(No Model.)

# W. TATHAM & W. T. HEAP.

## CYLINDER FOR WASTE PICKERS, &c.

No. 302,298. Patented July 22, 1884.

Fig. 2.

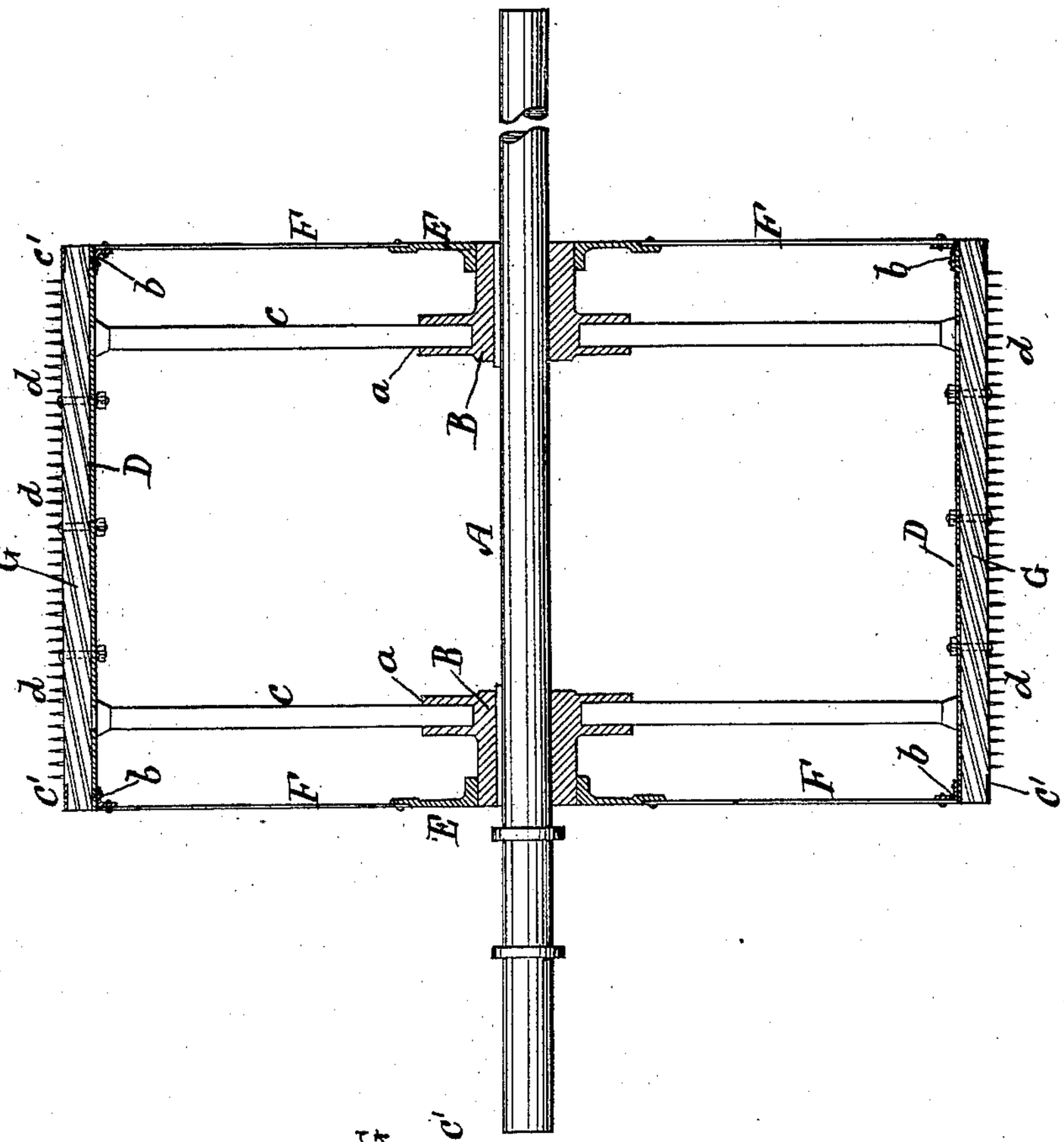
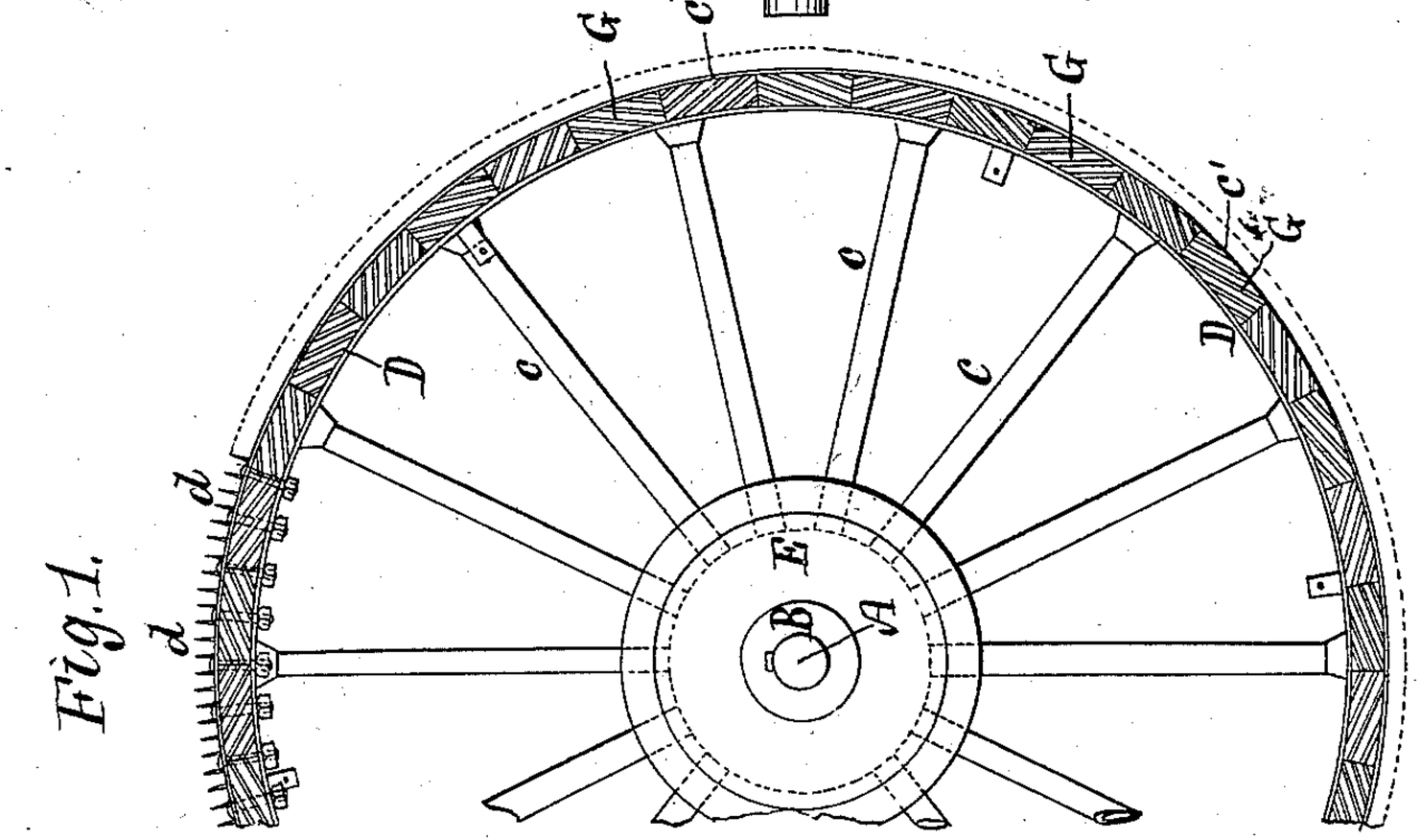



Fig. 1.




Witnesses.
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# UNITED STATES PATENT OFFICE.

WILLIAM TATHAM AND WILLIAM TWEEDALE HEAP, OF ROCHDALE, COUNTY OF LANCASTER, ENGLAND; SAID HEAP ASSIGNOR TO SAID TATHAM.

## CYLINDER FOR WASTE-PICKERS, &c.

SPECIFICATION forming part of Letters Patent No. 302,298, dated July 22, 1884.

Application filed November 3, 1883. (No model.) Patented in England October 27, 1879, No. 4,362.

*To all whom it may concern:*

Be it known that we, WILLIAM TATHAM and WILLIAM TWEEDALE HEAP, subjects of the Queen of Great Britain, residing at Rochdale, in the county of Lancaster, England, have invented certain new and useful Improvements in Cylinders for Waste-Pickers, &c.; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

This invention relates to cylinders of machines for breaking up hard cotton waste and other fibrous materials, its object being to obtain strong, light, and stiff cylinders, not easily damaged or liable to get out of truth or balance. Our cylinder is formed of a wrought-metal plate, with its ends welded or brazed to provide a seamless tube. We cover the periphery of the cylinder with staves or lags of wood or metal, armed with metal teeth, which tear and break up the material. The peculiar mechanical construction of the entire "cylinder" is hereinafter described.

The drawings accompanying this specification represent, in Figure 1, a cross-section, and in Fig. 2 a longitudinal section, of a "breaker-cylinder" containing our invention.

In said drawings, A represents the shaft of the cylinder.

B B represent cylindrical hubs keyed upon opposite ends of said shaft, these hubs being formed with peripheral sockets *a a*, &c., at regular intervals, to contain the inner ends of the radial arms, which strengthen and support the metal shell or case of the cylinder. These arms are shown at *c c*, &c., as stepped at their inner ends in the sockets *a a*, and at their outer ends riveted to the cylindrical sheet-metal shell D. Each head of the cylinder is formed of a flat annular plate, E, fitted to the outer end of each hub B, and a series of plates, F F, which connect the annular plates E with the shell or case D. Angle-pieces *b b* are employed at the points of junction of the plates F F and shell D, respectively, the said plates and shell being bolted to said angle-pieces.

G G, &c., represent a series of staves or lags secured to the outside of the shell D in any suitable manner, so as to entirely cover its periphery, metal hoops *c' c'* being shrunk upon opposite ends of the series of staves to aid in confining them securely together upon or about the cylinder. The outer faces of the staves G G are armed with pointed spikes or teeth *d d*, &c., to tear and break up the material, as before explained.

We claim—

The shaft A, in combination with hubs B, arms C, annular plates E, attached to said hubs, wrought-metal shell or case D, said arms extending from the hubs to the shell or case, spiked staves G, attached to the periphery of said shell, and wrought-metal plates F, extending from plates E to shell D, substantially as set forth.

In testimony whereof we affix our signatures in presence of two witnesses.

WILLIAM TATHAM.
WILLIAM TWEEDALE HEAP.

Witnesses:
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