

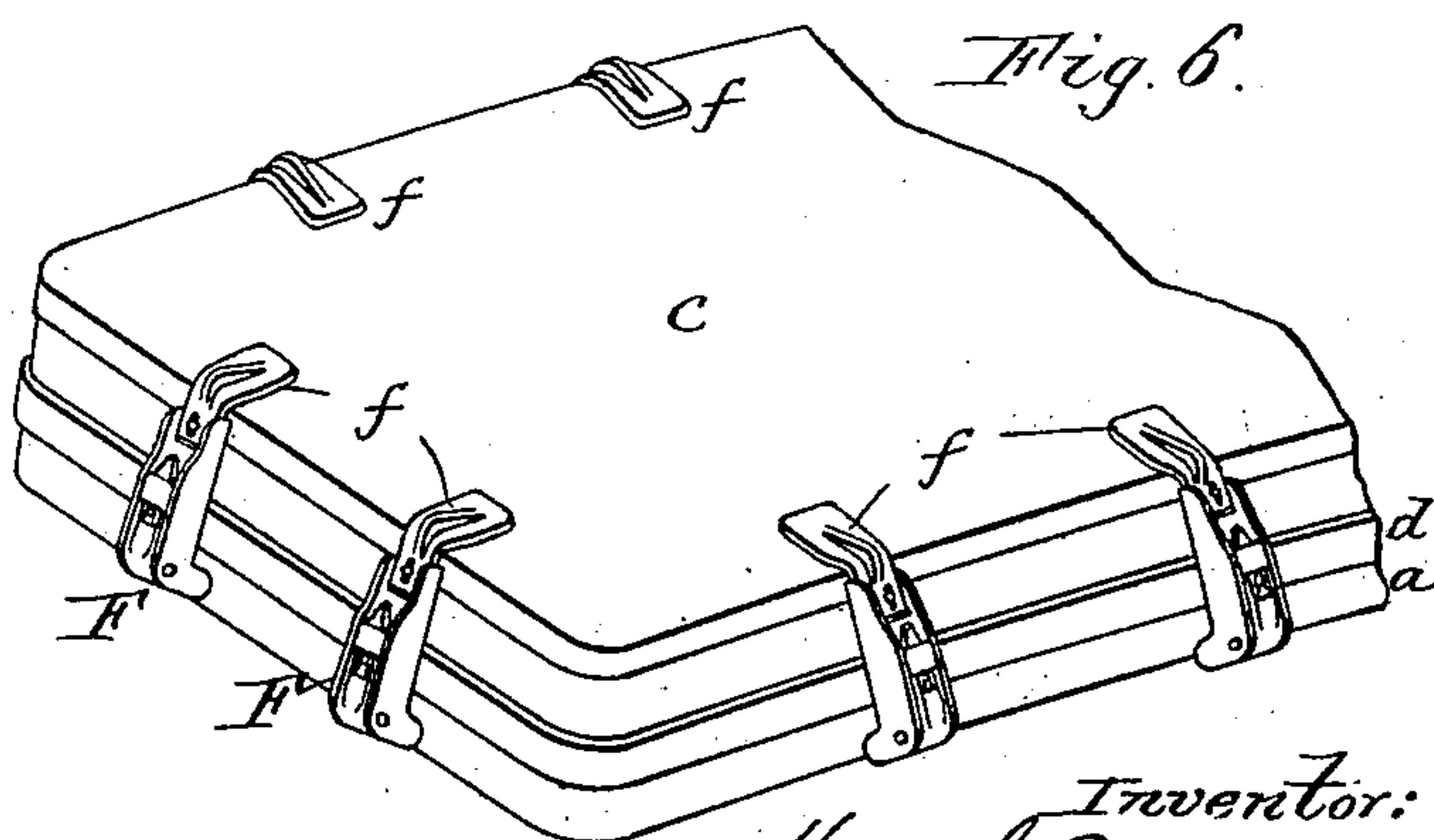
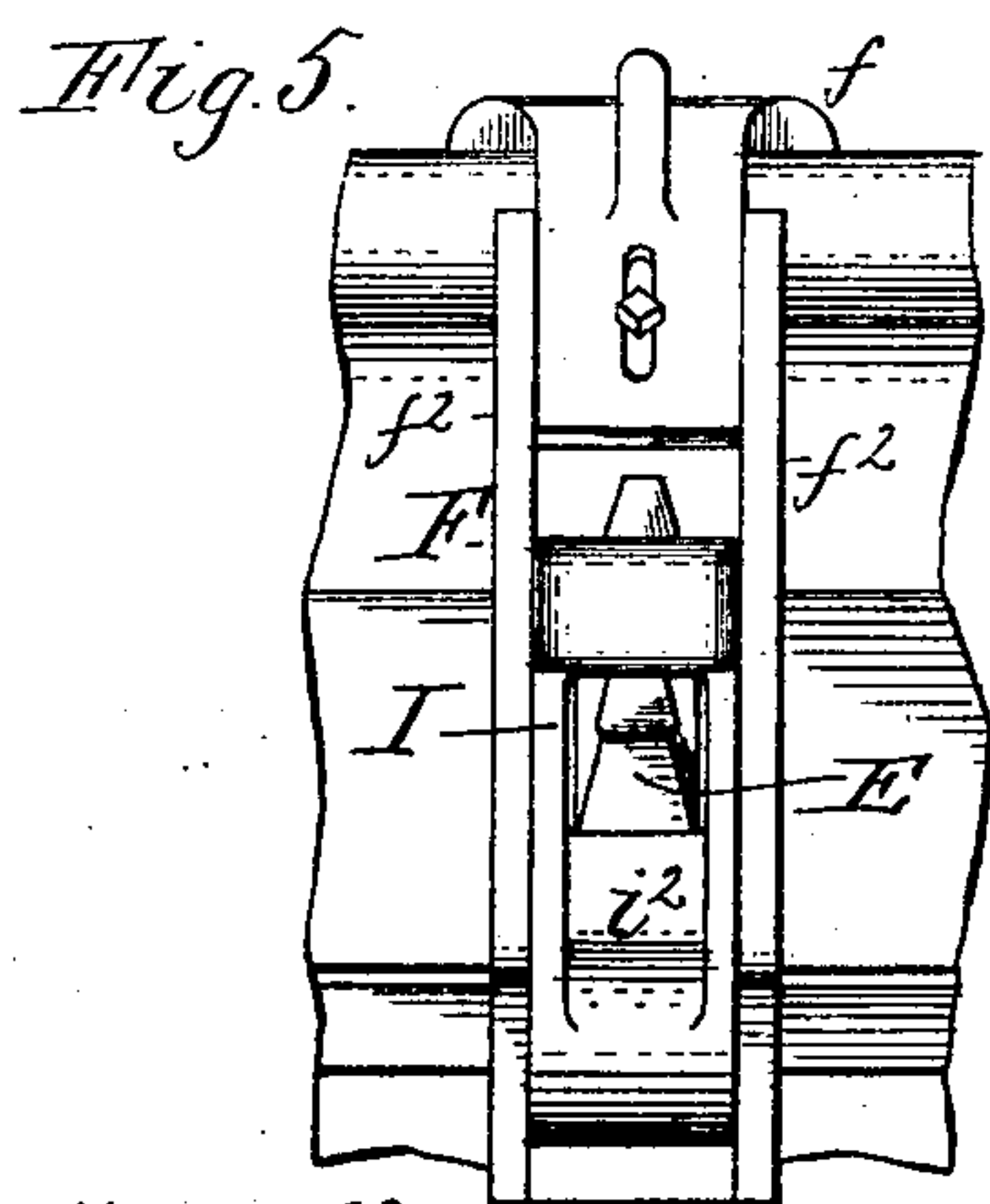
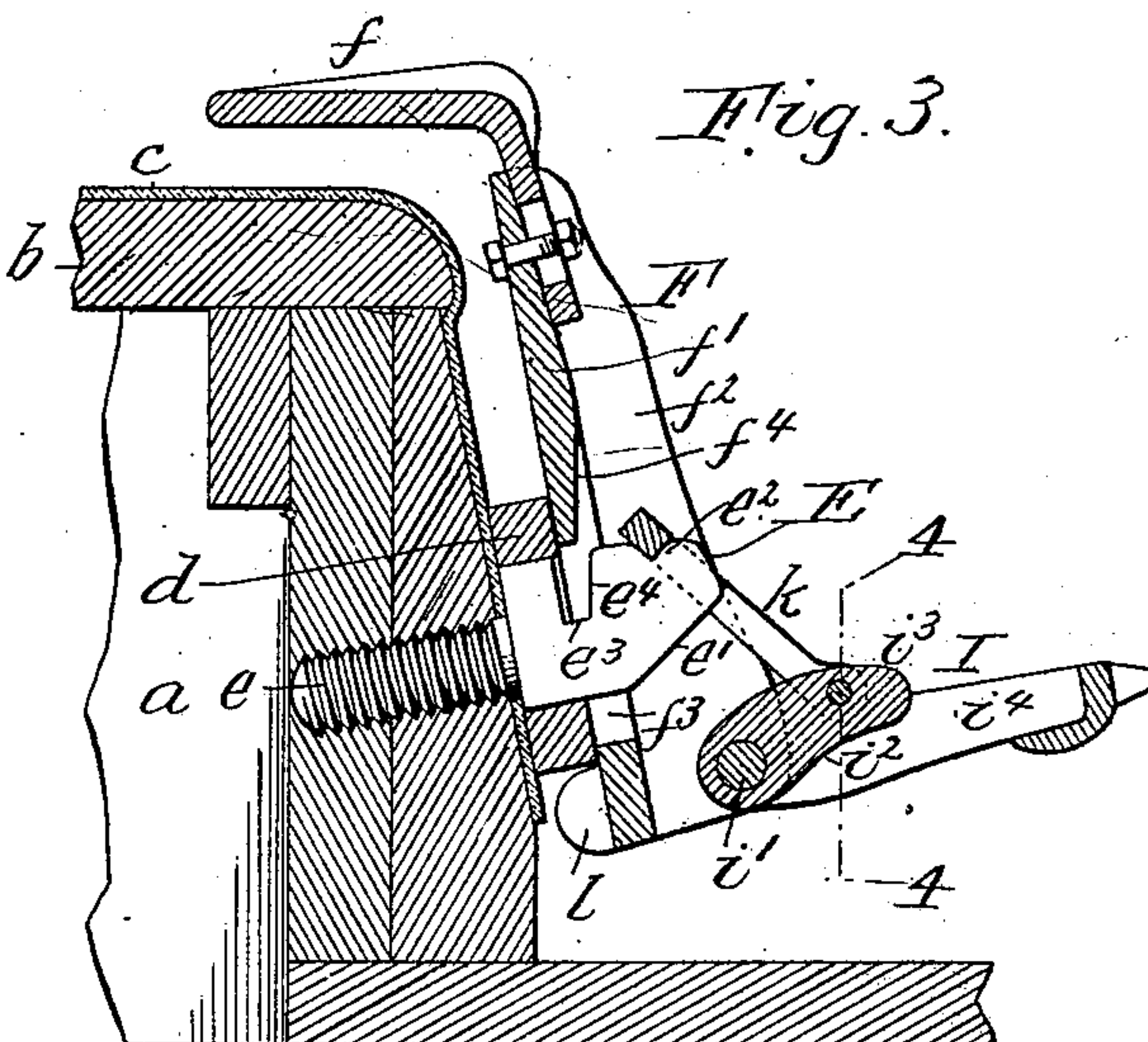
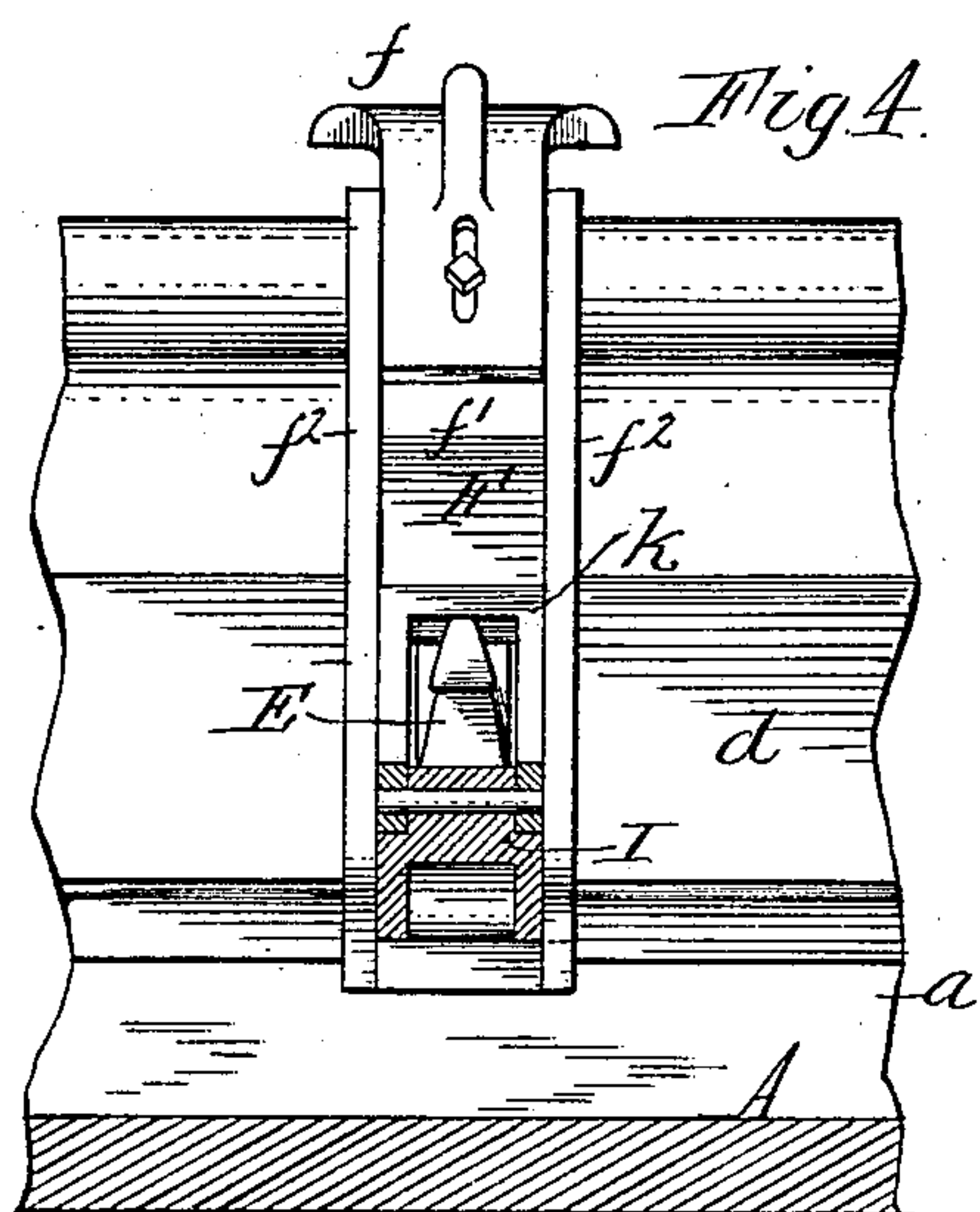
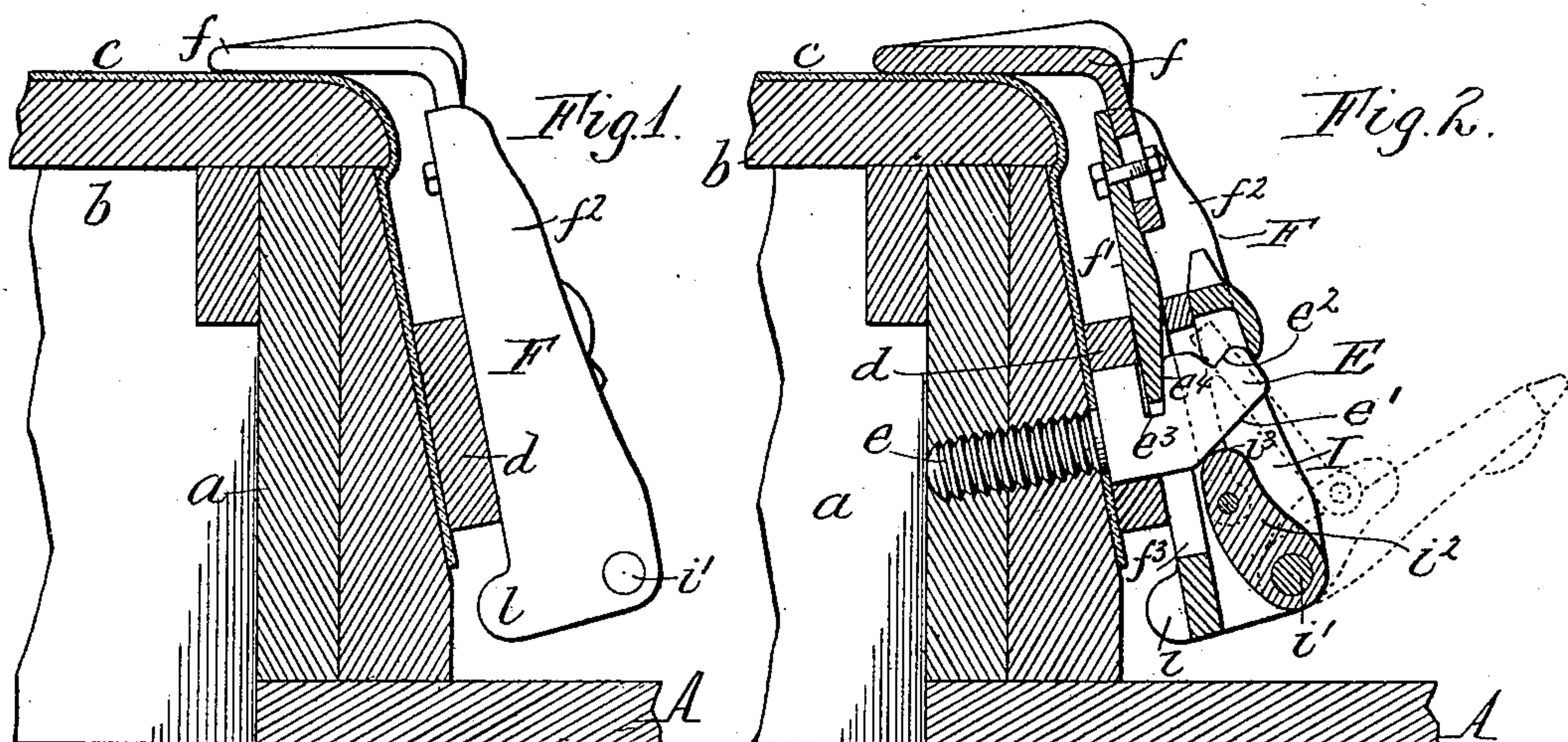
No. 677,604.

Patented July 2, 1901.

H. I. SMITH.  
HATCHWAY COVER FASTENING.

(Application filed Apr. 18, 1901.)

(No Model.)



Henry L. Dick.  
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Witnesses:

Inventor:  
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# UNITED STATES PATENT OFFICE.

HENRY I. SMITH, OF BUFFALO, NEW YORK, ASSIGNOR OF ONE-HALF TO  
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## HATCHWAY-COVER FASTENING.

SPECIFICATION forming part of Letters Patent No. 677,604, dated July 2, 1901.

Application filed April 18, 1901. Serial No. 56,412. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY I. SMITH, a citizen of the United States, residing at Buffalo, in the county of Erie and State of New York,  
5 have invented new and useful Improvements in Hatchway-Cover Fastenings, of which the following is a specification.

My invention relates to that class of fastening devices for hatchway-covers which comprise fixed members projecting from the side  
10 of the coaming or raised frame around the edge of the hatchway and movable clamps which engage with the fixed members and clamp the hatch-cover and also the battens to  
15 hold the canvas or tarpaulin which is usually stretched over the hatch-cover.

One object of my invention is to provide a fastening device which can be quickly secured and released.

26 Another object is to so construct the fastening device that it is compact and presents no protruding parts when in clamping position.

A further object is to reduce the size of the fixed members, so that when the movable  
25 members and the hatchway-cover are removed the fixed members will offer but slight obstructions about the coaming.

In the accompanying drawings, Figure 1 is a side elevation of the fastening device in  
30 clamping position, the hatchway, coaming, cover, tarpaulin, and batten being shown in section. Fig. 2 is a vertical sectional view showing the parts in the same position. Fig. 3 is a similar vertical section showing the  
35 clamp released. Fig. 4 is a front elevation with the lower part of the clamp in section on line 4 4, Fig. 3, looking toward the left. Fig. 5 is a front elevation of the device in the clamping position. Fig. 6 is a fragmentary  
40 perspective view of a hatchway-cover secured by my improved clamping devices.

Like letters of reference refer to like parts in the several figures.

A represents the deck of a vessel; *a*, the  
45 coaming; *b*, the hatchway-cover; *c*, the canvas or tarpaulin; and *d* the batten for clamping the latter. A series of clamping devices are employed to clamp the cover and canvas to the coaming; but as they are duplicates of  
50 one another only one will be described in detail. The fixed member of each device is com-

posed of a lug E, projecting from the coaming *a* and secured thereto by a screw-stem *e*. The lug has its lower face provided with a beveled end portion *e'*. It has a shoulder *e<sup>2</sup>* in its up- 55 per side near its outer end and a transverse notch or recess *e<sup>3</sup>* in its upper side in rear of said shoulder. The front wall *e<sup>4</sup>* of the recess is inclined rearwardly.

Each movable member of the fastening de- 60 vice comprises an upright bracket F, having a clamping-plate *f* extending laterally from the upper end thereof. The shank of the plate is preferably adjustably bolted to the web *f'* of the bracket between the side flanges *f<sup>2</sup>* thereof. A rectangular aperture *f<sup>3</sup>* is formed in the web *f'*, near the lower end thereof, through which the lug E projects when the clamping-bracket has been placed in position. The outer face of the web *f'* directly above 70 said aperture is beveled or inclined rearwardly in a direction corresponding to the inclined wall *e<sup>4</sup>* of the recess *e<sup>3</sup>* in the lug E. This bevel *f<sup>4</sup>* above the upper edge of the aperture *f<sup>3</sup>* engages against the inclined front 75 side of the notch *e<sup>3</sup>*, and the bracket is crowded by these wedging-faces toward the coaming when the bracket is forced down. The batten interposed between the back of the bracket and the coaming is thereby pressed against 80 the coaming to securely clamp the canvas or tarpaulin interposed between the same. The downward movement of the bracket brings the clamping-plate *f* firmly down upon the hatch-cover. The bracket is forced down by 85 means of a lever I, which is arranged with its lower end between the side flanges of the bracket near the bottom of the latter and pivoted thereto by a transverse pin *i'*. This lever has its short arm *i<sup>2</sup>* provided with a curved 90 face *i<sup>3</sup>*, which engages against the beveled face *e'* of the lug E when the lever is swung upwardly to force the bracket down. The lever is provided in its long arm outside of the bearing-face of the short arm with an 95 opening *i<sup>4</sup>*, through which the end of the lug E projects when the lever is closed against the bracket.

For securing the hatchway-cover the latter and the tarpaulin and batten-strips are first 100 placed in position and the clamping-brackets are placed on the lugs E with the clamping-le-



vers I projecting from the brackets, as shown in Fig. 3. The brackets enter the recesses of the lugs with their tapering portions  $f^4$ , and are thereby held in position on the lugs.

5 They are held in an upright position and prevented from turning on the lugs by the snug fit of said lugs in the apertures of the brackets. To tighten the clamps, the lever I of each clamp is swung upwardly and inwardly.

10 This brings the short arm of the lever to bear against the under side of the lug and by the continued inward movement of the lever draws the bracket down until the clamping-plate bears firmly upon the hatchway-cover.

15 Simultaneously the bracket is forced toward the coaming by the engagement of its beveled face  $f^4$  with the inclined wall of the notch in the lug, whereby the batten-strip is pressed against the coaming and the interposed canvas or tarpaulin is clamped in place. When

20 the lever has been closed against the bracket, it rests between the side flanges of the bracket, as shown in Figs. 1 and 2, with its outer side substantially flush with the side flanges. In

25 its tightened position the clamping device is very compact and forms but a slight obstruction around the coaming.

In order to release the brackets conveniently, means are provided for forcing the

30 bracket upward by means of the clamping-lever. For this purpose the lever is provided with a link  $k$ , which can be engaged over the lug E. This link straddles the short arm of the lever to which it is pivoted and is placed

35 with its opposite end upon the shoulder  $e^2$  of the lug. When the lever is closed against the bracket, as shown in Fig. 2, the link occupies a position between the lever and the web of the bracket. When the lever is swung

40 down, the link engages the end of the lug and is retained thereby. A further downward movement of the lever causes the lever to turn on the link as a fulcrum and raises the pivoted portion of the lever and the bracket

45 to which it is attached, lifting the tapering portion of the latter out of the notch of the lug and the clamping-plate from the cover, as shown in Fig. 3. The batten-strips illustrated herein are arranged in the same horizontal

50 plane as the lugs E and are for this purpose provided with openings through which the lugs project. The latter are thus given a support before being clamped in place. This arrangement of the batten-strips, however, is

55 not essential, as they may be placed above the lugs, if desired.

To prevent ropes or cables from accidentally entering beneath the brackets and being caught between the same and the coaming, guard-lugs  $l$  are provided at the lower 60 end of each bracket for bridging the space between the bracket and the coaming.

I claim as my invention—

1. The combination of a lug adapted to be secured to the coaming, a clamping-bracket 65 guided on said lug, and a clamping-lever pivoted to the bracket and adapted to engage against the lug for tightening the bracket, substantially as set forth.

2. The combination of a lug adapted to be 70 secured to the coaming, and provided with a rearwardly-inclined wedging-face, of a clamping-bracket provided with a face which engages against said wedging-face, and a clamping-lever pivoted to the bracket and adapted 75 to engage against the lug for tightening the bracket, substantially as set forth.

3. The combination of a lug adapted to be secured to the coaming and provided in its 80 upper side with a notch having a wedging-face, of a clamping-bracket provided with a wedging portion which enters said notch as the bracket is forced down, and a clamping-lever which is pivoted to the bracket and engages against the under side of the lug for 85 forcing the bracket down, substantially as set forth.

4. The combination of a lug adapted to be secured to the coaming and provided on its upper 90 side with a rearwardly-inclined wedging-face, of a clamping-bracket providing with a face which engages against said wedging-face, and a clamping-lever pivoted to the lower portion of the bracket and provided with a 95 short arm which bears against said lug and above said arm with an opening through which the lug projects when the lever is closed against the bracket, substantially as set forth.

5. The combination of a lug adapted to be secured to the coaming, a clamping-bracket 100 guided on said lug, a clamping-lever pivoted to said bracket and adapted to engage against the lug for drawing the bracket down, and a link attached to the lever and adapted to engage the lug for forcing the bracket upward, 105 substantially as set forth.

Witness my hand this 16th day of April, 1901.

HENRY I. SMITH.

Witnesses:

JNO. J. BONNER,  
JOHN T. WALSH.