

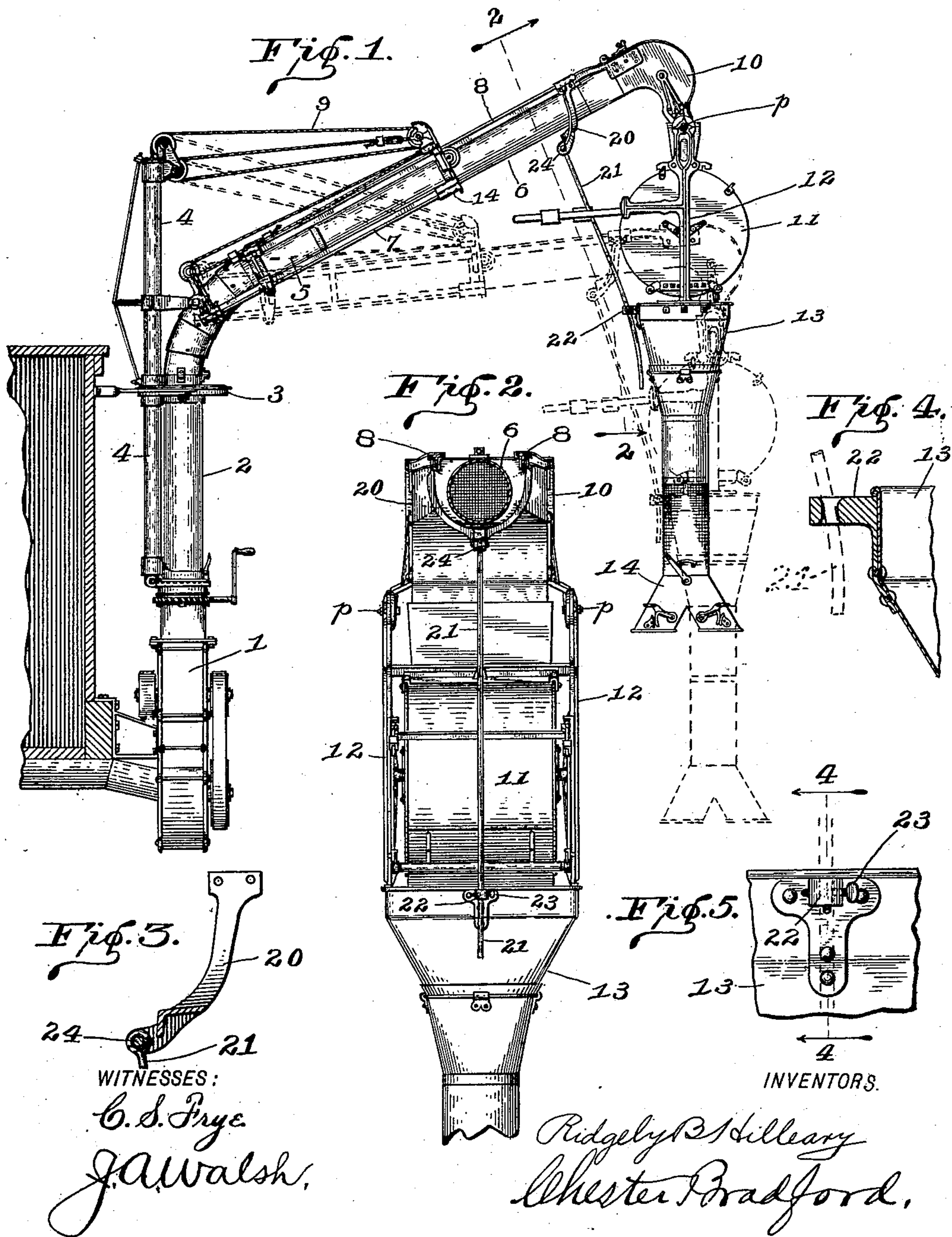
No. 706,054.

Patented Aug. 5, 1902.

R. B. HILLEARY & C. BRADFORD.
PNEUMATIC ELEVATOR AND WEIGHER.

(Application filed Dec. 18, 1901.)

(No Model.)



UNITED STATES PATENT OFFICE.

RIDGELY B. HILLEARY AND CHESTER BRADFORD, OF INDIANAPOLIS,
INDIANA.

PNEUMATIC ELEVATOR AND WEIGHER.

SPECIFICATION forming part of Letters Patent No. 706,054, dated August 5, 1902.

Application filed December 18, 1901. Serial No. 86,343. (No model.)

To all whom it may concern:

Be it known that we, RIDGELY B. HILLEARY and CHESTER BRADFORD, citizens of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented certain new and useful Improvements in Pneumatic Elevators and Weighers, of which the following is a specification.

Our present invention relates to that class of machines commonly used in connection with threshing-machines for handling grain, an example of which is shown in Letters Patent of the United States No. 623,109, dated April 11, 1899; and it consists in a means for steadying and bracing the weigher and holding it in proper position at whatever elevation it may be adjusted.

Said invention will be first fully described and the novel features thereof then pointed out in the claims.

Referring to the accompanying drawings, which are made a part hereof and on which similar reference characters indicate similar parts, Figure 1 is a side elevation of a pneumatic elevator and weigher provided with our said invention, a second position being indicated by means of dotted lines; Fig. 2, a view on a somewhat-enlarged scale as seen from the dotted line 2 2 in Fig. 1, the telescopic pipe and frame-bars being shown in section and the remainder of the parts shown in elevation; Fig. 3, a detail sectional view of the yoke to which the brace-rod is hinged on a still further enlarged scale; Fig. 4, a detail sectional view of the eye through which the brace-rod passes, and Fig. 5 a detail elevation of said eye.

The housing or boot 1, the vertical pipe 2, the supporting turn-table 3, the mast 4, the outwardly-extending telescopic pipe-sections 5 and 6, the telescopic frames 7 and 8, the elevating and lowering cable 9, the separating-head 10, the weighing-drum 11, the weigher-frame 12, the receiving-hopper 13, and the bagger 14 are similar to those described in the Schuman patent, No. 623,109, above referred to, (although embodying some improvements in construction,) and will not, therefore, be further described herein except incidentally in describing said invention.

As heretofore in such machines, the weighing and bagging devices are suspended from the ears on the separating-head by pivots or pivot-bolts *p*, and as the pipes 5 and 6, with the separating-head 10, are raised or lowered the frame carrying said devices must swing on said pivots in order to maintain the perpendicularity of said parts, which is necessary to the accurate operation of the weigher. In the Patent No. 623,109, above referred to, the means of holding the weigher and parts attached thereto in perpendicular position consisted of friction-plates at the points where said pivots are located, said pivots consisting of screw-bolts which were intended to be loosened when the relative positions were to be shifted and retightened when the desired positions were attained. In practice, however, we have found that it is difficult to secure the required rigidity of the apparatus by means of such screw-bolt pivots alone, and it is more difficult to secure operatives who will properly manipulate them. By means of our invention, which consists of the bracing apparatus now presently to be described, it is permissible to leave the pivots *p* loose and depend upon the said bracing apparatus, which is much more easily and conveniently manipulated, both because there is but one clamp-screw to be so manipulated and because the position of said clamp-screw is in much easier reach of the operatives than the pivots are or were. We have therefore secured to the outer telescopic pipe 6, or preferably to its frame 8, the yoke 20, to which we have pivoted a brace-rod 21, which passes down through an eye 22, in which there is a clamp-screw 23. As will be best understood by an examination of Figs. 2 and 3, the yoke 20 being rigidly secured to the outer end of the telescopic structure and moving therewith is well adapted to support the brace-rod, which is pivoted thereto by a pivot-bolt 24. Said yoke also may be arranged as a stop against which the casting 14 may strike when the telescopic pipes are moved in to their shortest length. The eye 22 is firmly riveted to the receiving-hopper 13 below the weighing-drum 11, and the lower end of the brace-rod 21 passes therethrough, and when the clamp-screw 23 is applied said brace-rod is held very

firmly therein. The lower end of the brace-rod is curved, as shown in Figs. 1 and 4, so that its lower end will not come in contact with the hopper 13 or the parts which are attached thereto.

As will be seen, this present apparatus does not in any way interfere with the free and perfect operation of the weigher or scale apparatus, as it is connected at the one end to the telescopic pipe and at the other end to the receiving-hopper, and thus exerts no strain whatever upon the working parts of the weigher mechanism.

Having thus fully described our said invention, what we claim as new, and desire to secure by Letters Patent, is—

1. The combination, in an adjustable elevator and weigher wherein the weigher apparatus is pivotally suspended to the elevating apparatus, of an adjustable brace extending from the elevating apparatus to a frame or rigid portion connected to the weigher apparatus, whereby the latter may be adjustably

secured and held in position relatively to the weighing apparatus and a vertical position of said weigher apparatus thus maintained whatever the relative position of the elevator apparatus may be.

2. The combination, in a pneumatic elevator and weigher, with the adjustable elevator-pipe and the weigher apparatus suspended thereto, of a bracing apparatus consisting of a yoke 20, a brace-rod 21 connected to said yoke, a stud or eye 22 connected to the weigher apparatus frame and to which said brace-rod is connected, and a means whereby said brace-rod can be secured thereto at any desired position therein, substantially as set forth.

In witness whereof we have hereunto set our hands and seals, at Indianapolis, Indiana, this 9th day of December, A. D. 1901.

RIDGELY B. HILLEARY. [L. S.]

CHESTER BRADFORD. [L. S.]

Witnesses:

ALBERT F. ZEARING,
C. S. FRYE.