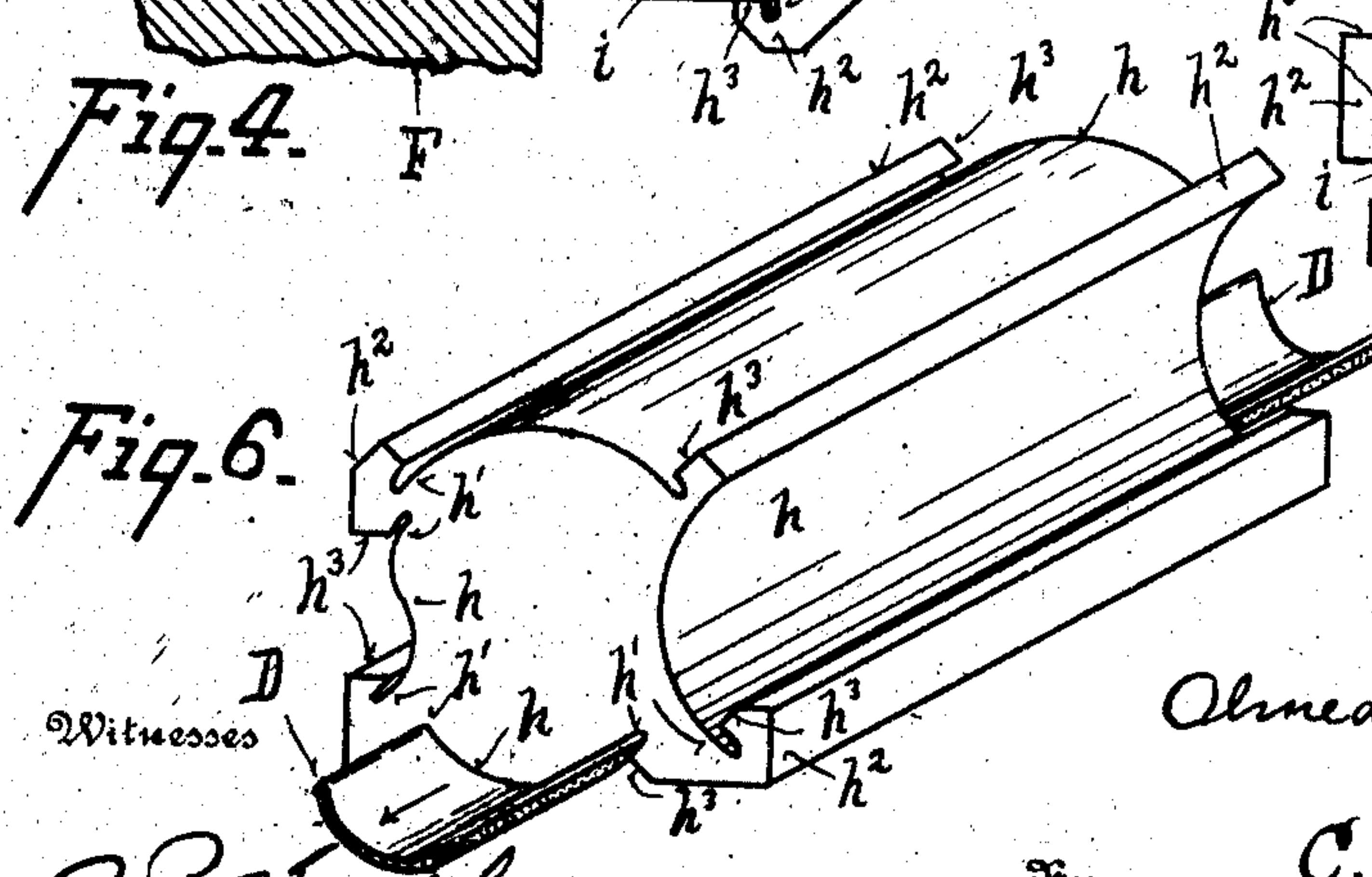
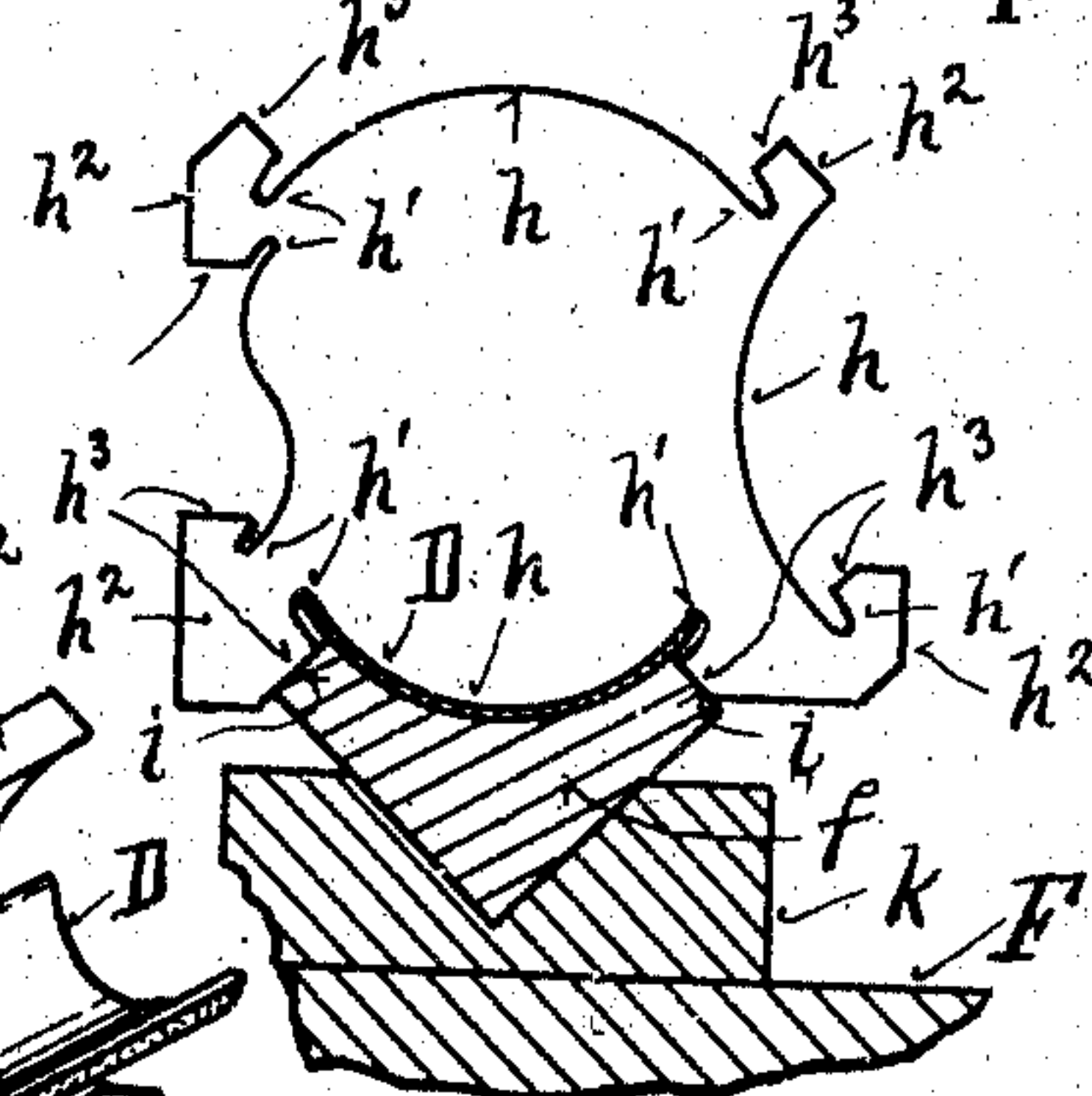
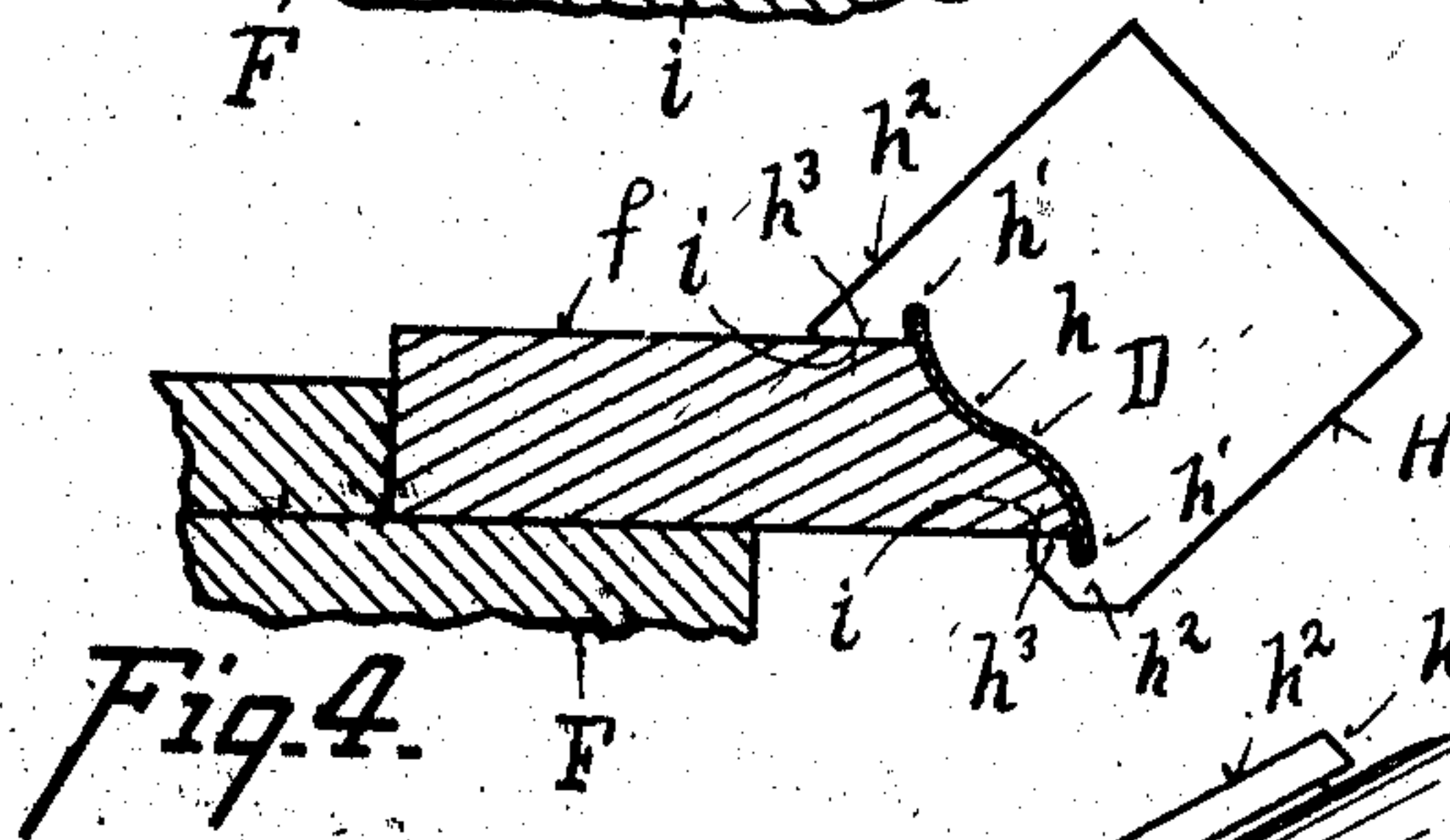
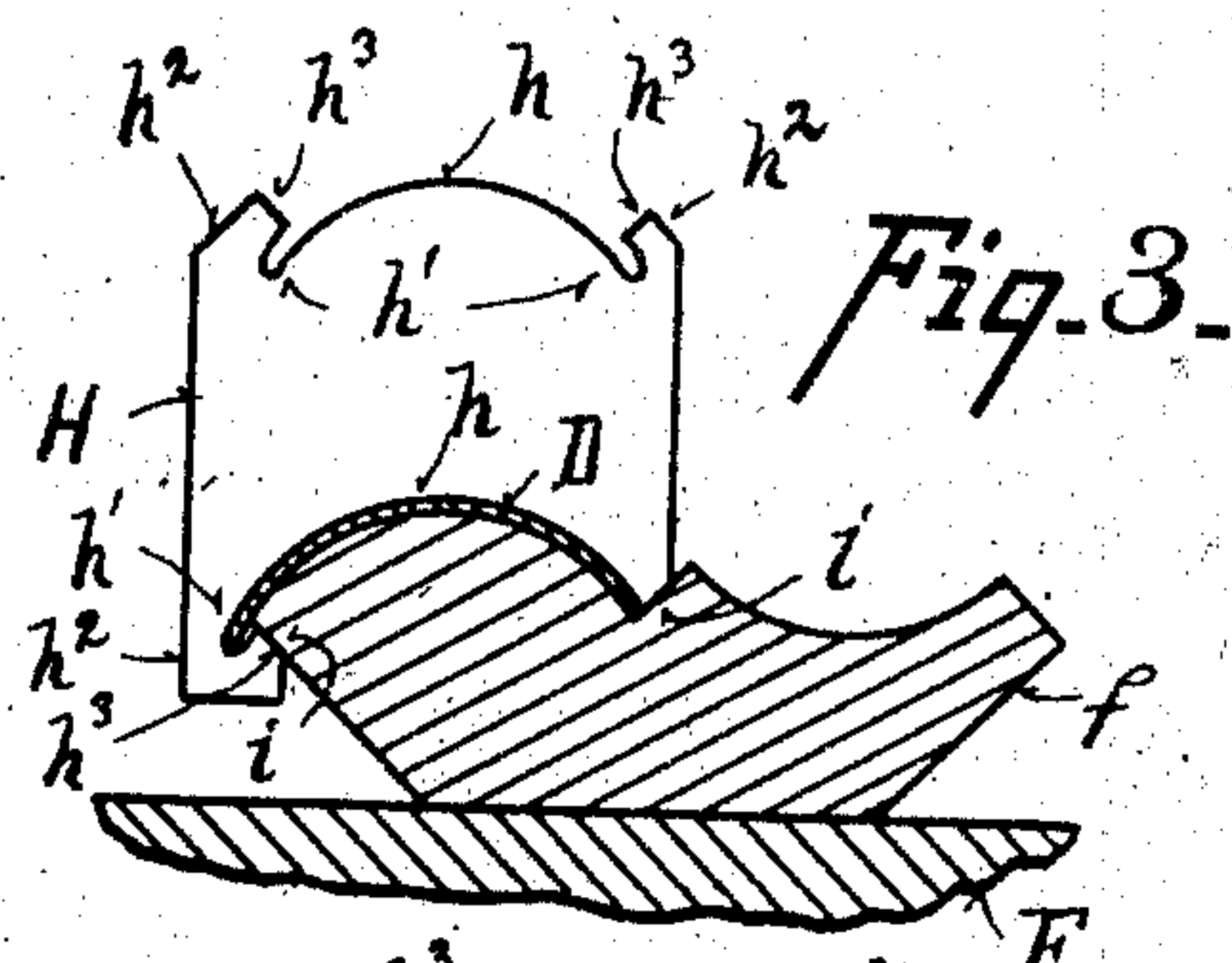
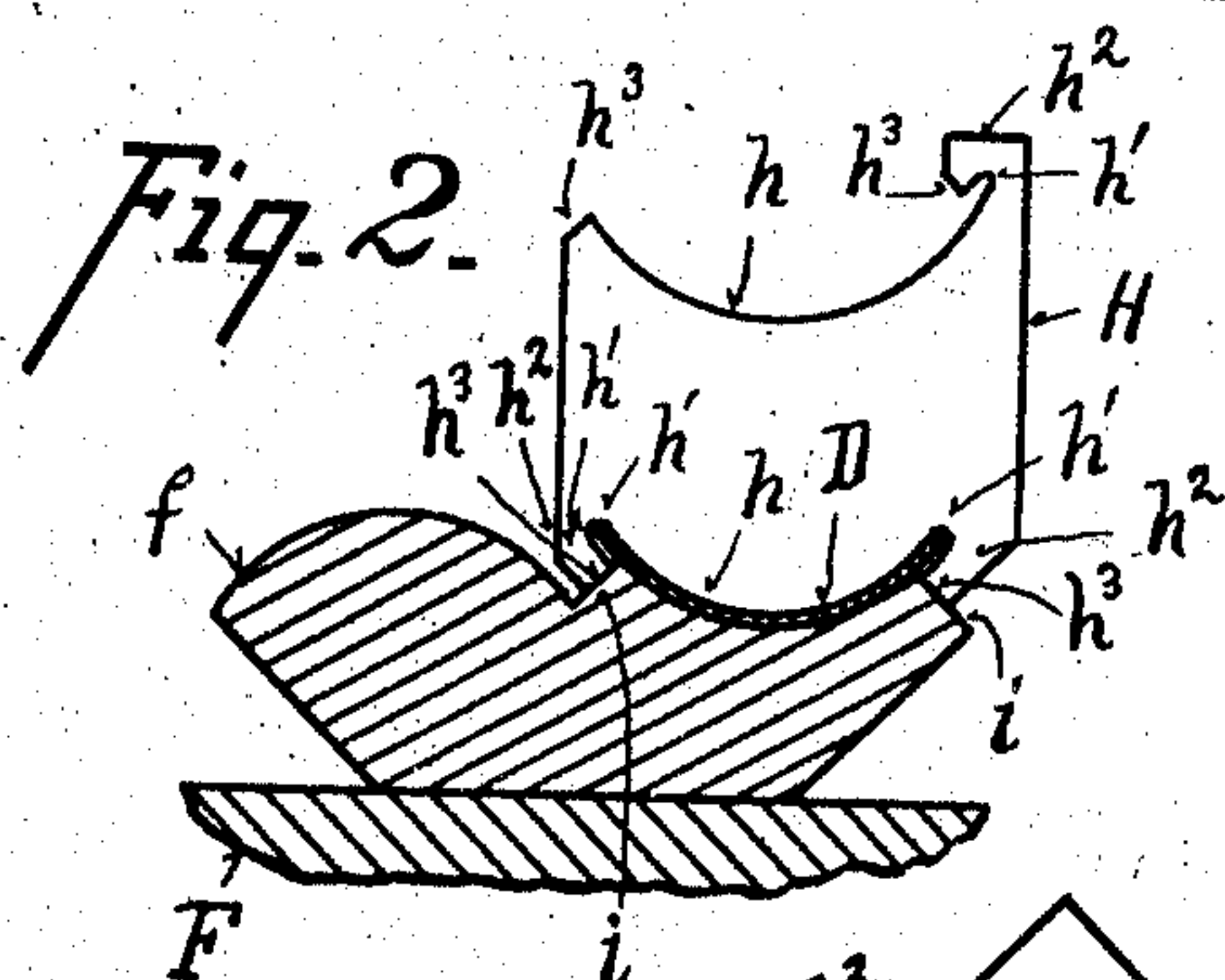
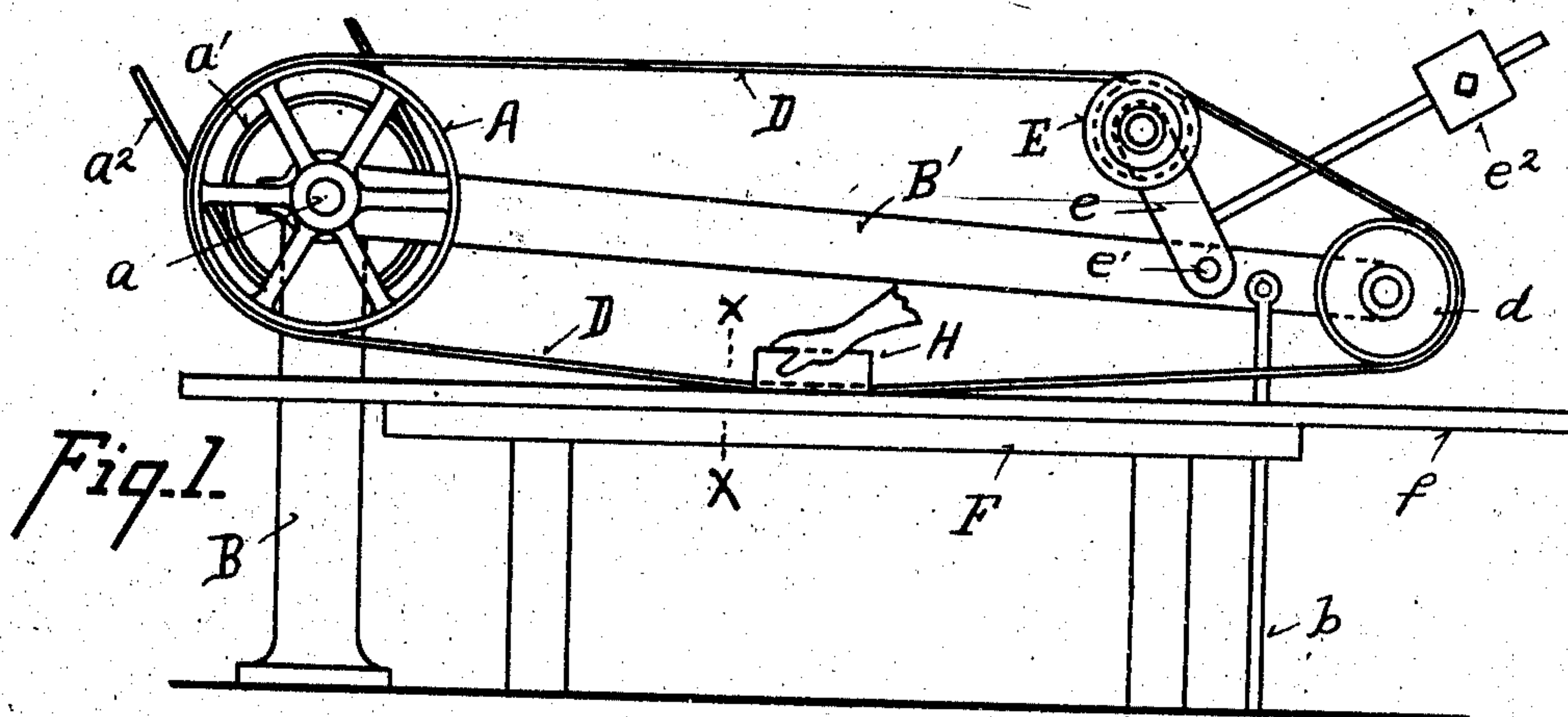


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 ABRASIVE APPARATUS.
 APPLICATION FILED APR. 2, 1910.

994,358.

Patented June 6, 1911.



Witnesses

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ABRASIVE APPARATUS.

994,358.

Specification of Letters Patent.

Patented June 6, 1911.

Application filed April 2, 1910. Serial No. 553,044.

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 improved means for supporting and holding an abrasive belt in contact with work of curved or irregular pattern.

Another object is to provide means to guide and support one or both edges of the belt, to cause the belt to travel true relative to the work, and to prevent injury to the work from irregularities at the edges of the belt.

Another object is to provide means to guide the belt support on or relative to the work to be polished.

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 an abrasive belt supporting and driving mechanism, and work support with my invention in position for use. Fig. 2 is an enlarged detail vertical section on line $x-x$ of Fig. 1, illustrating the relative positions of the work, abrasive belt, and belt support. Fig. 3 is a similar sectional view showing the belt support reversed and applied to another face of the work. Fig. 4 is a similar sectional view illustrating a modification of the belt support, and applied to work of a different pattern. Fig. 5 is a similar sectional view, illustrating modifications of the belt support, and pattern of the work. Fig. 6 is a perspective view of the work support of Fig. 5, and a section of the belt guided thereby.

In the accompanying drawings A represents an abrasive belt driving pulley which is mounted upon a shaft a journaled to a frame B. A pulley a' on shaft a serves by means of a belt a^2 to drive the shaft a and pulley A.

D represents an abrasive belt driven by pulley A and supported at its opposite end upon an idler pulley d journaled to the

frame B', the extended end of which frame is supported by a rod b . An idler pulley E is journaled to an arm e which is pivotally supported at e' relative to frame B'. An adjustable weight e^2 carried by the arm e serves to hold the pulley E yielding in contact with the belt D to take up the slack in said belt and tension the abrasive belt to the extent desired. Other means than illustrated may be employed to tension and take up the slack in the belt. As illustrated in Fig. 1 the abrasive belt is adapted to run with its abrasive face away from the pulleys, it may, however, be arranged to run with its abrasive face toward the pulleys if desired.

F represents a work supporting table and f a piece of work.

In Figs. 2 to 5 I have illustrated in cross section several patterns of molding and house finishing stock of the general class adapted to be polished.

In order to support a section of sufficient length of the traveling abrasive belt in proper relation to the curved face or pattern of the work to be polished, I provide a holder or support H for the active section of the belt, which support is adapted to be held in the hand of the operator and guided over the surface to be polished. The support H is provided with a face h curved or shaped to a counterpart of the surface to be polished, and which face is adapted to support the rear face of the belt and to shape the belt to said face h before and during the time the belt is being applied to the work. One edge of the belt, and where practical both edges of the belt, are embraced in recesses h' formed at the edge of the face h , and the overhanging sections h^2 at one or both sides of the face h are suitably shaped to provide one or more faces h^3 to engage counterpart faces i on the work and thus serve as guides to guide the support H along the face of the work. The recesses h' each serve to guide the edge of the belt and to hold the belt in position relative to the support H, and further serve to protect the work from contact with the edges of the belt which are more liable to be rough or irregular than the central portion of the belt. As illustrated in Fig. 3 one edge of the belt is of necessity employed to polish the work, and the plane face i of the work serves as a guide for one edge of the belt.

while the opposite edge is guided by the recess h' of the support II.

The supports II which may be of various length, usually from four to ten inches, are preferably formed from hard wood, and can be conveniently cut on a band saw to the pattern or counterpart of the work to be treated. A separate support may be employed for each pattern of work to be treated as indicated in Fig. 4, or two or more faces of the support may be utilized for different patterns, as indicated in Figs. 2, 3, 5, and 6, and particularly where two or more patterns are required to polish a single piece of work, as illustrated in Figs. 2 and 3.

In practice the work is supported either directly upon the flat surface of the table, or upon a grooved strip k supported on the table. The belt is adjusted to position in a suitably prepared support II, power is then applied to drive the abrasive belt D, and the operator, preferably holding support II in his hand with the belt traveling through said support, adjusts the support to the face of the work and presses the support to the work with light or heavy pressure and guides the support along the face of the work with greater or less speed according to the amount of polishing required at various points on the work. The work, which is usually in pieces shorter than the length of the work table, is removed and replaced with new work, preferably by hand, the operator using one hand to hold and guide the support II and the other hand to manipulate the work.

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

Having described my invention what I claim is:

1. An abrasive belt support having a belt supporting face the counterpart of the work to be polished, and recesses at opposite sides of said supporting face adapted to receive and guide the edges of a traveling abrasive belt.

2. An abrasive belt support having a supporting face the counterpart of the work to be polished, and a recess adapted to receive and guide the edge of a traveling abrasive belt.

3. An abrasive belt support having a belt supporting face the counterpart of the work to be polished, a recess adapted to receive and guide the edge of a traveling abrasive belt, and a face adapted to engage a face on the work to guide said belt supporting

face along in contact with the face of the work to be polished.

4. An abrasive belt support having a belt supporting face the counterpart of the work to be polished, a recess at the side of said belt supporting face adapted to receive and guide the edge of an abrasive belt, and faces at opposite sides of said belt supporting face adapted to engage faces on the work and to guide said belt supporting face along in contact with the face of the work to be polished.

5. An abrasive belt support, said support comprising a belt supporting face the counterpart of the work to be polished, recesses at opposite sides of said belt supporting face adapted to receive and guide the edges of a traveling abrasive belt, and a face adapted to engage a face on the work and to guide said belt supporting face along in contact with the face of the work to be polished.

6. An abrasive belt support, said support comprising a belt supporting face the counterpart of the work to be polished, recesses at opposite sides of said belt supporting face adapted to receive and guide the edges of an abrasive belt, and faces at opposite sides of said belt supporting face adapted to engage faces on the work and to guide said belt supporting face along in contact with the face of the work to be polished.

7. An abrasive belt support, said support comprising a belt supporting face the counterpart of the work to be polished, recesses at opposite sides of said belt supporting face adapted to receive and guide the edges of the belt, and a face at one side and at an angle to said belt supporting face adapted to engage a face on the work and to guide said belt supporting face along in contact with the face of the work to be polished.

8. An abrasive belt support, said support comprising a belt supporting face the counterpart of the work to be polished, recesses at opposite sides of said belt supporting face adapted to receive and guide the edges of the belt, and faces at opposite sides of and each at an angle to said belt supporting face adapted to engage faces on the work and to guide said belt supporting face along in contact with the face of the work to be polished.

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

OLMEDO CORTEZ WYSONG.

Witnesses:

J. A. KLEEMEIER,

J. R. BROWN.