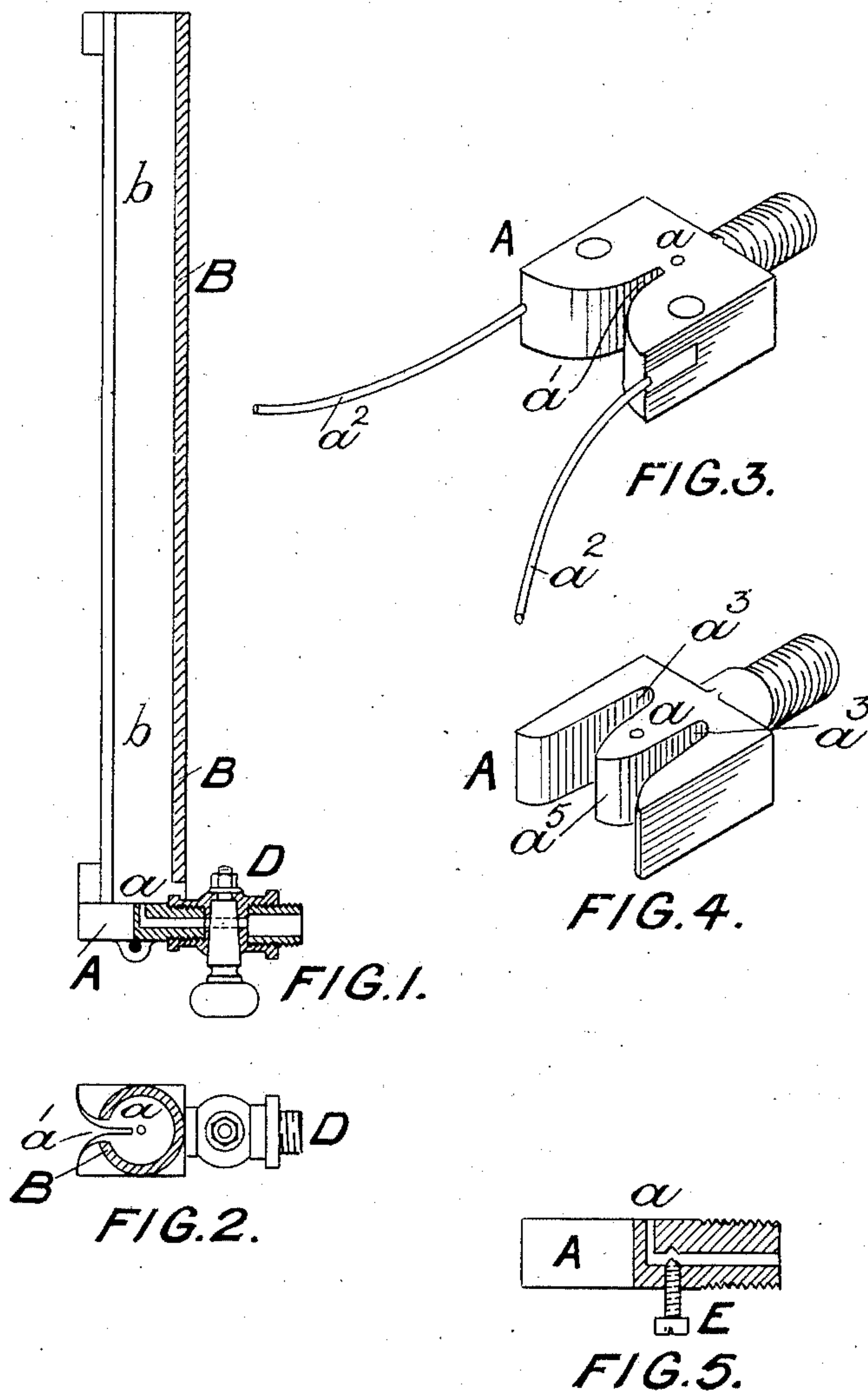


No. 864,917.

PATENTED SEPT. 3, 1907.

F. RIVETT & S. OLDHAM.  
BURNER FOR GASSING YARNS AND OTHER FIBERS.

APPLICATION FILED JUNE 4, 1906.



WITNESSES.

*E. Howard*  
*Joseph Bates.*

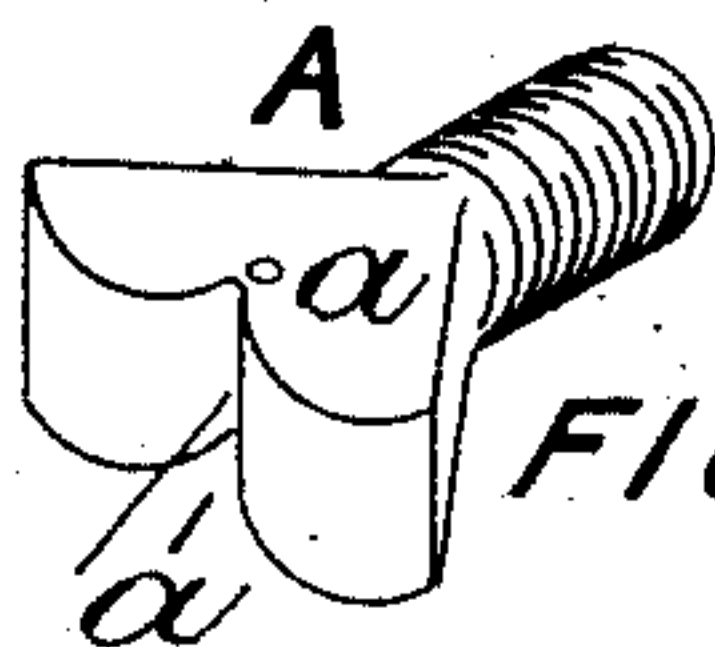


FIG. 6.

INVENTORS.

*F. Rivett.*  
*S. Oldham*  
*By J. A. C. M. M. M.*  
*att.*

# UNITED STATES PATENT OFFICE.

FRED RIVETT, OF HEATON CHAPEL, AND SAMUEL OLDHAM, OF HEATON NORRIS, ENGLAND.

## BURNER FOR GASSING YARNS AND OTHER FIBERS.

No. 864,917.

Specification of Letters Patent.

Patented Sept. 3, 1907.

Application filed June 4, 1906. Serial No. 320,095.

*To all whom it may concern:*

Be it known that we, FRED RIVETT, a British subject, and a resident of Heaton Chapel, county of Lancaster, England, and SAMUEL OLDHAM, a British subject, and a resident of Heaton Norris, county of Lancaster, England, have invented certain new and useful Improvements in Burners for Gassing Yarns and other Fibers, of which the following is a specification.

This invention relates to apparatus for gassing yarn or thread by means of a gas jet or flame for the purpose of removing fine fibers or fluff standing off or projecting from the surface thereof.

This invention relates more particularly to that type of burner constructed with a vertical regenerative or combustion chamber—with a slot or opening from top to bottom—through which the yarn is passed one or more times up and down in the ascending flame. This type of burner for gassing frames has hitherto been constructed with the flame issuing horizontally into the vertical chamber, the chamber being completely open both top and bottom. This construction does not give the regular even vertical flame which is desired and our improvements are designed to provide a burner in which the jet or flame is perfectly parallel with the yarn and by which the yarn or thread is directed or permitted to be brought close to the base of the flame.

The invention will be fully described with reference to the accompanying drawings.

Figure 1. Vertical section of the improved burner.  
Fig. 2. Sectional plan of same. Fig. 3. Perspective view of the base of the burner. Fig. 4. Perspective view showing a modified form of burner for passing yarn twice through the flame. Fig. 5. Section showing a modification with means for regulating the size of flame.  
Fig. 6. Section showing another modification of the burner base.

The base A of the burner is constructed in any convenient shape such as forked or bifurcated or with a slot or notch  $a'$  to direct the yarn or thread (or permit of it being brought) close to the base of the flame and guide wires  $a^2$  may be attached to the sides to direct the yarn into the slot or notch  $a'$ . It is provided on its horizontal face with a small hole or perforation  $a$  for the issuing gas of such a size as to form a thin elongated vertical or approximately vertical flame or jet when burning.

Upon the base A of the burner a shield or hood B is erected forming a regenerative or combustion chamber  $b$  in which the flame burns and through which the yarn or thread is passed vertically. The shield or hood B may be a comparatively narrow tube of any desired length with a slot extending from top to bottom to provide an entrance for the admission of the thread or yarn and through which it may be thrown out quickly on the stopping of the machine.

The base A of the burner is preferably formed with a slot  $a'$  to guide the yarn or thread vertically through the length of the flame or it may be made with two slots  $a^3$  and a tongue  $a^5$  to guide the yarn or thread both up and down through the flame.

The chamber  $b$  in which the flame burns and through which the yarn passes may be made of metal glass porcelain fire clay asbestos or other suitable material and it may be covered by any non-conducting material.

The supply of gas is regulated by a cock D as in Fig. 1. or by a regulating screw E as in Fig. 5.

By this construction the gassing may be carried on at a much quicker rate and the speed of the machine may in consequence be greatly accelerated, in addition to which the fluff from the yarn is more completely consumed.

What we claim as our invention and desire to protect by Letters Patent is:—

1. A burner for gassing yarn comprising in its construction a base A, provided with a perforation  $a$  in its horizontal face means therein to direct the yarn close to the base of the flame and a shield or hood mounted thereon to inclose the flame and yarn substantially as described.

2. In a burner for gassing yarn the combination with a vertical shield to inclose the flame and yarn provided with a longitudinal opening, of a base A of bifurcated shape provided with a perforation  $a$  in its horizontal face through which the gas issues with a vertical flame and with a notch  $a'$  to direct the yarn to the base of the flame, means to guide the yarn to the burner and means to regulate the gas supply substantially as described.

In witness whereof, we have hereunto signed our names in the presence of two subscribing witnesses.

FRED RIVETT.  
SAMUEL OLDHAM.

Witnesses:

I. OWDEN O'BRIEN,  
H. BARNFATHER.