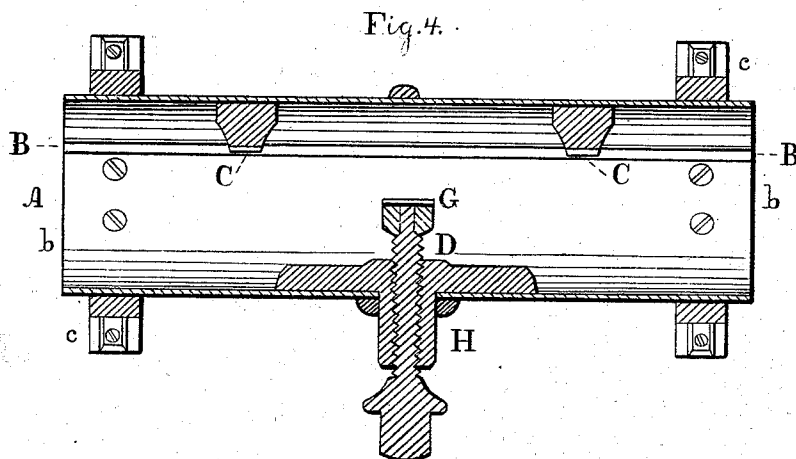
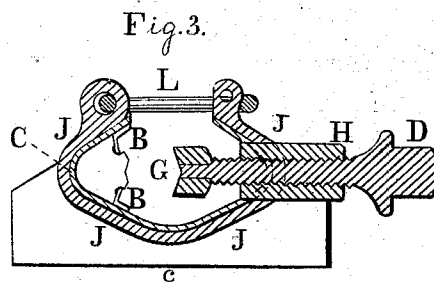
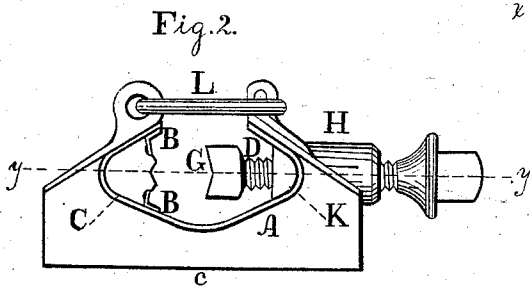
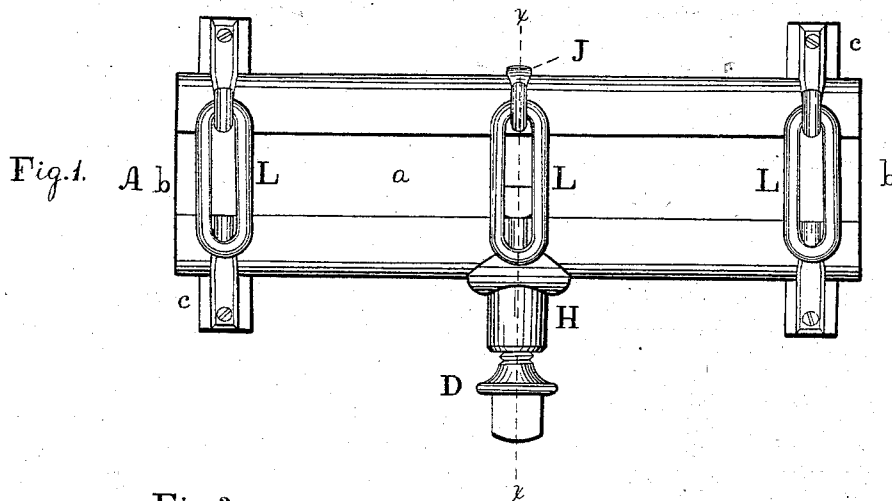


C. SCOFIELD.
Machines for Straightening Tubing, Shafting, &c.
 No. 152,695. Patented June 30, 1874.



Witnesses

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UNITED STATES PATENT OFFICE.

CHARLES SCOFIELD, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN MACHINES FOR STRAIGHTENING TUBING, SHAFTING, &c.

Specification forming part of Letters Patent No. **152,695**, dated June 30, 1874; application filed May 27, 1874.

To all whom it may concern:

Be it known that I, CHARLES SCOFIELD, of the city and county of Philadelphia and the State of Pennsylvania, have invented a new and useful Improvement in Apparatus for Straightening Shafting, Tubing, &c.; and I do hereby declare the following to be a clear and exact description of the nature thereof, sufficient to enable others skilled in the art to which my invention appertains to fully understand, make, and use the same, reference being had to the accompanying drawings making part of this specification, in which—

Figure 1 is a top or plan view of the device embodying my invention. Fig. 2 is an end view thereof. Fig. 3 is a transverse vertical section in line *x x*, Fig. 1. Fig. 4 is a horizontal section in line *y y*, Fig. 2.

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

This invention relates to a device for straightening shafting, tubing, &c.; and consists in an open-top tubular bed, adjustable bearing-blocks, a screw, and braces at the top of the bed.

Referring to the drawings, A represents a bed, which is somewhat of a tubular form, and open at top *a* and ends *b*. On the inner face of one side of the bed there are arranged parallel ways or guides B B, which extend longitudinally, and on which are mounted two or more sliding bearing-blocks, C C, consisting of pieces of metal constructed and arranged to bear at their backs against the adjacent portion of the bed A. D represents a screw, which passes through the side of the bed opposite to the ways B, and carries a swiveled head, G. The screw also passes through a boss, H, projecting transversely through the bed and forming an enlarged bearing for the screw. The bed will rest on suitable supports *c*, and its ends be surrounded by said supports in order to be properly strengthened. A brace, J, extends continuously around the outside of the bed, at the center thereof, and the boss H of the screw D projects through an opening in said brace. On the inner face of the bed, opposite to the ways B, there is fixed a longitudinally-extending brace-bar, K, through which passes the

screw D, and which serves to strengthen the side of the bed to which it is secured, the bar K and boss H of the screw being connected to each other or formed in one piece. L represents a series of loops, rods, bars, or bracings, which are hinged to one side of the upper end of the bed A, extend over the open end thereof, and are adapted to engage with projections or fastenings M on the other side of the upper end of the bed. In the present case there is a bracing at each end of the bed and one at the center thereof, although a greater number may be employed.

The operation is as follows: The shafting, tube, rod, or other article to be straightened is introduced into the bed A, either through the end *b* or top *a*, and its bent portion brought in proximity to the bearing-blocks C, which should be previously or subsequently moved or adjusted relatively to the bends in the article to be straightened. The bracings L are then properly applied and secured. The screw D is now moved in against the bent article, so that the latter will be held between the bearing-blocks and the swiveled head of the screw, the faces of these parts being grooved or double inclined inwardly, in order that they will properly hold and support the article to be straightened.

It is evident that the pressure of the screw exerted against the bent portions of the article acted upon will cause the latter to give at such portions, since they have no immediate support, and thus the operation of straightening is readily performed.

In some cases judgment should be exercised to subject the article to repeated pressure of the screw and at different points, the bearing-blocks being moved or adjusted to accommodate the work.

It will be seen that the pressure against the bearing-blocks is transferred directly to the adjacent side of the bed with which the blocks are in contact. The other side of the bed is likewise subjected to great pressure, but the bracings L strengthen the upper or weakest portion of the bed, and thus the latter is able to withstand the transverse strain. The central portion of the bed, owing to the location of the screw D, is subjected to the most strain;

but this is amply provided for by the encircling-brace J, and in a measure assisted by the interior bar K.

The open top of the bed, besides admitting the introduction of the article to be acted upon, affords ready means of adjusting the bearing-blocks and inspecting the work.

The device will be found to be light, but strong and durable, and may be applied to shafting, &c., without removing the latter from its lathe or centers.

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

The open-top tubular bed A, adjustable bearing-blocks C C, screw D, and top braces L, combined and operating substantially as and for the purpose set forth.

CHAS. SCOFIELD.

Witnesses:

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