

TRANSACTIONS
OF THE
SOCIETY,
Instituted at London,
FOR THE
ENCOURAGEMENT
OF
ARTS, MANUFACTURES,
AND COMMERCE;
WITH THE
PREMIUMS OFFERED IN THE YEAR 1822.

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M.DCCC.XXIII.

N° VIII.

APPARATUS FOR BALING SHIPS.

The LARGE SILVER MEDAL was this Session presented to Mr. JAMES DENNETT, of Newport, in the Isle of Wight, for AN APPARATUS FOR BALING SHIPS. The following Communication has been received from him on the subject, and a Model of his Apparatus has been placed in the Society's Repository.

SIR;

April 15th, 1823.

WHEN a ship springs a leak at sea, and from the extent of the injury, or from the pumps becoming worn, they are found insufficient to free her of water; the most usual method resorted to, is that of baling with canvas buckets, at the several hatchways, which after the most painful and long-continued exertions, but too often proves ineffectual in preventing the ship from going down. A consideration of the deplorable and extensive loss of human lives, occasioned by these occurrences, has led me to the invention of a "Machine for Baling," which I think will be found a powerful auxiliary to a ship's pumps in all cases of danger. Its extreme simplicity, and facility of application in vessels of every class, and its occupying so little room when not in use; will, I flatter myself, be found such as to recommend it to the consideration of the Society

for the encouragement of Arts. I therefore take the liberty of soliciting you will do me the favour to lay the accompanying model and description before them, at their next meeting ; for which I shall feel greatly obliged. Should it hereafter be instrumental in saving a single ship from destruction, or even the life of but one individual, it will be to me a source of the highest gratification.

I am, Sir,

To *A. Aikin, Esq.*

&c. &c. &c.

Secretary, &c. &c.

JOHN DENNETT.

*Reference to the Drawing of Mr. JOHN DENNETT'S
Apparatus for Baling Ships.—Plate VII.*

Fig. 1, *a* and *b*, parts of the hatchways of the upper and lower decks: *c c* a long rabbeted slide, reaching from a little above the coamings of the upper deck to the ballast in the hold ; it is requisite that it should decline from a vertical position, therefore it is attached to the lower hatchway by a thick block *d*; *e e* a square bucket made to slide on the rabbet of *c c*, its bottom is a flap-valve so that when it slides down into the water it fills at once without any particular attention on the part of the workmen. The upper portion *f* of the rabbet of the long slide is made detached, and is fixed in its place by a pin *g* (in the top of the forks) on which it turns as on an axis; the bucket is shown discharging the water on the upper deck ; when the rope *h i k* is let go, the bucket falls down, rights itself, and the portion *f* of the slide falls into its place as *f* fig. 2, before the bucket begins to descend ; this, however, it would not do if the slide did not in-

cline, nor unless the block *l* was sufficiently on the same side to bias it against the slide ; but as it is, it runs down to the bottom, as shown by dotted lines, where it fills with water, and is drawn up by pulling the parts *i* and *k* of the rope, the part *k* having passed through a block *m* on the deck ; a pin, *n*, fig. 2, is fixed as a stop in the top of the rabbet, so that when the bucket rises up and is only on the loose portion *f* of the rabbet, it is stopped by the pin *n*, and the loose portion *f* by farther pulling rises out of its place and upsets the bucket, as in fig. 1 ; then, to prevent the bucket being pulled higher than enough to spill the water, in which case it would fall on the deck instead of returning, a knot *o* is worked on the rope to stop against the block *l*, which effectually prevents it from rising too high. The block *l* is made fast to a yard arm, and the upper end of the rope *k* is made fast either to the same or elsewhere only just long enough to let the bucket reach the bottom of the slide, by which it is prevented from going off there if the slide should not reach to the bottom of the hold. Fig. 3 shows a front view of the upper or fork-like portion of the slide *c*, the moveable piece being removed.

Fig. 7, a bird's-eye view of the bucket and slide separated.

M.^r Dennett's Apparatus for baling Ships.

M.^s Brochedon's rest for Painters.

