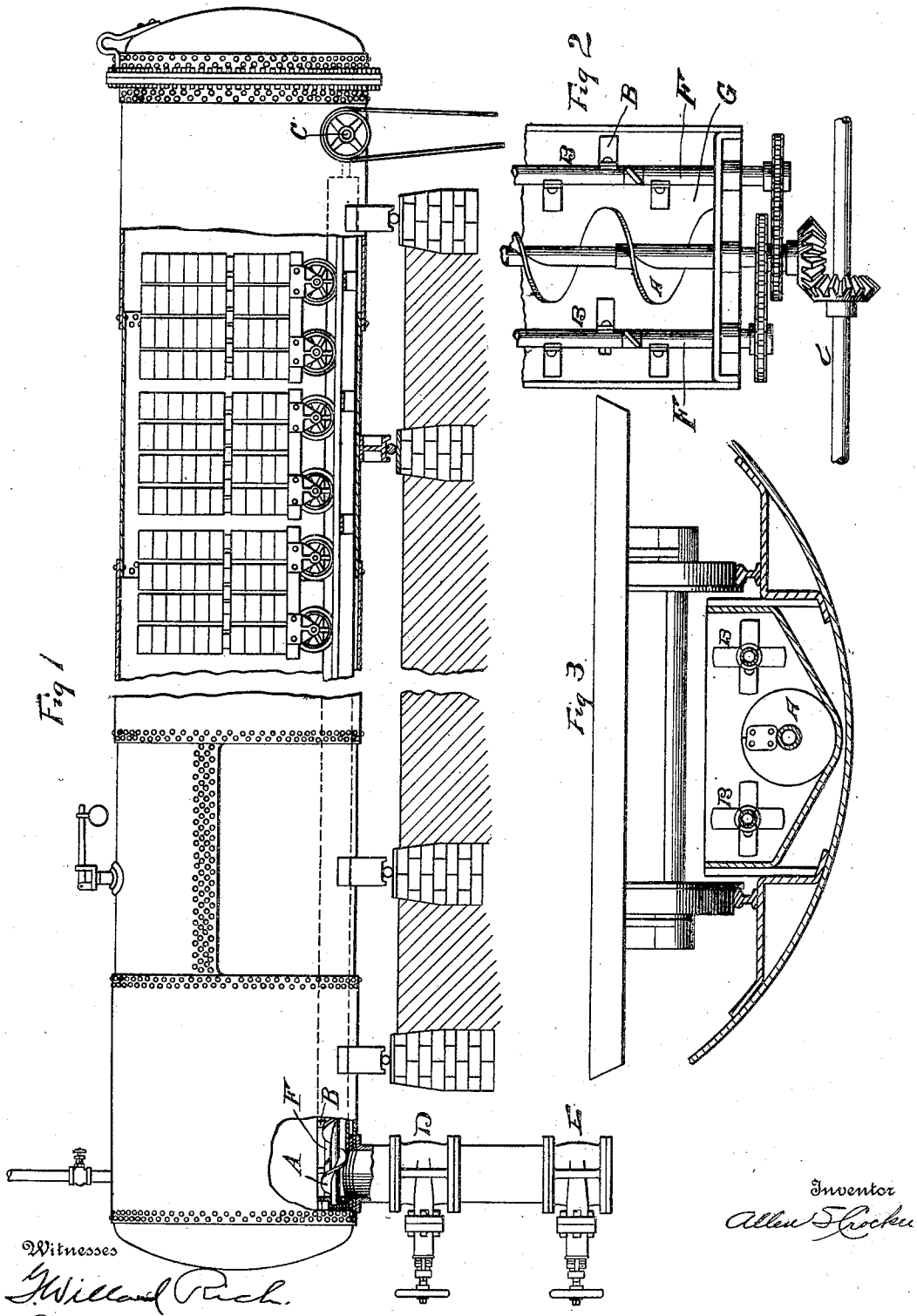
No. 836,066. PATENTED NOV. 13, 1906.

A. S. CROCKER.

HYDRATOR.

APPLICATION FILED JUNE 16, 1906.



Witnesses

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ALLEN S. CROCKER, OF ROCHESTER, NEW YORK, ASSIGNOR TO LAURENCE ELKUS, OF INDIANAPOLIS, INDIANA.

HYDRATOR.

No. 836,066. Specification of Letters Patent. Patented Nov. 13, 1906.

Application filed June 16, 1906. Serial No. 321,948.

To all whom it may concern:

Be it known that I, ALLEN S. CROCKER, a citizen of the United States, residing in Rochester, in the county of Monroe and State of New York, have invented a new and useful Improvement in Hydrators, of which the following is a specification.

My invention relates particularly to an improvement in hydrating lime, and especially to its hydration when it is used in the process of manufacturing bricks.

The difficulty heretofore has been that in the apparatuses used the moisture does not penetrate to the center of the body of the lime. The lime was put in pans underneath the cars carrying the bricks in its lump form usually or in the form of a powder. Steam was then turned onto the cylinder, and the moisture from the steam was taken up by the lime and the lime hydrated, but not perfectly. In order to obviate this difficulty, I have devised the improvement specified hereinafter, and described in the accompanying drawings.

Referring to the drawings, Figure 1 represents a front sectional elevation showing the use of my novel means of agitating the lime. Fig. 2 represents in detail the agitating means used in the pan for hydrating the lime. Fig. 3 is a sectional plan view of the same.

Referring to the drawings, A represents a spiral conveyer, which may be run in either direction, thus working the lime backward and forward.

F F are shafts with paddles B B and flights which break up the lime and move it backward and forward.

C is a shaft which is driven first in one direction and then in the other to get the reverse motion in the shafts and conveyer.

It is thus seen that in my improvement as set forth the lime as it commences to hydrate is agitated, the moisture thoroughly distributed, and the lime broken up. As the large pieces of lime commence to hydrate the outer surface becomes soft. This agitation will remove the soft parts, and the steam and moisture will then attack the harder core.

D and E represent gate-valves. The object of these valves is to withdraw the lime without releasing the pressure in the cylinder. The operation is to open the upper valve, the conveyer working the lime toward the discharge end and will fill the pipe, which may be of any size. During this time the lower valve will be closed. Then the upper valve can be closed and the lower one opened and the lime taken out without disturbing the brick in the cylinder and without releasing the steam-pressure.

Having thus described my invention, what I claim is—

In a hardening or other cylinder, the combination of a spiral conveyer, shafts, paddles on said shafts, means for driving said conveyer and shafts; and means adapted to withdraw the hydrated lime from said cylinder without releasing the steam-pressure in said cylinder, substantially as described.

In witness whereof I have hereunto set my hand this 14th day of June, 1906.

ALLEN S. CROCKER.

In presence of—

G. WILLARD RICH,

J. E. WOODLAND.