BENJAMIN G. BROOKS.

Improvement in Mode Attaching Drums to Shafts.

No. 119,504. Patented Oct. 3, 1871.

Fig. 1.

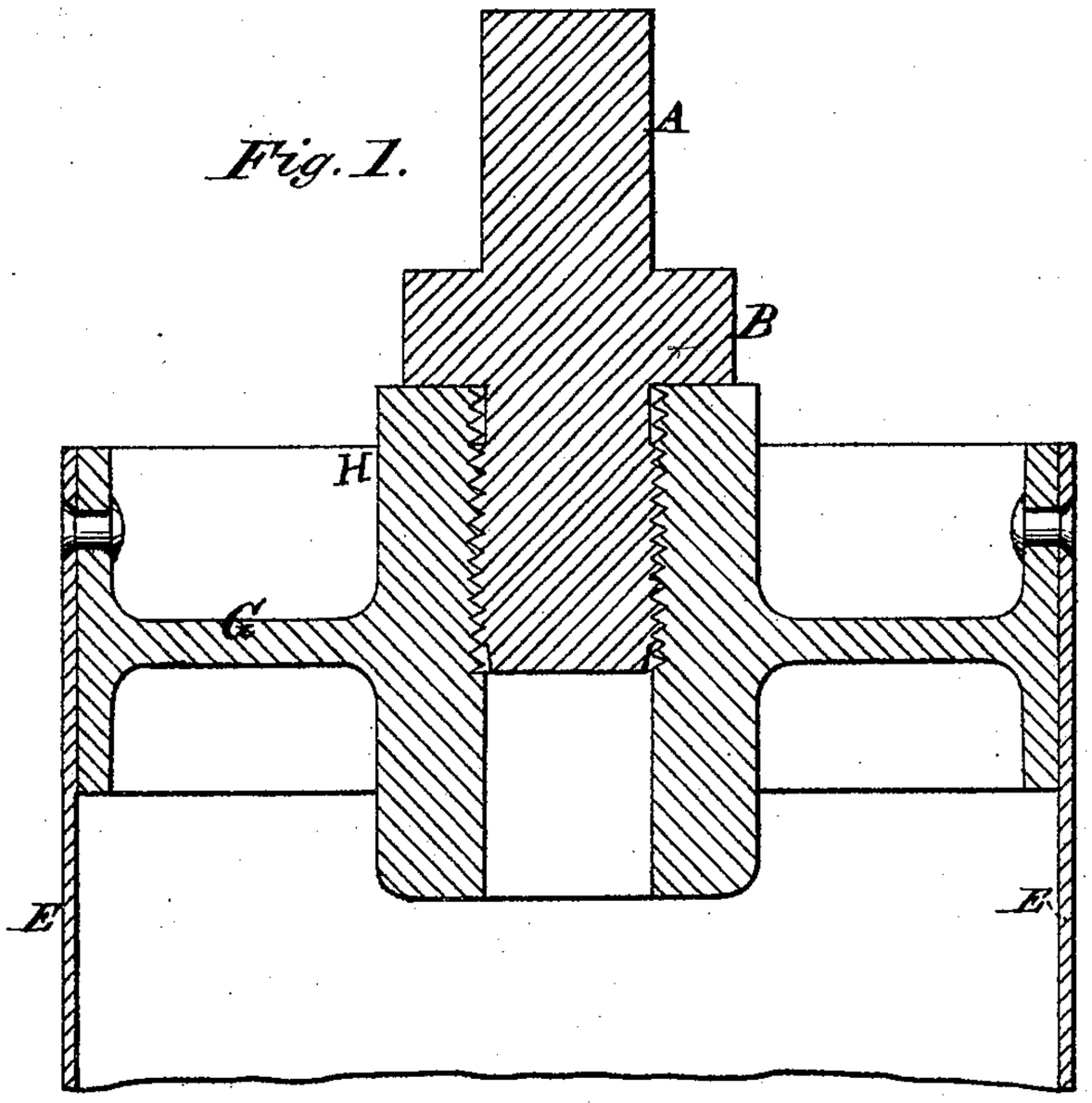


Fig. 3.

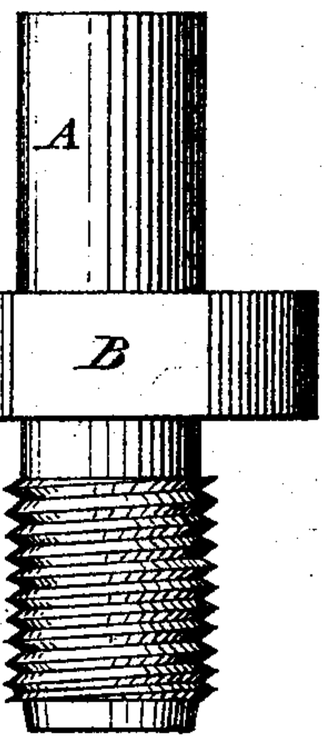
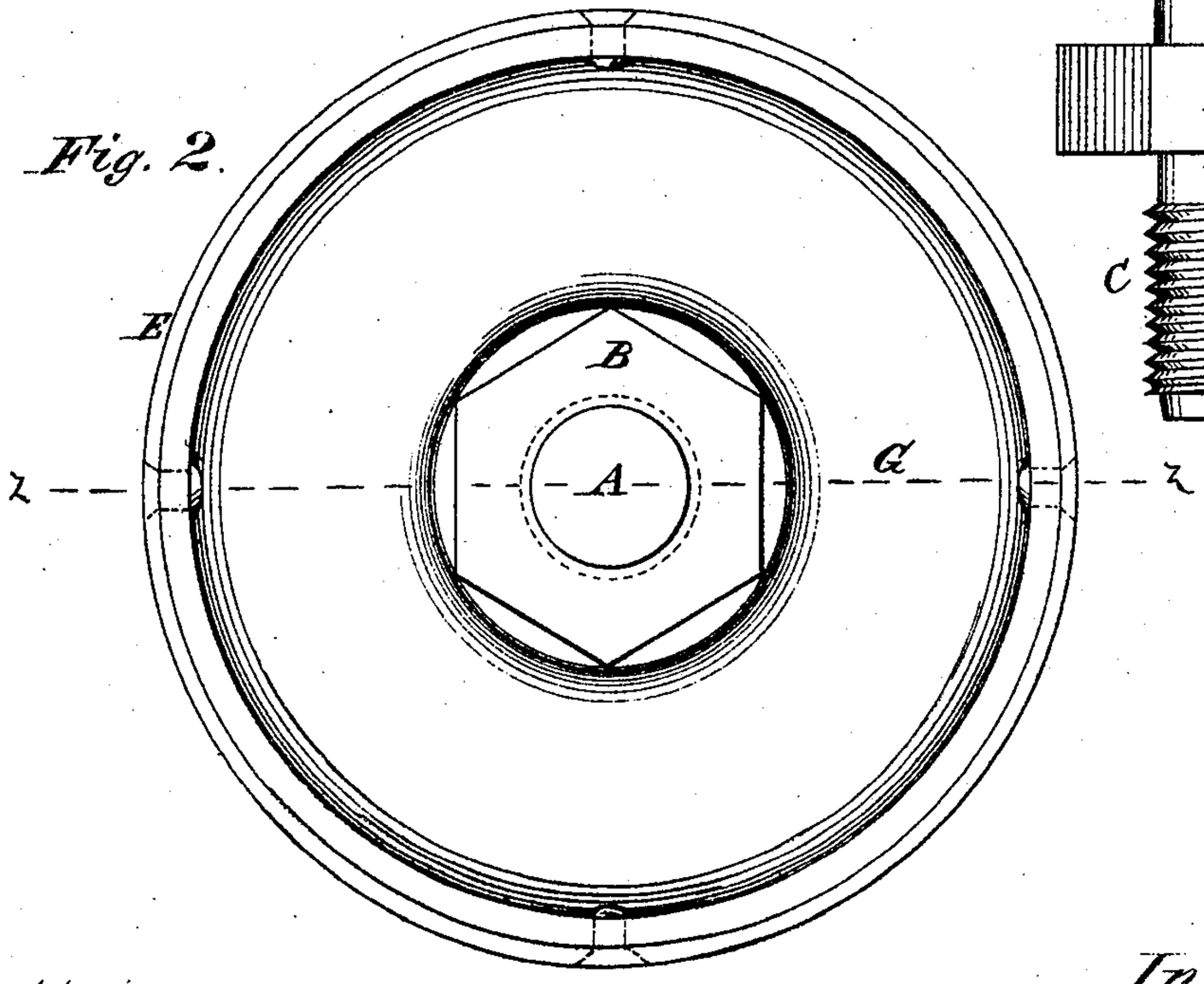


Fig. 2.



Witnesses:

Alonzo Hughes

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119,504

UNITED STATES PATENT OFFICE.

BENJAMIN G. BROOKS, OF MANCHESTER, NEW HAMPSHIRE, ASSIGNOR TO WATERMAN SMITH, OF SAME PLACE.

IMPROVEMENT IN MODES OF ATTACHING DRUMS TO SHAFTS.

Specification forming part of Letters Patent No. 119,504, dated October 3, 1871.

To all whom it may concern:

Be it known that I, BENJAMIN G. BROOKS, of Manchester, in the county of Hillsborough and State of New Hampshire, have invented certain Improvements in the Mode of Attaching or Connecting Journals or Gudgeons to Rollers or Drums of Machinery, of which the following is a specification:

In dyeing and coloring calicoes, muslins, and other goods it is often necessary to pass the cloth around rollers running in steam or hot acids, chlorine and other chemicals, which cause a rapid corrosion of most metals. And as the journals of these rollers run in the hot acids and other chemicals where they cannot be lubricated, the friction of the journal against the box, combined with the corrosive properties of the chemical liquor which surrounds it, causes the journals of the rollers to wear out very soon, and sometimes, when worn small, to break off while the machinery is in operation. In such cases it is very important to renew the journal with the least delay possible, to avoid losing the labor of the hands employed, who are paid whether they work or not. To avoid the losses incidental to rollers with permanent journals under such circumstances, I have been induced to make removable journals to rollers fitted to screw into the end or head of the roller, so as to be readily removed when worn out and replaced by simply screwing in a new journal, which may be done very quickly, when the roller is ready for immediate use again with the least possible delay or loss of time.

In the accompanying drawing, Figure 1 is a section of one end of a roller with my improvements, showing it cut lengthwise through the center or on the line *z z* of Fig. 2. Fig. 2 is an elevation of one end of a roller and journal. Fig. 3 is an elevation of a removable journal.

In the above-mentioned drawing, A is the journal or pivot on which the cylindrical roller E turns, which roller may be made of sheet-copper or other composition or material, and fastened to the head or end G by riveting or otherwise. The head G may be made of cast-copper or brass, and provided with a hub, H, which is perforated in the center and provided with a female screw, to which the male screw C on the inner end of the journal A is fitted. This journal A may be made of copper, brass, or other composition least likely to be corroded by the chemicals used in the several dyeing processes; and is provided with an enlargement or collar, B, midway between the ends, which fits against the end of the hub H when the journal is screwed in and makes a tight joint, which prevents dyestuffs or liquor, in which the roller turns, from getting inside the roller. This collar also serves to apply a wrench or clamp to screw the journal in or out when desired, and also to prevent the roller from traversing endwise in the journal-boxes.

Having described my improvements, I claim—

1. The removable journal A provided with a male screw, C, in combination with the roller-head G provided with a female screw to fit the male screw C, substantially as described.

2. In combination with the above-claimed devices, the collar B, substantially as described, for the purposes set forth.

BENJ. G. BROOKS.

Witnesses:

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