

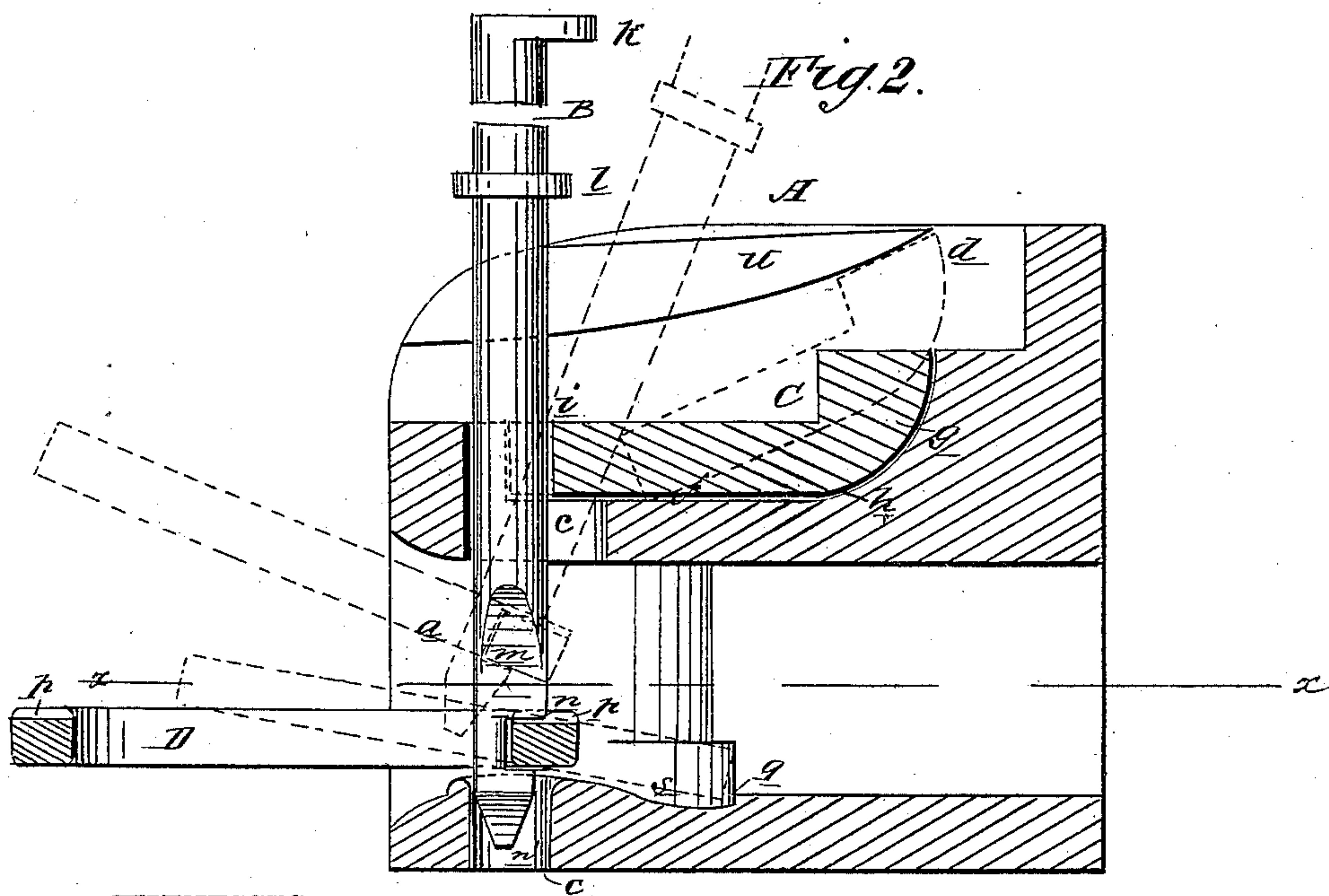
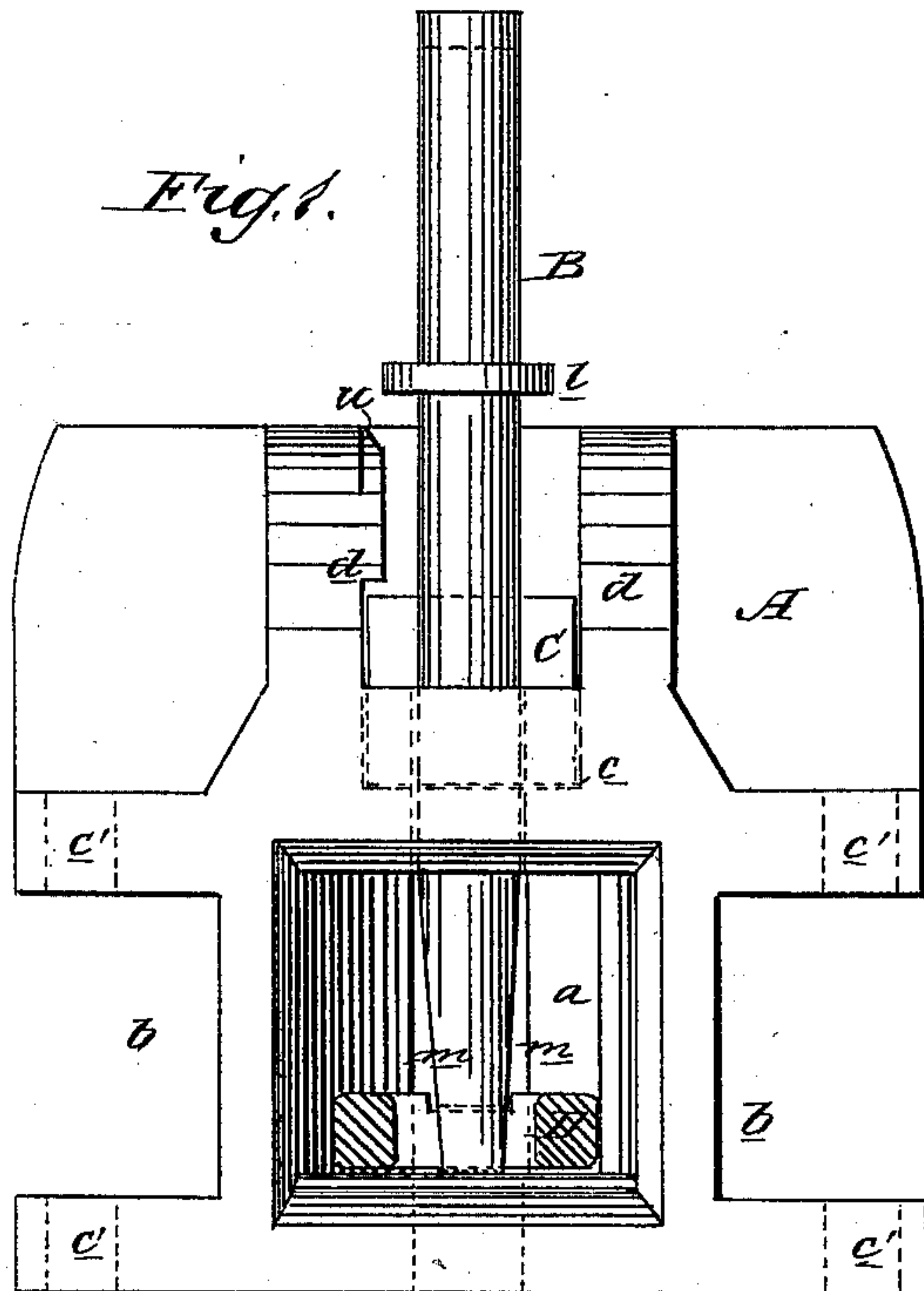
(Model.)

2 Sheets—Sheet 1.

S. A. V. HARTWELL.  
CAR COUPLING.

No. 249,616.

Patented Nov. 15, 1881.



WITNESSES :

Francis M. Andle  
C. Sedgwick

INVENTOR:

S.A.V. Hartwell  
BY *Mum & Co*  
ATTORNEYS.

(Model.)

2 Sheets—Sheet 2.

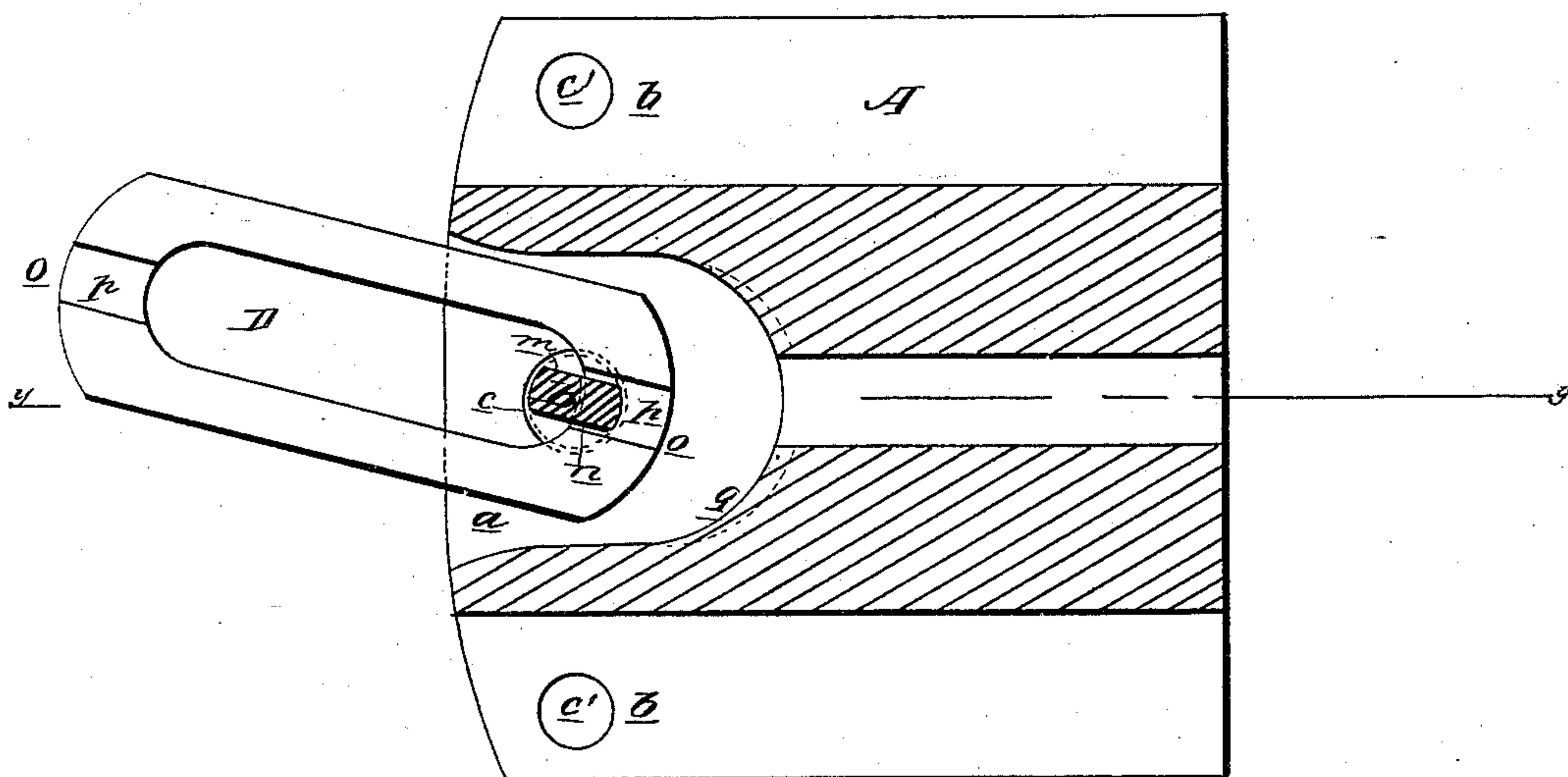
S. A. V. HARTWELL.

CAR COUPLING.

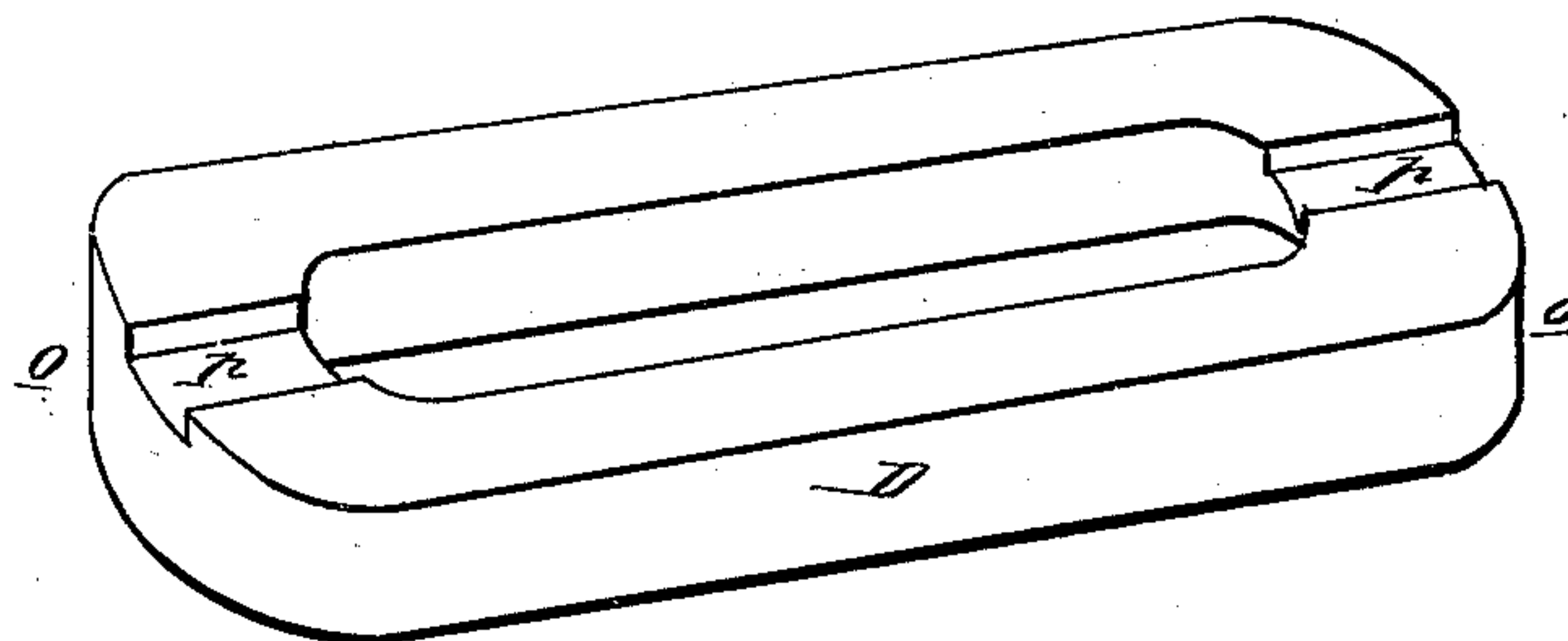
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*Fig. 3.*



*Fig. 4.*



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# UNITED STATES PATENT OFFICE.

SAMUEL A. V. HARTWELL, OF VALLEY CENTRE, KANSAS.

## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 249,616, dated November 15, 1881.

Application filed August 18, 1881. (Model.)

*To all whom it may concern:*

Be it known that I, SAMUEL A. V. HARTWELL, of Valley Centre, in the county of Sedgwick and State of Kansas, have invented a new and Improved Car-Coupler, of which the following is a specification.

The object of this invention is to facilitate the coupling of cars without danger to the operator.

The invention consists of the combination of a draw-head having a sliding cap for regulating the size of the coupling-entrance, a notched coupling-pin for adjusting the link, and a flat link having grooved ends, all of which will be hereinafter described.

In the accompanying drawings, Figure 1 is a front elevation of the improved coupler. Fig. 2 is a sectional side elevation of the same on line *y y*, Fig. 3. Fig. 3 is a section of the same on line *x x*, Fig. 2. Fig. 4 is an enlarged perspective view of the coupling-link.

Similar letters of reference indicate corresponding parts.

In the drawings, A represents the draw-head, having a central square mouth, *a*, and on either side thereof a rectangular recess, *b*, all of which are designed for the entrance of coupling-links when three coupling-links are used, according to a common practice on some roads.

The coupling-pins in each case are designed to be inserted in holes *c c'*. The upper central hole, *c*, is slotted fore and aft, in order to permit the adjustment of the coupling-pin B, as will be hereinafter set forth, and from the top of the draw-head A, on either side of this hole *c*, rise cheek-blocks *d*, that are designed to prevent the lateral movement of the sliding cap C. This cap C has a flat bottom for a portion of its length, as shown at *f*, and then curves up at its rear end, as shown at *g*, and fits in a corresponding socket, *h*, in the top of the draw-head A, having its front end projecting over the slotted hole *c*, and the semi-circular groove *i* in its end fitted about the coupling-pin B.

When the latter is in an upright position, as shown in Fig. 2, or when withdrawn from the link D and still in an upright position, it is so held by the pressure of said cap C upon it, the latter being forced and held forward in position by its weight and by the contact of its inclined plane *g* with the incline of the socket *h* of the draw-head A.

The coupling-pin B is a round rod or pin having a flanged head, *k*, for convenience of manipulating and to indicate the position of the notch *n* in its lower end, and a collar, *l*, to prevent it from falling too far, and its lower end is cut away or flattened on both sides, as shown at *m*, to facilitate its entrance into the link D, and just above its pyramidal point *n'* said pin B is notched in the rear, as shown at *n*, for holding the link D in coupling position for coupling with a car on the same level, as shown in Fig. 2.

The link D is flat, with rounded ends *o*, and having grooves *p* formed on the upper faces of the ends, as shown in Fig. 4.

The operation is as follows: When arranged for coupling with another car on the same level the pin B is vertical, as shown in Fig. 2, and the link D is held thereby, a grooved end *p* of said link D being engaged in the notch *n* of the pin B, and said link D being thereby held in a horizontal plane, as shown, and so arranged the said link D can be swung to the right or left, as shown in Fig. 3, for convenience of coupling, if desired, by rotating the pin B. An approaching car will strike the link D on its outer end and disengage it from the notch *n*, when the pin B will fall into coupling position, while the opposite pin does the same. When it is desired to couple with a higher car the rear end of the link D is engaged in a socket, *q*, formed within the mouth of the draw-head A, and the bottom of said socket *q* being inclined, as shown at *s*, the forward end of said link D is thrown upward, as shown in dotted lines, Fig. 2. When it is desired to couple with a low car the link D is permitted to hang loose about the pin B, so that the forward end of said link D shall incline downward. In these last two cases the pin B is in both holes *c*, and the contact of the opposing car will serve to jar the pin B and link D in their proper coupling positions. When, in order to couple with a very high car, it is necessary to elevate the link D very considerably, said link D is engaged in the notch *n* of the pin B, and the cap C being drawn up to the position indicated in dotted lines, Fig. 2, the slotted upper hole, *c*, is thereby fully enlarged or opened, and the pin B is drawn upward and inclined, as indicated in dotted lines, Fig. 2. A stop, *u*, on the inside of one of the



cheek-blocks *d* prevents the disengagement of said cap C.

Some of the advantages possessed by this device are that the coupling-pin controls the  
5 positions of the coupling-link; that the coupling can be done by hand without danger to the operator; that it will couple cars of any difference in height; that it is simple and inexpensive and can be applied to or removed  
10 from a draw-head with slight expense.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

1. A car-coupler constructed substantially  
15 as herein shown and described, consisting of draw-head A, provided with slotted upper coupling-hole, *c*, sliding cap C, and internal socket, *g*, coupling-pin B, having notch *n* and flattened sides *m*, and flat coupling-link D,  
20 having grooved ends *o p*, as set forth.

2. In a car-coupler, the draw-head A, provided with slotted upper coupling-pin hole, *c*, internal link-socket *g*, sliding cap C, and cap-  
25 stop *u*, substantially as herein shown and described.

3. In a car-coupler, as a means for preventing the disengagement of the sliding cap C, the combination, with the cheek-blocks *d*, of the stop *u*, substantially as herein shown and described.

4. In a car-coupler, as a means for holding  
30 the coupling-pin in position and for regulating the size of the upper coupling-pin hole, the sliding cap C, having an inclined plane *g*, substantially as herein shown and described.

5. In a car-coupler, as a means for adjusting the coupling-link, the coupling-pin B, having collar *l*, flattened sides *m*, notch *n*, and point *n'*,  
35 substantially as herein shown and described.

6. In a car-coupler, as a means for coupling  
40 the cars, the flat link D, having rounded ends *o*, provided with face-grooves *p*, substantially as and for the purpose described.

SAMUEL A. V. HARTWELL.

Witnesses:

G. J. LOWRY,  
H. M. CARPENTER,  
A. H. CARPENTER.