

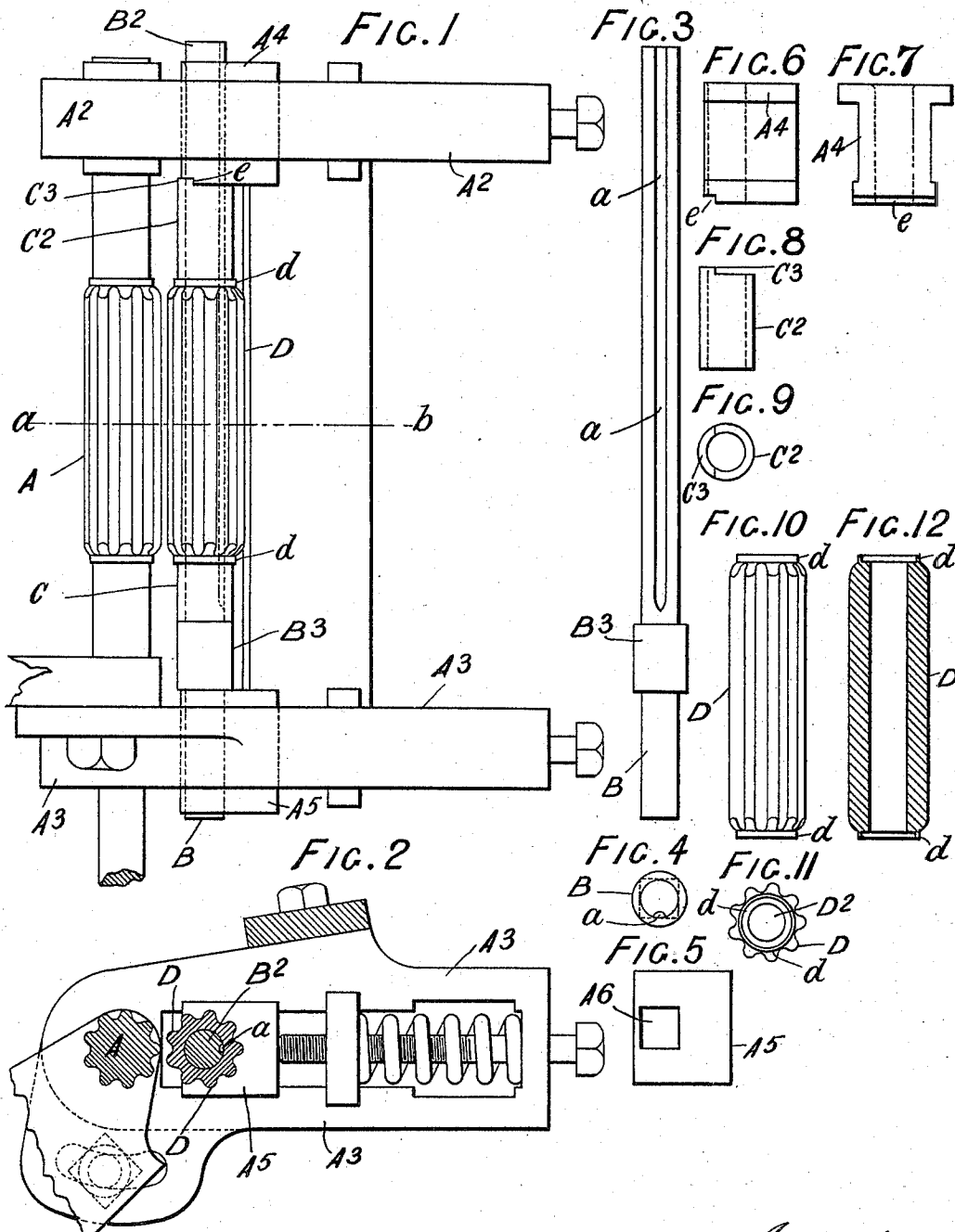
(No Model.)

G. H. JOWETT & I. SHARP.

DRAWING-OFF ROLLER OF COMBING MACHINES.

No. 580,493.

Patented Apr. 13, 1897.



Witnesses
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UNITED STATES PATENT OFFICE.

GEORGE HY. JOWETT AND ISAAC SHARP, OF GREAT HORTON, ENGLAND,
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DRAWING-OFF ROLLER OF COMBING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 580,493, dated April 13, 1897.

Application filed February 24, 1896. Serial No. 580,416. (No model.) Patented in England May 29, 1895, No. 10,692.

To all whom it may concern:

Be it known that we, GEORGE HENRY JOWETT and ISAAC SHARP, subjects of the Queen of England, residing at Great Horton, near Bradford, England, have invented certain new and useful Improvements in the Drawing-Off Rollers of Noble's Combing-Machines, (for which Letters Patent have been obtained in Great Britain, No. 10,692, dated May 29, 1895,) of which the following is a specification.

This invention relates to improvements in the drawing-off rollers of Noble's combing-machines; and its object is to reduce the power required to drive the press-rollers and also to equalize the wear and tear on the fluted portion. For this purpose we make the fluted portion of the press-roller in the form of a shell or sleeve and mount it upon a spindle or arbor fixed in any convenient manner in the same position as the ordinary press-roller. The fluted shell is made to revolve freely upon this spindle, and it may be lubricated by means of a duct or channel at the top.

Reference is to be had to the accompanying sheet of drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in each of the figures.

Figure 1 represents an elevation of a pair of drawing-off rollers in which the press-roller is mounted in accordance with our invention. Fig. 2 represents a horizontal section of the same on the line *a b*, Fig. 1. Figs. 3 to 12 are views of certain parts separately shown and hereinafter referred to.

The driving-roller *A* and the upper and lower slides *A*² and *A*³ are of the usual form, and the adjustable or sliding blocks *A*⁴ and *A*⁵ are fitted in the slides in the usual way. The lower block *A*⁵ has, however, a square hole *A*⁶, adapted to receive the square end *B* of the spindle *B*² and hold it stationary. Fig. 3 represents a separate longitudinal view of the spindle, and Fig. 4 is a plan view of the same, and Fig. 5 represents a separate plan view of the block *A*⁵. The upper block *A*⁴ is made with a cylindrical hole to fit the upper end of the spindle. A collar *B*³ is formed on the spindle to rest upon the upper face of the block *A*⁵ and a washer *C* is mounted on the spindle over this collar. The fluted sleeve or

shell *D* is made with an axial hole *D*², nicely fitting the spindle, and its lower end rests upon the washer *C*. An upper washer *C*² is then mounted upon the spindle between the block *A*⁴ and the top of *D*, and to prevent revolving it is provided with a projection *C*³, which engages the side of the rabbet *e*, cut across *A*⁴. Figs. 6 and 7 represent two side views at right angles to each other of the block *A*⁴. Figs. 8 and 9 represent a side view and a plan of the washer *C*²; and Figs. 10, 11, and 12 respectively represent an elevation, a plan, and a vertical section, of the sleeve *D*. The hole *D*² through the sleeve *D* is preferably enlarged at the top and bottom to receive the ends of the washers *C* and *C*² next to the sleeve with the object of more perfectly excluding dust and dirt.

A channel or duct *a* is formed down the spindle to enable the interior of the shell *D*² to be lubricated from the top. The shell may be adjusted longitudinally upon the spindle by substituting washers of different lengths for the washers *C* and *C*², for the purpose of exposing different parts of the fluted portion to the full wear and tear of drawing off the fibers, or the spindle *B* may be made vertically adjustable for the same purpose.

We claim—

1. The combination with the upper and lower slides, and blocks adjustably mounted therein, the lower block having a square hole and the upper block a cylindrical hole, of a spindle squared at one end and said end being seated in the square hole of the lower block, and the upper end of the spindle being cylindrical and seated in the cylindrical hole of the upper block, the fluted sleeve or shell revolubly mounted on the spindle, and washers arranged upon the spindle between the adjustable blocks and the ends of the fluted shell, as specified.

2. The combination with the upper and lower slides, and blocks adjustably mounted therein, the lower block having a square hole and the upper block a cylindrical hole, of a spindle squared at one end and said end being seated in the square hole of the lower block, and the upper end of the spindle being cylindrical and seated in the cylindrical hole of the upper block, the fluted sleeve or

shell revolubly mounted on the spindle, a collar on the spindle resting on the lower block a washer mounted and non-rotatable upon the spindle between the upper block
5 and the upper end of the fluted shell, and a second washer mounted on the spindle between the lower end of the fluted shell and the said collar, as specified.

3. The combination with the upper and
10 lower slides and blocks adjustably mounted therein, one of said blocks having a square hole and the other a cylindrical hole, of a spindle having one end square and the other cylindrical, and mounted respectively in the
15 square and cylindrical openings of the blocks, a fluted shell or sleeve revolubly mounted on the spindle, the bore of the shell being enlarged at the ends, and washers mounted on the spindle and having their inner ends ar-
20 ranged within the enlarged ends of the bore, for the purpose specified.

4. The combination with the upper and lower slides, and blocks adjustably mounted therein, one of said blocks having a square hole and the other a cylindrical hole, of a
25 spindle having one end square and the other cylindrical and mounted respectively in the square and cylindrical openings of the blocks, a fluted shell or sleeve revolubly mounted on the spindle, and washers mounted on the
30 spindle between the ends of the fluted shell and the adjustable blocks, one of said washers having a projection engaging a rabbet in one of said blocks.

In testimony whereof we have hereunto set
35 our hands in the presence of the two subscribing witnesses.

GEO. HY. JOWETT.
ISAAC SHARP.

Witnesses:

DAVID NOWELL,
SAMUEL A. DRACUP.