J. FLEMING.

Hatchway-Brace.

No. 168,630. Patented Oct. 11, 1875.

Fig. 1.

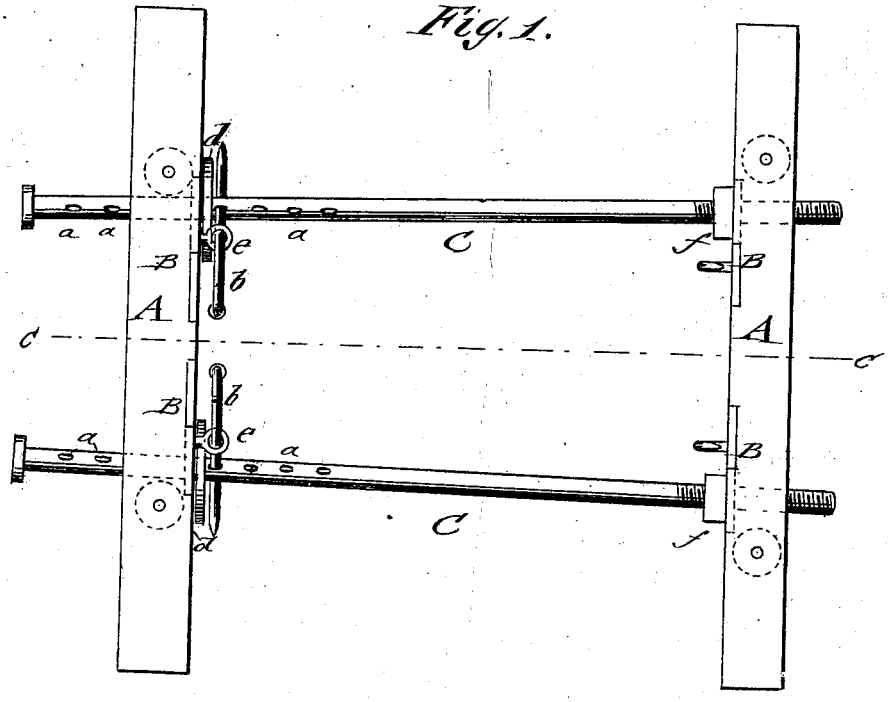
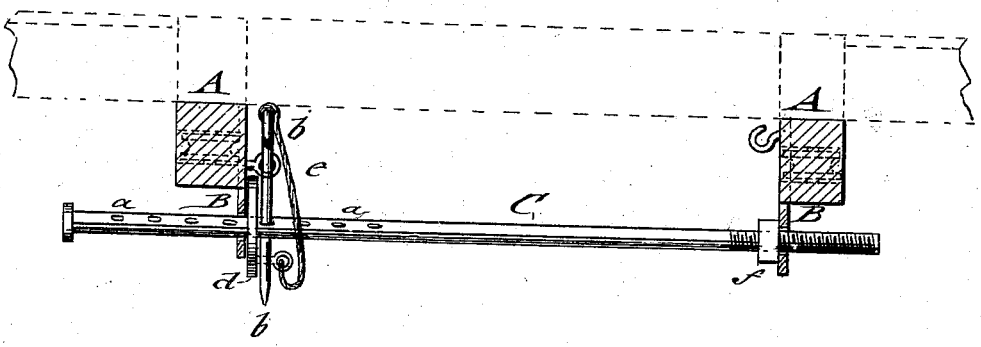


Fig. 2



WITNESSES:

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UNITED STATES PATENT OFFICE.

JAMES FLEMING, OF BUFFALO, NEW YORK.

IMPROVEMENT IN HATCHWAY-BRACES.

Specification forming part of Letters Patent No. **168,630**, dated October 11, 1875; application filed September 17, 1875.

To all whom it may concern:

Be it known that I, JAMES FLEMING, of Buffalo, in the county of Erie and State of New York, have invented a new and Improved Hatchway-Brace for Grain Steam-Shovels, of which the following is a specification:

In the accompanying drawing, Figure 1 represents a top view, and Fig. 2 a vertical transverse section on the line *c c*, Fig. 1, of my improved hatchway-brace for grain steam-shovels.

Similar letters of reference indicate corresponding parts.

My invention relates to improved adjustable bars or braces, which may be attached to hatchways of various sizes, for the purpose of bracing the sheave-timbers through which the ropes are running that operate the shovels for carrying the grain from the hold of vessels toward the elevator, the brace serving, furthermore, for retaining the elevator in position and protecting the shovel-operating ropes against chafing.

The invention consists of the combination of the sheave-timbers, which are attached to both sides of the hatchway, and provided with perforated guide-supports, with lateral brace-rods, that are attached by fastening set-pins to the supports at one side, and by tightening-nuts to the supports at the other side.

In the drawing, A A represent the sheave-timbers, which are placed under the hatchway at the starboard and port sides, and attached in suitable manner thereto. The timber-pieces A support the pulleys over which the ropes pass to connect the operating mechanism at the dock with the grain-gathering shovels in the hold of the vessel. The hatchway-timbers A are provided with strong downward-extending supports B, that are rigidly attached thereto, and perforated for the passage of lateral bars or brace-rods C, which are of greater length than the greatest width of the hatchways in vessels, so as to be adjustable to hatches of greater or smaller size. The brace-rods C are at such a distance from each other that the elevator-leg may be placed between the same and kept steadily in position without chafing the shovel-operating ropes. The end of each brace-rod C is provided with a number of holes, *a*, into which the fastening-pin *b* is inserted, a washer-plate, *d*, being interposed between the pin and support B of the timber. The pin *b* is connected by a rope or chain to a staple of the washer-plate *d*, to be always on hand, and passed through an eye-bolt, *e*, of the supporting-plate B, to prevent the brace from turning and dropping the pin, which would endanger the substantial brace-connection of the sheave-timbers. The opposite ends of the braces C are threaded and adjusted by screw-nuts *f* to the exact width of the hatch, the screw being turned up from the inside onto the supporting-plate, so as to tighten firmly the brace-rods and prevent the timbers from changing their position or getting loose. The adjustability of the braces by the set-pins and screw-nuts admits their ready application to any size of hatchways without difficulty, and furnishes thereby a useful feature for the elevating and the steam shoveling devices employed for removing grain from vessels.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

As an improvement in hatchway-braces for grain elevating and shoveling devices, the combination of sheave-timbers A, having supporting-plates B, with lateral brace-rods C and adjusting devices for securing rigid position of sheave-timbers for any width of hatchway, substantially in the manner and for the purpose set forth.

JAMES FLEMING.

Witnesses:

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WILLIAM COESTER,
THOMAS KERR.