

No. 827,429.

PATENTED JULY 31, 1906.

N. DREIS.
STEERING MECHANISM FOR ENGINES.

APPLICATION FILED MAR. 3, 1906.

2 SHEETS—SHEET 1.

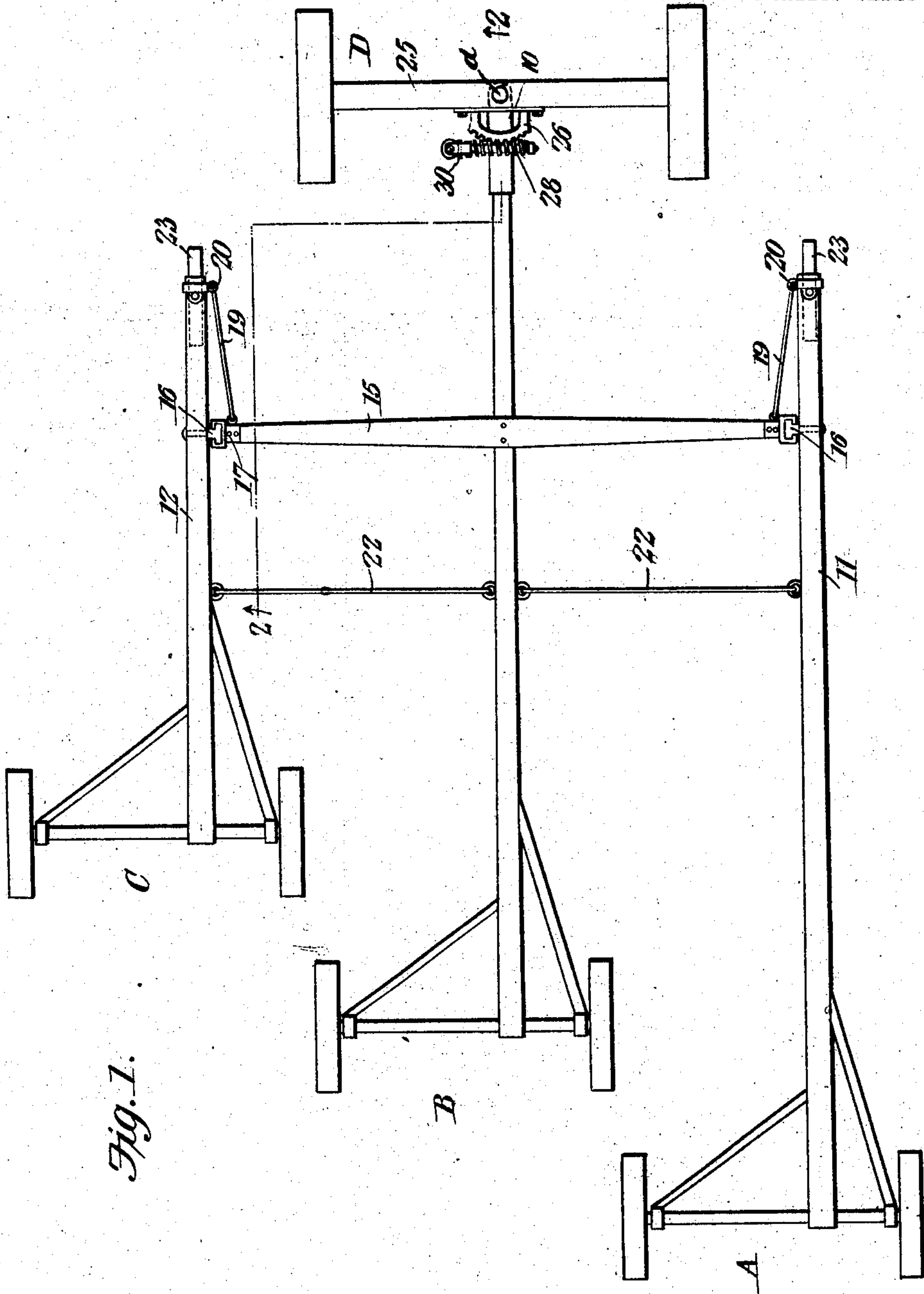


Fig. 1.

WITNESSES:

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By

C. A. Snow & Co.
ATTORNEYS

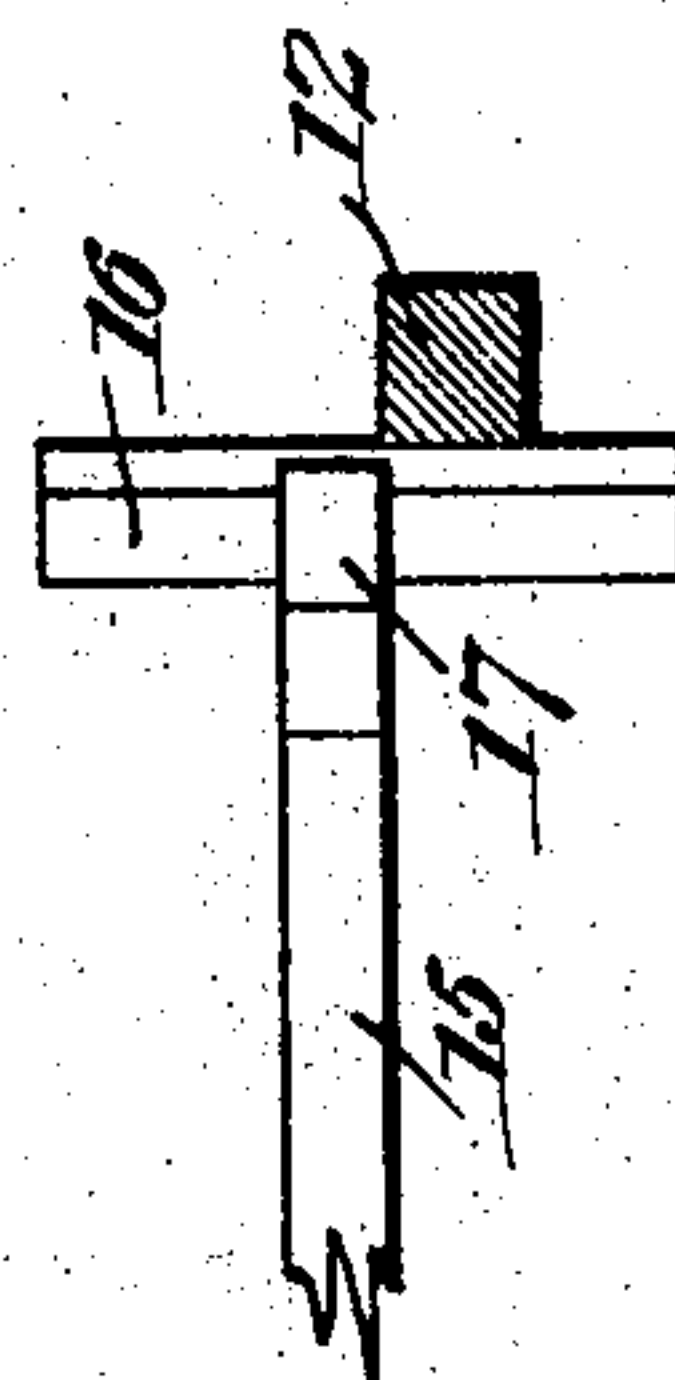
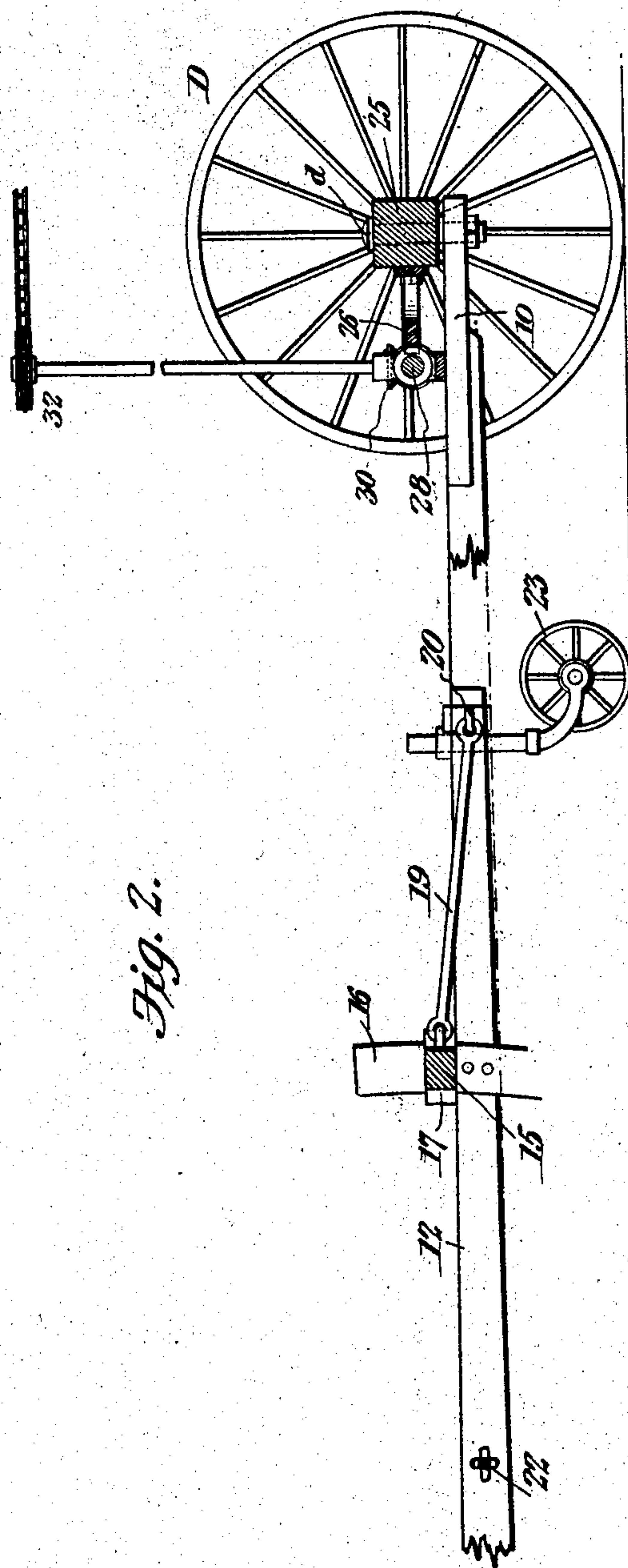
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WITNESSES:

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UNITED STATES PATENT OFFICE.

NICHOLAS DREIS, OF HASTINGS, MINNESOTA.

STEERING MECHANISM FOR ENGINES.

No. 827,429.

Specification of Letters Patent.

Patented July 31, 1906.

Application filed March 3, 1906. Serial No. 304,140.

To all whom it may concern:

Be it known that I, NICHOLAS DREIS, a citizen of the United States, residing at Hastings, in the county of Dakota and State of Minnesota, have invented a new and useful Steering Mechanism for Engines, of which the following is a specification.

This invention relates to propelling and steering mechanisms for header-binders, and has for its principal object to provide an improved means for coupling a number of header-binders to a traction-engine and to provide for the adjustment of the connection between the two, so that the mechanism may be steered in the desired direction.

A further object of the invention is to provide a coupling means which will permit the several binders to move vertically and independently of each other when traveling over rough or uneven ground.

With these and other objects in view, as will more fully hereinafter appear, the invention consists in certain novel features of construction and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that various changes in the form, proportions, size, and minor details of the structure may be made without departing from the spirit or sacrificing any of the advantages of the invention.

In the accompanying drawing the figure is a plan view of a coupling connection constructed in accordance with the invention, the view being partly in the nature of a diagram.

Similar characters of reference are employed to indicate corresponding parts throughout the drawing.

The mechanism in the present instance is intended for the driving and steering of three header-binders A, B, and C, the propelling means being in the form of an ordinary traction-engine D.

Pivoted to the king-pin *d* of the forward axle of the engine is the rear end of a forwardly-projecting tongue 10, the front end of which is connected to the central header-binder B. Extending parallel with the central tongue 10 are two tongues 11 and 12, that are connected, respectively, to the header-binders A and C, the tongues being of such length that the header-binders may follow one another, the binder A being slightly

in advance of the binder B and binder B being slightly in advance of the binder C.

Secured rigidly to the central tongue 10 is an evener-bar 15, to the ends of which are secured arcuate bars 16, that bear against blocks or plates 17, secured to the inner faces of the tongues 11 and 12, so that each of the tongues is free to move vertically when traveling over uneven ground. Extending from the ends of the evener-bar are draft-rods 19, that are connected to eyebolts or similar members 20, that project from the tongues 11 and 12, so that the movement of the central tongue will be transmitted to the other tongues and all of the machines will be traveled forward at uniform speed. To prevent separation of the machines, connecting-rods 22 are placed between the central tongue and the side tongues, the ends of the rods being linked or pivoted to the tongues in order not to interfere with their vertical play.

The rear ends of the side tongues are supported by suitable casters 23, while their forward ends are supported by the wheeled binders. The central tongue does not require any auxiliary support, one end being carried by the machine and the other end being supported by the traction-engine.

Secured rigidly to the lower forward axle 25 of the traction-engine is a forwardly-extending bracket 26, the front edge of which is toothed and forms a worm-rack that is engaged by a worm 28, mounted in suitable bearings near the rear portion of the tongue 10. The shaft of the worm is connected by bevel-gears 30 to a steering arm or wheel 32, that is within convenient reach of the engineer or other person, and by turning the worm the angular position of the tongue with respect to the front axle of the traction-engine may be altered in order that the machines may be propelled in the desired direction.

It will be seen that the several tongues are so connected as to permit of free vertical play, and the machines may readily travel over an uneven surface without undue wear or danger of breakage or straining of the connections. At the same time the steering mechanism is such that the course of the machine may be readily controlled.

I claim—

1. In a coupling device of the class described; a plurality of parallel tongues, a draft connection between them, and means

for permitting independent vertical play of said tongues.

2. In a coupling of the class described, a central tongue, an equalizer-bar secured thereto, side tongues arranged parallel with the central tongue, slidably engaging members between the ends of the equalizer-bar and the side tongues, to permit independent vertical play of all of the tongues, draft connections between the equalizing-bar and such side tongues, and means for connecting the forward end of said tongues to retain them in parallelism.

3. In a coupling of the class described, a central tongue, an equalizer-bar secured thereto, a pair of side tongues arranged par-

allel with the central tongue, slidable plates arranged between the ends of the equalizer and the inner face of the side tongues to permit independent vertical play of all of the tongues, draft-rods connecting the equalizer-bar to the rear ends of the side tongues, and connecting-rods extending between the forward ends of the several tongues.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

NICHOLAS DREIS.

Witnesses:

JOHN RAETZ,
D. E. QUEALY.