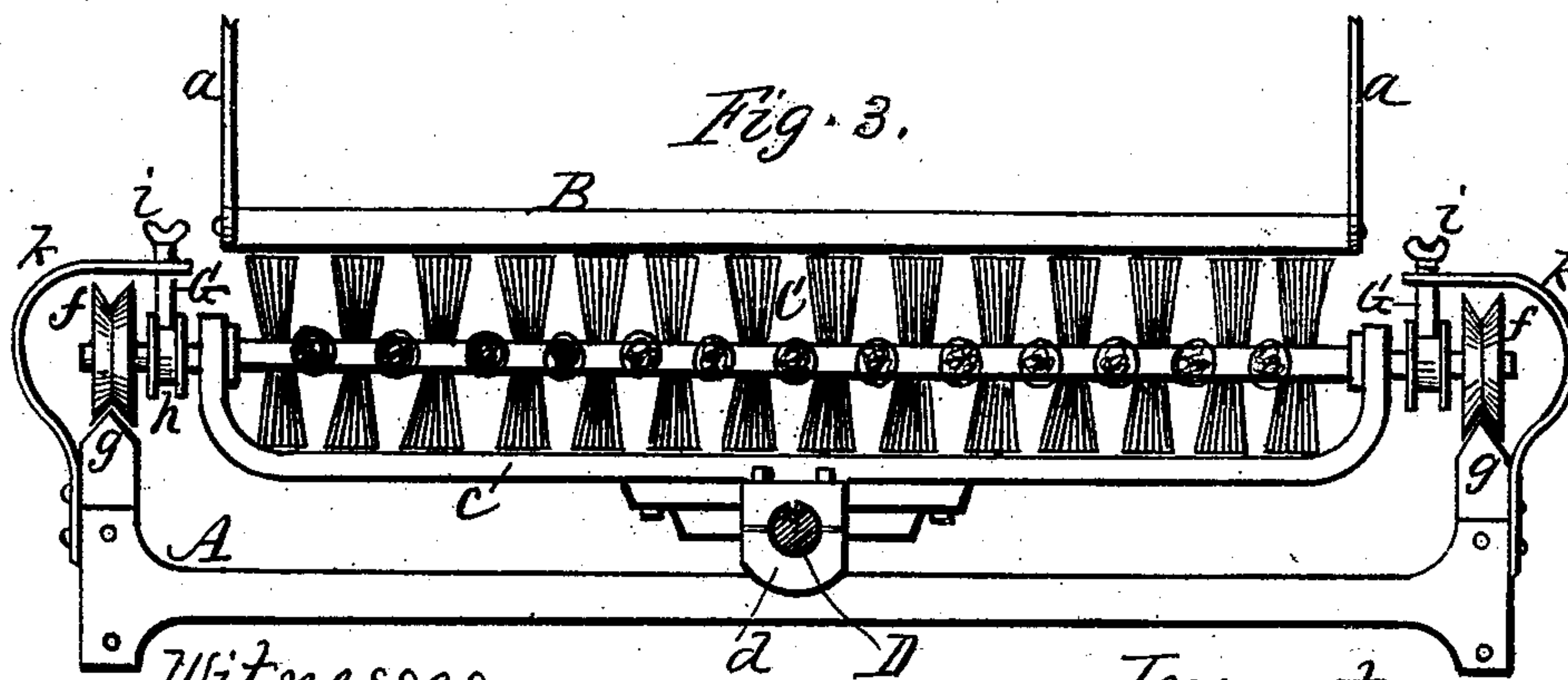
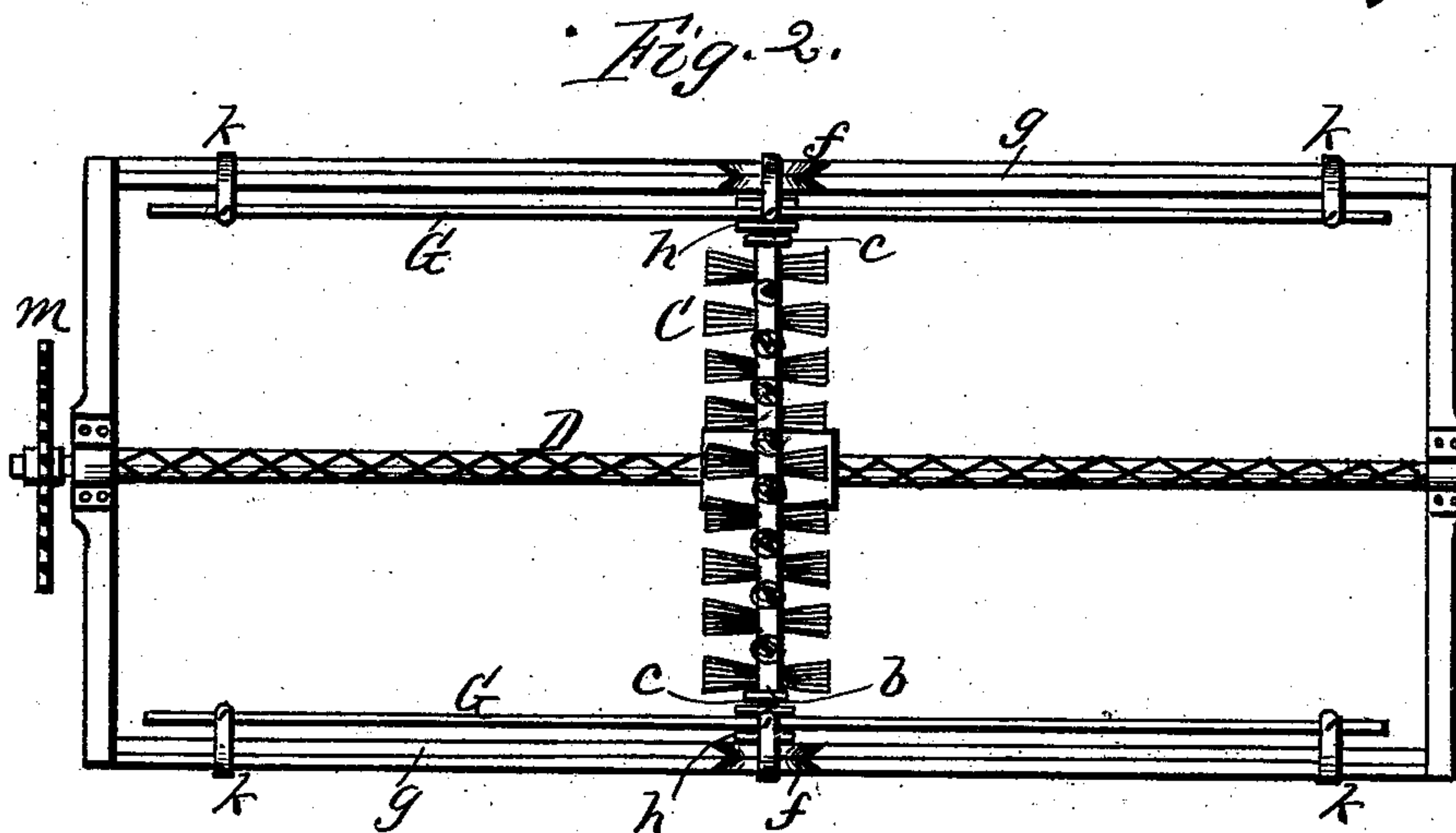
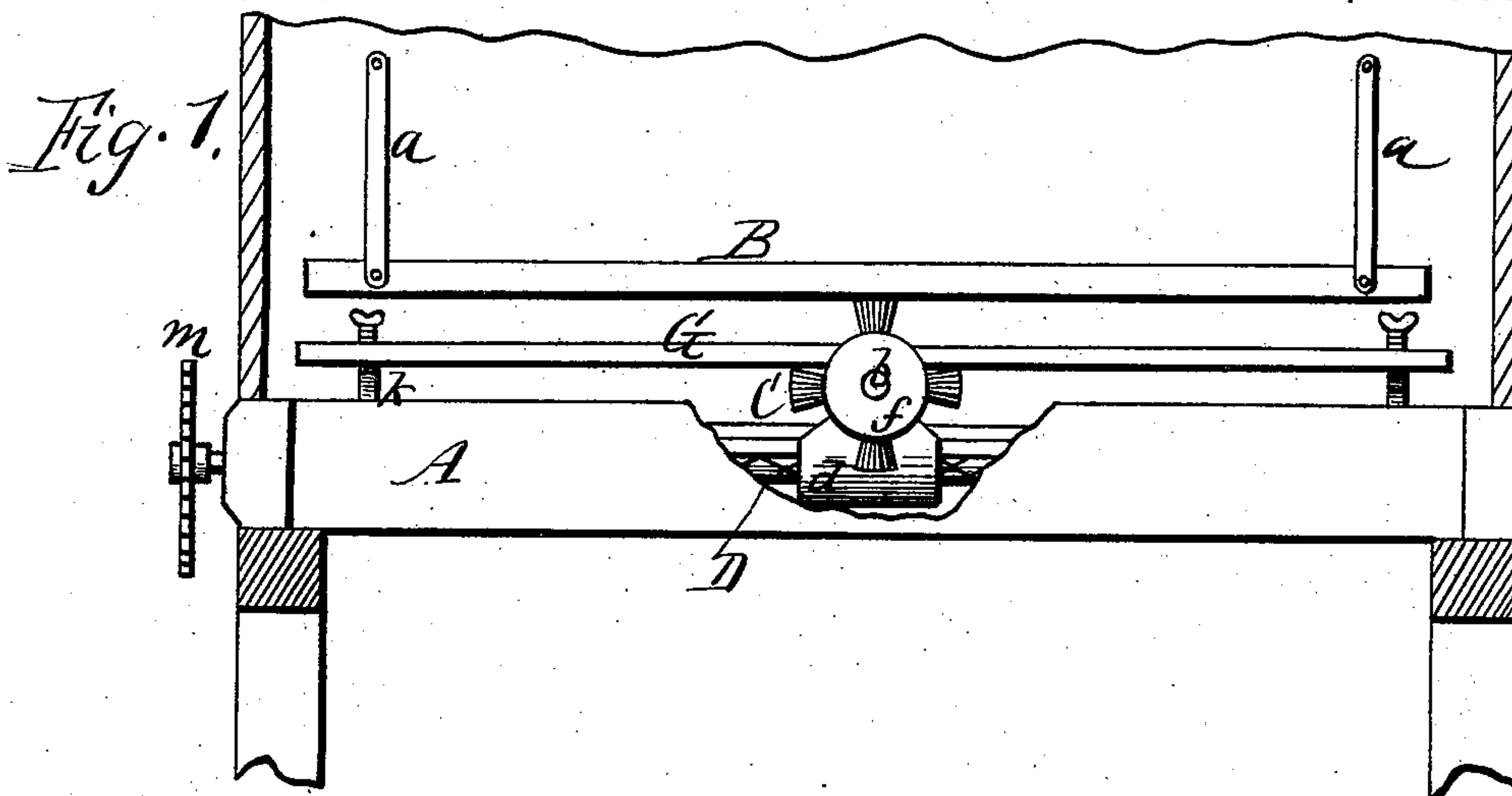


(No Model.)

C. F. HARDY.
BOLTING APPARATUS.

No. 534,045.

Patented Feb. 12, 1895.



Witnesses.

H. B. Hutchinson
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UNITED STATES PATENT OFFICE.

COLIN F. HARDY, OF SCOTTSVILLE, NEW YORK.

BOLTING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 534,045, dated February 12, 1895.

Application filed July 30, 1894. Serial No. 518,915. (No model.)

To all whom it may concern:

Be it known that I, COLIN F. HARDY, of Scottsville, in the county of Monroe and State of New York, have invented a certain new and useful Improvement in Bolting Apparatus; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the drawings accompanying this application.

My improvement relates to bolting apparatus, more particularly to that class known as middlings purifiers, in which a vibrating screen is used, and a traveling brush is employed beneath the screen for clearing the meshes.

The invention consists in the combination and arrangement of parts hereinafter described and claimed.

In the drawings—Figure 1 is a side elevation of the apparatus, a part being broken away. Fig. 2 is a plan view of the same, with the screen removed. Fig. 3 is an end elevation.

A indicates the main frame and B the screen, the latter suspended by hangers *a a*, or otherwise arranged so as to receive vibrating action.

C is the brush, arranged to travel forward and back under the screen, and, by rotary motion clear the meshes in the ordinary way. The shaft *b* of this brush has its bearings in a cross yoke *c*, and the latter is provided with a nut *d*, which travels forward and back on a right and left double-threaded screw shaft D, that extends longitudinally of the machine. This shaft is of ordinary and well known construction. The nut has a point which engages with the thread of the screw shaft, and at the end of the motion of the brush in one direction the point of the nut shifts into the opposite thread and the brush traverses the length of the screen in the opposite direction. A constant reciprocating motion of the brush, in addition to its rotary motion, is thus produced.

The ends of the brush shaft *b* project beyond their bearings in the yoke, and are provided with friction wheels *f f*, which are fixed to the shaft. These friction wheels run on longitudinal ways *g g* of the machine. As the brush travels forward and back the friction wheels running on the ways impart the necessary rotary motion to the brush. If de-

sired the ways may be covered by strips of rubber or other packing to increase the frictional contact with the wheels.

On the shaft *b* of the brush are also small flanged rollers *h h*, which turn freely on the shaft, and on these rollers rest bars *G G* which extend longitudinally of the machine. The bars are held by set screws *i i*, which are attached to bearings *k k* connected with the main frame. By turning the set screws down the bars are made to bear tighter on the rollers thereby increasing the frictional contact of the wheels *f f* with the ways *g g*.

By the construction above described a longitudinal reciprocating motion and a rotary motion are given to the brush in a simple and convenient manner, and the endless chains ordinarily employed are avoided. The apparatus is much more compact than usual. The loose rollers on the brush shaft and the bars which hold them down insure the proper rotary motion at all points in the travel of the brush.

The screw shaft D is driven by a sprocket wheel *m*, on which runs a chain, or by any other suitable means.

Having described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a bolting apparatus, the combination of the rotary brush, the yoke which forms its bearings, the double acting screw shaft, the nut attached to the yoke and resting on the screw shaft, the friction wheels on the brush shaft, and the ways on which the friction wheels run, as shown and described and for the purpose specified.

2. In a bolting apparatus, the combination of the rotary brush, the yoke which forms its bearings, the double acting screw shaft, the nut attached to the yoke and resting on the screw shaft, the friction wheels on the brush shaft, the ways on which the wheels travel, the loose rollers on the brush shaft, and the bars resting over the rollers, as shown and described and for the purpose specified.

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

COLIN F. HARDY.

Witnesses:

A. R. STOKES,
E. R. COLLINS.