

A. B. Caldwell,
Journal Box.
N^o 81,748. Patented Sep. 1, 1868.

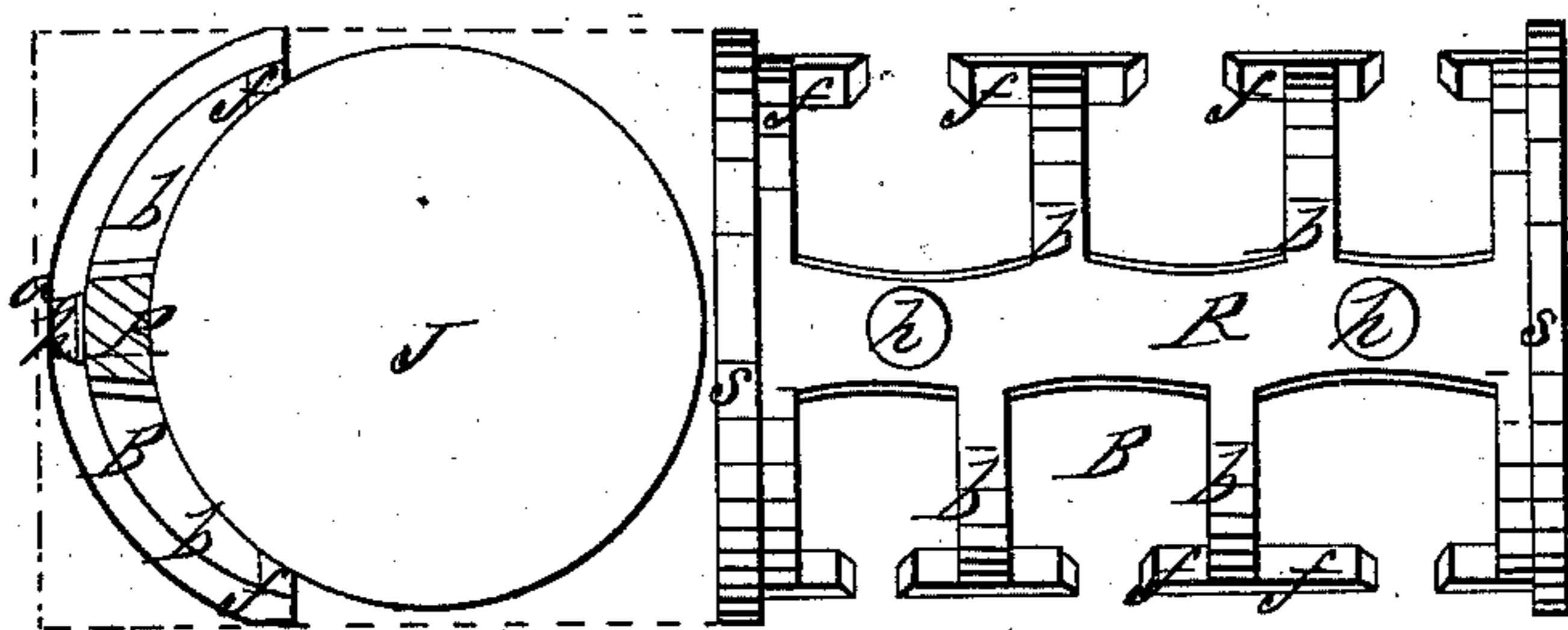


Fig. 2.

Fig. 1.

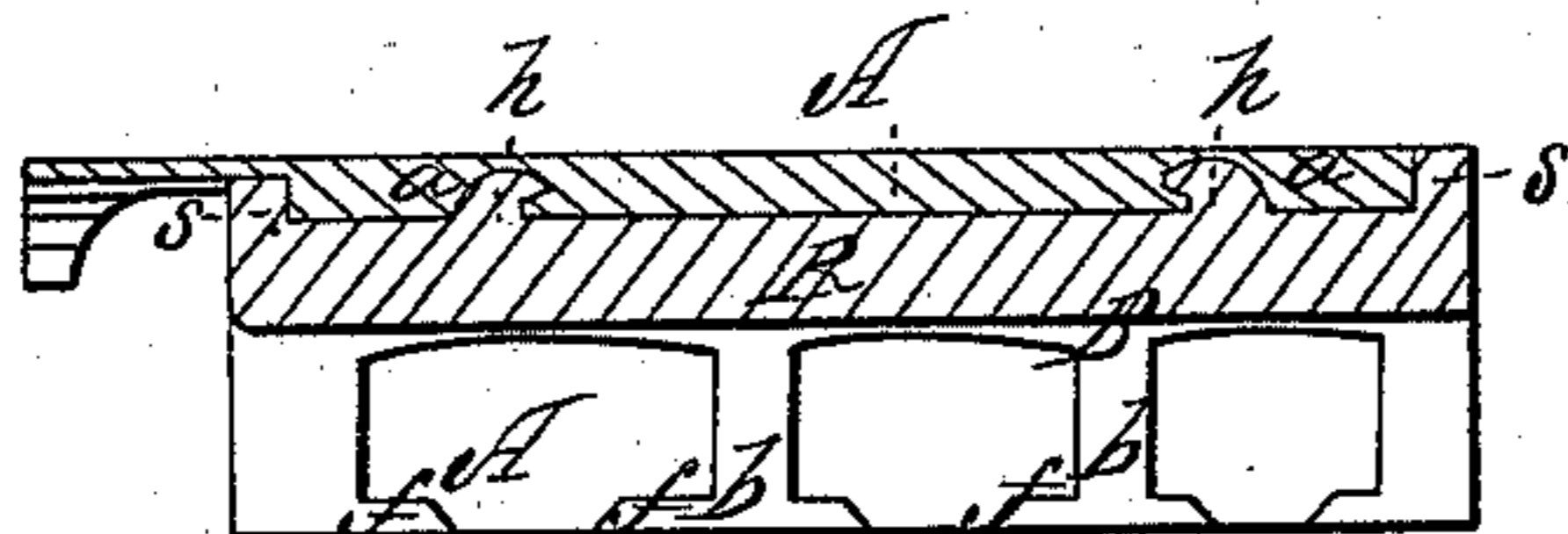


Fig. 3.

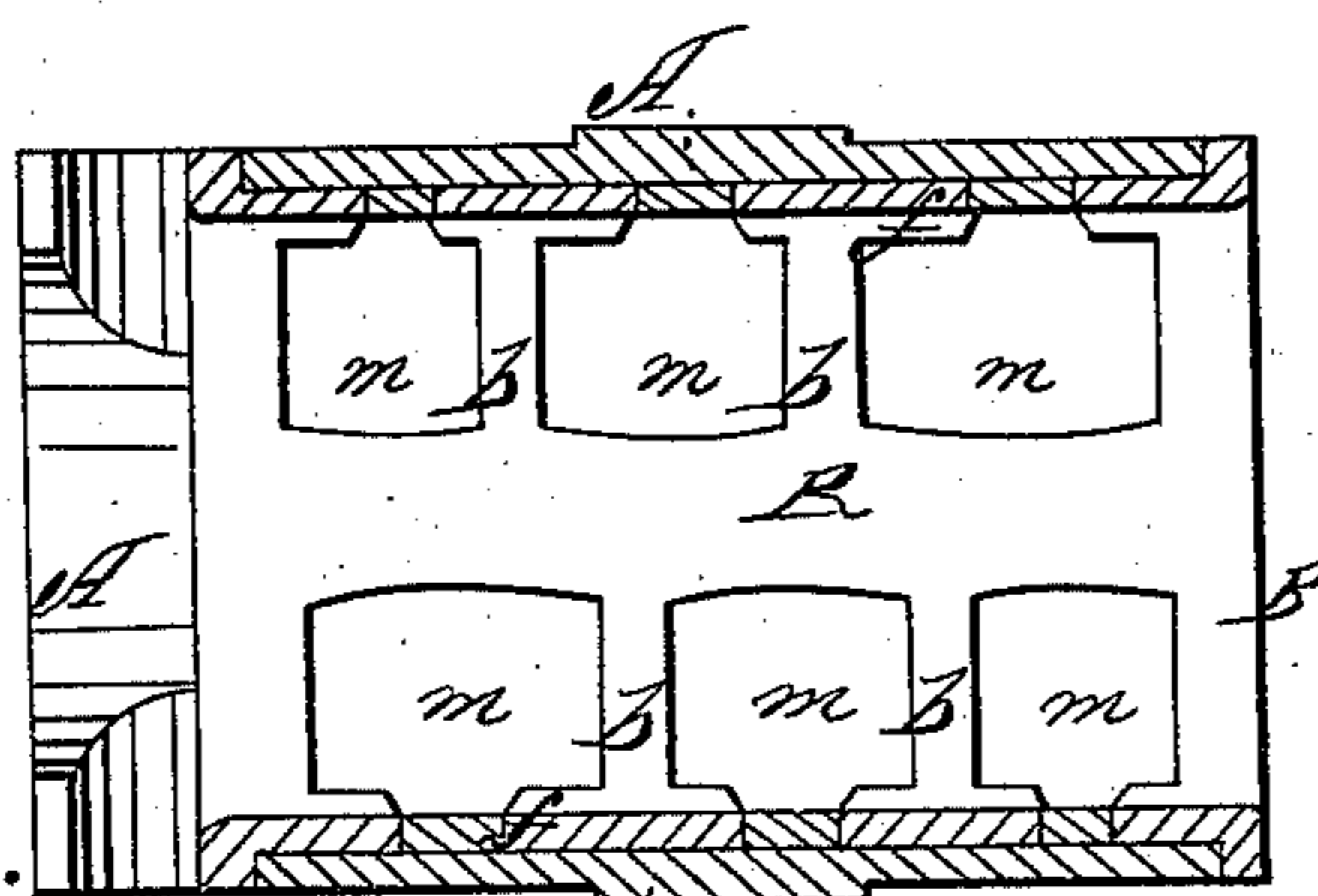


Fig. 4.

Witnesses:

A. B. Smith
C. W. Smith

Inventor:

A. B. Caldwell

United States Patent Office.

ALONZO B. CALDWELL, OF SYRACUSE, NEW YORK, ASSIGNOR TO HIMSELF
AND JACOB PINKERTON, OF SAME PLACE.

Letters Patent No. 81,748, dated September 1, 1868.

IMPROVED JOURNAL-BOX.

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

TO ALL WHOM IT MAY CONCERN:

Be it known that I, ALONZO B. CALDWELL, assignor to Alonzo B. Caldwell and Jacob Pinkerton, of the city of Syracuse, and State of New York, have invented certain new and useful Improvements in Journal-Boxes composed of cast iron, ribbed with bronze metal, and filled in with a composition of soft metal, designed more particularly as improvements on the journal-box of J. Mosher Brower, to whom Letters Patent of the United States were granted, bearing date June 19, 1863, and numbered 38,808; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, which form a part of this specification, (similar letters representing corresponding parts,) wherein—

Figure 1 represents an outside plan of the bronze-metal portion of the box.

Figure 2, a transverse section of the box with journal in place.

Figure 3, a longitudinal section through the bronze and cast-iron portions, showing the manner in which they are held together.

Figure 4 is a view of the inside of the box when complete, the dark portion indicating cast iron, the pink-colored portion bronze metal, and the blue portion soft metal.

J, in fig. 2, is an ordinary journal.

A is the outer shell, of cast iron, with holes, *a a*, in the same to receive the knobs or hooks *h h* on the back of the bronze-metal frame, as hereinafter more fully described.

B is the bronze-metal frame, with a rib, R, through the centre, and with arms, *b b b b*, extending therefrom upon each side.

My improvements relate especially to the form of this frame to adapt it more perfectly to the use for which it was designed.

Experience has demonstrated that the manner of holding the bronze-metal and cast-iron portions together, as described in the original patent, was not sufficiently strong. I therefore make the knobs or hooks *h h* with heads thereto, or their equivalent, as shown in the drawings, to constitute a part of the bronze-metal frame, so that when the box is made, the cast-iron metal, while in a molten state, will run around the heads *h h*, and they are thus made to hold the frame securely to the cast-iron shell A.

To further that object, I also make shoulders, *s s*, as a part of the bronze-metal frame extending over the cast-iron shell A, as will fully appear in the drawings.

Experience has also shown that the soft metal parts, *m m m*, by use, will crush down in a ridge between the outer ends of the arms *b b*, when the arms are made according to the original patent, and to prevent this I make the flanges *f f f* across the ends of the arms, and forming a part thereof, which operate to brace against and support the soft metal, and keep it more securely in place, and prevent it from being crushed or shoved down, as aforesaid.

The shoulders *s s* also keep the cast-iron metal ends from cutting the wrought iron with which it might come in contact but for such shoulders, especially when the box is pretty well worn down.

Under the original patent referred to, the cast-iron metal portion of the box was cast by itself, and also the bronze-metal portion by itself. They were then put together, and the soft metal run in to fill up the spaces in the box designed for it. Such soft metal was also the principal if not the sole reliance to hold the box together, mainly by a key in the centre, as will be seen by reference to said patent. The soft metal did not sufficiently answer the purpose, and the key was easily drawn out.

Under my improvements, I make the bronze-metal portion, as above described, with the knobs or hooks *h h* and shoulders *s s*, forming a part thereof, as above described, and with this complete, I then mould and cast upon such bronze-metal frame the cast-iron portion A, filling up the space between the shoulders *s s*, and running the molten metal around the heads of the knobs or hooks *h h*, as above described.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The knobs or hooks *h h*, or their equivalents, as a part of the bronze-metal frame B, substantially as and for the purposes described.

2. I claim the flanges *fff*, upon the ends of the arms *b b b*, when made and applied in the manner and for the purposes described.

3. I claim the cast-iron shell A, when cast around the heads of the knobs or hooks *h h* upon the bronze-metal frame B, in the manner and for the purpose as above described.

4. I claim the shoulders *s s* upon the bronze frame B, in combination with the knobs or hooks *h h* and holes *a a* in the cast-iron frame A, when used to hold more securely together and strengthen the bronze-metal and cast-iron portions of the box, in the manner described.

5. I claim a journal-box, composed of the bronze-metal portion B, when made with the flanges *ff* and shoulders *s s*, combined with the cast-iron frame A, made as aforesaid, with the soft-metal portions *m m m* filled in, substantially in the manner and for the purposes described.

A. B. CALDWELL.

Witnesses:

N. B. SMITH,

C. W. SMITH.