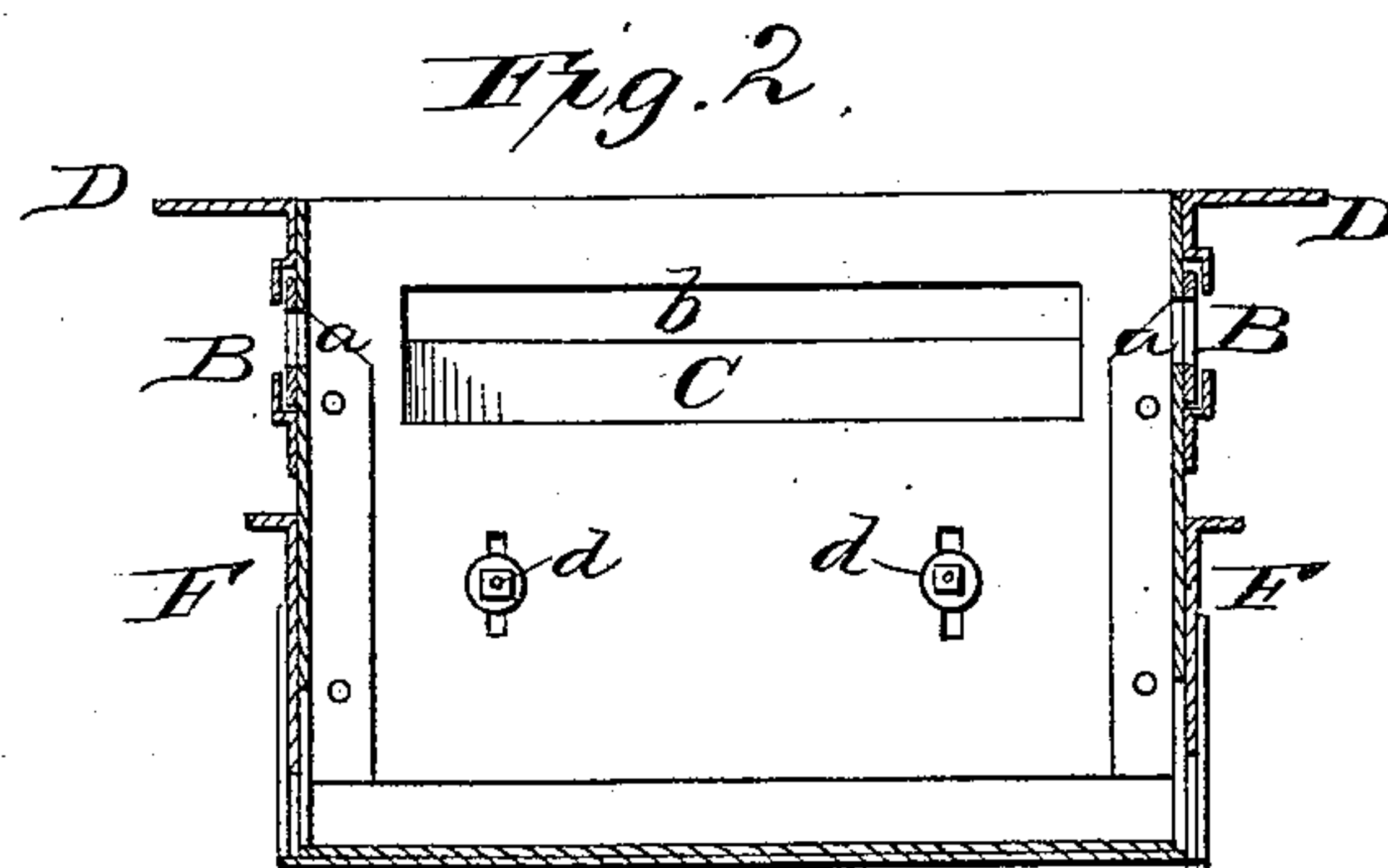
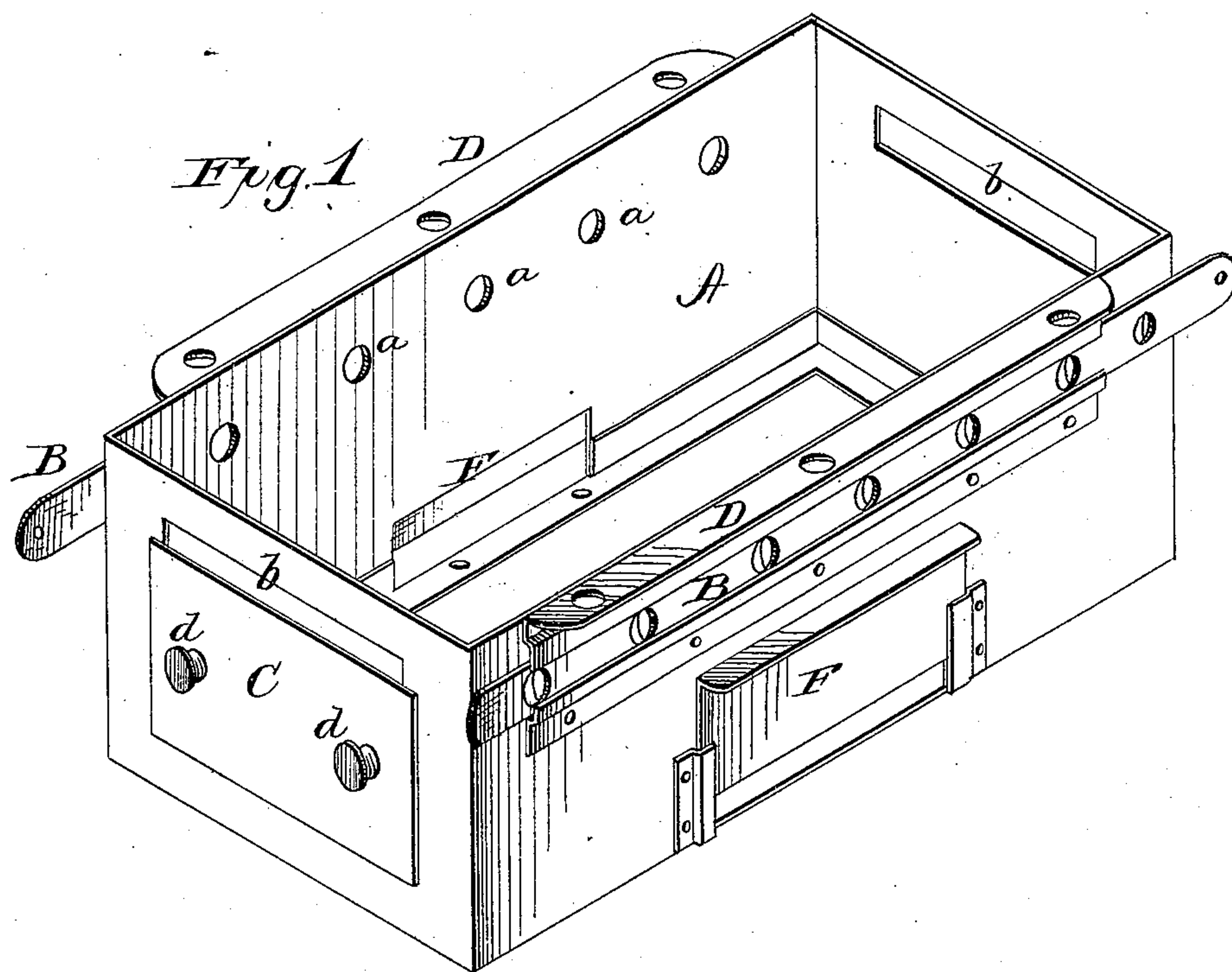


C. O. SMITH.
Ash-Pan for Locomotives.

No. 226,800.

Patented April 20, 1880.



Witnesses:
A. L. Curran
J. J. McCarthy.

Inventor:
C. O. Smith
By Alexander Mason
att.

UNITED STATES PATENT OFFICE.

CHARLES O. SMITH, OF SELMA, ALABAMA.

ASH-PAN FOR LOCOMOTIVES.

SPECIFICATION forming part of Letters Patent No. 226,800, dated April 20, 1880.

Application filed February 12, 1880.

To all whom it may concern:

Be it known that I, CHARLES O. SMITH, of Selma, in the county of Dallas, and in the State of Alabama, have invented certain new and useful Improvements in Ash-Pans for Locomotives; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

The nature of my invention consists in the construction of a perforated ash-pan designed particularly for locomotive-engines.

The object of my invention is to destroy or effectually abolish the noise of the engine caused by the use of bituminous coal or any other gaseous fuel that may be used, and also to create a stronger draft which produces a more thorough combustion, thereby consuming nearly all the surplus smoke and gas arising from the fuel, the result of which produces a more general economy in the cost of generating steam.

In the annexed drawings, Figure 1 is a perspective view of my improved ash-pan. Fig. 2 is a cross-section thereof.

A represents the body of the pan, which is perforated on the sides near the top by any desired number of holes, *a*, about one and a half inch in diameter. These holes will correspond and register with a similar number of holes of the same size in sliding dampers B, which are secured to the ash-pan by suitable guides, by means of which dampers the said perforations *a* may be entirely opened or partially or completely closed, as necessity may require.

The end of the sliding damper is to be connected by a curved arm and damper-rod in the same manner as the ordinary or common damper, and operated from the foot-board of the engine at the will and pleasure of the engineer.

On the ends of the ash-pan are horizontal slots *b*, extending nearly the width of the pan,

and provided with a solid sliding plate or damper, C, secured to the ash-pan by thumb or set screws *d*, which can be loosened and the damper-plate adjusted to cover more or less of the slots, as the nature of the draft may require.

Flanges D D are made at the top of the ash-pan for securing the same to the fire-box of the engine, and at the bottom are side openings with sliding doors F, for cleaning out the ash-pan.

When a locomotive or other engine is fired up with soft coal or pine knots, from which arise a large volume of gas, and the engine begins to hum and roar about the fire-box, the engineer or fireman can, by a slight movement of the damper-rod, so regulate the flow of fresh air as to consume the accumulated gas, thereby effecting a complete combustion of all fuel, also destroying the hum and roar of the engine.

Should the draft be too light or too great, or the combustion incomplete, which will be ascertained by the hum of gas, the engineer can go under the engine, loosen the set-screws and adjust the end dampers to suit the nature of the draft, as his judgment may dictate.

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

An ash-pan for locomotives provided at its sides with perforations *a*, and with corresponding sliding register-dampers B, and also with end apertures, *b*, said apertures, having adjustable vertically-sliding dampers C, by which the air-supply is regulated from the sides, the front, or the back, substantially as herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 3d day of February, 1880.

CHARLES O. SMITH. [L. S.]

Witnesses:

J. R. SATTERFIELD,
W. W. MCCOLLUM.