

(No Model.)

B. SCHARDT & G. JONES.

ELECTRIC ARC LIGHT SUPPORT.

No. 388,723.

Patented Aug. 28, 1888.

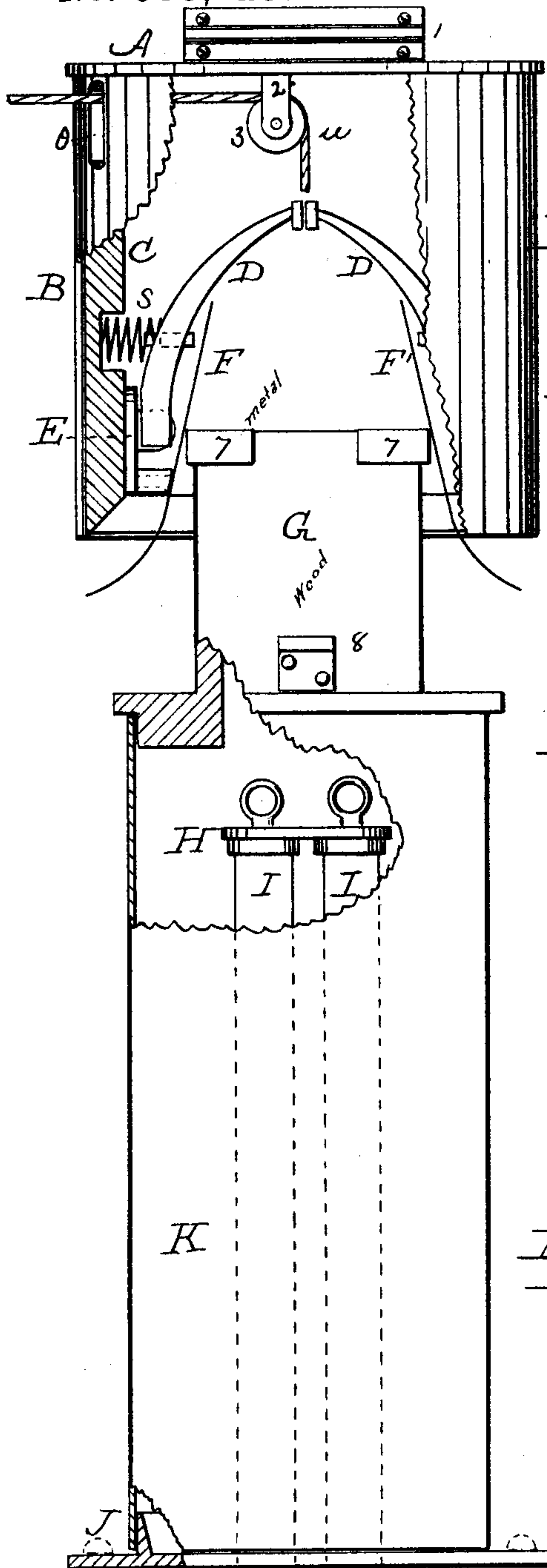


Fig. 1

Fig. 2

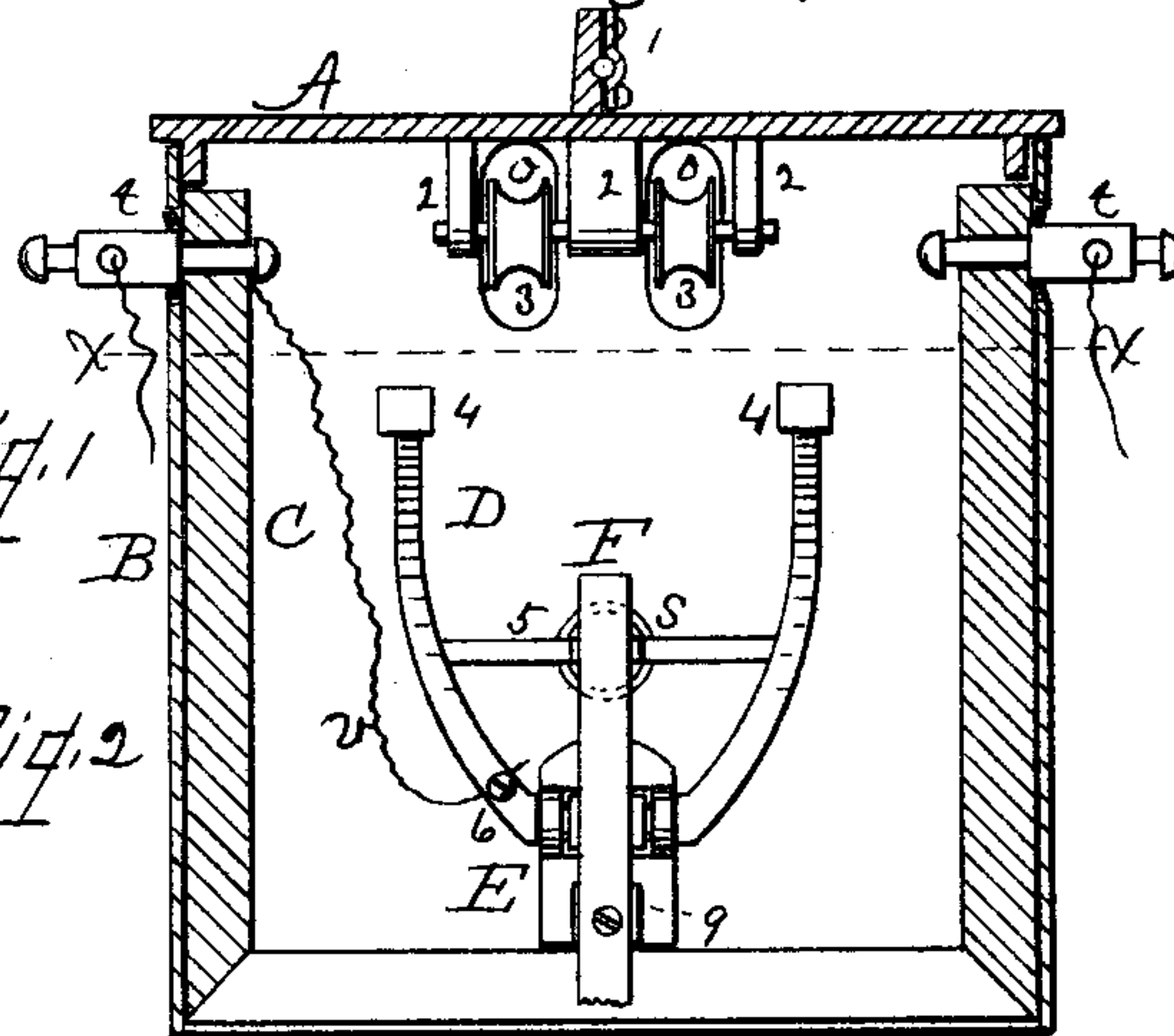


Fig. 3

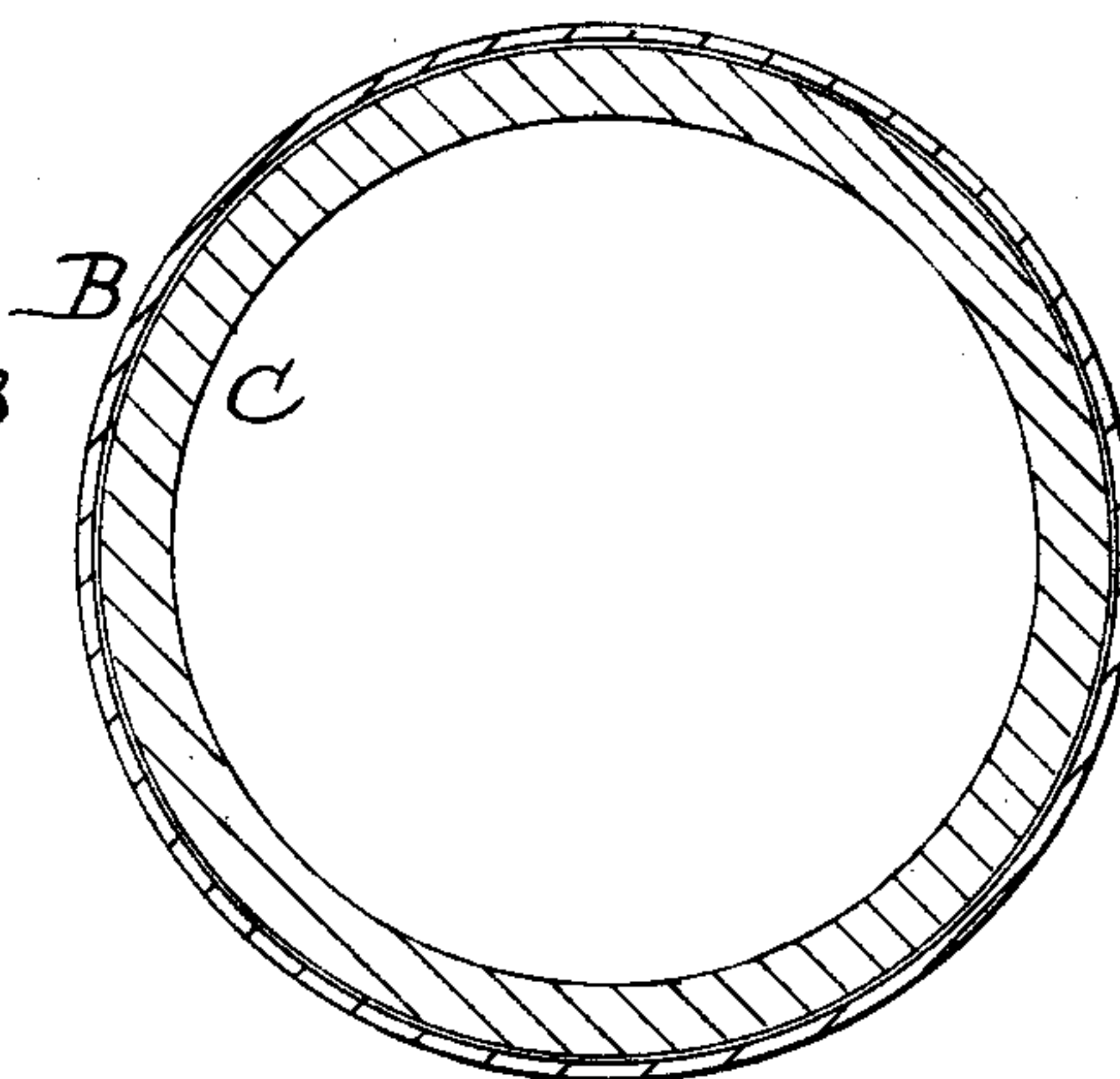
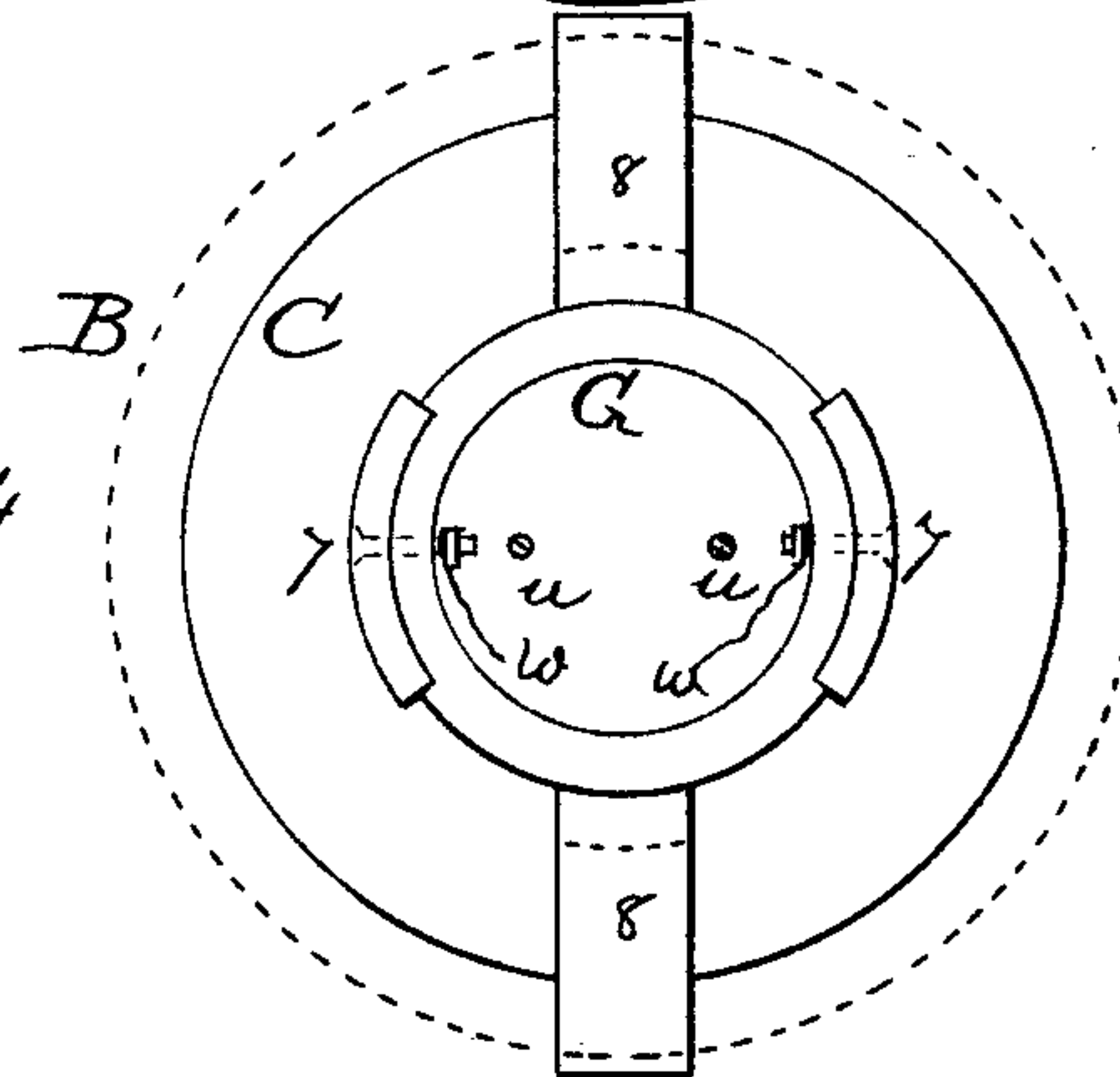


Fig. 4



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UNITED STATES PATENT OFFICE.

BENJAMIN SCHARDT AND GEORGE JONES, OF DAYTON, OHIO, ASSIGNORS
OF ONE-THIRD TO JOHN R. FLETCHER, OF SAME PLACE.

ELECTRIC-ARC-LIGHT SUPPORT.

SPECIFICATION forming part of Letters Patent No. 388,723, dated August 28, 1888.

Application filed January 25, 1888. Serial No. 261,836. (No model.)

To all whom it may concern:

Be it known that we, BENJAMIN SCHARDT and GEORGE JONES, citizens of the United States, residing at Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Electric Dome-Connections for Arc Lamps; and we do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

Our invention relates to improvements in electric dome-connections for arc lamps, the several features of which will be fully hereinafter set forth.

The objects of our invention are to connect an arc lamp with the cable by which it is supported and detach the same without disrupting the electric circuit, or, in other words, to connect and break the circuit—using a short circuit external to the lamp—so that the established circuit is not broken until another circuit for the current is fully established, and to shield the lamp and its appendages from obstruction by snow, sleet, or other causes by covering the entire top of the lamp. We attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a fragmentary side view of the connecting-dome with the cylindrical shield, which incloses the top of an arc lamp, shown in position as it is when the lamp is being raised to be brought into the electric circuit of the main line. Fig. 2 is a central vertical section of the dome at a right angle to the view of the same in Fig. 1. Fig. 3 is a horizontal section of the dome on line *x*, Fig. 2. Fig. 4 is a top view of the protecting-shield, and the circular lines show the relation of the parts.

Like letters designate like parts throughout the several views.

The flanged plate A is the top of the dome and has clamp 1 at its center to embrace a cable, and has lugs 2 to support the pivot of the pulleys 3 3, which pulleys are made of wood or other insulating substances. To the flange of

this plate is attached a cylinder of metal, B, and this incloses the hollow hard-wood cylinder C. There are two openings, *o o*, through the cylinders for the cords *u*, which pass over the two pulleys. The binding-posts *t t* are attached to the wooden cylinder, the metal of the outer cylinder being cut away to effect the perfect insulation of said binding-posts, and these have connection with the main line. The connecting-pieces D are identical in construction and attached directly opposite in the wooden cylinder, and are supported in bearing-plates E, attached to the inner surface of said cylinder. The connecting-piece consists of two faces, 4 4, at the upper end, a cross-piece, 5, having two lugs, the front a bearing for the spring F and the back to hold the inner end of the spiral spring *s* in position, and at the lower end are pivots, which are held in the bearing-plate. A hole is made through one arm to receive the conductor *v*, which connects with the binding-screw at the top. This conductor or wire is held by the binding-screw 6, and the opposite connecting-piece has a like connection. On the bearing-plate is the lug 9, to which the flat spring F is attached. The lower ends of these springs are curved outwardly to serve as guides as the shield enters the dome. The spiral springs *s*, the outer ends of which are supported in the sides of the wooden cylinder, keep the faces of the connecting-pieces in contact.

The inclosing cylinder or shield is composed of the wooden top G, having metallic plates 7 7 attached on opposite sides, the metallic cylinder K, and the flanged plate J. To the sides of the wooden part are attached the lugs 8, which serve to arrest the movement when the arc lamp is raised. Within this cylinder is shown the top of an arc lamp—viz., the tubes I I, which serve as guides for the rods carrying the carbon candles. This top is provided with two eyes, into which are tied the two cords *u*, which are used to raise the lamp and hold it in position on the cable. In Fig. 1 they are shown in a position at a right angle to their true position. The flanged plate J is screwed onto the top plate of the cylindrical portion of the arc lamp. The metallic plates 7 7 are connected with the binding-posts on the

are lamp by the wires *w w*, Fig. 4. The only change required in the arc lamp is that two eyes be used instead of one for the attachment of the cords. There must be sufficient length
 5 of the two cords to let the lamp to the ground, and beyond this one is used, as is usual, for the suspending-cord. As is usual, the supporting-cable is attached to the top of two posts set in a diagonal position at intersecting streets,
 10 and the connection-dome remains permanently attached thereto, and the arc lamp is carried to and from the same by a cord or rope, and when the lamp is suspended the same is made fast to one of the posts. The arc lamp is per-
 15 manently attached to the protecting-shield, as above specified.

The operation of connecting the lamp with the hood is thus: A short circuit is already established through the hood-connections. The
 20 shield is raised until contact is made with the flat springs, and as the shield is further raised the said springs strike the lugs and the faces of the connecting-pieces are separated, the short circuit is destroyed, and a circuit estab-
 25 lished through the arc lamp. A metallic connection is made between the poles of the lamp before a separation of the connection-pieces, and therefore in making or breaking the electric circuits there is no disruption of the cur-
 30 rent, and consequently no detriment to the operation of other lamps in the circuit. When the lamp is raised to the proper point to form

the electric circuit through said lamp, the arresting-lugs 8 8 are brought against the under surface of the hood.

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Having fully described our invention, what we claim, and desire to secure by Letters Patent, is—

1. The hood comprising the top plate, A, with clamp 1 for the suspending-cable and lugs 40 2 for the pulleys, the metallic outer cylinder, B, and the wooden or insulating inner cylinder, C, in combination with the spring-actuated connecting-pieces D D, pivoted to the said insulating-cylinder, the spring-plate connec- 45 tions F F, attached thereto, and the connecting-plate 7 7 of the shield, attached to an electric lamp to form two circuits alternately with the generator, one external to the lamp and the other through the same, substantially as
 50 set forth.

2. The shield comprising the wooden part G, having plates 7 7 and the arresting-lugs 8 8, the metallic cylinder K, and the flange J, for attachment to the top plate of an arc lamp, 55 substantially as set forth.

In testimony that we claim the foregoing as our own we affix our signatures in presence of two witnesses.

BENJAMIN SCHARDT.
 GEORGE JONES.

Witnesses:

B. PICKERING,
 SUMNER T. SMITH.