(No Model.)

H. W. HILL.

CLUTCH OPERATING MECHANISM.

No. 503,853. Patented Aug. 22, 1893.

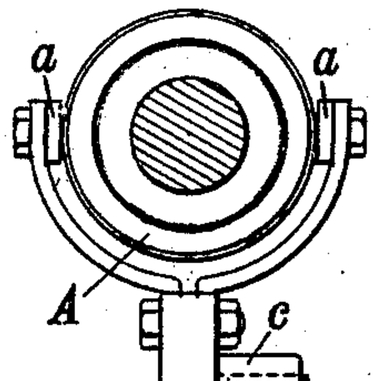

FIG 1.

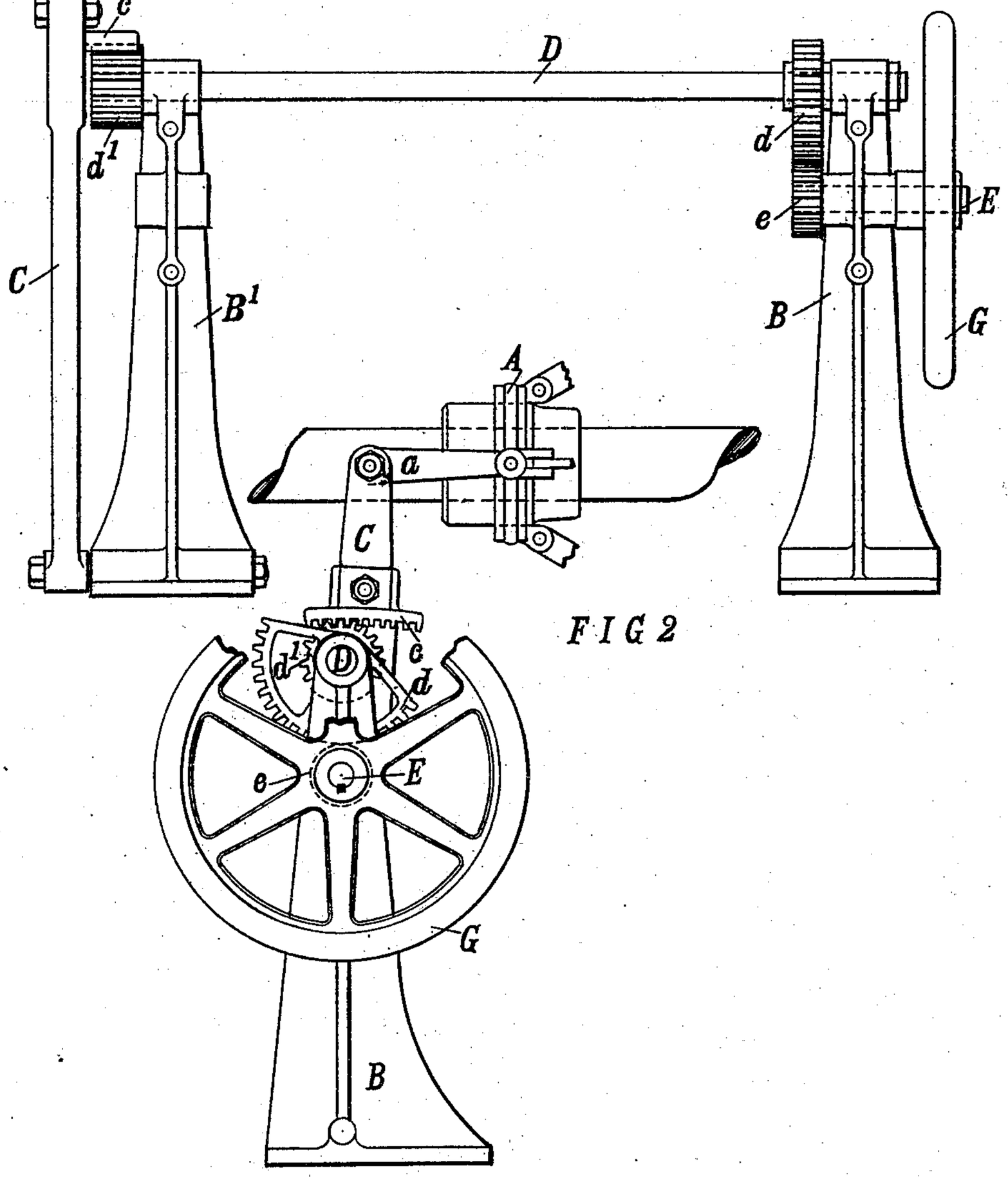

FIG 2

WITNESSES.

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CLUTCH-OPERATING MECHANISM.

SPECIFICATION forming part of Letters Patent No. 503,853, dated August 22, 1893.

Application filed May 31, 1892. Serial No. 434,888. (No model.)

To all whom it may concern:

Be it known that I, HARRY W. HILL, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Clutch-Operating Mechanism; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My device is especially designed for operating the sliding sleeves of large friction clutches in plants where the available floor space is limited, or where it is desired to operate the sleeve from some point at a distance therefrom. In large electric plants as they are usually arranged now-a-days every thing is crowded as much as possible in order to utilize all the allotted space, and there is ordinarily no room for long levers which might, under different conditions, be employed to move the great shifting sleeves of the clutches employed.

The chief object of my invention is to provide a comparatively inexpensive device which may occupy very little floor space, or which may be extended to a point distant from the sleeve, but which will give a sufficient leverage to enable one man to move the sleeve and cause the clutching or unclutching of the clutch members.

My invention consists in the construction and combination of parts hereinafter described and pointed out definitely in the claim.

In the drawings, Figure 1 is a side elevation of my improved operating mechanism, and Fig. 2 an end view thereof.

Referring to the parts by letters, A represents the sliding sleeve which the mechanism to be described is intended to move.

B B′ represent two standards which are secured to the floor in proper relation to each other. To the standard B′ a fork lever C is pivoted. The upper end of this lever C is connected by the links *a a* or other suitable means to said sleeve A, whereby, as the lever is oscillated, the sleeve is moved backward and forward. A shaft D of any desired length is journaled in the two standards B′ B. To the end thereof nearest the sleeve a pinion *d′* is keyed, and this pinion engages with an internal gear segment *c* on the lever C. A shaft E is mounted in a bearing in the standard B, and projects on both sides of said standard. On one side of the standard a spur pinion *e* is keyed to the shaft E; and this pinion meshes with a spur segment *d* keyed to the shaft D. On the end of the shaft E which is on the other side of the standard a large hand wheel G is secured by means of which the shaft is turned.

It is evident that with the above described construction a very small force applied to the hand wheel will move a very large and heavy sleeve. The necessary mechanism occupies only a small amount of space; but by making the shaft D longer or shorter the mechanism may be operated from any desired point.

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

In a clutch operating mechanism, in combination, the two standards B B′, the lever C pivoted at one end to the standard B′, a suitable device connecting the other end with the sliding sleeve, the internally geared segment *c* on said lever, the shaft D journaled in both of said standards B B′, the pinion *d′* secured to said shaft and meshing with a gear segment *c*, the spur segment *d* secured to said shaft D, the shaft E journaled in the standard B, the spur pinion *e* secured to said shaft E and meshing with said spur segment *d*, and the hand wheel G secured to said shaft E, substantially as and for the purpose specified.

In testimony whereof I affix my signature in presence of two witnesses.

HARRY W. HILL.

Witnesses:
FRANK. MILLER,
M. S. INGHAM.