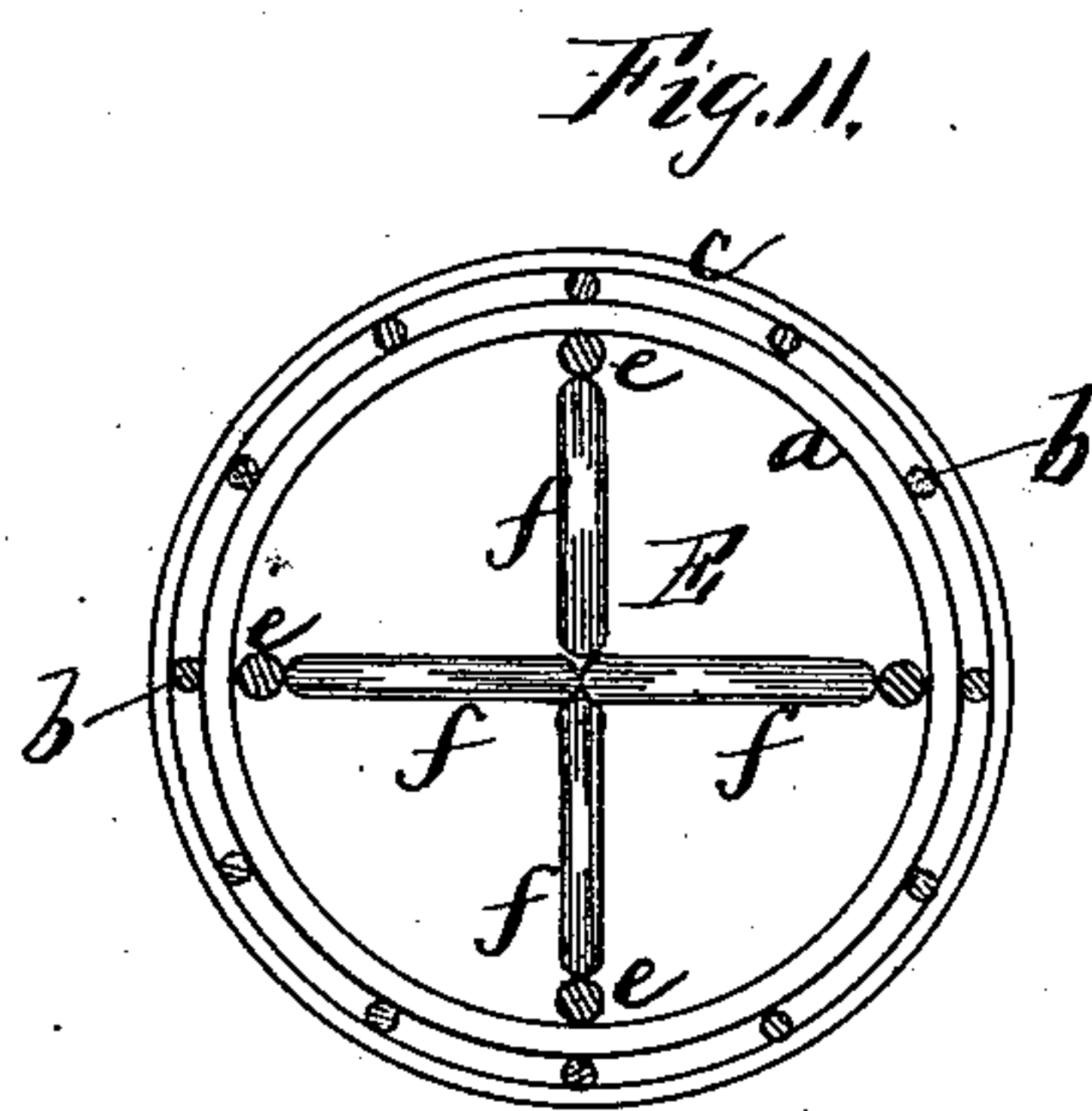
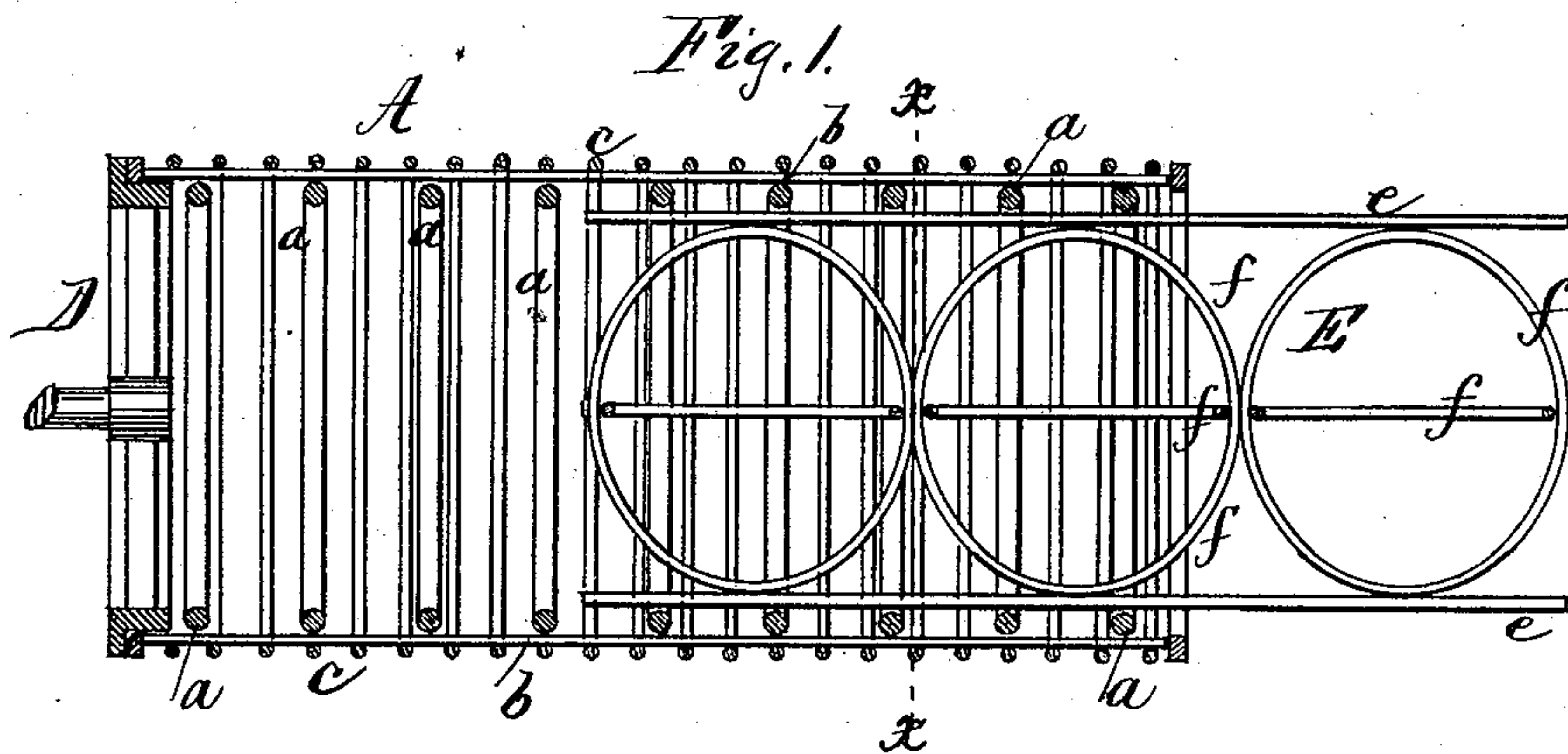


R. McMURRAY.

Cylinder for Paper-Making Machines.

No. 164,468.

Patented June 15, 1875.



Witnesses:  
Franklin Barrett.  
Richard Gerner.

Inventor:  
Robert M. Murray.  
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Henry Gerner,  
Atty.

# UNITED STATES PATENT OFFICE.

ROBERT McMURRAY, OF BROOKLYN, NEW YORK.

## IMPROVEMENT IN CYLINDERS FOR PAPER-MAKING MACHINES.

Specification forming part of Letters Patent No. **164,468**, dated June 15, 1875; application filed December 1, 1874.

*To all whom it may concern:*

Be it known that I, ROBERT McMURRAY, of Brooklyn city, Kings county, State of New York, have invented certain Improvements in Adjustable Frames for Wire-Cloth Paper-Making Cylinders, of which the following is a specification:

The object of my improvement is to provide for the stiffening of the present used and required long wire-cloth paper-making cylinders, and preventing them from sagging and getting out of shape. I am well aware that such cylinders are and have been stiffened by braces attached to the sides of the cylinders, and to an axle placed in the center of the cylinder.

My invention relates to an adjustable frame which can be slid out of and into the cylinders, and cleaned and repaired as required.

My invention consists in constructing a metallic frame, consisting of four or more horizontal bars or rods, which are held certain distances apart by stiffening-braces. I prefer to make these braces in the form of rings, one placed in the interior of the other, perpendicular to each other, and all fastened together; but I do not confine myself to this form of braces.

By removing one of the heads of the cylinder

my adjustable stiffening-frame can be removed, and again inserted, for the purpose of cleaning and repairing.

In order to describe more fully my invention, I refer to the accompanying drawing forming a part of this specification.

Figure I is a longitudinal sectional view of a cylinder and my improved adjustable stiffening-frame. Fig. II is a vertical sectional view of the same through line *x x*, Fig. I.

A is the cylinder, consisting of the rings *a a*, rods *b b*, wire coating *c c*, and heads D D. E is the adjustable stiffening-frame, formed of the horizontal bars or rods *e e* and the braces *f f*, made in form of rings, placed between and fastened to each other. This adjustable stiffening-frame is made to fit exactly the inner circumference of the rings *a a* of the cylinder.

Having described my invention, I desire to claim—

The wire-cloth cylinder A, in combination with the adjustable and removable stiffening-frame E, substantially as set forth.

ROBERT McMURRAY.

Witnesses:

FRANKLIN BARRITT,  
RICHARD GERNER.