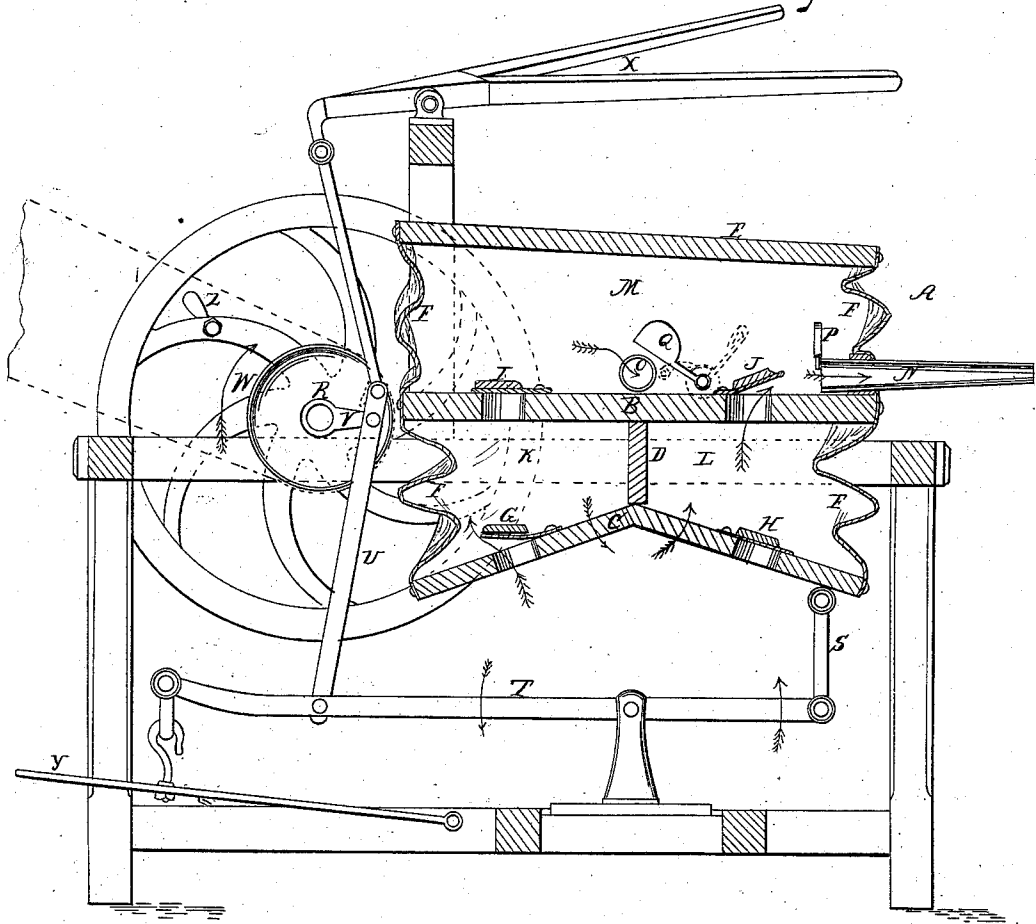


E. Field,

Bellows.

No 56,199.

Patented July 10, 1866.



Witnesses

*G. Willward
J. H. Layman*

Inventor

*E. Field
By Knight Ross
atop*

UNITED STATES PATENT OFFICE.

EDWARD FIELD, OF CINCINNATI, OHIO.

IMPROVEMENT IN BELLOWS.

Specification forming part of Letters Patent No. 56,199, dated July 10, 1866.

To all whom it may concern:

Be it known that I, EDWARD FIELD, of Cincinnati, Hamilton county, State of Ohio, have invented certain new and useful Improvements in Forge-Bellows; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawing, making part of this specification.

My invention consists in certain mechanical appliances whereby a double-acting bellows may be operated either by a lever, crank, treadle, or belt-pulley, the pulley-shaft being provided with a fly-wheel to give additional smoothness to the motion.

In the accompanying drawing, A is the bellows, composed of stationary head B, V-shaped head C, partition D, and receiver-head E.

The heads are connected by the usual folding leather sides F, and are provided with the necessary reception and discharge valves G H I J.

By the use of the V-shaped head C, which oscillates on the partition D, two forcing-cham-

bers, K L, are constructed, the alternate action of which produces a uniform discharge of air into the common receiving-chamber M.

Two or more discharge-pipes, N O, connect with the receiver, the ventage of which can be governed at will by means of valves P q.

The bellows are connected to and operated by a revolving shaft, R, through rod S, lever T, rod U, and crank V.

The shaft is provided with an ordinary fly-wheel, and can be operated at will by either pulley W, lever T, treadle Y, or handle X.

I claim herein as new and of my invention—

The arrangement of shaft R, rod S, lever T, rod U, crank V, pulley W, lever T, treadle Y, and handle X, combined and operating substantially as and for the purpose specified.

In testimony of which invention I hereunto set my hand.

EDWARD FIELD.

Witnesses:

F. MILLWARD,
JAMES H. LAYMAN.