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Patented Oct. 6, 1908.

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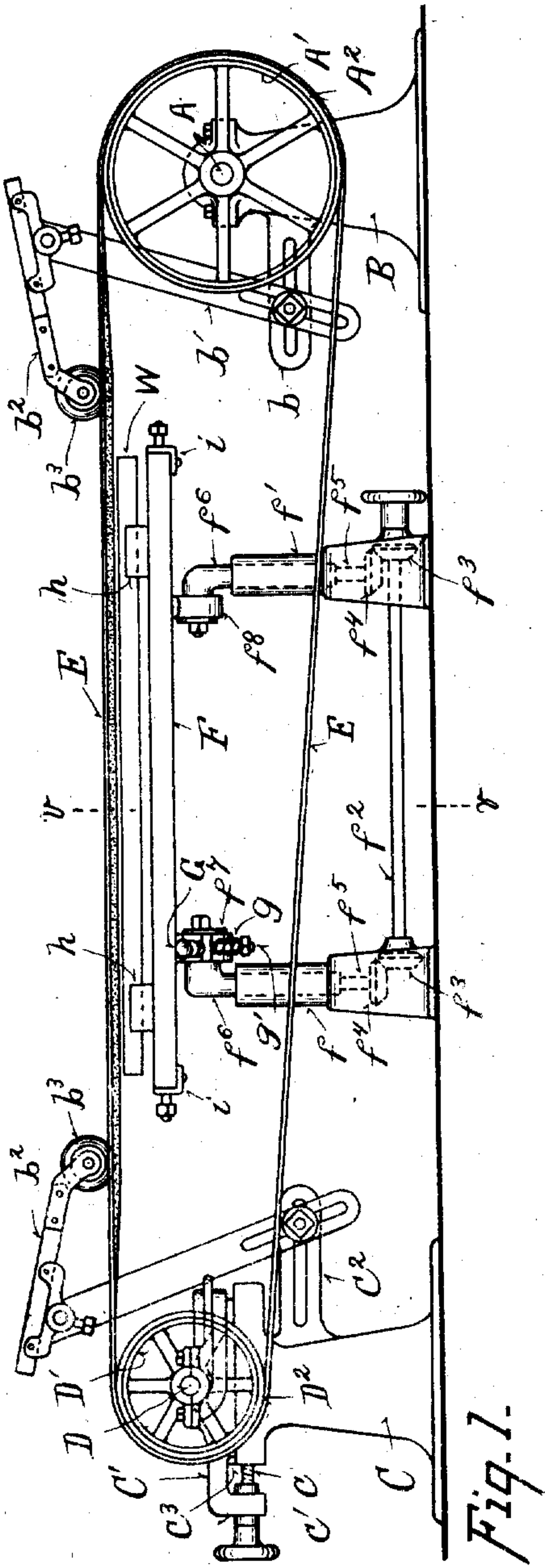


Fig. 1.

Witnesses

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 C. H. Barth

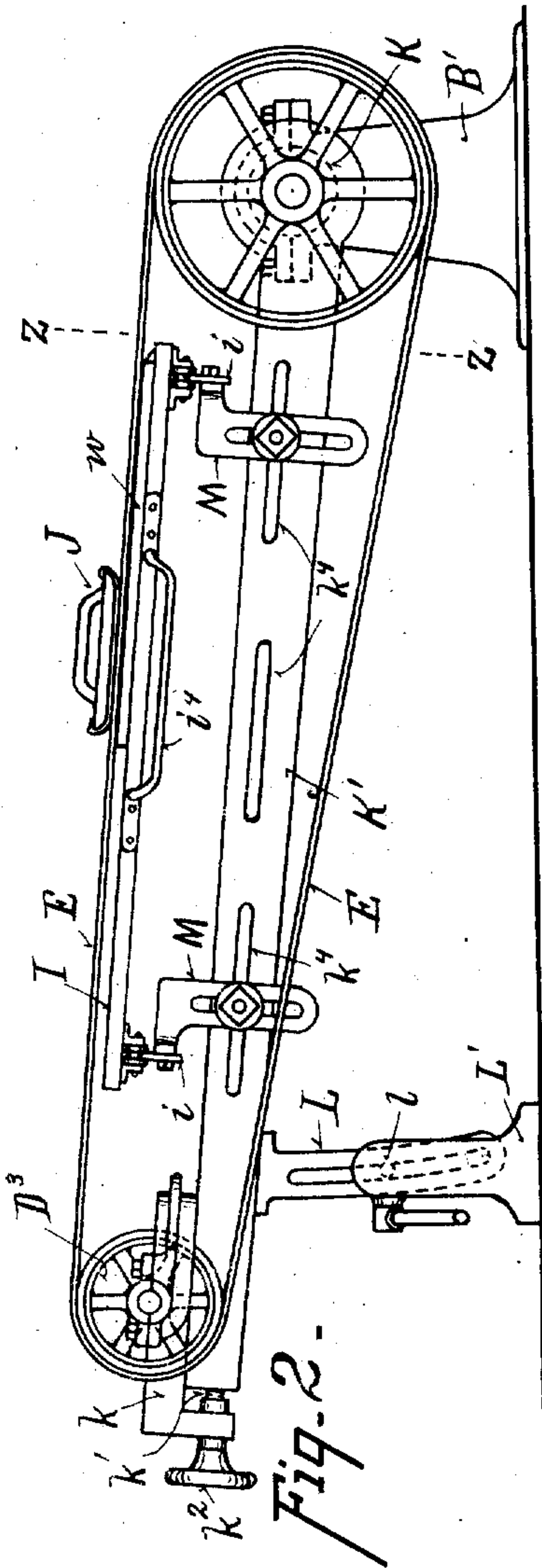


Fig. 2.

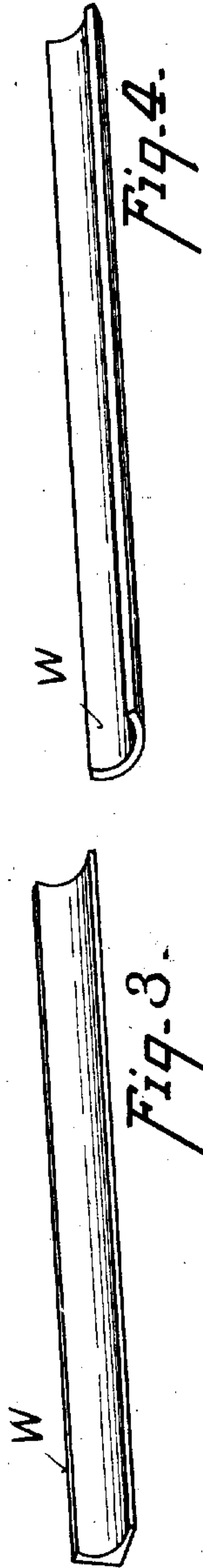


Fig. 3.

Fig. 4.

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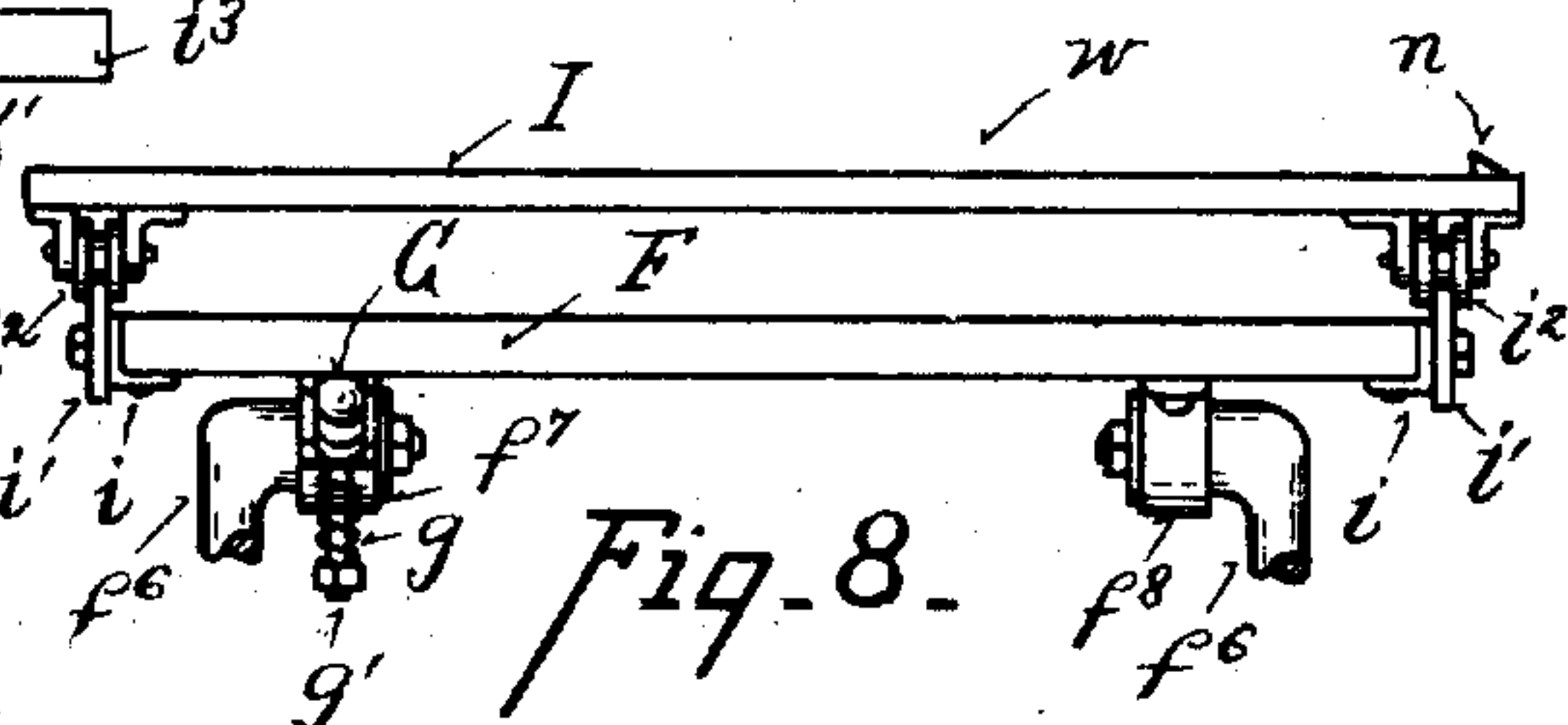
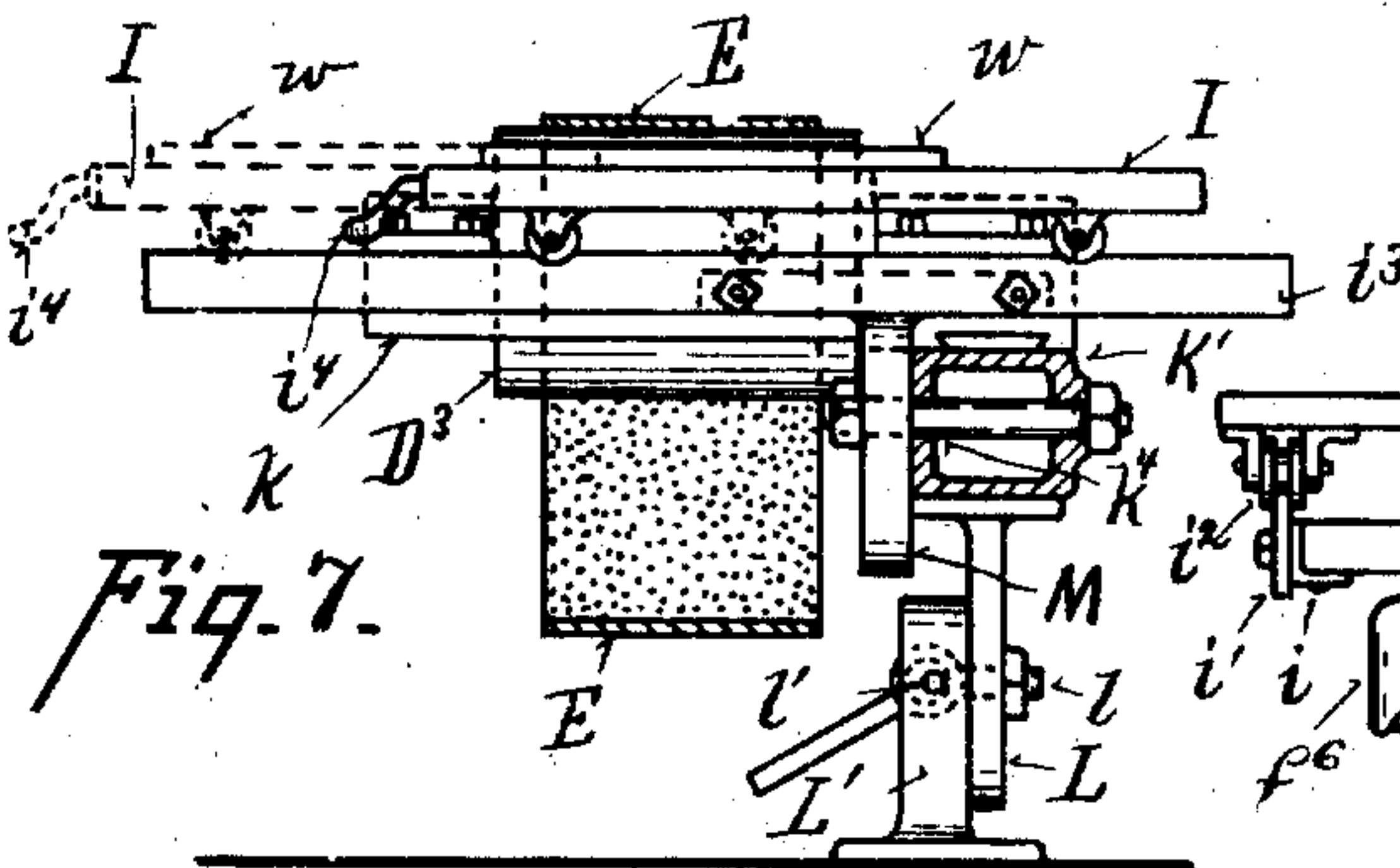
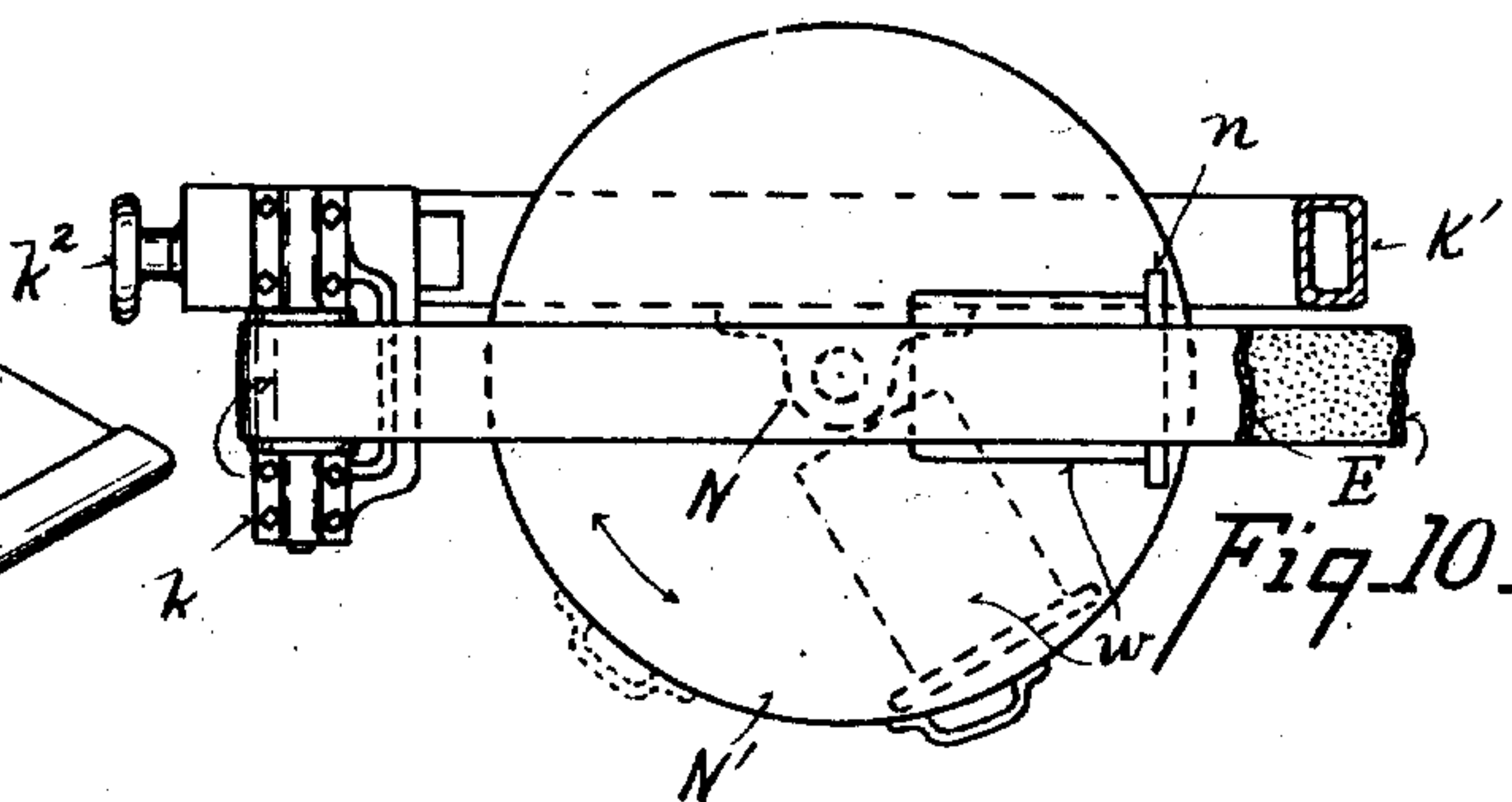
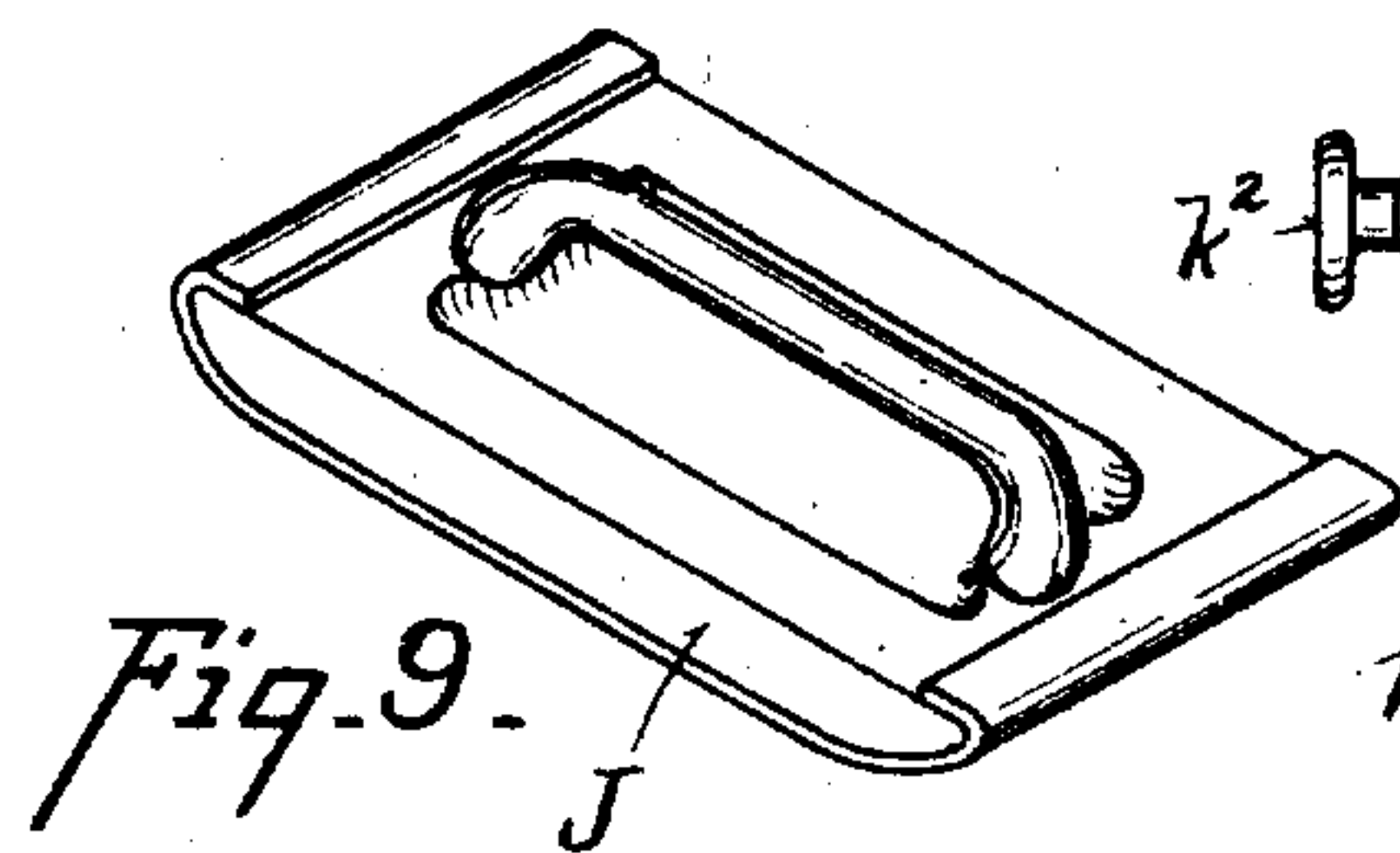
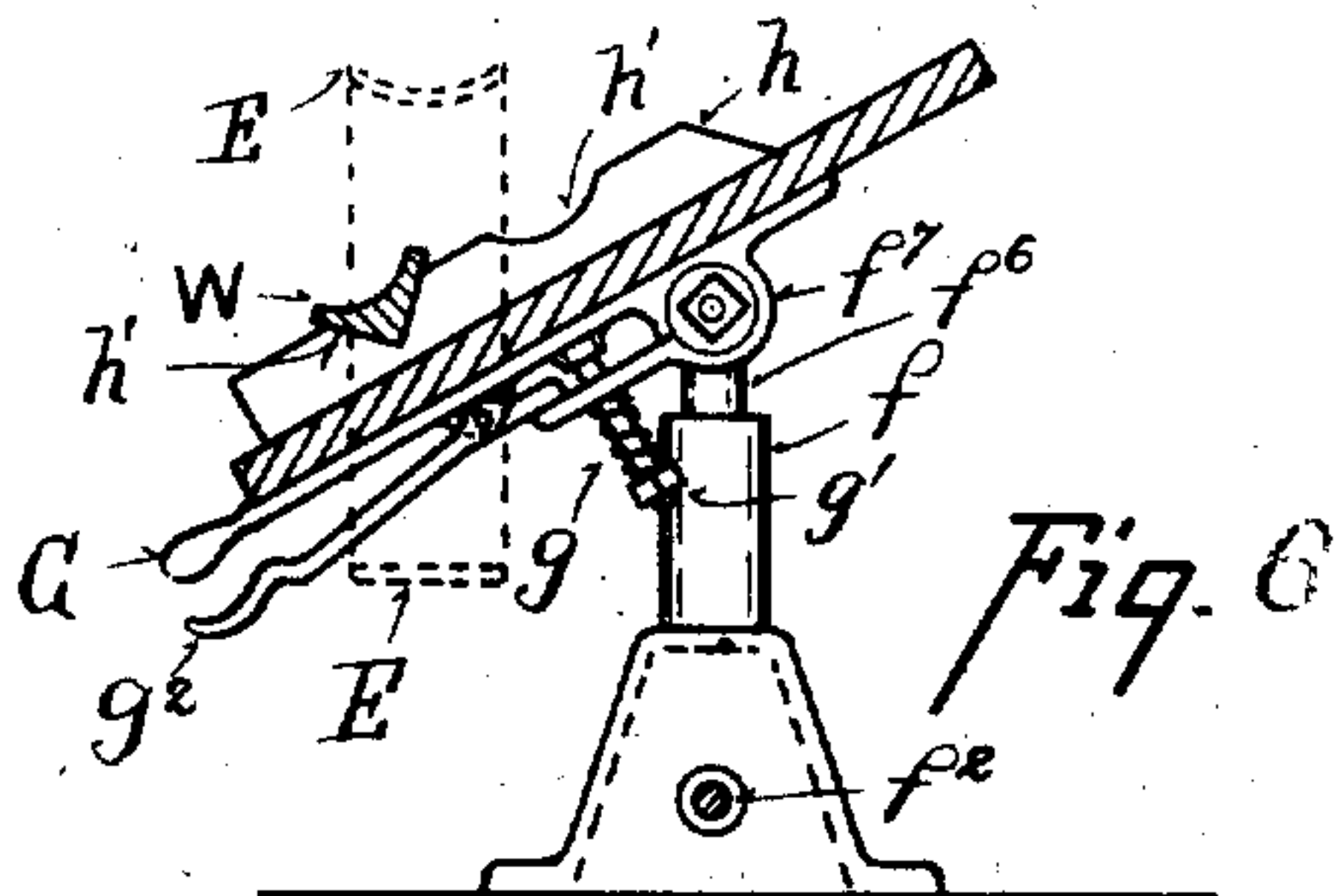
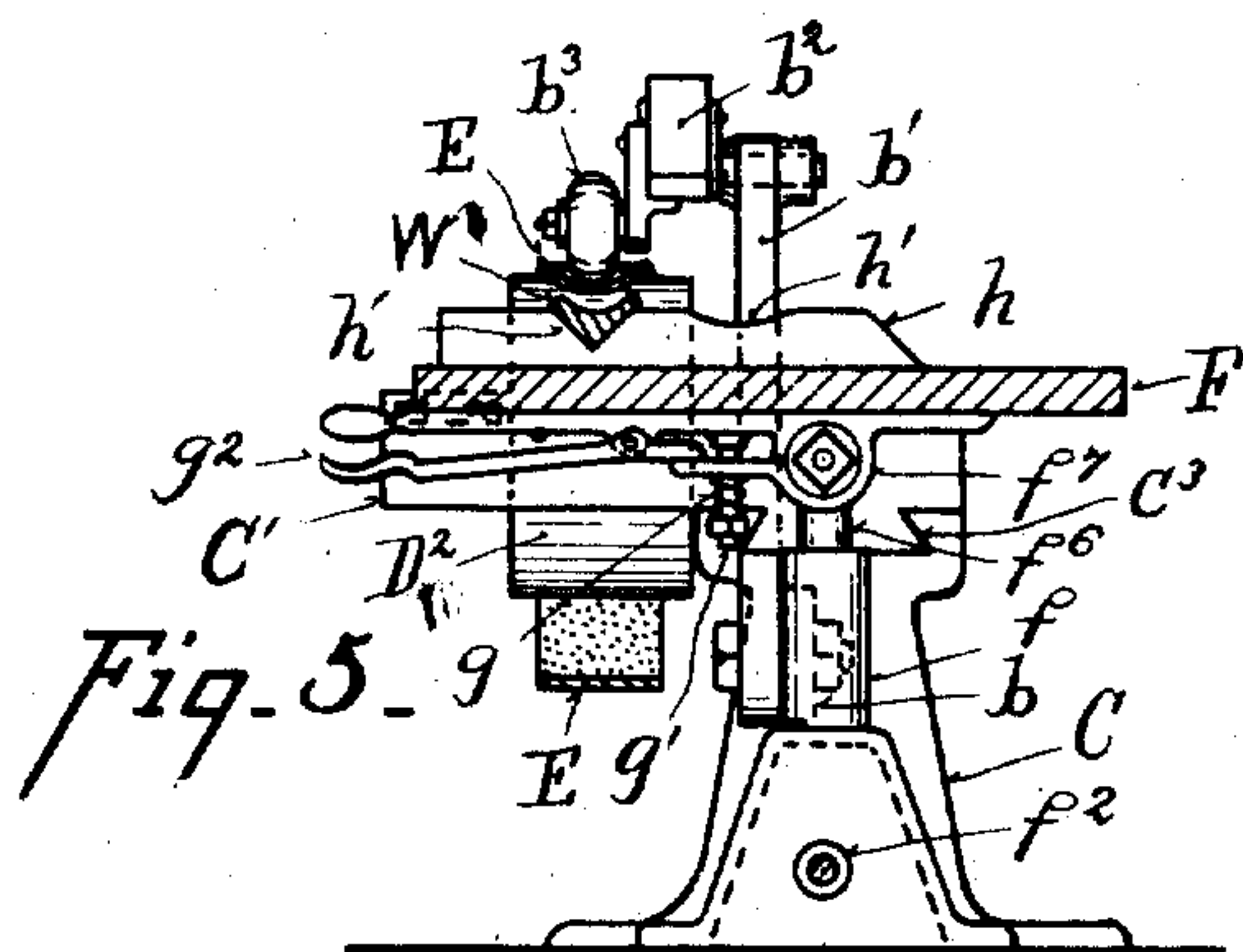
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 ABRASIVE APPARATUS.
 APPLICATION FILED AUG. 8, 1907.

100,249.

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2 SHEETS—SHEET 2.



Witnesses

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UNITED STATES PATENT OFFICE.

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ABRASIVE APPARATUS.

No. 900,249.

Specification of Letters Patent.

Patented Oct. 6, 1908.

Application filed August 8, 1907. Serial No. 387,605.

To all whom it may concern:

Be it known that I, OLMEDO CORTEZ WYSONG, a citizen of the United States, residing at Greensboro, in the county of Guilford and State of North Carolina, have invented certain new and useful Improvements in Abrasive Apparatus, of which the following is a specification.

My invention relates to improvements in abrasive apparatus.

One of its objects is to provide an improved arrangement of the parts whereby the work can be conveniently treated and examined.

Another object is to provide an improved arrangement of parts whereby the operative parts are brought close to the floor and a strong steady mechanism secured.

Another object is to provide means whereby the abrasive belt can be successfully operated when running with its abrasive face toward the pulleys.

Another object is to provide improved means for supporting and examining curved surface and plane surface work.

It further consists in certain details of form, combination, and arrangement, all of which will be more fully set forth in the description of the accompanying drawings, in which;

Figure 1 is a side elevation of my improved mechanism in the form which it is employed for treating long and heavy work. Fig. 2 represents a side elevation of a modification employed for treating shorter and lighter work. Figs. 3 and 4 represent different styles of work capable of being treated with my improved mechanism. Fig. 5 is a section on line *vv* of Fig. 1. Fig. 6 is a similar view showing the work table in position to examine the work. Fig. 7 is a section on line *zz* of Fig. 2. Fig. 8 is a side elevation of the work table of Fig. 1 adapted for plane work. Fig. 9 is a perspective view of the hand operated pad for pressing the abrasive belt to the work. Fig. 10 is a top plan view of the machine Fig. 2 showing a modified table for treating light and short work.

As illustrated in Fig. 1, A represents the driving shaft, which is preferably driven by means of a belt from the line shaft shiftable from a tight to a loose pulley to stop and start shaft A. Shaft A carries a pulley A' which is preferably provided with a surface A² of fibrous or textile material formed by winding a piece of canvas several times

around the face of the pulley and firmly securing the same in place by a suitable cement. The shaft A is journaled in a standard B secured firmly to the floor. *b* represents a slotted bracket to which may be attached an adjustable arm *b'* at the upper end of which is an adjustable arm *b²* armed at its free end with a form or forming roller *b³* adapted to press upon the rear or smooth face of the abrasive belt and give it approximately the outline of the work to be treated.

C represents a standard which may be secured to the floor at any desired distance from the standard B, depending upon the length of work to be treated.

c² represents a bracket similar to bracket *b*, and to which may be attached a second set of parts *b'*, *b²*, *b³* for the purpose above described. The upper portion of standard C is provided with ways *c³* in which slide an adjustable head C', said head being adjustable relative to the standard by means of a screw shaft *c* and hand wheel *c'*.

D represents a shaft journaled in boxes carried by the head C' and provided with a pulley D' having a fibrous face D² similar to that of the pulley A'.

E represents the abrasive belt, which is adjusted upon the pulleys A' D' with its abrasive face to the pulleys, the head C' being adjusted to secure the desired tension on the belt.

F represents a work supporting table carried on standards *f f'* and adjustable as to height by means of a shaft *f²* carrying beveled gears *f³* meshing with beveled gears *f⁴* which rotate screw rods *f⁵* to elevate and lower the stems *f⁶* within the standards *f f'*, to which they are splined. The upper ends of the stems *f⁶* are bent at right angles and journaled in boxes *f⁷ f⁸* attached to the under side of the table F. The box *f⁷* is split at one side, and held normally tight upon the stem *f⁶* by means of a spring *g* and bolt *g'*. A handle G projects from the box *f⁷* beyond the edge of the table, and a pivoted lever *g²* is adapted to be grasped with the handle and pressed against the handle to cause its opposite end to counteract the spring *g* and loosen the grip of the box *f⁷* upon stem *f⁶* so that the table may be tilted to any desired position, which it will retain as soon as lever *g²* is released. The table may thus be tilted as indicated in Fig. 6 to lower the work away from the under abrasive side of the belt in order that the work may be conveniently ex-

amined. Long pieces of work W such as illustrated in Figs. 3 and 4 are preferably supported upon cross bars h attached to the table F and notched or recessed at h' to support the particular style of work to be treated.

Angle plates i are provided at the ends of the table, to which as shown in Fig. 8 may be bolted cross rails i' , and where plane work is to be treated, a supplemental table I is provided, which travels crosswise above the table F upon rollers i^2 riding upon the rails i' ; thus the work w resting on table I may be drawn forward from under the belt for examination, and returned for further treatment.

In treating the work a hand pad J is applied to and shifted along the rear or smooth face of the belt to press the abrasive face of the belt against the work at the points desired, the belt traveling normally slightly above the face of the work, except as pressed against the work by pad J. This permits the work to be variously treated at different points as may be required, and permits the desired surface to be secured without danger of cutting through even thin veneers. By running the abrasive belt with its abrasive face to the pulleys and interposing the table between the upper and lower sections or reaches of the belt, I am enabled to avoid having the pulleys above the table, thus bringing the belt close to the floor where a firm support is secured therefor, vibration avoided, a compact mechanism attained, and the operative parts brought into convenient position for use. The textile face of the pulleys secures a strong traction or propulsion of the belt, and avoids injury to the abrasive face of the belt, and to the face of the pulleys.

In the modification shown in Figs. 2 and 7 the driving shaft is journaled centrally within a sleeve K forming part of the swinging or adjustable frame K', which sleeve is journaled in the standard B'. An idler pulley D^a is carried by a head k sliding in ways upon the end of frame K', and adjustable to tighten the abrasive belt by means of a screw k^1 and hand wheel k^2 . A segmental bracket L projects downward from frame K' and is locked by means of an eye-bolt l and eccentric pin l' to the standard L' which is bolted to or stands upon the floor. The frame K' is provided with slots k^4 to which may be secured arms similar to arms b^1 b^2 and also brackets M which may be employed to support cross rails i^3 on which table I may be mounted, or a table similar to table F may be mounted on brackets secured to the frame K' by slots k^4 . Frame K' is adjustable from a horizontal to nearly vertical position.

As illustrated in Fig. 10 a bracket N is attached to the frame K' and a table N' pivotally mounted thereon. The work w is laid upon the table and the table may be shifted

upon its pivot as indicated in full and dotted lines to bring the work beneath the belt or into position to be examined by the operator.

n represents a strip against which the work rests to prevent it from slipping off the table.

The mechanism herein specified is capable of considerable modification without departing from the principle of my invention.

Having described my invention, what I claim is;

1. In a mechanism of the character indicated, a driving pulley, an idler pulley, an abrasive belt supported by said pulleys with its abrasive face to the pulleys, a work table interposed between the two reaches of said belt, and means for pressing the belt against the face of the work.

2. In a mechanism of the character indicated, a pair of pulleys, an abrasive belt supported upon and driven by said pulleys with the abrasive face of the belt toward the pulleys, a movable work table interposed between the two reaches of the belt, said table being movable relative to said belt to shift the work so that it may be acted upon by the belt and examined by the operator.

3. In a mechanism of the character indicated, a pair of pulleys, an abrasive belt supported upon and driven by said pulleys with the abrasive face of the belt toward the pulleys, a work table pivotally supported between the two reaches of said belt, and means for adjusting said table to varying positions relative to said pivotal support, and locking the table to its adjusted position.

4. In a mechanism of the character indicated, a pair of pulleys, an abrasive belt supported upon and driven by said pulleys with the abrasive face of the belt toward said pulleys, a work table pivotally supported between the two reaches of said belt, mechanism for adjusting said table to varying positions relative to said support and locking the table to its adjusted position, and means for pressing the belt against the face of the work.

5. In a mechanism of the character indicated, a pair of pulleys, an abrasive belt supported upon and driven by said pulleys with the abrasive face of the belt toward said pulleys, a work table adjustably supported between the two reaches of said belt, and cross rails carried by said table, said cross rails being adapted to support a detachable supplemental table.

6. In a mechanism of the character indicated, a pair of pulleys, an abrasive belt supported upon and driven by said pulleys with the abrasive face of the belt toward said pulleys, a work table pivotally supported between the two reaches of said belt, and rails carried by said table, said rails being adapted to support a supplemental table movable relative to said primary table.

7. In a mechanism of the character indi-

ated, a pair of pulleys having faces of textile material, an abrasive belt supported upon and driven by said pulleys with the abrasive face of the belt toward said pulleys, a work table supported between the two reaches of said belt, in position to support the work so as to be acted upon by the under face of the upper reach of said sand belt.

8. In a mechanism of the character indicated, a driving pulley having a face of textile material, an idler pulley, and an abrasive belt traveling over and strained upon said respective pulleys with its abrasive face toward said pulleys.

9. In a mechanism of the character indicated, a pair of pulleys, each having a face

of textile material, and an abrasive belt traveling over and strained upon said respective pulleys with its abrasive face toward said pulleys.

10. In a mechanism of the character indicated, a pair of pulleys, an abrasive belt supported upon and driven by said pulleys, with its abrasive face toward said pulleys, and a work supporting table located between the two reaches of said belt.

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

OLMEDO CORTEZ WYSONG.

Witnesses:

J. A. KLEEMEIER,
P. D. KEMER.