G. S. Barton.

Paper Machine.

No. 101,345. Patented Mar. 29, 1870.

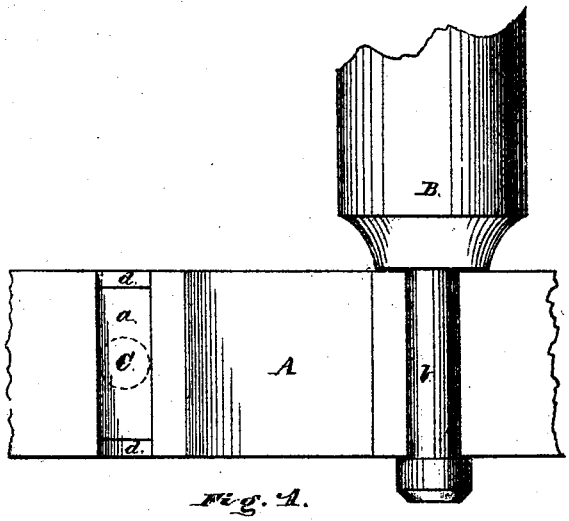

Fig. 1.

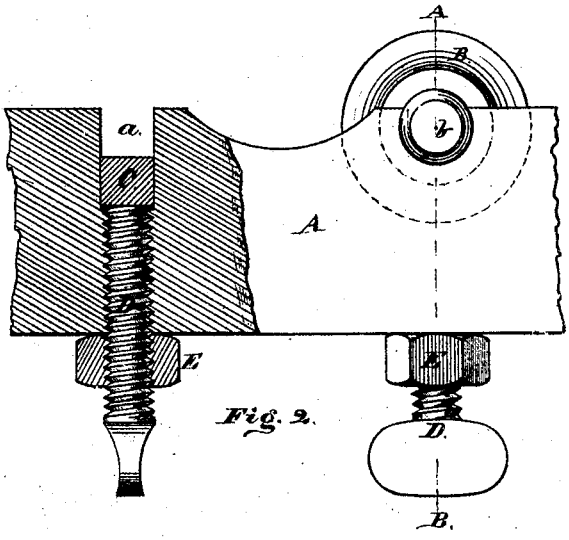

Fig. 2.

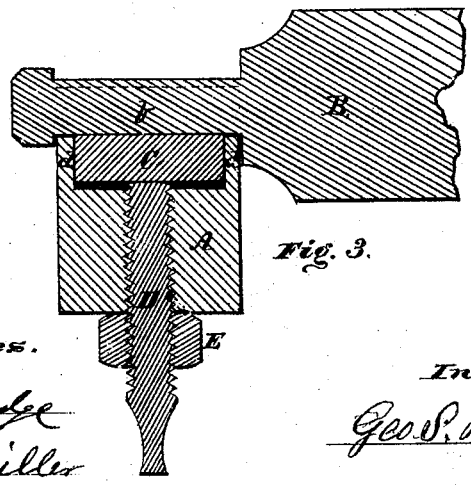

Fig. 3.

Witnesses.

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GEORGE S. BARTON, OF WORCESTER, MASSACHUSETTS, ASSIGNOR TO RICE, BARTON & FALES MACHINE AND IRON COMPANY.

Letters Patent No. 101,345, *dated March* 29, 1870.

IMPROVEMENT IN THE BEARINGS FOR THE TABLE-ROLLS OF FOURDRINIER PAPER-MACHINES.

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

To whom it may concern:

Be it known that I, GEORGE S. BARTON, of the city and county of Worcester, and Commonwealth of Massachusetts, have invented certain new and useful Improvements in Bearings for Fourdrinier Table-Rolls; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings forming a part of this specification, in which—

Figure 1 represents a plan view of such portions of a Fourdrinier table as are necessary to illustrate my invention.

Figure 2 represents a side view of the same, a portion thereof being shown in section, the better to indicate the construction of the parts; and

Figure 3 represents a transverse section of the same on line A B, fig. 2.

To enable those skilled in the art to which my invention belongs to make and use the same, I will proceed to describe it more in detail.

The nature of my invention consists—

First, in the combination with the table-rolls in a Fourdrinier paper-machine of separate adjustable bearings for supporting said rolls, as hereafter explained.

Second, in the combination with the side supporting-rails of rectangular bearing-blocks, adjusting-screws, and check-nuts, as hereafter described.

In the drawings—

The part marked A is the side supporting-rail, in the top of which square grooves *a* are formed transversely, at regular intervals, to receive the journals *b* of the rolls B.

In the bottom of each of the transverse grooves *a* is arranged a rectangular bearing-block, C, upon which the journal *b* is supported.

The bearing-block C is made of hardened steel or some other suitable material, and is finely polished upon its upper surfaces, to reduce the friction upon the journal *b*.

Flanges *d d* are formed across the groove *a* at the end of the block C, to prevent the latter from sliding out of place.

The central part of the block C is supported on the end of an adjusting-screw, D, that passes through the rail A from its lower side, and by means of which the bearing-blocks can be easily raised or depressed, to adjust the roll B to the proper position.

The block C is formed to fit the groove *a* closely at its sides, but a slight space is left between its ends and the flanges *d d*.

There is also a space between the bottom of the block and the bottom of the groove *a*, so the block can rock upon the end of the screw D, and thereby adjust itself perfectly to the line of the journal *b*.

A check-nut, E, is arranged upon the screw D, which can be turned up against the bottom of the rail A, and thereby secure the screw D in any adjusted position.

It will be observed by those skilled in the use of paper-machinery, that my invention is of great practical importance, inasmuch as its use will entirely obviate and overcome a serious difficulty often experienced in the running of the Fourdrinier machines, viz: the frequent stopping of the rolls, and which results from the unequal wearing of the journals of the same, or from flat places being worn in the sides thereof, which may have been stopped in consequence of the wearing away of their journals, or from being temporarily clogged. For instance, sometimes the journals of one roll will wear faster than those of the roll in front and rear of the same, and as a consequence such roll will not be acted upon by the wire-gauze apron with sufficient force to keep it in motion, and in a short time the friction of the moving wire apron will wear a flat place in the side of the roll, thereby rendering it comparatively useless until re-turned in a lathe.

In the old machine, however, when a part of the rolls become so worn as to require turning, the entire lot have to be turned, in order to insure uniformity of action.

With my improved bearing the journals of the rolls can be raised or depressed, and the rolls leveled without trouble, whereas, with the ordinary construction, the rolls and journals all have to be turned to a uniform size, to obviate the difficulty arising from the uneven wearing away of the parts, as before explained.

Having described my improved bearing for Fourdrinier table-rolls,

What I claim therein as new and of my invention, and desire to secure by Letters Patent, is—

1. The combination with the table-rolls in a Fourdrinier paper-machine of separate adjustable bearings for supporting said rolls, substantially as and for the purposes set forth.

2. The combination with the side supporting-rails A, provided with grooves *a* and flanges *d d*, and roll-journals *b*, of the rectangular bearing-blocks C, adjusting-screws D, and check-nuts E, substantially as and for the purposes set forth.

GEO. S. BARTON.

Witnesses:

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GEO. H. MILLER.