

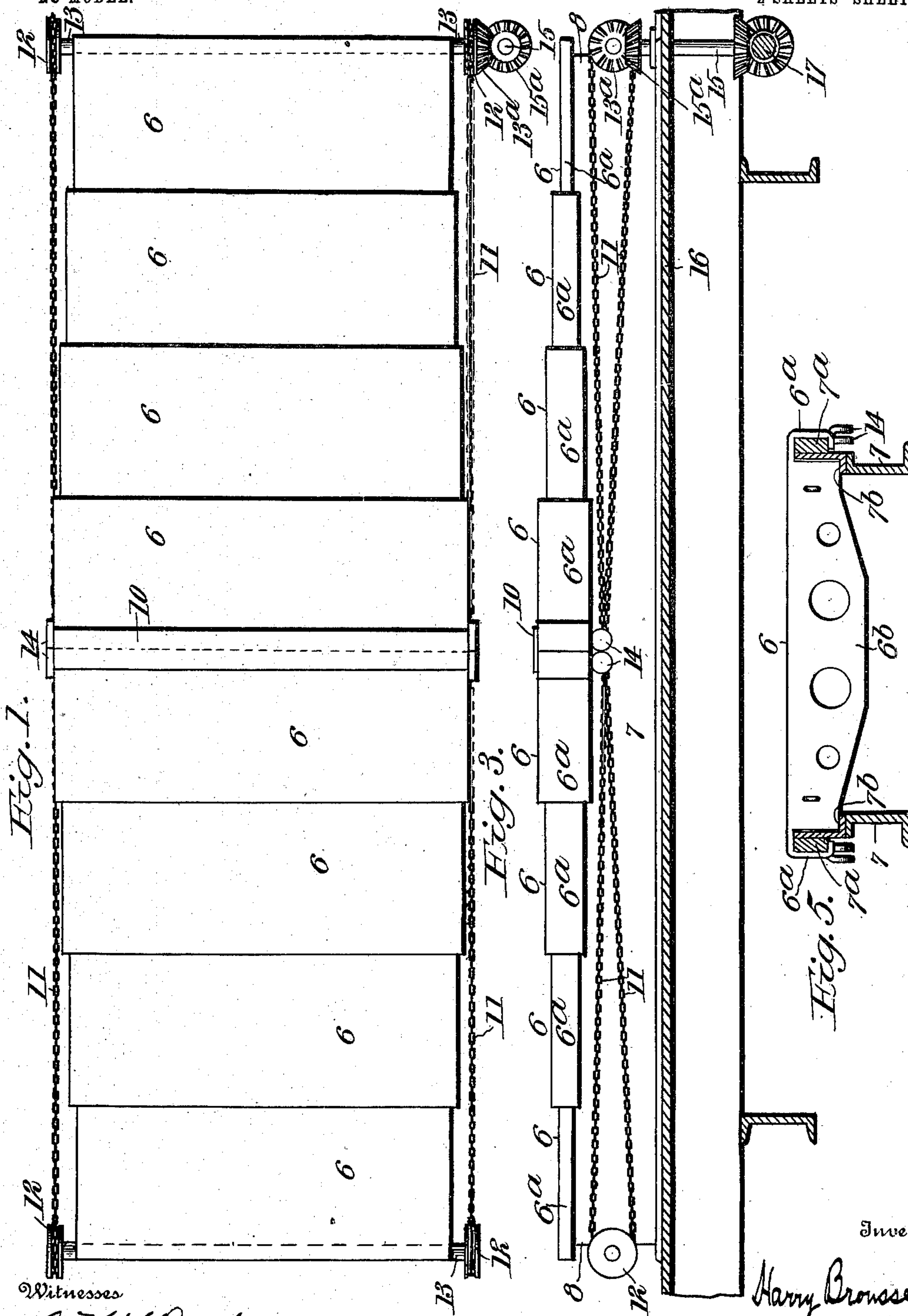
H. BROUSSEAU.

HATCH.

APPLICATION FILED JAN. 3, 1903.

NO MODEL.

2 SHEETS—SHEET 1.



Witnesses

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NO MODEL.

2 SHEETS—SHEET 2.

Fig. 2.

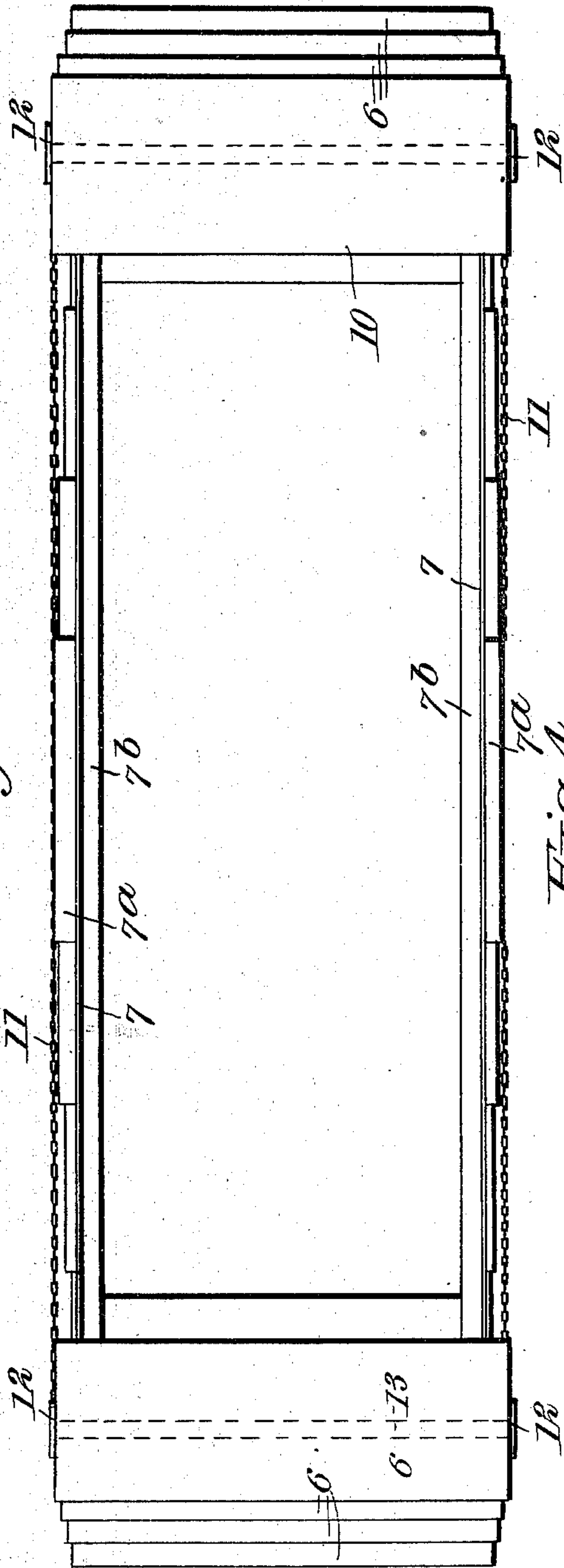


Fig. 4.

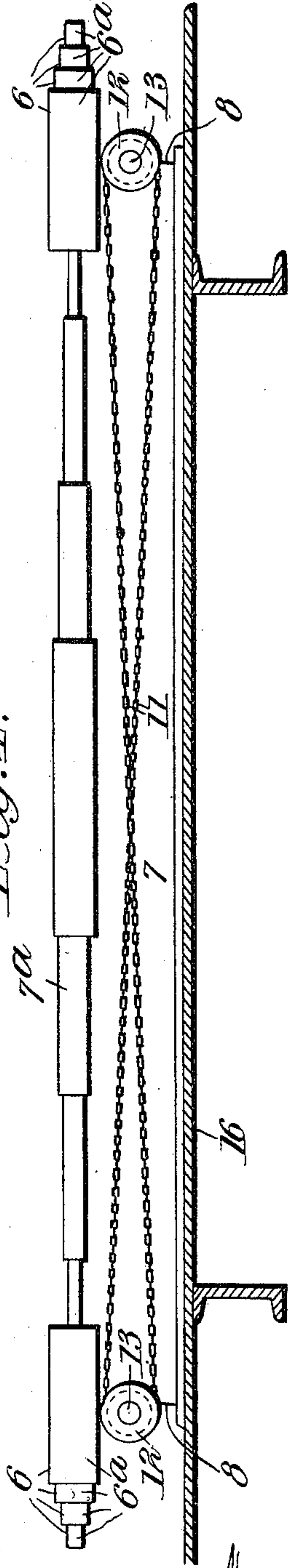


Fig. 1.

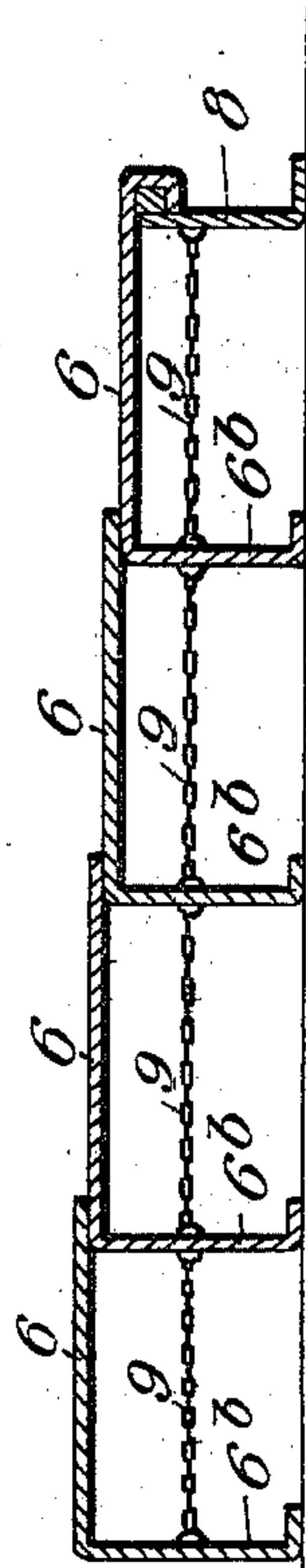
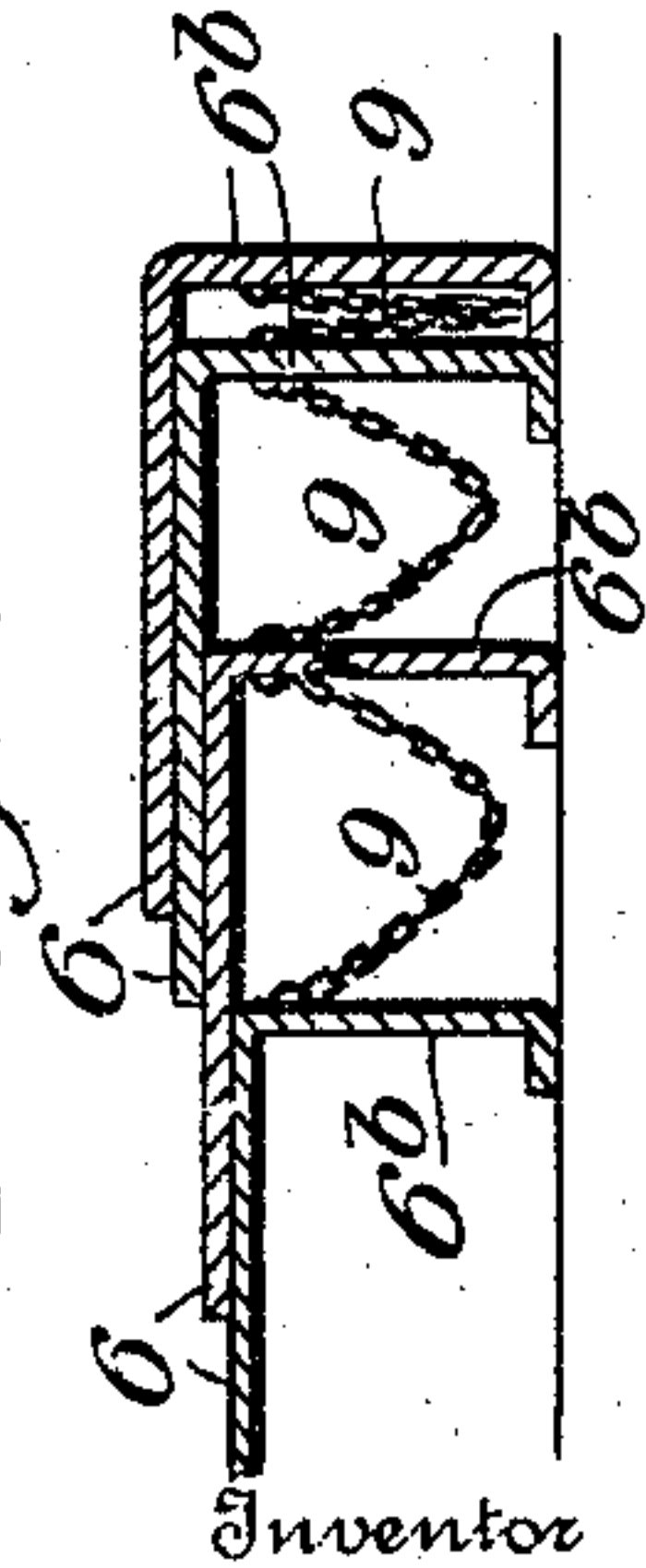


Fig. 6.



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# UNITED STATES PATENT OFFICE.

HARRY BROUSSEAU, OF WEST SUPERIOR, WISCONSIN.

## HATCH.

SPECIFICATION forming part of Letters Patent No. 736,357, dated August 18, 1903.

Application filed January 3, 1903. Serial No. 137,731. (No model.)

*To all whom it may concern:*

Be it known that I, HARRY BROUSSEAU, a citizen of the United States, residing at West Superior, in the county of Douglas and State of Wisconsin, have invented certain new and useful Improvements in Hatches; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

This invention relates to hatches, and particularly to hatches for closing hatchways in the deck of a ship, although it may be applied to similar openings in other places without departing from the scope of the invention.

The object of the invention is to form an improved telescoping hatch comprising several parts which may be nested at the side of the hatchway to open the same or extended to close the same.

The invention is particularly useful in iron ships or iron hatches and is so illustrated in the accompanying drawings.

A further object of the invention is the provision of improved means for operating a hatch.

Further objects and advantages will be apparent from the following description and the accompanying drawings, in which—

Figure 1 is a plan of the hatch closed. Fig. 2 is a plan of the same open. Fig. 3 is an end elevation showing the deck in section with the hatch closed. Fig. 4 is a similar view with the hatch open. Fig. 5 is a cross-section; and Figs. 6 and 7 are details in longitudinal section, showing the hatch respectively partly open and closed and also showing a modification comprising a chain to hold the parts of the hatch in place.

Referring particularly to the drawings, the hatch, as shown, comprises overlapping plates 6, which are free to slide upon each other to an extent and by means to be hereinafter described. The head-ledges of the hatchway are indicated at 7 and the coamings at 8. Each plate 6 has depending end flanges 6<sup>a</sup>, which are formed to hook under projecting

rims 7<sup>a</sup>, produced on or secured to the head-ledges. The plates and their flanges are progressively increased in size or stepped from the end of the hatch to the middle to receive each other, and the rims above referred to are also stepped accordingly. For the sake of strength and in use over wide hatchways the hatch-plates may be provided at their underlapping edges with depending truss-flanges 6<sup>b</sup>, and when so made the ends of the truss-flanges rest on shoulders 7<sup>b</sup>, produced in the head-ledges. It will be seen from this construction that the hatch-plates will slide back and forth upon the rims and each other to close or open the hatchway, the movement of each plate in closing the hatchway being stopped by the appropriate step in the rims, and in opening the hatchway the flanges 6<sup>b</sup> successively contact and nest the parts over the coamings at the ends of the hatchway. In addition to the stepped construction of the rims the extension of the parts may be limited and separation prevented by chains 9, extending between the truss-flanges, and when the hatch is telescoped the chains hang between the trusses, as shown in Fig. 6. The hatch is shown formed in two sections meeting at the middle of the hatchway, and indicates a plate joined to one of the outer parts 6 to cover and close the crack at the middle.

The hatch made as above stated may be operated by hand or any other suitable manner; but I show a novel and efficient means comprising crossed chain-belts 11, extending beside the head-ledges and around chain-sprockets 12 on shafts 13. The outermost plates 6 of each section of the hatch are connected to opposite runs of the chain-belts, as by suitable chain hooks or clamps, (indicated at 14.) One of the shafts has at one end a gear 13<sup>a</sup>, which may conveniently be a clutch-gear, meshing with a bevel-gear 15<sup>a</sup> on a vertical counter-shaft 15, extending through the deck 16 of the vessel and driven by bevel-gearing from a line-shaft, (indicated at 17,) which may be driven by the engine of the ship or by any other suitable motor. It is intended that the line-shaft shall extend fore and aft to all the hatches, so that they can all be opened at once, if desired, or by use of a clutch-gear, as above referred to, can be opened one at a time.



It is believed that from the above description the construction and operation of the hatch will be clearly evident, and it is to be noticed that when telescoped the hatch takes  
 5 very little deck space and also acts as a protection to the coamings. Any number of plates may be used and various modifications may be made within the scope of the invention.

10 Having thus described the invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination with hatchway-ledges, of telescopic overlapping hatch-plates having  
 15 end flanges engaging the ledges.

2. A hatch formed of two opposite sections each comprising telescopic parts, in combination with means for simultaneously moving the respective parts in opposite directions.

20 3. The combination with hatchway-ledges having a stepped rim, of overlapping hatch-plates having telescopic end flanges engaging the rim.

4. A hatch composed of telescopic overlapping-plates having truss-flanges depending  
 25 lengthwise at the underlapping edges thereof.

5. The combination with hatchway-ledges having a shoulder thereon, of telescopic hatch-plates having truss-flanges depending  
 30 lengthwise and resting at their ends upon the shoulders.

6. The combination with hatchway-ledges having a projecting stepped rim, of overlapping telescopic hatch-plates having overlapping end flanges hooked under the rim.

7. The combination with hatchway-ledges having an outer projecting rim and inner projecting shoulder, of overlapping telescopic hatch parts hooked under the rim and supported on the shoulder.

8. A hatch formed of sections each comprising telescopic parts, in combination with a belt connected at opposite runs to a part of each section, and means to drive the belt to simultaneously telescope the parts and open or close  
 45 the hatchway.

9. A hatch formed of oppositely-sliding sections, in combination with a belt connected at opposite runs to each section, and means to drive the belt.

10. The combination with a floor having a hatchway, of a sliding hatch, an operating-belt connected thereto, a shaft under the floor, and transmission devices extending through  
 55 the floor to drive the belt.

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

HARRY BROUSSEAU.

Witnesses:

ARTHUR H. POTVIN,  
 R. I. TIPTON.