

(No Model.)

J. BLAIR.
SUPPORT FOR SPINNING SPINDLES.

No. 482,860.

Patented Sept. 20, 1892.

Fig. 1.

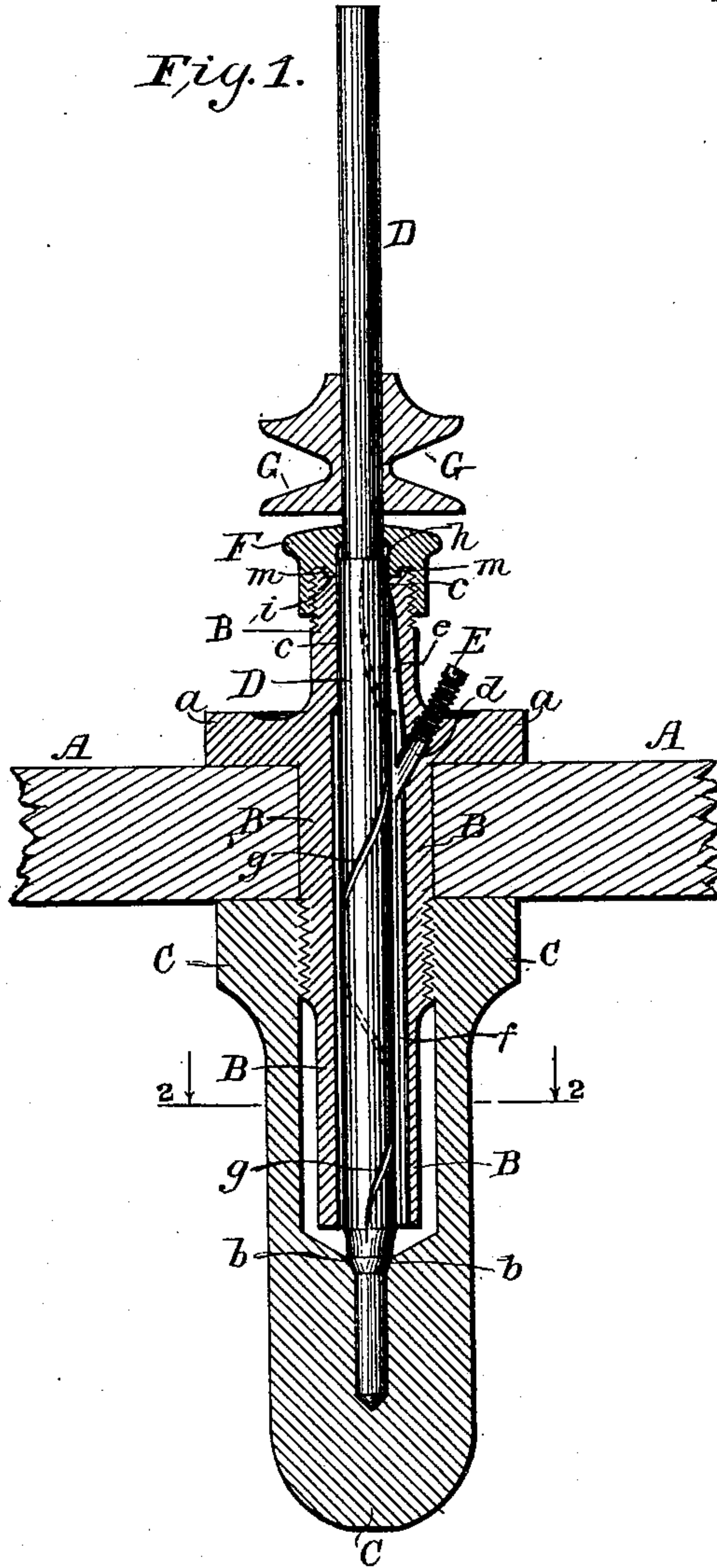
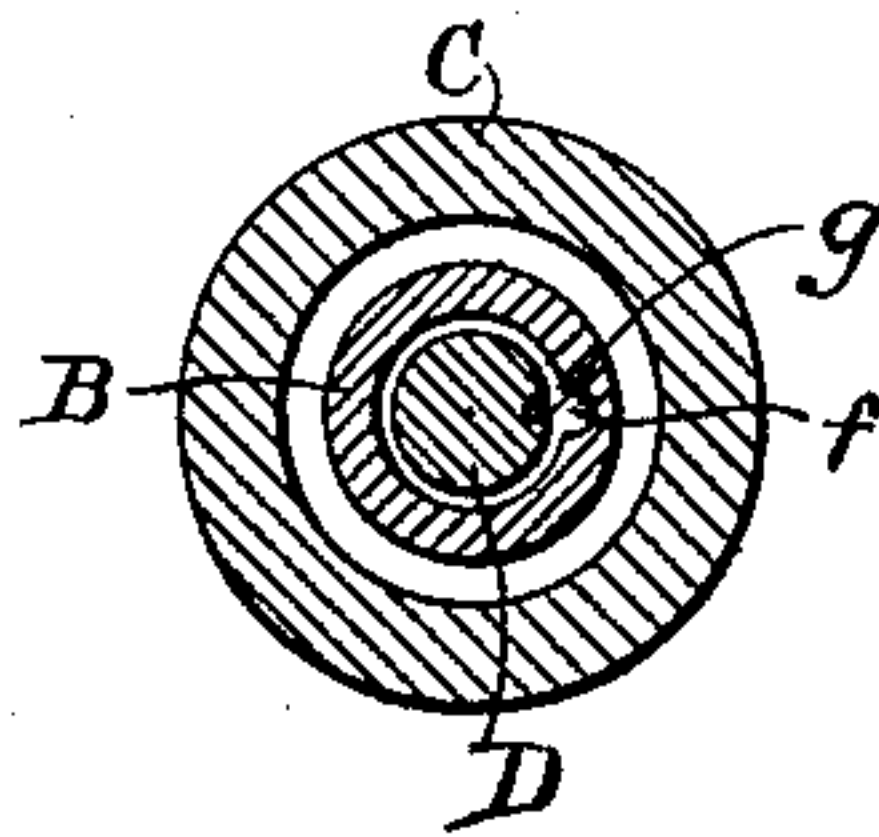


Fig. 2.



Witnesses
W. S. Latimer
Charles E. Snell

Inventor
James Blair
by *J. H. Soule & Co.*
Attorneys

UNITED STATES PATENT OFFICE.

JAMES BLAIR, OF WORCESTER, MASSACHUSETTS.

SUPPORT FOR SPINNING-SPINDLES.

SPECIFICATION forming part of Letters Patent No. 482,860, dated September 20, 1892.

Application filed July 27, 1891. Serial No. 400,780. (No model.)

To all whom it may concern:

Be it known that I, JAMES BLAIR, of Worcester, in the county of Worcester and State of Massachusetts, have invented certain
5 new and useful Improvements in Supports for Spinning-Spindles, of which the following is a specification.

The present invention relates to spindles for supporting the bobbins of spinning-machines; and it consists in the means for holding the spindle in the upper or bolster bearing.
10

The improvements are illustrated in the accompanying drawings, wherein—

15 Figure 1 is a central vertical section of the improvements. Fig. 2 is a horizontal section thereof in a plane indicated by the line 2 2 in Fig. 1.

A is a portion of the bolster or spindle rail. Extending through the bolster-rail is the
20 bolster-case B, which has a flange *a*, resting upon the upper surface of the bolster-rail.

C is an oil-cup, which embraces the lower portion of the bolster-case B and screws onto
25 the same below the bolster-rail. The oil-cup screws tightly against the lower face of the bolster-rail, thereby clamping both itself and the bolster-case B to the bolster-rail.

D is the spindle, which extends down through
30 the bolster-case B, and its lower end seats in a spindle-step *b*, formed in the bottom of the cup C. The bolster-case B at its upper end is slightly contracted and is bored to a true circle to constitute an upper or bolster bearing
35 *c* for the spindle. The general bore of the bolster-case below the bearing *c* is slightly greater in diameter than the spindle, so that the latter turns in said bore without friction.

Extending through the flange *a* of the bolster-case B is an oil-inlet *d*, which communicates with the annular space between the
40 spindle and the bolster-case, immediately beneath the bearing *c*. A longitudinal groove *f* on the interior of the bolster-case conducts the oil from the oil-inlet *d* to the oil-cup C. A screw-plug E fits in and closes the inlet *d*, thus keeping dirt and dust out of the oil-cup. The longitudinal groove *f* is necessary in order
45 to conduct the oil to the bottom of the oil-cup. The annular space between the spindle

and the bolster-case is so small as to be in effect a capillary space, and consequently the oil would not in the absence of the groove *f* be conducted freely to the oil-cup. On its
50 outer surface, within the bolster-case B, the spindle has a spiral groove *g*, which carries the oil from the oil-cup to the upper bearing *c* for lubricating the latter. Said bearing has on its inner face a groove, which is a continuation of the groove *f* and which retains the oil
55 pumped up by the spiral groove *g*.

Above the bearing *c* the spindle is reduced in diameter, forming a shoulder *h*. A screw-cap F, preferably of brass, surrounds the upper reduced portion of the spindle, having a
60 slight longitudinal play thereon. This cap screws onto and over the top of the bolster-case B and prevents the spindle being accidentally removed from the bolster-case when the bobbin is taken off, since should the
65 spindle be lifted its shoulder *h* would encounter the cap where the latter embraces the contracted portion of the spindle. The cap F has immediately surrounding the spindle a downwardly-extending annular flange *m*,
70 which fits within an enlarged bored portion or annular recess at the upper end of the bolster-case B and seats against a shoulder *i* within the bolster-case, which is formed by said enlarged bore or recess. The cap F thus
75 serves to prevent the escape of any surplus oil which may be pumped up to the bearing *c* by the spiral groove. Any such surplus oil passes into the groove *f* and is conducted back to the oil-cup.
80

Above the cap F the spindle carries its driving-pulley G, which is fixed fast thereto.

I claim as my invention—

1. The bolster-case B, having an internal bore and a reduced bearing *c* at its upper end,
85 and the spindle D, extending through the internal bore of said bolster-case and turning in said bearing *c*, said spindle having a reduced portion forming a shoulder *h* at the bearing *c*, in combination with a cap F, removably secured to the upper end of the bolster-case and embracing the reduced portion of the spindle above said shoulder *h*, substantially as set forth.
90

2. The bolster-case B, having bearing *c* and
95

an annular recess with shoulder *i* at its upper
end, and a spindle *D*, turning in said bearing
c, in combination with a cap *F*, screwing onto
the exterior of said bolster-case and embrac-
5 ing said spindle, said cap *F* having a down-
wardly-extending annular flange *m*, entering
said recess and seating on said shoulder *i*, sub-
stantially as set forth.

In witness whereof I have hereunto signed
my name in the presence of two subscribing
witnesses.

JAMES BLAIR.

Witnesses:

FRED. L. HILDRETH,
J. ELMER HALL.