

No. 709,928.

Patented Sept. 30, 1902.

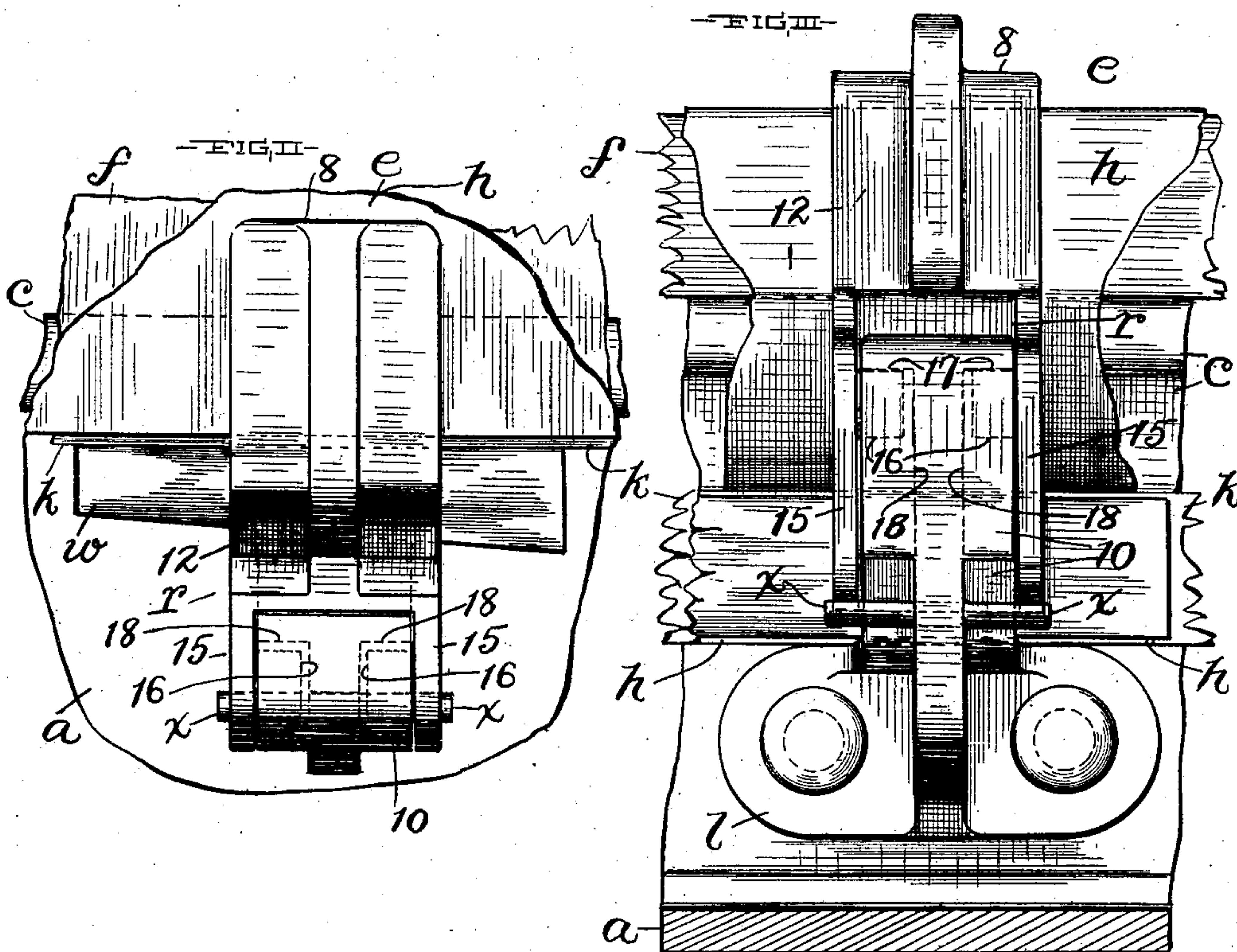
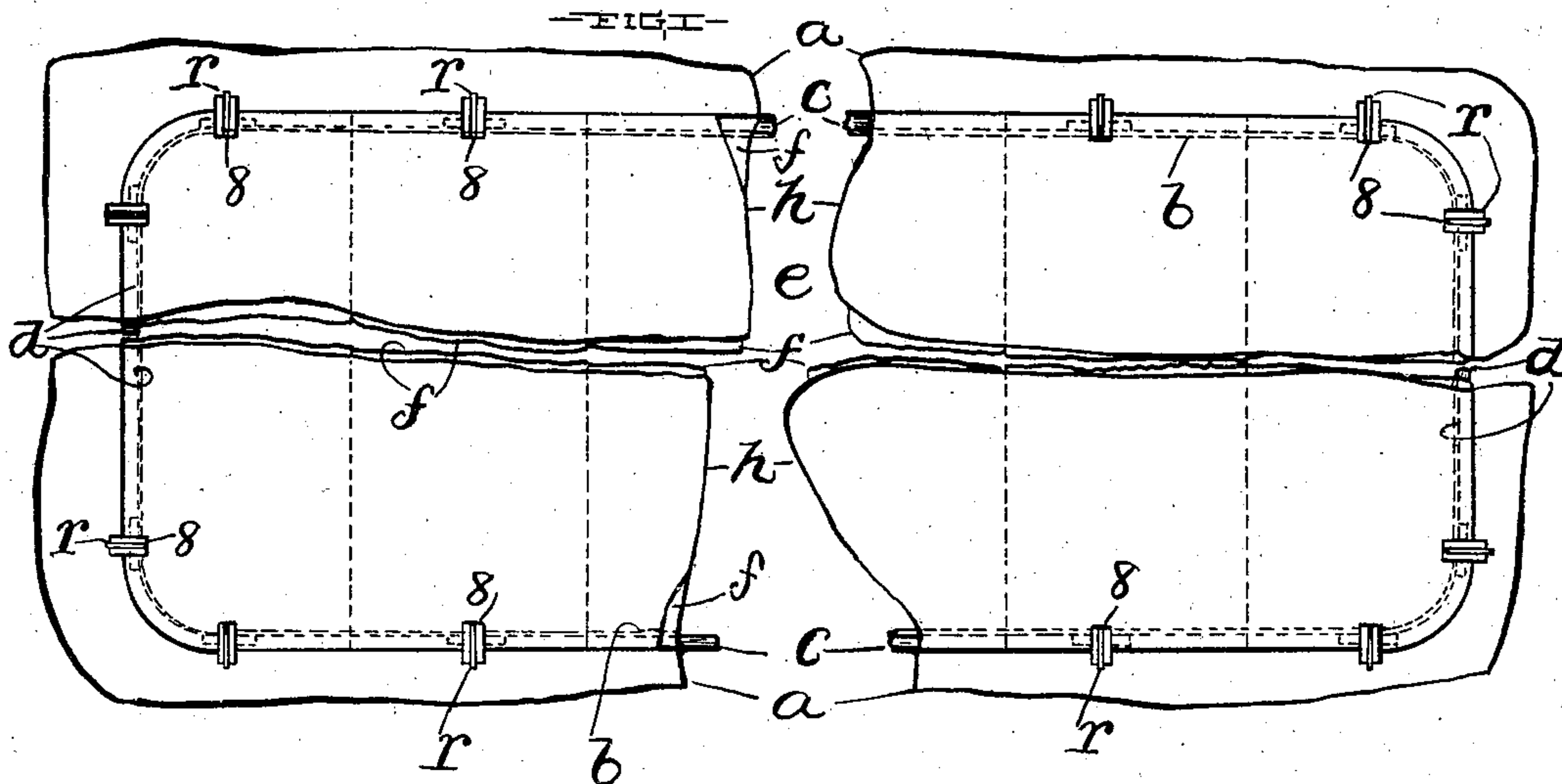
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HATCH FASTENER.

(Application filed Nov. 29, 1901.)

(No Model.)

2 Sheets—Sheet 1.



WITNESSES:

Daniel E. Daly.  
Victor C. Lynch.

INVENTORS

Archibald P. Rankin  
and Albert C. Dierickx

BY

Lynch & Worr  
their ATTORNEYS

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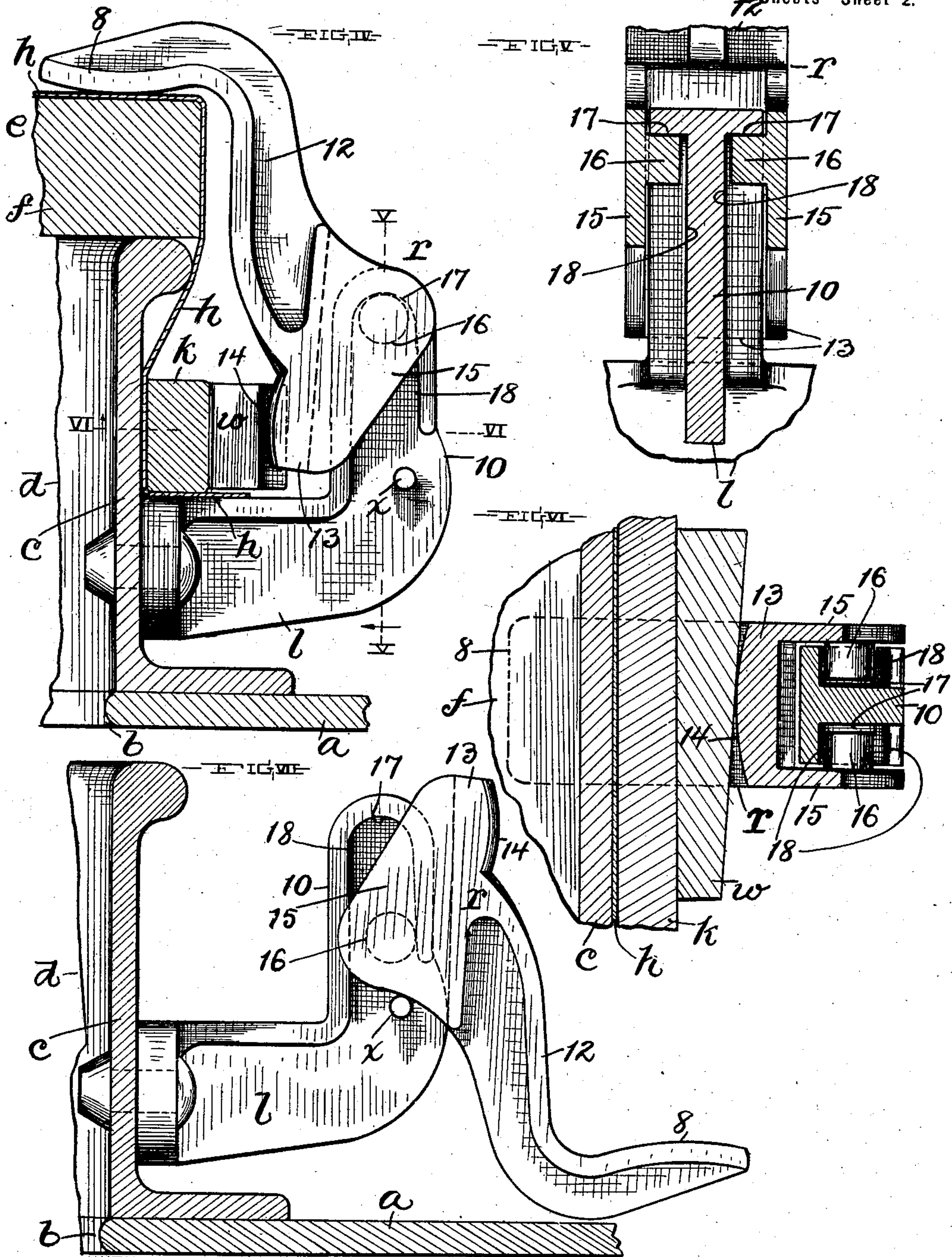
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# UNITED STATES PATENT OFFICE.

ARCHIBALD P. RANKIN, OF LAKEWOOD, AND ALBERT C. DIERICX, OF CLEVELAND, OHIO.

## HATCH-FASTENER.

SPECIFICATION forming part of Letters Patent No. 709,928, dated September 30, 1902.

Application filed November 29, 1901. Serial No. 84,046. (No model.)

*To all whom it may concern:*

Be it known that we, ARCHIBALD P. RANKIN, a resident of Lakewood, and ALBERT C. DIERICX, a resident of Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Hatch-Fasteners; and we do hereby declare the following to be a clear, full, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same.

Our invention relates to improvements in hatch-fasteners for ships or vessels, and pertains more especially to improved means for securing a hatch over a hatchway and stretching the tarpaulin or flexible waterproof covering of the hatch and holding the said covering stretched taut.

The object of this invention is to provide improved means of the character indicated which is simple and durable in construction and convenient and efficient in its operation.

In the accompanying drawings, Figure I is a top plan illustrative of a hatch arranged over a hatchway in the deck of a ship or vessel and secured in its hatchway-closing or operative position by our improved fastener. Portions are broken away in this figure to reduce the size of the drawing. Fig. II is a top plan of a portion of a coaming of the hatchway-surrounding frame or guard and the adjacent portion of the hatch secured upon the said coaming by our improved fastener. Fig. III is an outer side elevation relative to Fig. II. Fig. IV is a left-hand side elevation relative to Figs. II and III with the hatch and the hatchway-surrounding frame or guard in section. Fig. V is a vertical section on line V V, Fig. IV, looking inwardly. Fig. VI is a top plan in horizontal section on line VI VI. Fig. VII is a side elevation of a fastener applied to a coaming of a hatchway-surrounding frame or guard and shows the movable part of the fastener swung into its idle or inoperative position.

Referring to the drawings, *a*, Fig. I, designates the deck of the ship or vessel, *b* the hatchway formed in the said deck and shown in dotted lines, and *c c* and *d d* the coamings and headledges, respectively, of the frame or guard surrounding the hatchway and pre-

venting the ingress of water from the deck into the hatchway. The said coamings and headledges are of any suitable construction and assembled and secured in place in any approved manner, and *e* represents a hatch for covering the hatchway. The hatch *e* is shown extending over and resting upon the coamings *c* and the headledges *d*. The hatch *e* is made in any approved manner, consisting, preferably, of planks *f* and the tarpaulin or flexible waterproof covering *h*. The planks *f* are arranged athwart and over the hatchway and extend over and rest upon the coamings *c*, and the waterproof covering *h* extends over and covers the said planks and extends over the upper portions of the external sides of the headledges and coamings of the hatchway-surrounding frame or guard.

Battens *k*, instrumental in tightening the covering *h* and holding it stretched taut, are arranged horizontally and longitudinally of the outer sides of the headledges and coamings of the hatchway-surrounding guard and rest upon brackets *l*, which are arranged externally of and at suitable intervals around and rigidly secured to the said guard, and the tarpaulin or covering *h* extends between the external surface of the said guard and the battens *k* and between the under sides of the battens and the brackets *l*.

Each bracket *l* extends a suitable distance beyond the outer side of the adjacent batten *k*, and a suitable distance from and laterally of the said side of the said batten is provided with an upwardly-projecting arm 10, which extends upwardly above the said batten a suitable distance and is provided at its upper end with a clamping device which comprises, preferably, a jaw 8, arranged to bear downwardly upon the adjacent portion of the hatch externally of the tarpaulin or covering of the said hatch and being consequently instrumental in holding the hatch firmly down upon the surrounding frame or guard of the hatchway. The said jaw 8 has a shank or arm 12 depending from the jaw at the exterior of the hatchway-surrounding guard or frame and forming the upwardly-projecting arm of a bell-crank *r*, whose depending arm 13 extends between the adjacent batten *k* and the arm 10 of the bracket *l*, instrumental in support-



ing the clamping device of which the said jaw forms a member, and a wedge *w* is driven between the said batten and the batten-facing surface 14 of the bell-crank arm 13.

5 The bell-crank *r* has two parallel flanges or wings 15 and 15, which are arranged at opposite sides, respectively, of the arm 10 of the bracket *l*, and each wing or flange 15 is provided upon its inner side with a trunnion or  
10 journal 16, which is arranged horizontally and longitudinally of and preferably parallel with the adjacent batten *k* and has bearing against the rounded upper end wall 17 of a slot or  
15 channel 18, with which the adjacent side of the bracket-arm 10 is provided, which channel extends up and down the said arm 10 and is open at its lower end to accommodate the reception by it of the said trunnion or jour-  
20 nal—that is, the bracket-arm 10 has two recesses 18 and 18, formed in opposite sides, respectively, of the arm and arranged vertically and open at their lower ends and having upper end walls 17, rounded and affording bearing to trunnions 16 of the bell-crank *r*. The  
25 wedge-engaging surface 14 of the said depending arm 13 of the bell-crank is convex, so as to most advantageously utilize the pressure exerted by the wedge upon the said member 13.

In dotted lines, Fig. VII, the clamping device is shown swung into an inoperative position against the deck of the ship or vessel, and in this position the trunnions or journals 16 of the bell-crank *r* are within the lower ends of the channels 18 of the bracket-arm  
35 10, and the flanges or wings 15 of the bell-crank abut against a pin *x*, which is arranged horizontally and parallel with the said journals 16, and extend laterally through the bracket *l* at the lower ends of the said channels, so as  
40 to form a stop for preventing the removal of the bell-crank from the bracket; but the pin *x* is removable endwise to accommodate an entire removal of the bell-crank from the bracket, if desired.

45 Obviously the bell-crank *r* during its operation by the engaging wedge *w* by driving the wedge in between the bell-crank arm 13 and the adjacent batten *k* causes the jaw 8 of the bell-crank to bear downwardly upon  
50 the hatch.

What we claim is—

1. The combination, with a hatchway-surrounding frame or guard, the hatch resting upon the said guard and having its tarpaulin  
55 or flexible covering extending over and adown the outer side of the guard, brackets rigidly secured to the guard a suitable distance below the hatch and arranged externally of and at suitable intervals along the guard, and  
60 each bracket having an upwardly-projecting arm arranged a suitable distance laterally of and outside of the guard and provided with two slots or channels formed in opposite sides, respectively, of and extending up and down  
65 the arm and having upper rounded end walls and open at their lower ends, and a batten

resting upon the said bracket and arranged to hold the tarpaulin or covering against the outer side of the guard, of a bell-crank having journals arranged to engage the said end  
70 walls in the operative position of the bell-crank, which bell-crank has one of its arms provided with a jaw arranged to bear downwardly upon the hatch and has its other arm arranged to depend between the adjacent  
75 batten and the batten-facing surface of the bracket-arm, and a wedge between the said batten and the batten-facing surface of the depending bell-crank arm.

2. The combination, with a hatchway-surrounding frame or guard, the hatch resting upon the said guard and having its tarpaulin or flexible covering extending over and adown the outer side of the guard a suitable distance below the hatch and arranged exter-  
85 nally of and at suitable intervals along the guard, and each of the said brackets having an upwardly-projecting arm arranged a suitable distance laterally of and outside of the guard and provided with two slots or chan-  
90 nels formed in opposite sides, respectively, of and extending up and down the arm and having upper end walls and open at their lower ends, of a bell-crank having a jaw-bearing arm and a pressure-receiving arm, 95  
which bell-crank has two flanges or wings arranged at opposite sides, respectively, of the bracket-arm and journal-forming lugs formed upon the inner sides of the said wings or flanges and engaging the aforesaid  
100 channels, and means for exerting pressure against the pressure-receiving arm of the bell-crank, and the arrangement of parts being such that the jaw of the bell-crank shall bear downwardly upon the hatch upon ren-  
105 dering the pressure-applying means operative.

3. The combination with a hatchway-surrounding frame or guard, a hatch resting upon said guard, and having its tarpaulin or  
110 flexible covering extending over and down the outer side of the guard, brackets rigidly secured to the guard, a suitable distance below the hatch and arranged externally of and at suitable intervals along the guard each  
115 bracket having an upwardly-projecting arm arranged a suitable distance laterally of and outside of the guard and provided with two slots or channels formed in opposite sides, respectively, of and extending up and down  
120 the arm, and upper rounded end walls, and open at their lower ends, and a batten resting upon the said bracket and arranged to hold the tarpaulin or covering against the outer side of the guard, of a bell-crank hav-  
125 ing journals arranged to engage the said end walls in the operative position of the bell-crank, which bell-crank has one of its arms provided with a jaw arranged to bear downwardly upon the hatch and has its other arm  
130 arranged to depend between the adjacent batten and the batten-facing surface of the

5 bracket-arm, a pin arranged in the wall between the respective channel in the said bracket-arm, for locking the said bell-crank on the said bracket, and a wedge interposed between the depending arm of the bell-crank and the said batten, substantially as described and for the purpose set forth.

Signed by us, at Cleveland, Ohio, this 4th day of November, 1901.

ARCHIBALD P. RANKIN.

ALBERT C. DIERICX.

Witnesses:

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