(No Model.)

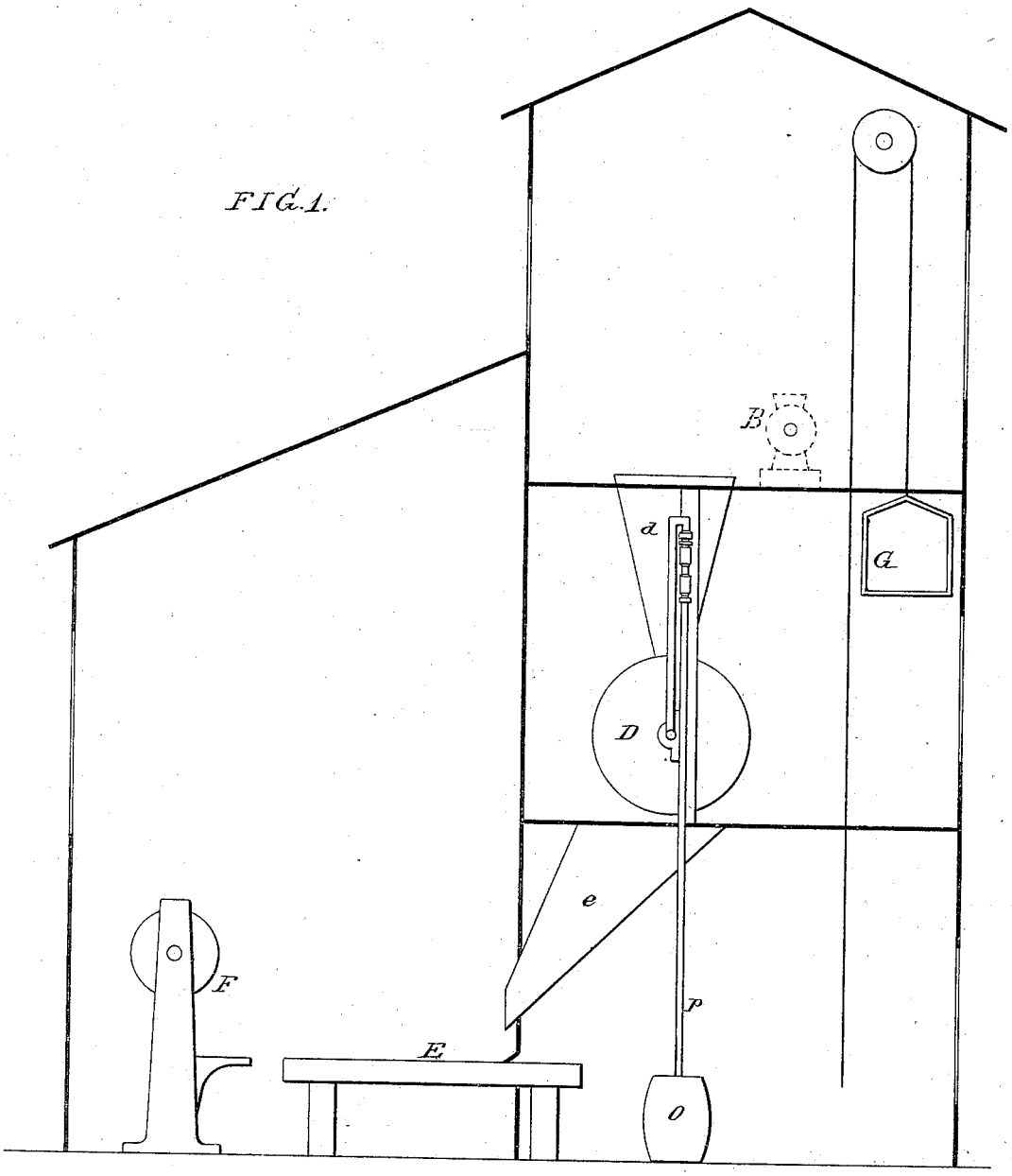
3 Sheets—Sheet 1.

C. I. WALKER.

APPARATUS FOR THE MANUFACTURE OF ARTIFICIAL STONE.

No. 311,694. Patented Feb. 3, 1885.

FIG. 1.



Witnesses:
John M. Clayton.
Harry Drury

Inventor:
C. I. Walker
by his Attorneys
Howson & Sons

(No Model.)

3 Sheets—Sheet 2.

C. I. WALKER.

APPARATUS FOR THE MANUFACTURE OF ARTIFICIAL STONE.

No. 311,694. Patented Feb. 3, 1885.

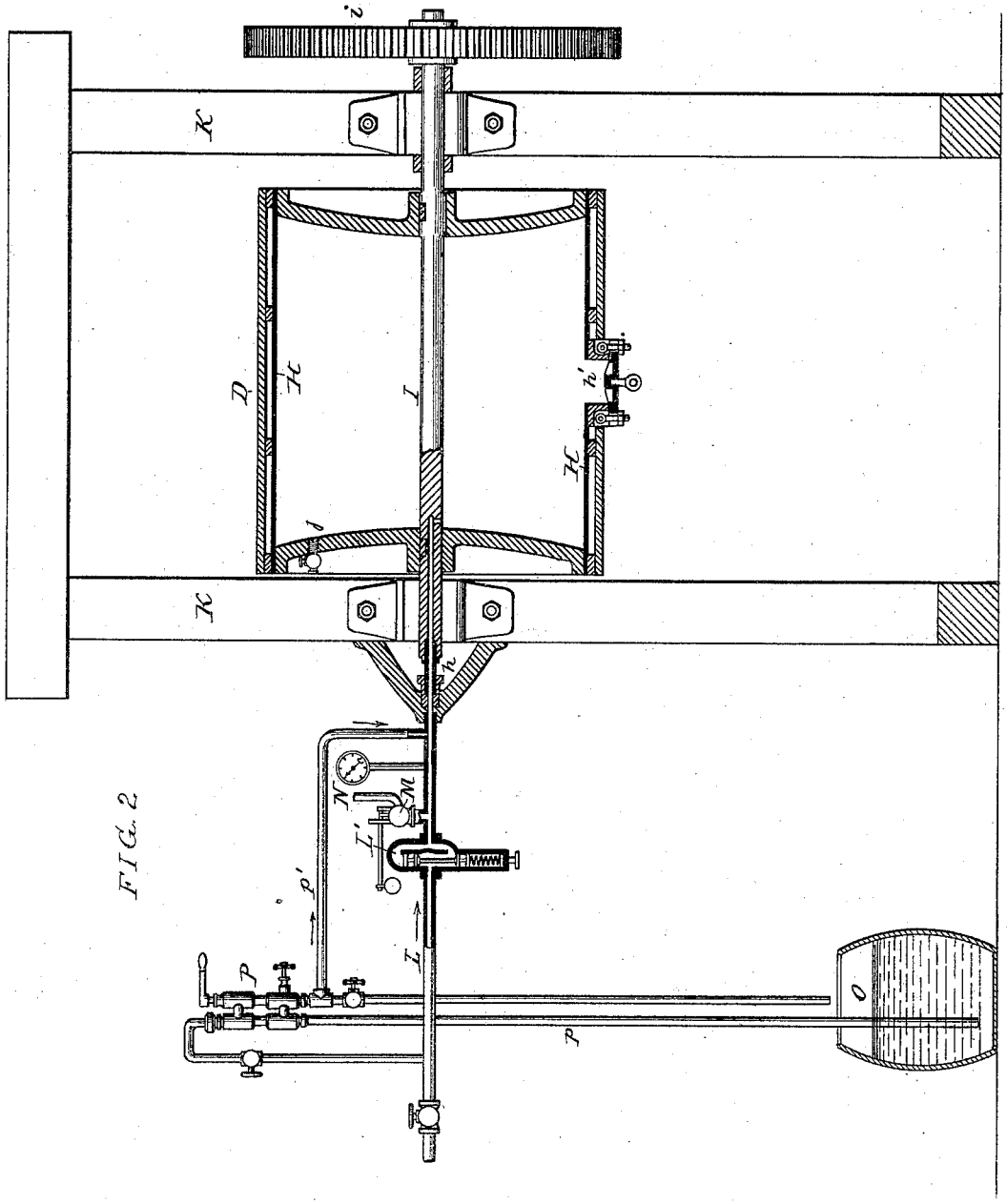


FIG. 2

Witnesses:
Harry Drury
John M. Clayton

Inventor:
C. Irvine Walker
by his Attorneys
Howson & Sons

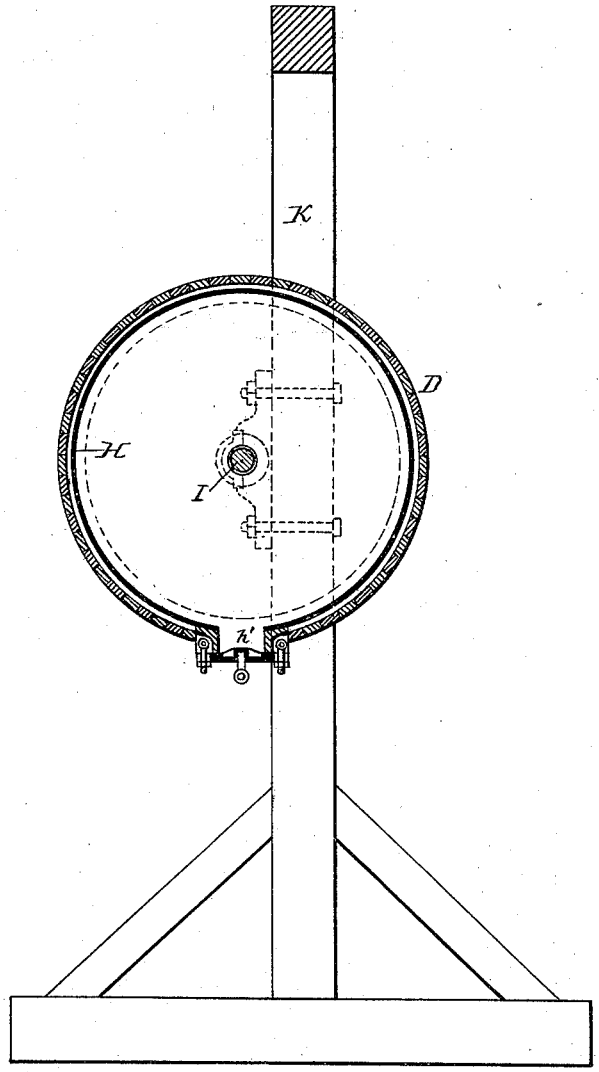
(No Model.) 3 Sheets—Sheet 3.

C. I. WALKER.

APPARATUS FOR THE MANUFACTURE OF ARTIFICIAL STONE.

No. 311,694. Patented Feb. 3, 1885.

FIG. 3.



Witnesses:
Harry Drury
John M. Clayton

Inventor:
C. Irving Walker
by his Attorneys
Howson & Sons

UNITED STATES PATENT OFFICE.

C. IRVINE WALKER, OF CHARLESTON, SOUTH CAROLINA, ASSIGNOR TO THE STONEY LANDING COMPANY, OF SAME PLACE.

APPARATUS FOR THE MANUFACTURE OF ARTIFICIAL STONE.

SPECIFICATION forming part of Letters Patent No. 311,694, dated February 3, 1885.

Application filed October 2, 1884. (No model.)

To all whom it may concern:

Be it known that I, C. IRVINE WALKER, a citizen of the United States, residing in Charleston, South Carolina, have invented certain Improvements in Apparatus for the Manufacture of Artificial Stone, of which the following is a specification.

My invention consists of an improved apparatus for preparing and mixing ingredients for the economical manufacture of artificial stone and similar substances, as fully described and claimed hereinafter.

In the accompanying drawings, Figure 1 (Sheet 1) is a view of the general construction and arrangement of the whole apparatus. Fig. 2 (Sheet 2) is a longitudinal section of the mixer, and Fig. 3 (Sheet 3) is a transverse section of the same.

I prefer to make the building, Fig. 1, in which the apparatus is arranged of sufficient height to enable the material to pass down through the successive machines to the molding-table by gravity. In the drawings I have shown the building as a three-story building, the third floor of which is adapted to receive the materials to be treated. I may also have there a grinding-mill, B, as indicated by dotted lines, to be used for such material as requires to be ground; or it may be ground in a separate building. On the second floor is the mixing-machine D, while on the ground-floor is the molding-machine F, preferably provided with a receiving-platform, E. The material is first carried by a suitable elevator, G, from the ground-floor up to the third floor, whence it is fed into the hopper *d* of the mixer D. The hopper *d* of the mixer is valved, and preferably constructed to measure the amount of the material fed into the mixer D. The material, when thoroughly mixed, is delivered down the chute *e* to the receiving-platform E.

The grinding machine B and molding-machine F may be of any suitable construction, as they form no part of my present invention; but the construction of the mixer is illustrated in detail in Figs. 2 and 3. A barrel or cylinder, H, is mounted on a shaft or trunnions, I, having bearings in a suitable frame, K, the shaft I being provided with a gear-wheel, *i*, or other means by which a rotary motion may be imparted to the cylinder. The cylinder is covered with a suitable non-conducting covering to prevent uneven condensation of steam, which is introduced into the cylinder as hereinafter described. The shaft I at one end, or the trunnions, is hollow, and has an opening or openings into the interior of the cylinder, while an extension of its outer end is adapted to turn in a hollow stuffing-box bearing, *h*, with which communicates the steam-supply pipe L, provided with a cock, *l*, a pressure-regulating valve, L′, a safety-valve, M, and gage N. An injector, P, has a pipe, *p*, extending down into a water reservoir or tank, O, which is of a character to indicate about the amount of water drawn up by the injector and forced through the pipe *p′* into the mixing-cylinder H, so that the requisite proportions of steam and water may be supplied to the material in the barrel. The cylinder H is provided with a manhole, *h′*, through which the material to be treated is introduced and discharged, and the cylinder is also provided with a blow-off cock, *j*, for blowing off steam.

Instead of the injector, a pump or other means of securing a head of water may be employed.

I claim as my invention—

1. The within-described apparatus for the manufacture of artificial stone, said apparatus consisting of an elevator, a hopper, a mixing-machine communicating with said hopper, a chute into which the mixing-machine discharges, a platform onto which the chute discharges, and a molding-machine adjacent to said platform, as set forth.

2. The within-described apparatus for the manufacture of artificial stone, said apparatus consisting of an elevator, a grinding-mill adjacent to the top of the elevator, a mixing-machine below the grinding-mill, a receiving-platform below the mixing-machine, and a molding-machine adjacent to the platform, as set forth.

3. The herein-described mixer, consisting of a revolving cylinder with a non-conducting covering and steam and water supply pipes.

4. The combination of the revolving mixing-cylinder with steam-supply pipe, water-reservoir and injector, or other device for supplying an ascertained quantity of water to the material in the cylinder.

5. The combination of the revolving mixing-cylinder with a water and a steam supply pipe having a pressure-valve, safety-valve, and gage, substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

C. IRVINE WALKER.

Witnesses:
R. B. ADAMS,
C. LILIENTHAL, Jr.