

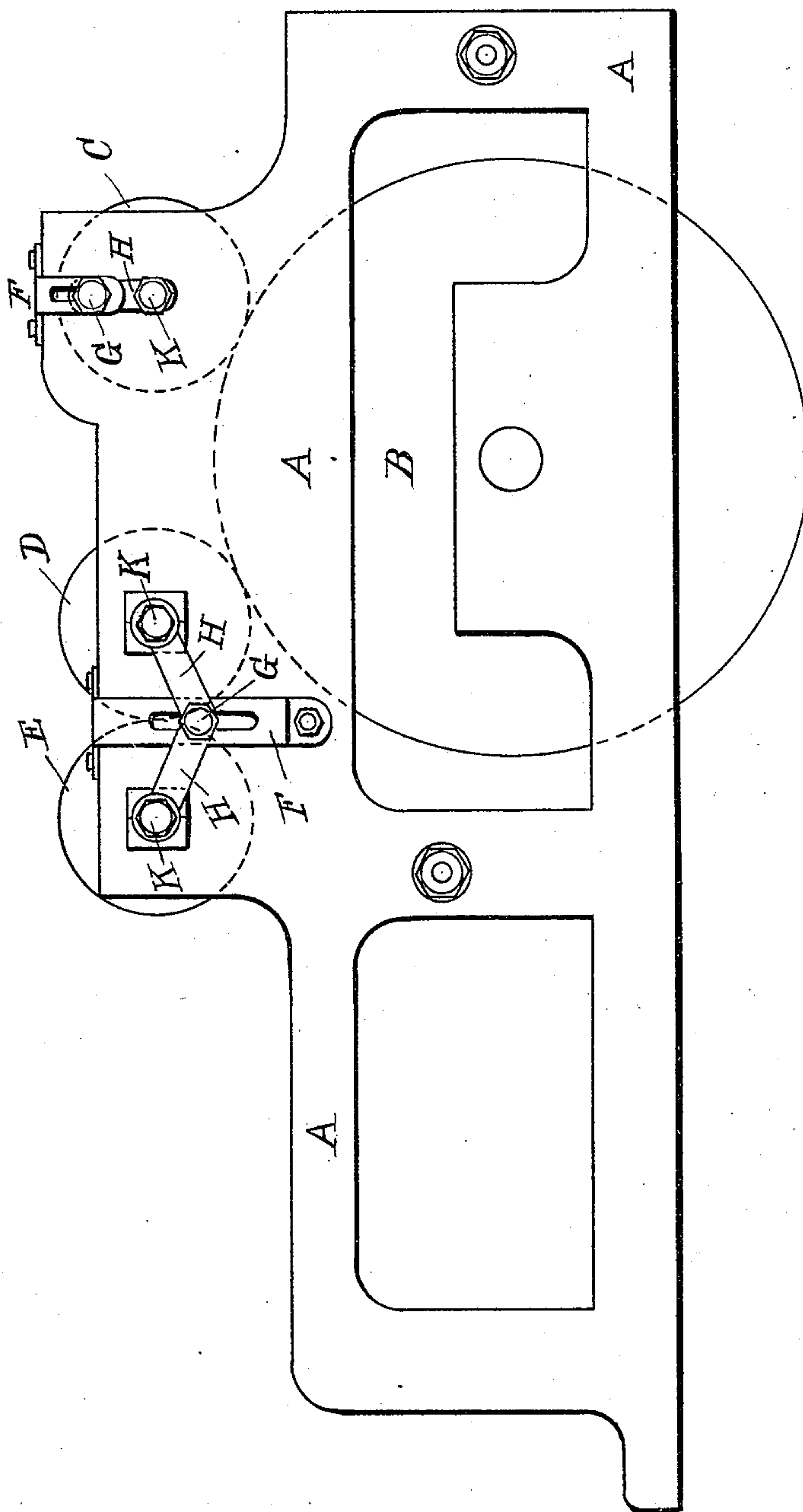
(No Model.)

R. W. TAYLOR.

PRINTING PRESS AND OTHER MACHINERY.

No. 251,486.

Patented Dec. 27, 1881.



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UNITED STATES PATENT OFFICE

RICHARD W. TAYLOR, OF PHILADELPHIA, PENNSYLVANIA.

PRINTING-PRESS AND OTHER MACHINERY.

SPECIFICATION forming part of Letters Patent No. 251,486, dated December 27, 1881.

Application filed August 6, 1881. (No model.)

To all whom it may concern:

Be it known that I, RICHARD W. TAYLOR, of the city and county of Philadelphia, in the State of Pennsylvania, have invented a new and useful improvement in means for preserving correct alignment and adjustment of printing-press cylinders and the axes of other rotary parts of machinery, which improvement is fully set forth and illustrated in the following specification and accompanying drawing.

The invention consists in an arrangement of two arms for each shaft, each arm adjustably secured at one end upon a bolt, the opposite ends of said arms being provided with set-screws, which are set into its true axis at each end of the shaft whose adjustment and alignment it is desired to preserve. The centers of such shaft, upon which its journals were originally turned, are preferably preserved to receive the points of the set-screws.

The accompanying drawing illustrates in one figure parts of a printing-press in side elevation, to the axes of whose cylinders this invention has been applied. The opposite side of the press, being, of course, but a duplication of the side shown, is not illustrated in the drawing. To the right of said figure a single cylinder only is provided with the invention. To the left two cylinders are shown, each provided with the invention, the arms for regulating their alignment being provided with but one bolt in common, adjustable in a slotted bracket secured to the framing of the machine, said arms thus forming a kind of toggle-jointed lever.

In the drawing, the letter A designates a portion of the frame of the press; B, a large impression-cylinder; C, one type-cylinder; D, a small impression or blanket cylinder, and E another type-cylinder. Brackets F F are secured to the frames A A. Said brackets are slotted, as seen in the drawing, and in whose slots the bolts G G are inserted and adjustably secured by screw nuts and threads or otherwise, as may be desired. By each of the bolts G on each side of the press opposite the type-cylinder C, but a single arm, H, is held, through the opposite ends of each of which arms a set-screw, K, is inserted and screwed as in a nut, the points of said screws entering the centers turned out to receive them in each end of the

cylinders' journals. The bolts G in the brackets F, on each side of the press, opposite the cylinders D E, each secure two arms, H H, forming with them toggle-joints, the opposite ends of said arms being attached to the respective cylinders' journals by the set-screws K K in the manner just described as to the cylinder C.

The complete operation of this invention, the desirability of its employment, and advantages attending its use will now be set forth, as follows: The tendency of all rotary shafts to wear away their bearings and to wear their journals oval in proportion to the pressure exerted upon said journals by the weight of or upon said shafts is well known, and the ordinary brasses or boxes are all commonly provided with keys or bolts for taking up the wear and preventing lost motion due to such wear. Such devices are absolutely necessary, yet in many cases not so efficient as is desirable, particularly where great accuracy of alignment and nicety of adjustment, coupled with high speed and much weight of parts, are necessary, as is the case in many printing-presses. This invention, however, does not supersede the ordinary means of supporting or adjusting shafts in bearings by bolts or keys, but is supplementary thereto, as is clearly seen in the drawing. Most of the weight and pressure of the shaft is taken by the usual bearings or boxes in the frame of the machine; but as said brasses begin to wear, and thus to less tightly embrace their journals, the lost motion in said journals that would otherwise ensue is taken up or prevented by the set-screws K K, which firmly take into the original centers bored in the true axial line of the shaft, and hold it as if in a lathe. When once accurately adjusted, therefore, the shaft thereafter remains as if suspended in a lathe upon its true centers, and thus is not only kept in line and in correct adjustment, but much wear of boxes and journals is prevented. The shaft always thus remaining as in the centers of a lathe, the exact degree necessary for keying up or lining up each brass or box will always be apparent.

In a printing-press, for which this invention is particularly adapted, the advantages arising from its use may be enumerated as follows: There is a great saving in the blanket-cover.

ings of the cylinders. Through lost motion and improper adjustment of parts said coverings are rapidly cut through and destroyed. The alignment being more perfect and the journals being preserved more truly cylindrical, the
5 journals will remain cool and require less lubrication and less attention to lubricating them. High speed, combined with considerable weight of parts, can thus be realized without increased,
10 but, on the contrary, with diminished, cost of repairs. A higher perfection in character of work printed is not only thus obtained, but durability of machine, trustworthiness of press, and non-loss of time in repairs are also the de-
15 siderata secured. It is quite evident that by similarly bolting an adjustable arm to a connecting-rod and connecting said arm by a set-screw to the center of a crank-pin journal a similar beneficial result will be accomplished in
20 preventing lost motion in the crank-pin as its boxes wear away by use. This invention is

therefore applicable to the center or centers of any rotary shaft or part of machinery in general, in combination with its ordinary bearings or boxes.

I do not broadly claim the method of suspending a shaft by its centers upon set-screws inserted within said centers; but,

As of my invention, I claim—

In a printing-press or other machine requiring accurate alignment or adjustment of rotary cylinders or shafts, in combination with such shaft or shafts, arms H, united thereto by set-screws K, as described, and adjustably bolted to suitable supports, whereby said shafts are
30 caused to rotate upon their original lathe-centers within their bearings or boxes, substantially as and for the purposes set forth.

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Witnesses:

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