

(No Model.)

2 Sheets—Sheet 1.

DE W. C. McCALLUM.

CAR COUPLING.

No. 279,658.

Patented June 19, 1883.

Fig. 1.

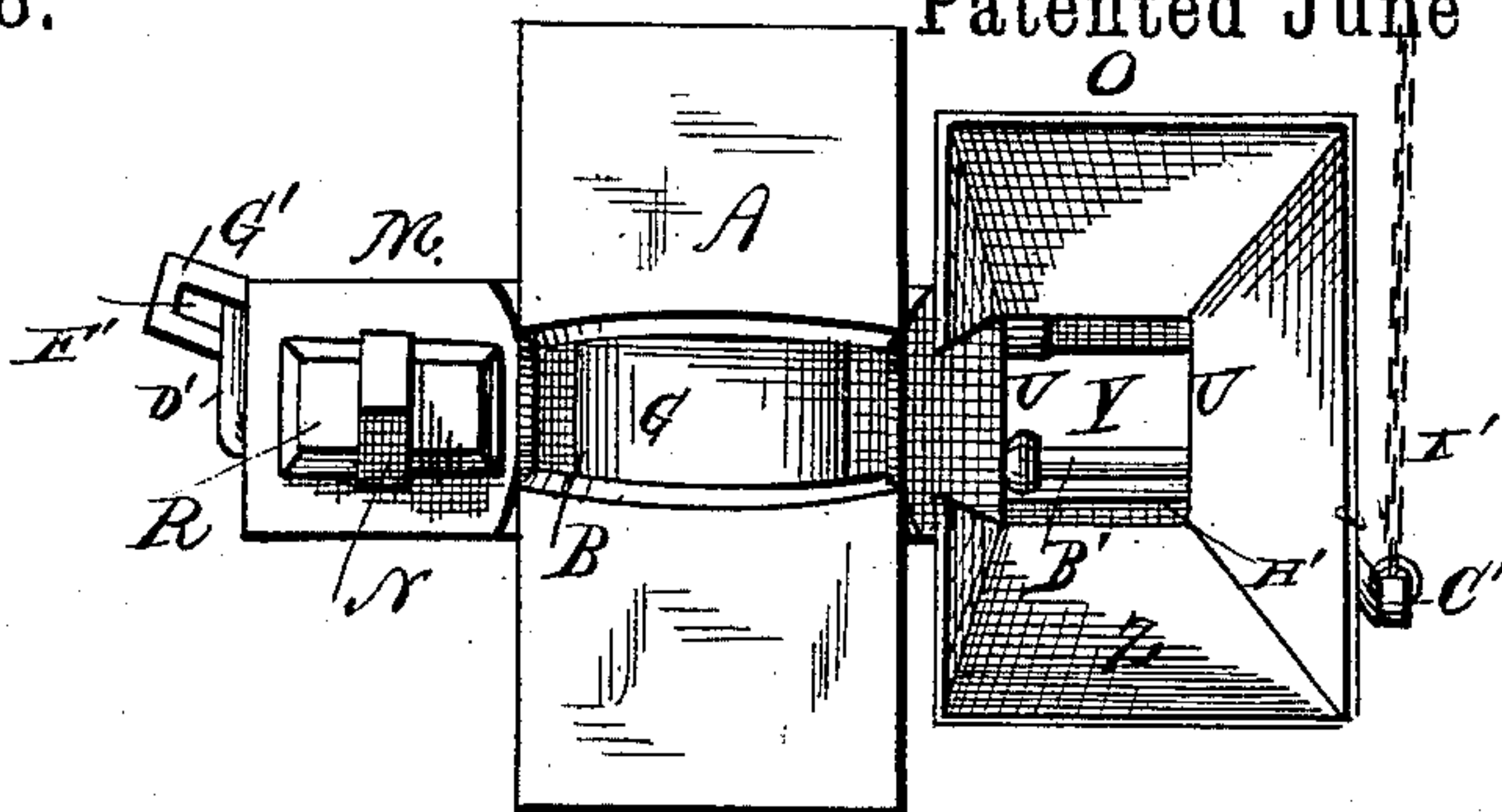


Fig. 3.

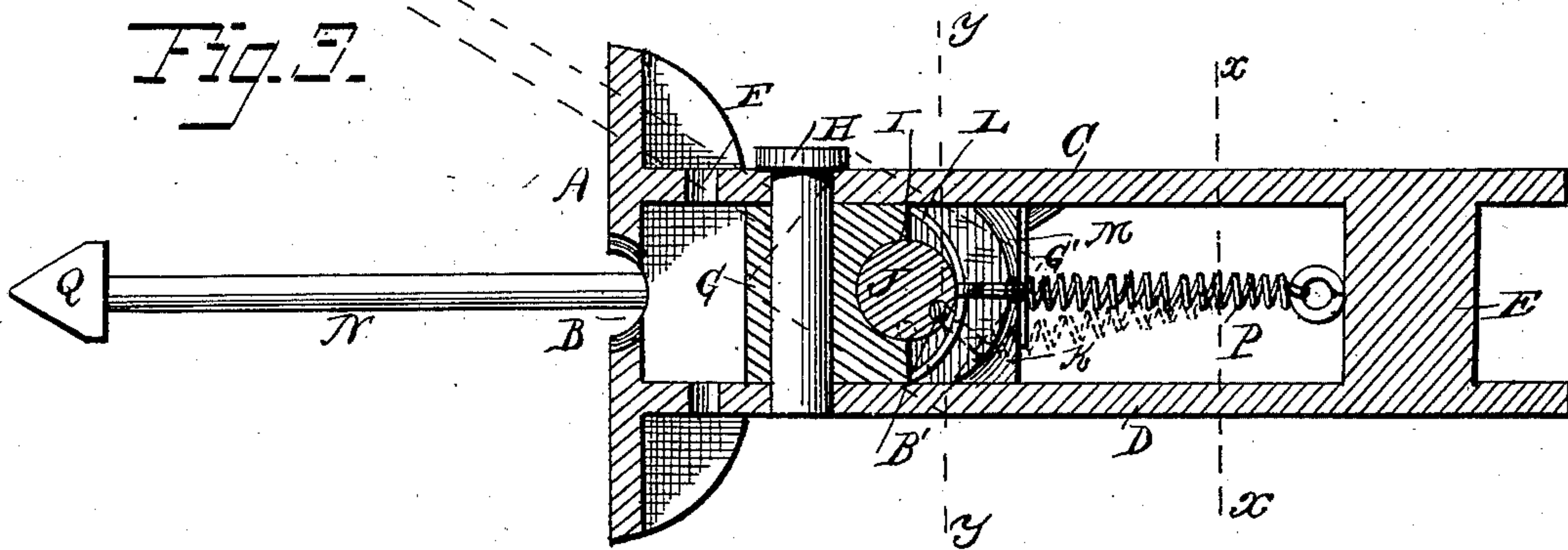
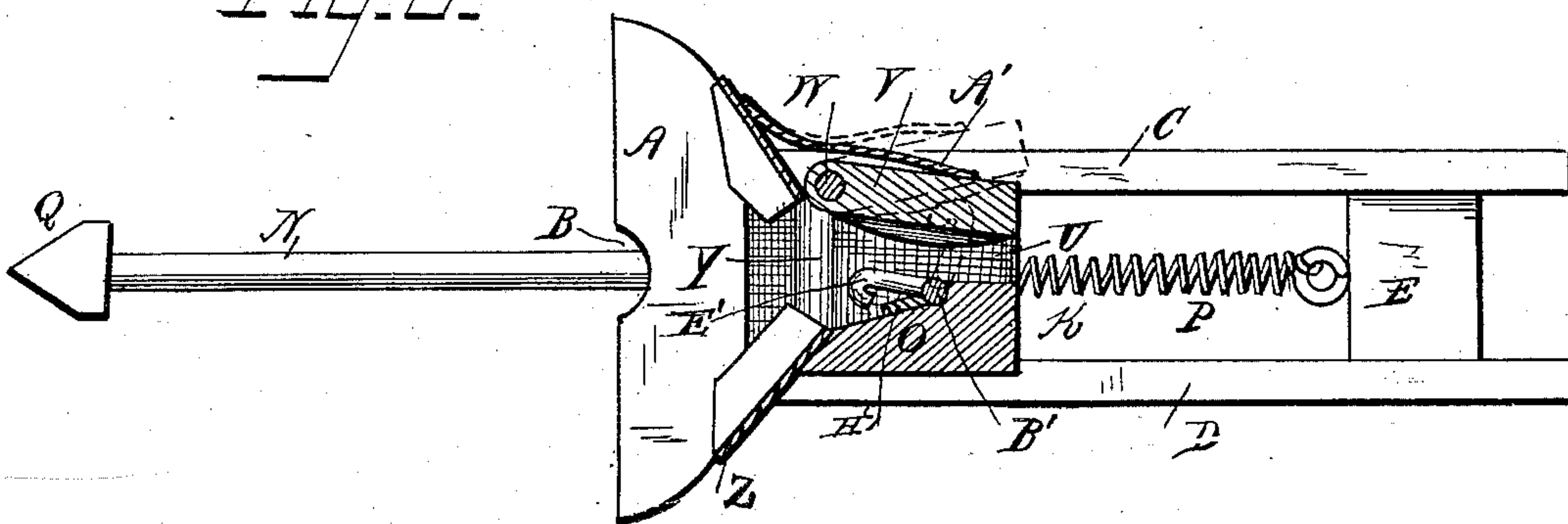


Fig. 6.



WITNESSES

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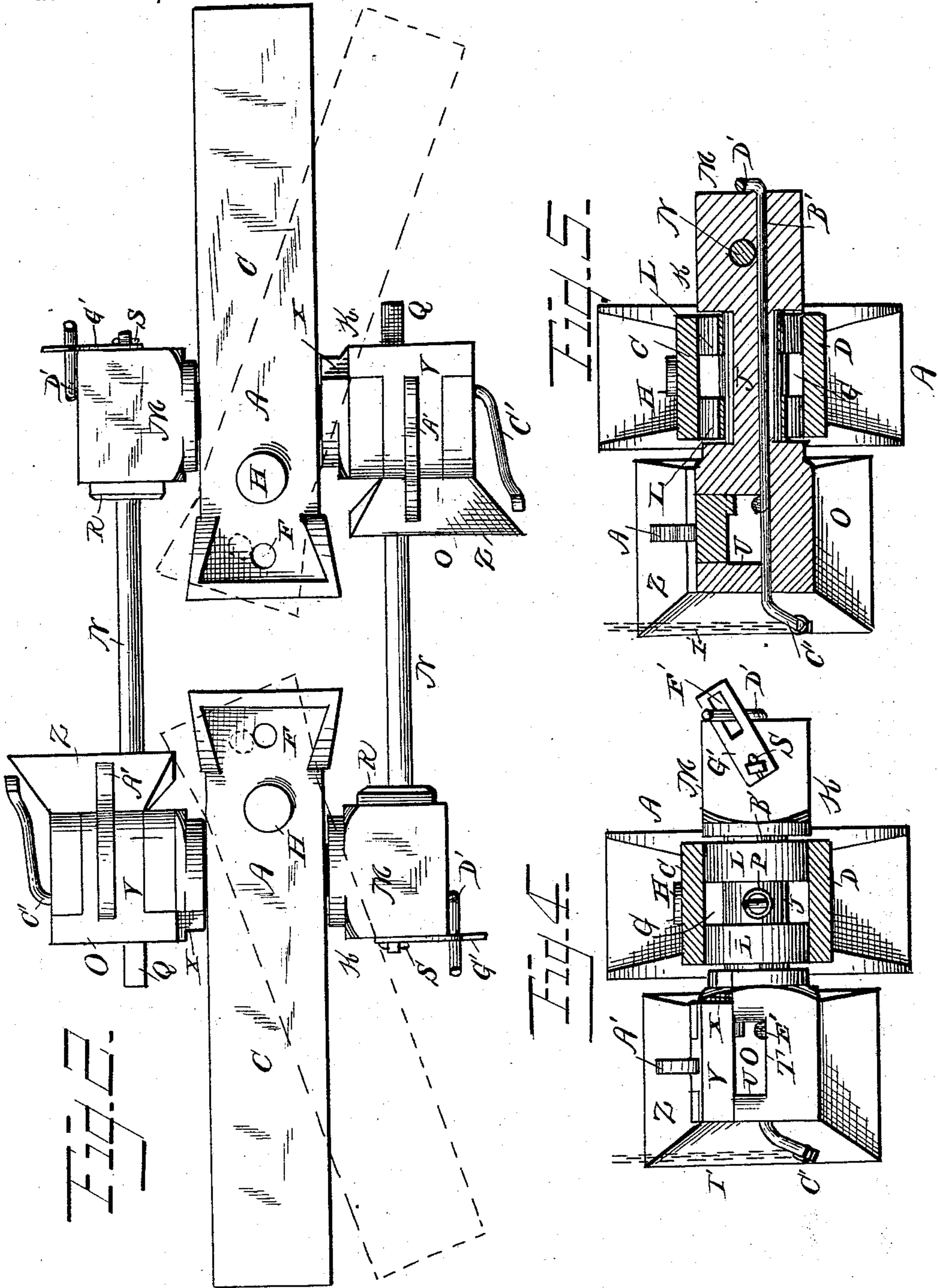
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2 Sheets—Sheet 2.

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WITNESSES

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UNITED STATES PATENT OFFICE.

DE WITT C. McCALLUM, OF MINNEAPOLIS, MINNESOTA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 279,658, dated June 19, 1883.

Application filed November 10, 1882. (No model.)

To all whom it may concern:

Be it known that I, DE WITT C. McCALLUM, a citizen of the United States, residing at Minneapolis, in the county of Hennepin and State of Minnesota, have invented a new and useful Car-Coupling, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to automatic car-couplings; and it has for its object to provide an efficient coupling that can be operated without going between the cars, that will effectually and automatically couple with cars of varying heights, and that will play laterally and vertically.

In the drawings, Figure 1 is a front view of my improved draw-head. Fig. 2 is a top view thereof, showing two engaging draw-heads coupled. Fig. 3 is a vertical central longitudinal sectional view. Fig. 4 is a vertical transverse sectional view on the line *x x*, Fig. 3. Fig. 5 is a like view on the line *y y*, Fig. 3, and Fig. 6 is a vertical longitudinal sectional view through the coupling-hook receiving-chamber.

Referring to the drawings, A designates the main or central draw-head, which has the mouth B, a top, C, bottom D, and rear wall, E, its sides being open, as shown. The top C and bottom D are formed with a vertical pin-perforation, F, near the mouth B, to enable a coupling to be effected with cars having the ordinary pin-and-link coupling apparatus.

G is a block, which is pivoted between the top C and bottom D, in rear of perforation F, by means of a vertical pivot-bolt, H, passing through the draw-head. In the rear end of block G is formed a bearing, I, for the central cylindrical portion, J, of the cross-piece K, said cylindrical portion being retained in its bearing by binding-straps L L, extending from block G, and conforming to the shape of portion J. The cross-piece K can, by means of this above-described connection with block G, swing laterally in either direction as the block turns on its pivot, or it can swing vertically in its own bearings on said block. The cross-piece K has at one end a head, M, carrying a coupling-bar, N, and at its other end a receiving-chamber, O, for the coupling-bar of the adjoining draw-head. Head M and cham-

ber O of course swing with cross-piece K, so that they can be coupled with cars of varying heights and swing laterally by motion of the cars.

To provide for returning the cross-piece K to its normal position, I provide a coiled spring, P, connected with the cylindrical portion J, and extending to and connected with the back wall, E, of the draw-head A.

The coupling-bar N is cylindrical, and is formed with an arrow-pointed head, Q. The bar N passes through the head M, and is retained therein by a shoulder, R, at the front and pin S at the rear.

The chamber O comprises a bottom, T, sides U U, and a top, V, the latter being hinged between sides U U by a cross-pin, W, at the front, and resting on shoulders X X at the rear of sides U U. The back of this chamber is open, as shown, and its mouth Y, at the front, is surrounded by a flaring guide-flange, Z. From the top of this flange projects a rearwardly-extending spring, A', which bears on hinged top V to retain it down in its normal position.

The coupling-bars N rest normally with their beveled edges of the arrow-head in a vertical plane, and as the draw-heads approach in coupling the bars enter the opposite chamber O of the other draw-head. As the bar N enters its chamber the arrow-head forces the hinged top thereof up until it is passed, when the top falls and locks the bar in by the arrow-head.

To provide for ready uncoupling, a transverse rod, B', is arranged to extend through chamber O, the portion J, and head M, and is provided at the side of chamber O with an operating-arm, C', and at the side of head M with an arm, D', at right angles to the body of the rod. Inside chamber O an arm, E', projects laterally from rod B' and engages the hinged top V, so that it will be raised as the rod is turned by its handle and admit of the arrow-head being withdrawn. As rod B' is turned to effect this its arm D' moves in a slot, F', in a plate, G', fixed on the end of bar N, so that the latter is turned until the beveled edges of its arrow-head are on a horizontal plane, when it can be withdrawn from its chamber without raising the top of the same. By this construction, when rod

B' is turned it effects complete uncoupling. Rod B' is preferably provided with a lateral plate or flange, H', inside chamber O, which assumes a vertical position when the rod is turned. Then as the arrow-head passes through the chamber in uncoupling it engages this plate H' and forces it down, thus throwing over the rod B', so that the parts all assume their normal position, ready for coupling.

10 I' is a line extending from the end of arm C' to the top of the car, whereby the operation can be effected from the latter point.

I claim as my invention—

15 1. The combination of a central draw-head having a top, bottom, and back wall, a laterally-swinging block pivoted between said top and bottom, a cross head or piece having bearings in said block and carrying coupling-heads, whereby the cross-head can swing vertically and laterally, and a returning-spring extending from the central portion of the cross-head to the rear wall of the draw-head, as set forth.

25 2. The combination of the central draw-head, having open sides and carrying a pivoted laterally-swinging block, a cross-head comprising a central portion having bearings in said block, whereby it swings laterally and vertically, and provided at one end with a head carrying a headed coupling-bolt and at the other end a bolt-chamber having a hinged top, as set forth.

3. The herein-described receiving-chamber for a headed coupling-bolt, having a flaring guide-flange at its mouth, an open back, and a hinged top that is retained down by springs extending from the flange, and provided with a cross uncoupling-bar having a lateral arm inside the chamber to raise the top, as set forth. 35

4. The combination, with the cross-head having at one end a swiveled bar provided with an arrow-shaped head, and a fixed slotted plate at its rear end, and a receiving-chamber having an open back and hinged top at the other, of a transverse operating-rod provided with an outside handle, a lateral arm inside the chamber, and an end arm engaging the slotted plate, as set forth. 45

5. The combination, with the chamber having a hinged top and open back, of a cross-rod having a lateral arm for lifting said top and a lateral flange or plate inside the chamber to be engaged by the coupling-bolt in uncoupling to return the cross-rod to its normal position, as set forth. 50

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses. 55

DE WITT CLINTON McCALLUM.

Witnesses:

CHAS. LORENTZ,
D. GALLAGHER.