B. H. Jenks.

Carding Mach.

No. 87,342. Patented Mar. 2, 1869.

Fig. 3.

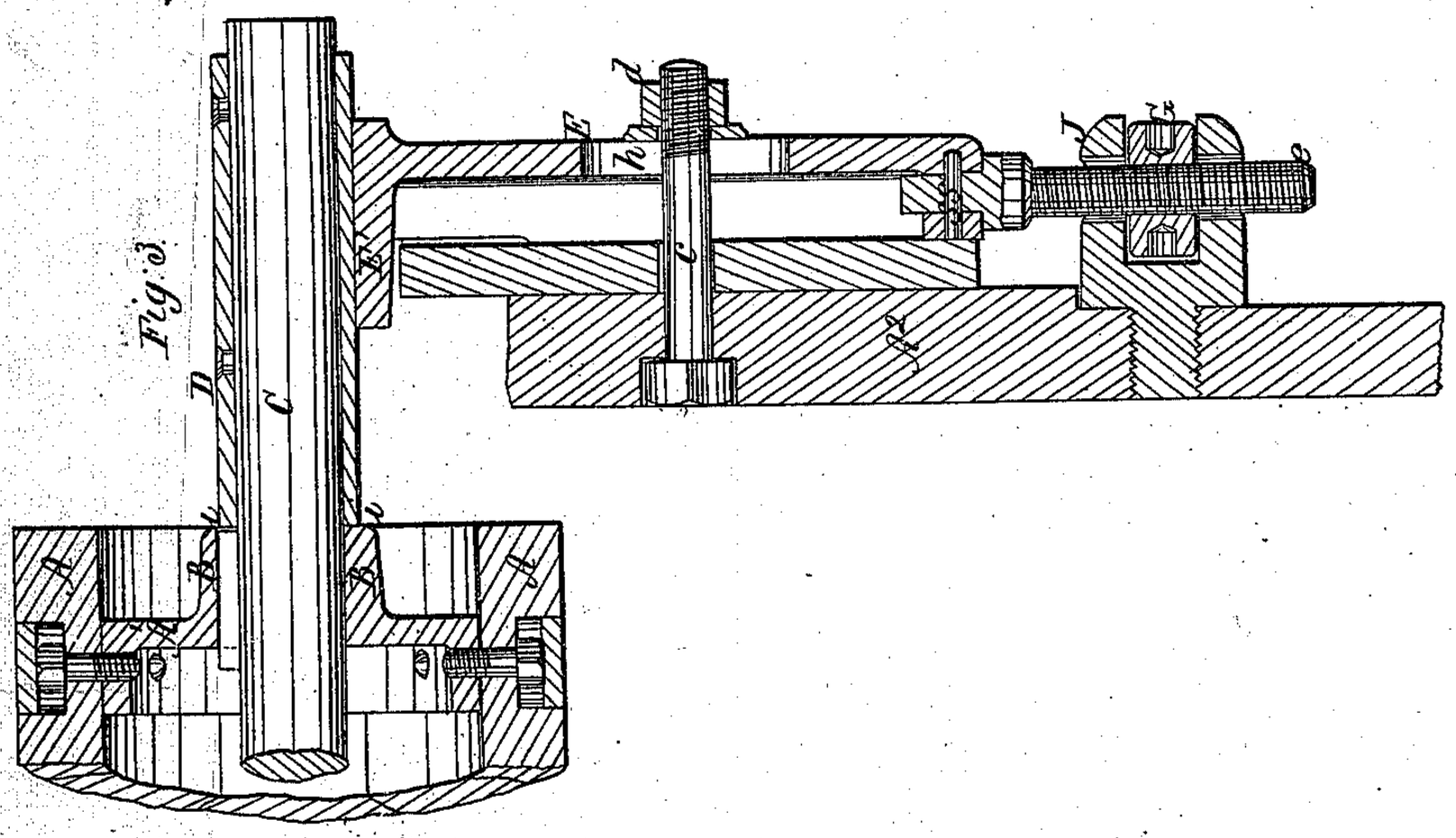


Fig. 2.

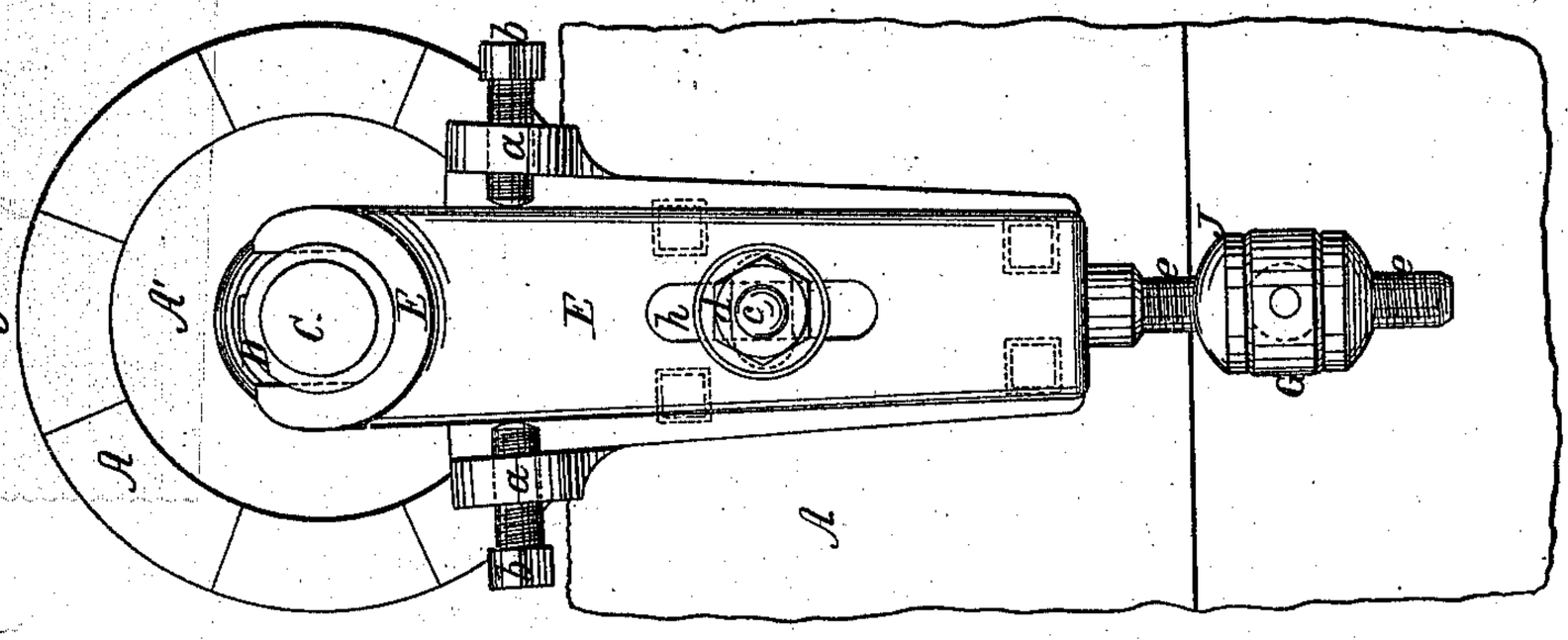


Fig. 4.

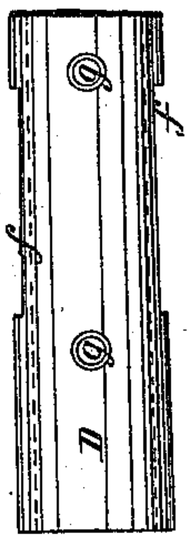
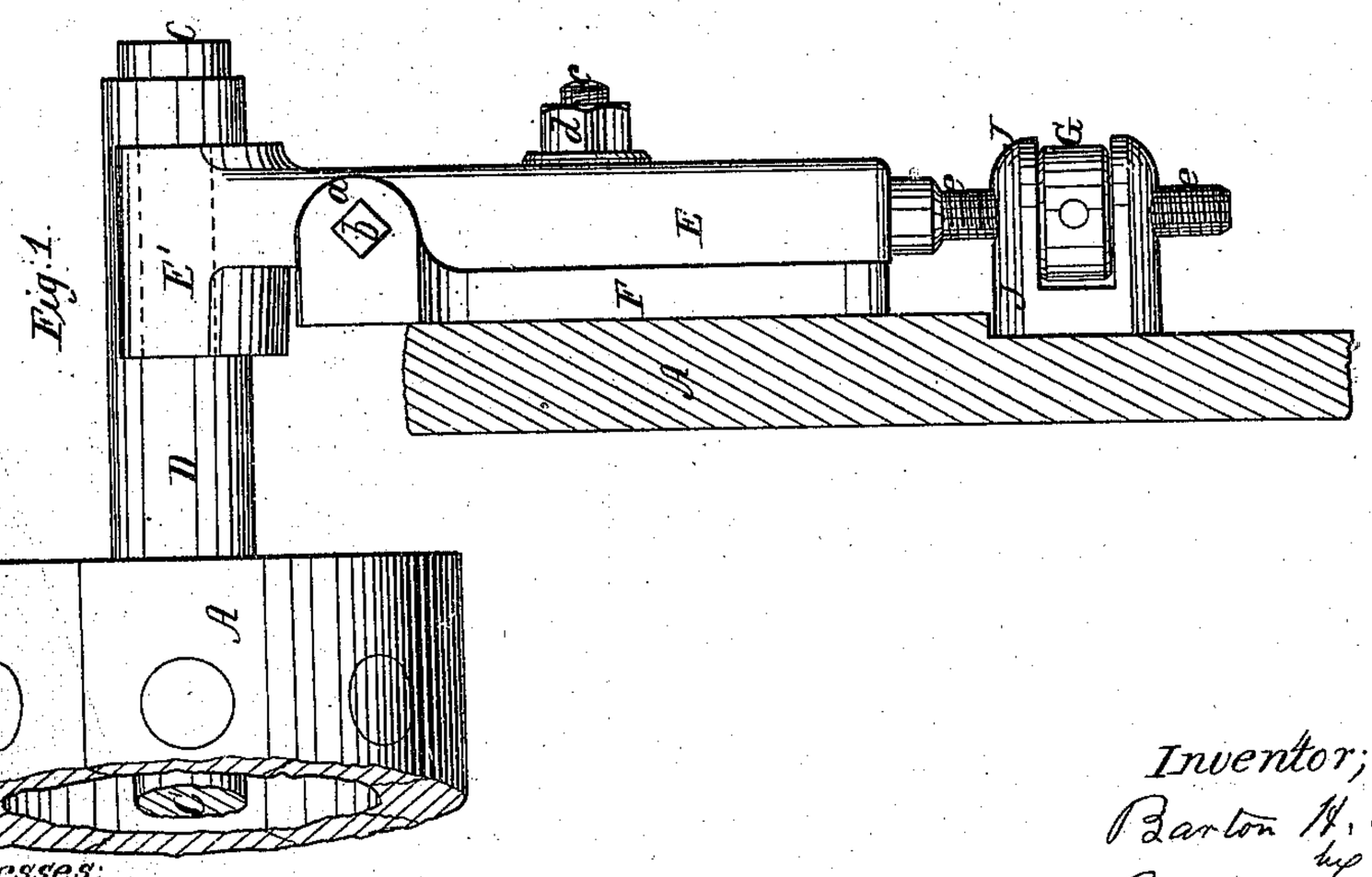


Fig. 1.



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Letters Patent No. 87,342, *dated March* 2, 1869.

IMPROVEMENT IN CARDING-ENGINES.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, BARTON H. JENKS, of Bridesburg, in the county of Philadelphia, and State of Pennsylvania, have invented a new and useful Improvement on Carding-Engines; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a side view of one end of a small roller of a cotton or wool-carding engine, showing the improved safety-sleeve and bearing applied to a poppet-head.

Figure 2 is an end view of the same.

Figure 3 is a section, taken through fig. 2, in the plane indicated by red line in this figure.

Figure 4 is a top view of the safety-sleeve, detached.

Similar letters of reference indicate corresponding parts in the several figures.

The object of this invention is to effectually guard against fire in cotton and woollen-carding engines, by so constructing the bearings of the carding-rollers that fibres of cotton or wool shall not be allowed to fall upon the gudgeons of said rollers, or find lodgment between the ends of the rollers and their bearings.

The nature of my invention consists in supporting the ends of the shafts of carding-rollers or cylinders upon adjustable poppet-heads, by means of stationary sleeves which pass through the sides of the frame of the machine, and abut snugly against the ends of the heads of said card-rollers or cylinders, thereby leaving the ends of the latter exposed, and at the same time covering the shafts or gudgeons, so as to preclude lint or fibre, as will be hereinafter explained.

To enable others skilled in the art to understand my invention, I will describe its construction and operation.

In the accompanying drawings—

A represents an uncovered portion of a card-cylinder, or roller, which, in practice, is covered with card-wire, and arranged within the frame A^2 of the engine, so as to operate in conjunction with a large carding-cylinder.

This cylinder is constructed upon heads A^1, which are keyed fast upon a central shaft, C, as shown in fig. 3, and the ends of this shaft extend beyond the ends of the cylinder far enough to project through the sides of the frame A^2, and be supported by adjustable bearings, secured upon said sides.

The heads A^1 are constructed with outwardly-projecting hubs B, which abut snugly against the inner ends of tubular bearing or sleeves D, so that the cylinder will be prevented from receiving end-play while in operation.

The drawing represents one end of the card-cylinder A and its supporting-devices, and as the devices which support its opposite end are precisely like those shown in the drawings, I will confine my description of them to one end only.

The sleeve D is constructed so as to receive and enclose all that portion of the shaft C which extends beyond the hub B of cylinder-head A^1, and in this sleeve the shaft C turns freely.

The opposite sides of sleeve D are flattened, as shown at *f f*, fig. 4, for the purpose of fitting it between jaws E′, which are formed on the upper end of an adjustable poppet-head or bearing, E, which jaws prevent said sleeve from turning with its shaft C.

The head E is secured to a supporting-plate, F, which is bolted upon the outside of the frame A^2, and which is constructed with side-ears *a a*, and also with a hole through it, for receiving a bolt, *c*.

Set-screws *b b* are tapped through the ears *a a*, and abut against the sides of the head E, as shown in fig. 2, by means of which this head can be adjusted and set laterally in any desired position.

The bolt *c* passes through an oblong slot, *h*, made through the face of the head E, and receives upon its screw-tapped end a nut, *d*, by loosening which latter, this head E can be adjusted in the direction of its length.

The perforated nut G, upon a screw-stem, *e*, which is pivoted to the lower end of the poppet-head E, is designed to assist in adjusting this head in a direction with its length, for which purpose the nut G is confined between the jaws of a stud, J, that is fastened to the frame A^2, as shown in figs. 1, 2, and 3.

The stand or poppet-head which receives the safety-sleeve D is made adjustable, for the purpose of allowing the card-wire upon the cylinder A to be set to work in proper relation to the card-wire upon the main cylinder, and to keep the carding-surfaces in proper relation to each other after they have been dressed or sharpened.

For these reasons I have described, and prefer to employ, a poppet-head made adjustable substantially as described, for supporting and holding the improved safety-sleeve.

In carding-engines heretofore made, an attempt has been made to prevent the occurrence of fire, by providing the strippers, workers, and "licker-in" cylinders with caps, which were adapted to receive the ends of said cylinders, and which were applied to stationary bearings, but it is found that the fibres of wool and cotton will will work between these caps and the ends of the cylinders, and increase the liability of fire.

The invention which I have above described, effectually prevents the cotton or wool, as the case may be, from falling upon the shaft C, or working between moving surfaces, and consequently there can be no liability of fire taking place from the cause above mentioned.

I do not confine my invention to the cylinders of

cotton-cards, as it is applicable to and will be found valuable as a means of safety for the cylinders of all kinds of machinery which is required in working or treating highly-inflammable substances, and which is exposed to danger in the manner above stated.

Having described my invention,

What I claim as new, and desire to secure by Letters Patent, is—

In combination with a poppet-head, the shaft C, the cylinder A, the flanged sleeved head A^1 B, set within the cylinder, and the sleeve D, with its end abutting against hub B, the cylinder, flanged sleeved head, and sleeve, being constructed and arranged as shown.

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Witnesses:

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