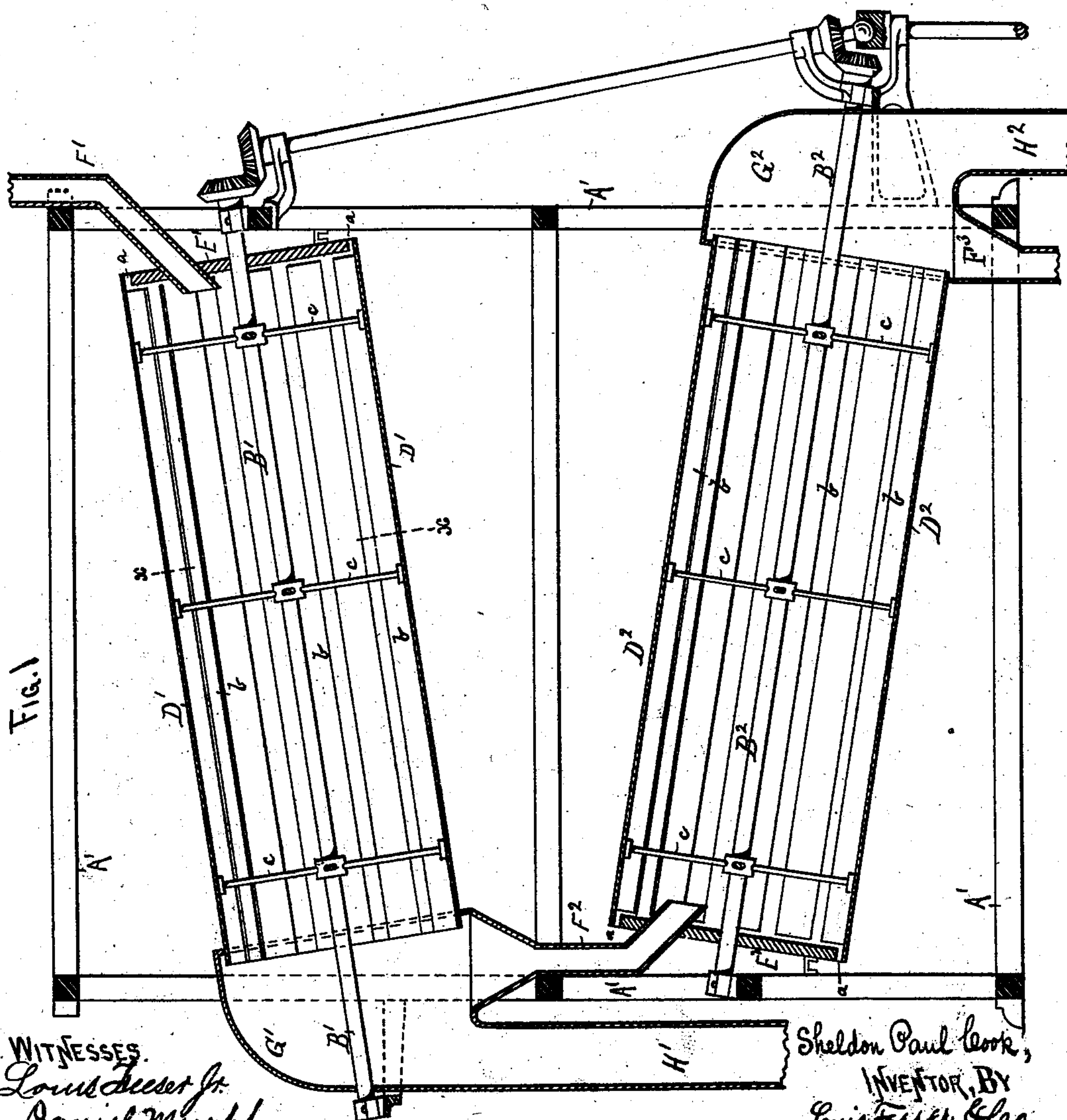
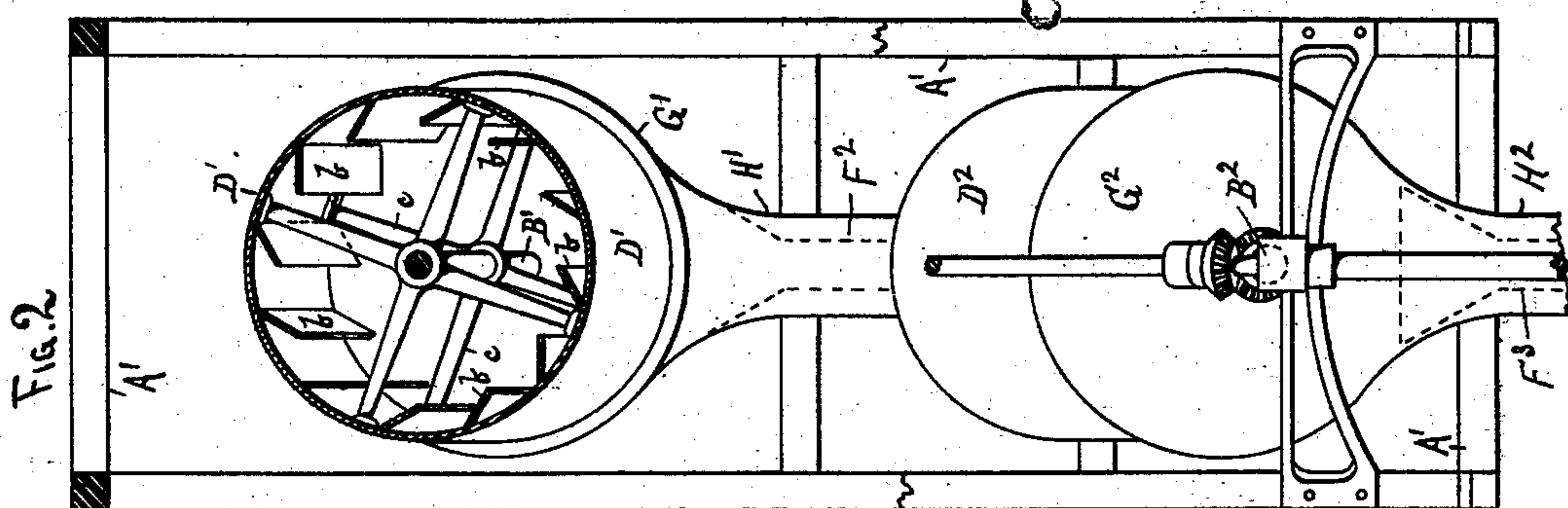


(No Model.)

S. P. COOK.  
GRAIN DRIER.

No. 294,367.

Patented Mar. 4, 1884.



WITNESSES.  
Louis Feiser Jr.  
Daniel Murphy

Sheldon Paul Cook,  
INVENTOR, BY  
Louis Fesser & Co.  
Attys.

# UNITED STATES PATENT OFFICE.

SHELDON PAUL COOK, OF MINNEAPOLIS, MINNESOTA.

## GRAIN-DRIER.

SPECIFICATION forming part of Letters Patent No. 294,367, dated March 4, 1884.

Application filed July 2, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, SHELDON PAUL COOK, a citizen of the United States, and a resident of Minneapolis, in the county of Hennepin, in the State of Minnesota, have invented certain new and useful Improvements in Grain Drying or Heating Machines, of which the following specification is a full, clear, and exact description, reference being also had to the drawings hereto annexed, in which—

Figure 1 is a sectional side elevation. Fig. 2 is an end elevation with the upper part in section on the line *x x* of Fig. 1.

A' is an oblong frame having two oppositely-inclining shafts, B' B<sup>2</sup>, mounted thereon and adapted to be revolved in any suitable manner. Secured to these shafts, inside the frame A', by open spiders or rings *c*, are two sheet-metal cylinders, D' D<sup>2</sup>, having heads E' E<sup>2</sup>, through which the grain is fed by spouts F' F<sup>2</sup> to the interiors of the cylinders, the feed-spout F<sup>2</sup> of the lower cylinder being also the discharge-spout of the upper cylinder, so that the grain discharged from the upper cylinder will run into the lower cylinder. The heads E' E<sup>2</sup> are loose upon the shafts B' B<sup>2</sup>, and are attached to the frame A', so that they will not turn, and are smaller than the cylinder, so as to leave narrow slits *a* between the heads and cylinders for the escape of the hot air, as herein-after shown. The ends of the cylinders opposite to the heads E' E<sup>2</sup> are covered by hoods G' G<sup>2</sup>, into which hot-air pipes H' H<sup>2</sup> lead, so that currents of hot air may be fed into the cylinders.

*b* are inclined wings attached to the insides of the cylinders parallel with each other, and also parallel with the shafts B' B<sup>2</sup>, as shown. The wings *b* are so inclined as to convey the

grain upward on one side nearly to the upper side of the cylinder and drop it down again, so that when the damp or moist grain is fed to the cylinder D' through the spout F' the wings *b* will catch and elevate every kernel upward and drop it down again several times during its passage through the cylinder, the inclination of the cylinder causing it to run down toward the discharge-spout F<sup>2</sup>. By this means the grain is thoroughly mixed and stirred and every separate kernel subjected to the action of the hot air, while the latter escapes through the crevices *a* or other openings around or through the head E'. The grain runs from the spout F<sup>2</sup> into the cylinder D<sup>2</sup>, where it undergoes the same treatment, and escapes at F<sup>3</sup> thoroughly dried and in proper condition for use.

Some qualities or conditions of grain will only require to be treated in one cylinder, while others might require three or more; but ordinarily two will be sufficient.

Heated grain may also be treated in this machine by passing cold air in place of hot air through the cylinders to cool the grain.

Having described my invention and set forth its merits, what I claim is—

The combination of cylinder D', adapted to be revolved, and provided with angular wings *b*, hot-air pipe H', and stationary head E', with hot-air exits *a* between said head and said cylinder, substantially as and for the purpose set forth.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

SHELDON PAUL COOK.

Witnesses:

C. N. WOODWARD,  
JOHN M. WILLIAMS.