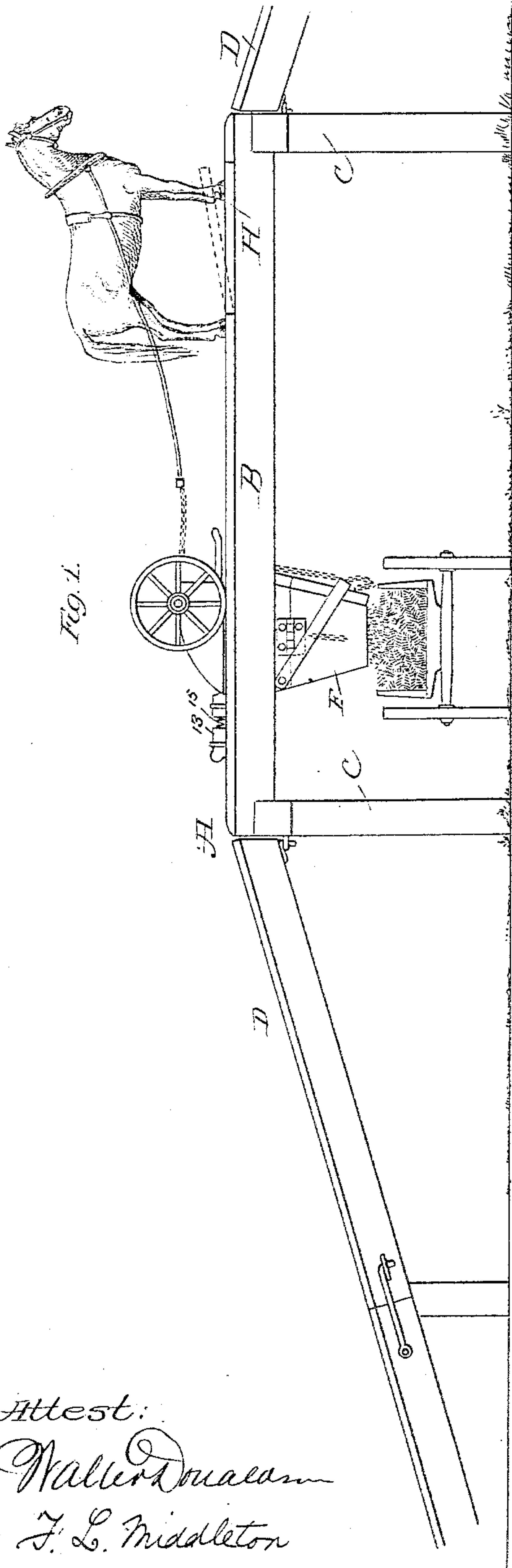


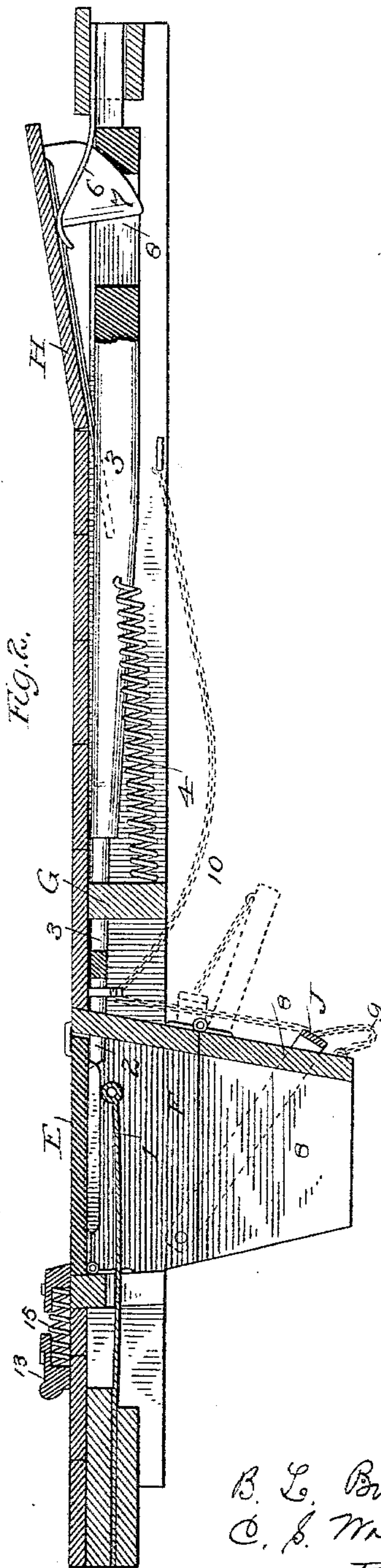
(No Model.)

2 Sheets—Sheet 1.

B. L. BURRIS & C. S. WOODMAN.
PORTABLE BRIDGE FOR UNLOADING EARTH SCRAPERS.
No. 300,301. Patented June 10, 1884.



Attest:
Walter D. Malan
J. L. Middleton



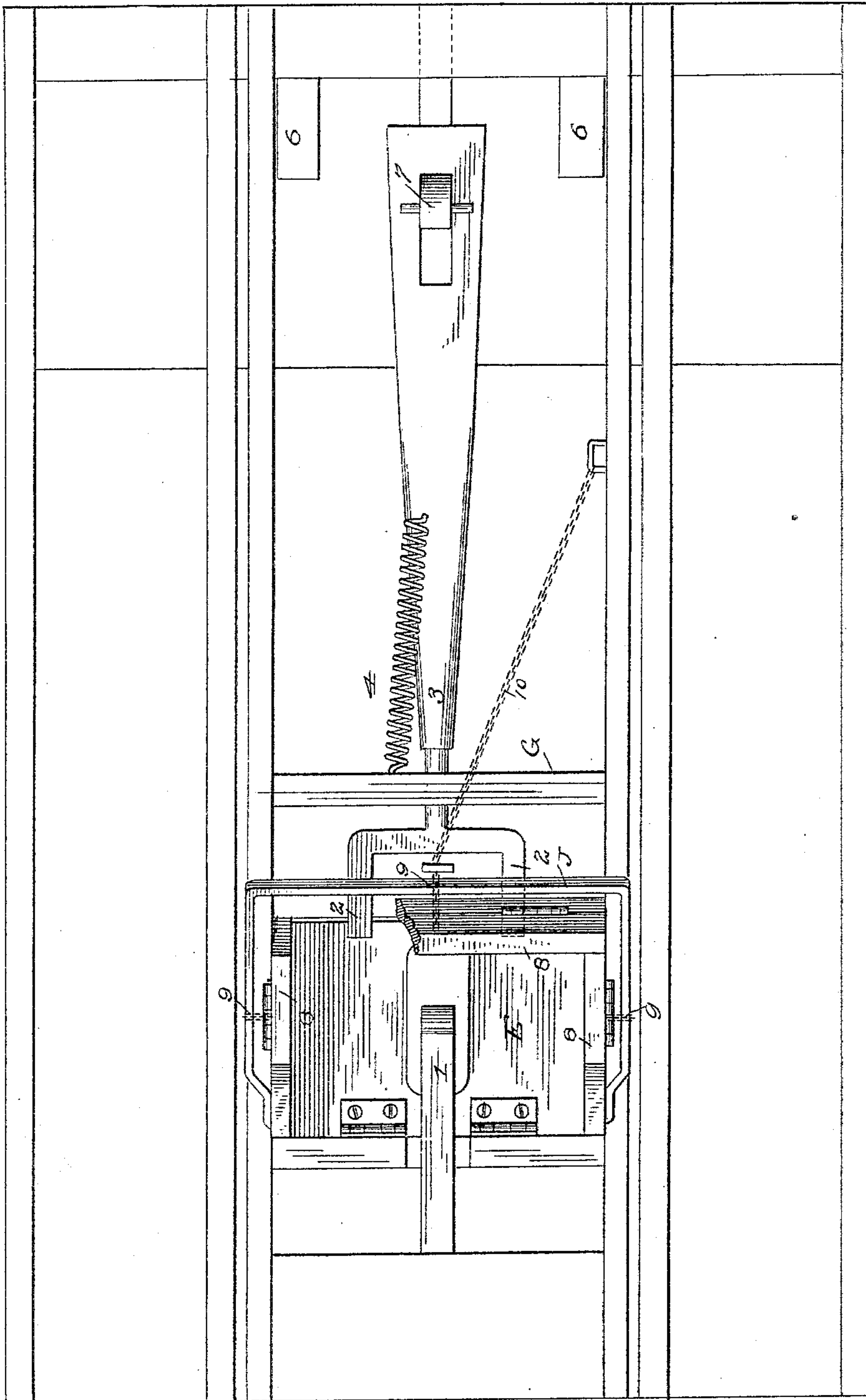
B. L. Burris
C. S. Woodman
Inventors
By Joyce & Spear.
Attys.

(No Model.)

2 Sheets—Sheet 2.

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Fig. 3.



Attest
Walter Donaldson
J. L. Middleton

Inventor
B. L. Burris & C. S. Woodman
by Joyce & Spear
Attys

UNITED STATES PATENT OFFICE.

BARTLEY L. BURRIS AND CLARENCE S. WOODMAN, OF WICHITA, KANSAS.

PORTABLE BRIDGE FOR UNLOADING EARTH-SCRAPERS.

SPECIFICATION forming part of Letters Patent No. 300,301, dated June 10, 1884.

Application filed November 1, 1883. (No model.)

To all whom it may concern:

Be it known that we, BARTLEY L. BURRIS and CLARENCE S. WOODMAN, of Wichita, in the State of Kansas, have invented a new and useful Improvement in Portable Bridges for Unloading Earth-Scrapers; and we do hereby declare that the following is a full, clear, and exact description of the same.

Our invention relates to portable bridges to be used in loading wagons with dirt contained in wheel or drag scrapers in railroad-engineering or other construction.

The essential features of our invention includes an elevated structure having inclined ways up which the loaded scraper may be driven, a trap-door through which the dirt is discharged, and a device operated by the team for automatically opening such trap-door at the proper time. In connection with these essential features we also use a device for tripping the catch which holds the body of the scraper when loaded, and when released permits it to discharge its load; and also an adjustable hopper, means for operating the same, and various other details of construction, all of which will be more fully hereinafter described.

In the drawings, Figure 1 is a side elevation of the bridge or structure, showing the wagon beneath it being loaded. Fig. 2 is a bottom view showing the mechanism for operating the trap-door and adjustable hopper. Fig. 3 is a longitudinal vertical section through the platform.

A represents the bridge as a whole, which is composed of the horizontal platform B, supported by uprights C C, and incline ways D D on the opposite ends of the platform. Both the inclined ways and the platform are built of longitudinal beams connected by cross-pieces set closely together to form the floor. The different parts of this bridge are adapted to be separated for transportation, and may be packed into a small space for that purpose. Near one end of the platform is hinged a trap-door, E, which is forced upward or to a closed position by a spring, 1. This trap-door is controlled by bolts 2 2 on the end of the sliding rod 3. The ends of the bolts slide through holes in the fixed side of the hopper F, while the sliding rod 3 is guided by an opening in a cross-piece, G, secured between two of the longitudinal beams of the platform. A spring,

4, is connected at one end to the cross-piece G and at the other to the sliding bar. This tends to force such rod and the bolts attached to it forward, so that the bolts are brought under the edge of the trap-door and hold the same closed. The bolts are withdrawn and the trap-door permitted to drop by the hinged section H of the platform shown in Fig. 1. This section forms a portion of the floor of the platform, but is raised to an inclined position by springs 6 6. Secured to the lower side of the hinged portion is an incline or cam, 7, which bears on one end of this slot 8, formed in the sliding bar. When the team is driven on the bridge, the weight depresses the hinged section, the effect being to cause the rod to slide, withdrawing the bolts from the trap-door. The end of the rod slides in a slot formed in one of the cross-beams of the platform.

The hopper F, for directing the dirt into the wagon, is composed of fixed sides and hinged walls 8 8, the latter being adapted to move outward to a horizontal position, so that the wagon to be loaded may be driven under the trap-door. The movement of the hopper is accomplished by a yoke, J, hinged to the fixed side of such hopper and connected by chains 9 9 9 to the three movable sides. The elevation of this yoke will draw on the chains and cause the movable sides of the hopper to rise to a horizontal position, where they offer no obstruction to the team. The lowering of the yoke causes the sides of the hopper to close downward, the yoke bearing directly on the movable parts and forcing them together. The chain 10 runs from the yoke over a suitable support, by which such yoke may be operated.

We have shown in Fig. 1 an attachment to the floor of the platform for tripping the catch which holds the body of the scraper when loaded. It consists of a sliding dog, 13, held in a suitable bearing on the floor of the platform, and has a spring, 15, which permits it to yield and forces it back to its proper position.

The operation of the device will be readily understood. The loaded team is driven up the incline, the trap-door being closed, until, as the horses reach the hinged section of the platform, the bolts which support the platform are withdrawn, at about the same time the catch

of the scraper is tripped, and the load of dirt dropped upon the trap-door, which is opened by the weight and allows the dirt to fall through into the wagon beneath.

5 Any kind of scraper may be used and unloaded on this structure.

Having described our invention, we claim—

1. A portable bridge for the purpose described, consisting of an elevated platform, 10 inclined ways at the opposite ends, a trap-door in the platform, and means operated by the team to permit said trap-door to open, substantially as described.

2. The combination of the elevated platform, 15 a trap-door, and spring-bolts for locking such trap-door, with the hinged section of the platform connected to the said bolts, for the purposes set forth.

3. The combination, with the elevated platform, 20 form, of the hinged trap-door, the slotted spring-rod and locking-bolts, and the hinged section having the projecting cam, and the springs, substantially as described.

4. The combination, with the elevated platform, of the trap-door and its operating devices, the adjustable hopper having movable sides, and means, substantially as described, for operating the same, for the purpose set forth. 25

5. The combination, with the hinged sides of the hopper, of the yoke J, connected to each of the sides and adapted to operate substantially as described. 30

6. In combination with the elevated platform having the trap-door, for the purpose set forth, the sliding projection on the floor of the platform adapted to trip the catch of the scraper. 35

In testimony whereof we have signed our names to this specification in the presence of 40 two subscribing witnesses.

B. L. BURRIS.

C. S. WOODMAN.

Witnesses:

FRED L. GUTHRIE,

WILL. C. WOODMAN.