

W. B. Barnard,

Animal Shears.

No. 98,840.

Patented Jan. 12, 1870.

Fig: 1.

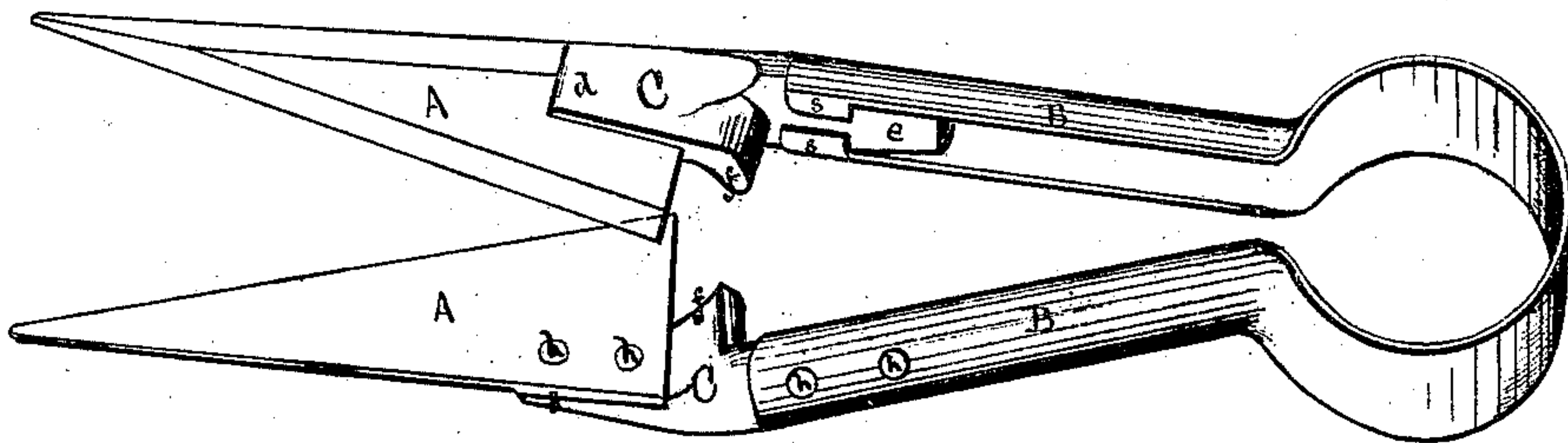


Fig: 2.

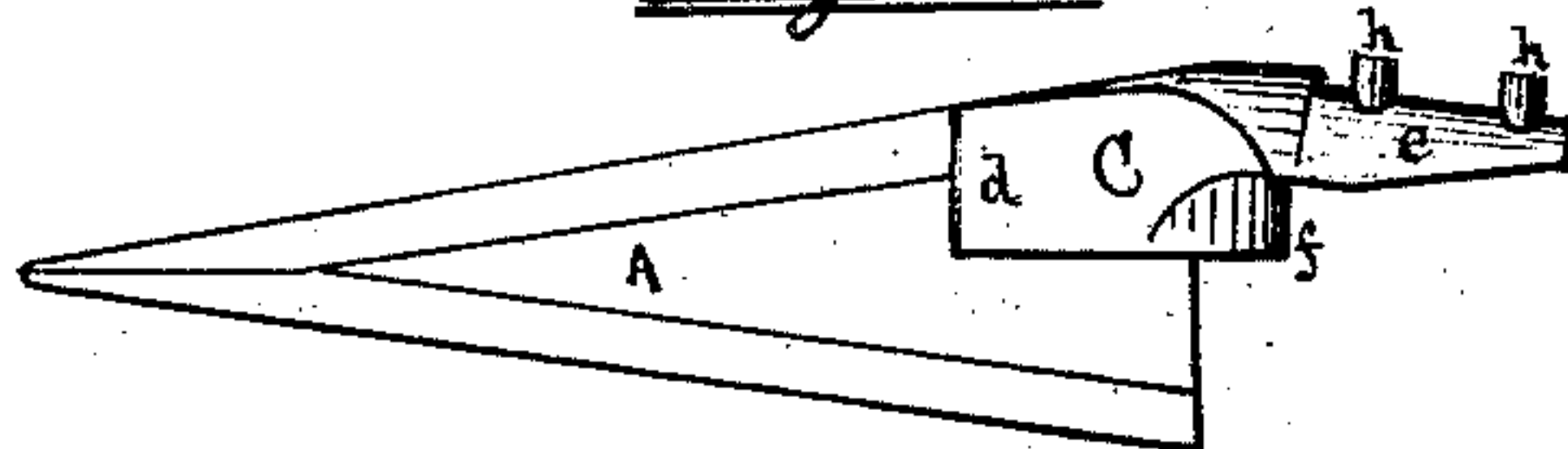


Fig: 3.

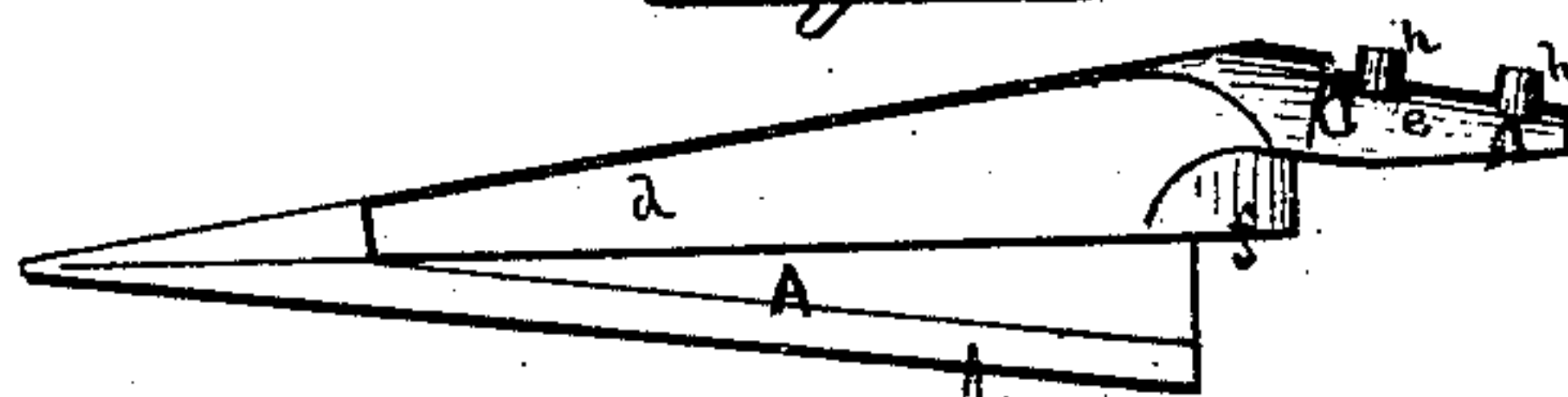


Fig: 4.

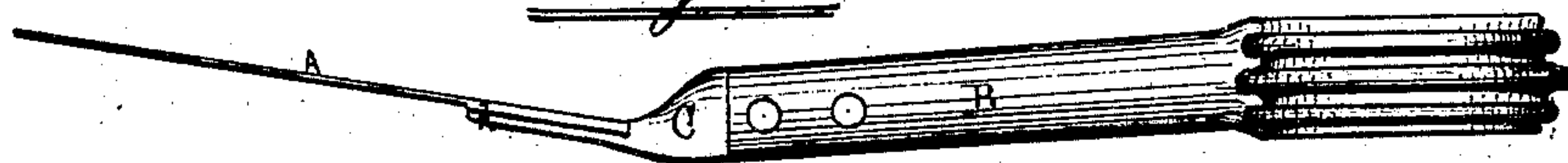
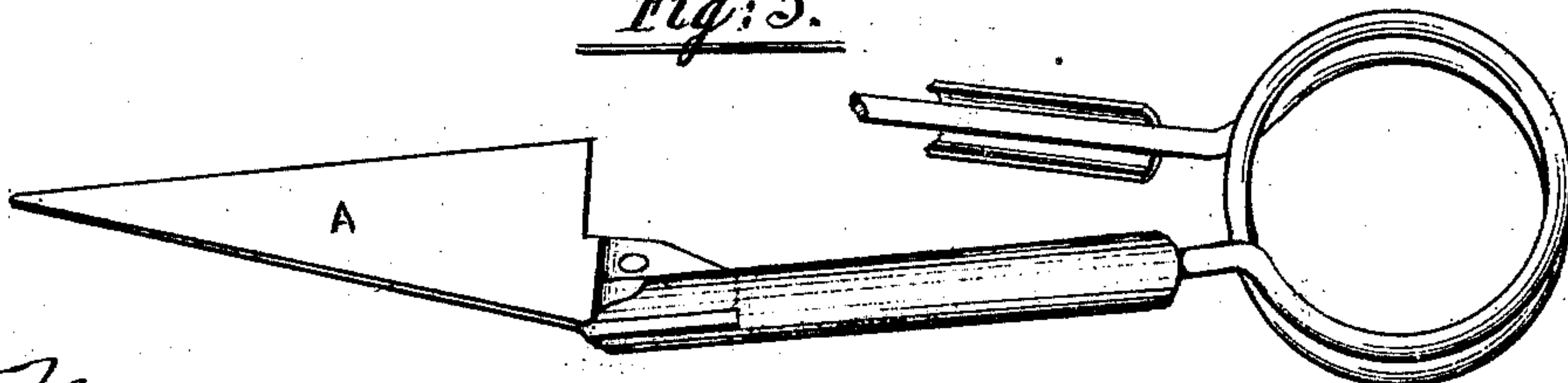


Fig: 5.



Witnesses

H. H. Young  
George Basellite

W. B. Barnard Inventor  
By David A. Burr atty.



# United States Patent Office.

WILLIAM B. BARNARD, OF WATERTVILLE, CONNECTICUT.

Letters Patent No. 98,840, dated January 18, 1870.

## IMPROVEMENT IN SHEEP-SHEARS.

The Schedule referred to in these Letters Patent and making part of the same.

I, WILLIAM B. BARNARD, of Waterville, in the county of New Haven, and State of Connecticut, have invented certain new and useful Improvements in the Construction of Sheep-Shears, of which the following is a specification.

The first part of my invention relates to the use of interposed connecting-pieces, of peculiar form, for the purpose of uniting the blades of sheep-shears to their handles, the object of this part of my invention being to avoid the necessity of welding or swaging a backing of iron to the blade, and to obtain greater strength at the point of juncture of the blades and handle, so as to prevent them from getting bent or sprung, when, as is often the case, they are accidentally thrown from the shearer's hand by the struggles of the sheep.

Figure 1 is a view, in perspective, of a pair of sheep-shears, constructed in accordance with the first part of my invention;

Figure 2, a plan view of a blade, with an improved connecting-piece secured thereto, illustrating more fully the form of said piece;

Figure 3, a similar view, showing the connecting-piece extended, to form a backing to the blade;

Figure 4, a side view of my improved shears, with a corrugated bow; and

Figure 5, a view, in perspective, illustrating a variation in the manner of securing the connecting-piece to the blade, and, also, a wire bow in combination therewith.

A A are the blades, stamped out of steel sheets, and then properly tempered and ground.

B B are handles, formed, in the usual manner, out of sheet-metal of proper thickness, and joined by an elastic bow made either in one piece therewith, or separate, and subsequently united thereto, as in other sheep-shears.

C C are my improved connecting-pieces, for securing the blades to the handles. These connecting-pieces are cast of metal, by preference, of iron, subsequently made malleable by the well-known process.

Their front ends, *d*, are made flat, to rest upon the rear ends of the steel blades, and, when heavy blades are used, are comparatively short, as illustrated in figs. 1, 2, and 4; but, if a very thin steel blade be used, are extended so as to reach nearly to the point of the blade, and form a backing therefor, as shown in fig. 3 of the drawings.

Their rear ends, *e*, project in a plane, at right angles to the front flat ends, and are made convex on their outer face, to fit snugly within the concave of the ends of the handles, as seen in fig. 1, and are cut away and flattened on the inner side, to avoid all superfluous weight and thickness of metal; a simple curved offset, *f*, being left on the rear edge of the

wider flat end of the piece, which operates as a stop, to prevent the cutting-blades from crossing too far.

Rivets *h h* are cast in one with the connecting-pieces C C, on that side of the flat front end which is to lie upon the blades, and on the outer convex face of the rear ends thereof, (see figs. 2 and 3,) at a cost merely of the slight additional weight of metal in the casting.

Suitable rivet-holes are pierced and properly countersunk in the blades, and in the ends of the handles, to fit upon these rivets, which project from the connecting-pieces, so that when the blades, connecting-pieces, and handles have each been properly made, separately, they are quickly and firmly united by a few blows of a hammer; first, to drive the projecting rivets on the connecting-piece through the blade, and also through one extremity of the handles; and again, to upset the ends thereof down on the opposite side.

The attachment of the connecting-pieces to the handles of the shears is made still stronger by turning or bending over the edges of the handles or lips *s s*, cut therefrom, down upon the flat face of the connecting-pieces, as fully illustrated in fig. 1, and this feature of my improvement enables me to use very light metal in the handles.

Where I form the handles and bow out of very thin sheet-metal, I corrugate the bow between the handles, as illustrated in fig. 4, in order to impart thereto the necessary strength as well as elasticity, and this corrugation of the metal may, if desired, be extended with good effect in or along the handles themselves.

As a modification in the form or construction of the connecting-pieces C, I contemplate forming a slot in the edge or thickness of the flat forward end thereof, parallel with its faces, to receive and embrace a projection from the rear end of the blade, as shown in fig. 5.

I contemplate, also, an extension of my connecting-pieces rearwardly, to form handles, and their union by a wire spring-bow, as shown in fig. 5.

In accordance with the first part of my invention, the connecting-pieces C C may be swaged or welded on to the blades, and be riveted to the handles; or be welded both to the one and the other; or be secured to either by loose rivets instead of rivets cast homogeneous with the connecting pieces; but I regard the attachment or fastening of the improved connecting-pieces by means of the homogeneous rivets, as manifestly superior to any other mode.

I am aware that handles of cast-metal, united by a steel bow secured thereto, have been combined with steel blades, by welding, in the construction of sheep-shears; also, that the blades of such shears have



been riveted directly to the handles thereof, by means of loose rivets, and the handles connected by spring-bows of elastic-steel wire; and I herein make no claim to any of these features, where they appear in connection with my present invention.

I claim, as my invention—

Connecting-pieces, formed substantially as herein set forth, interposed between the blades or blade-plates and the handles of sheep-shears, to unite them,

and form a secure joint between the two, substantially as herein described.

In testimony whereof, I have affixed my hand to my said specification, this 1st day of December, 1869.

WM. B. BARNARD.

Witnesses:

JOHN O'NEAL, Jr.,  
J. W. WEBSTER.