2 Sheets—Sheet 1.

F. H. C. MEY.

ELEVATOR-BELTS FOR HOISTING-BUCKETS.

No. 181,355. Patented Aug. 22, 1876.

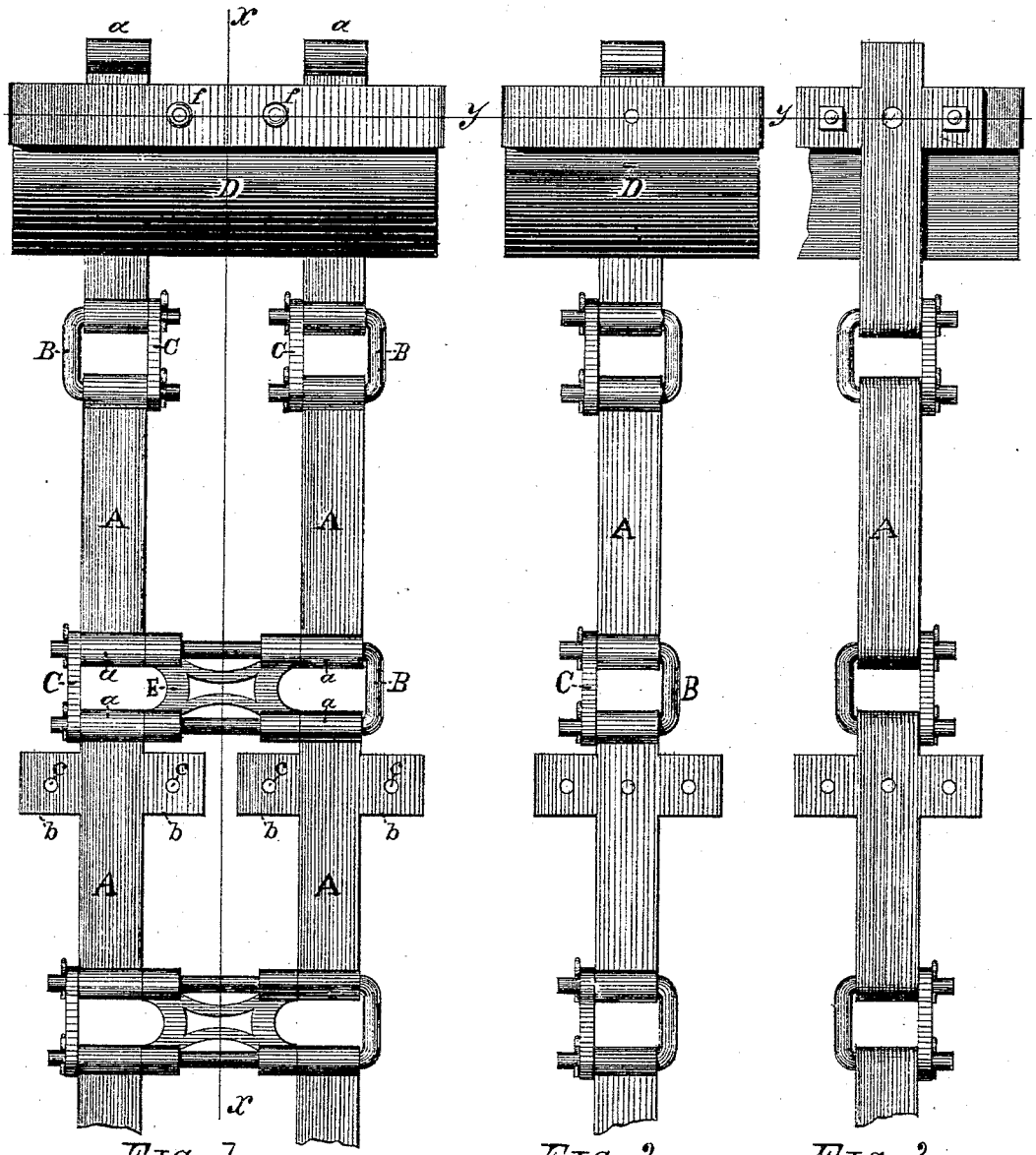

FIG. 1.

FIG. 2.

FIG. 3.

WITNESSES:
Michael J. Stark
Frank Kirsch.

INVENTOR:
Fred. H. C. Mey.

2 Sheets—Sheet 2.

F. H. C. MEY.

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No. 181,355. Patented Aug. 22, 1876.

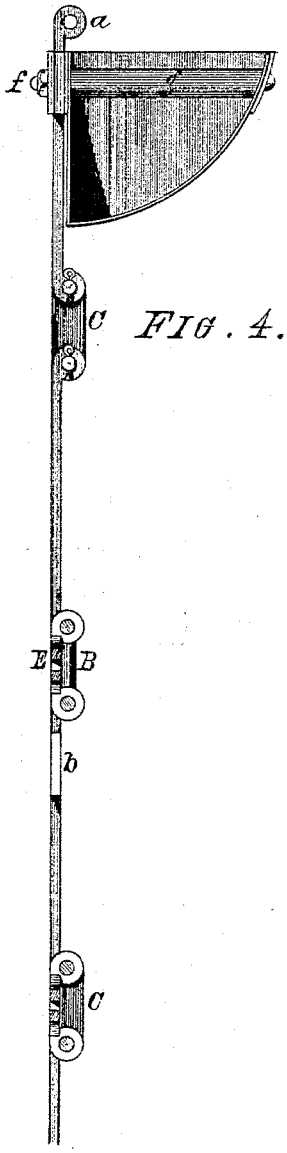


FIG. 4.

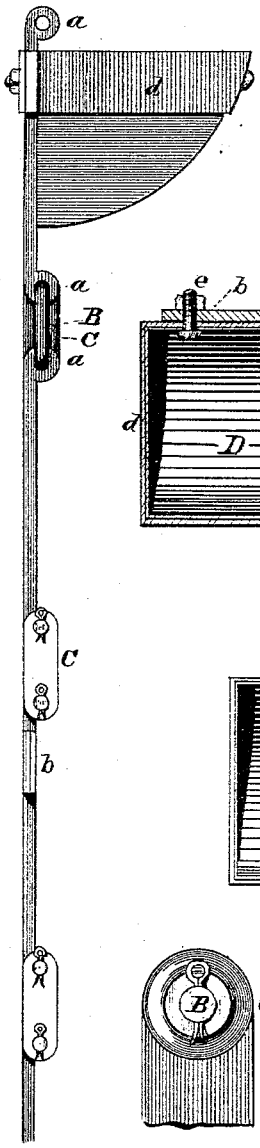


FIG. 5.

FIG. 6.

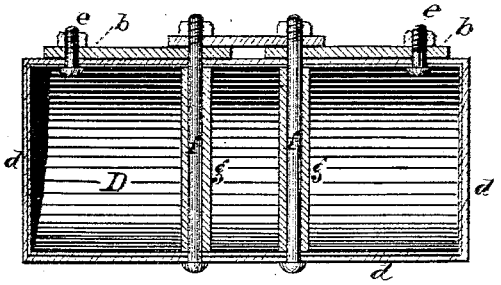
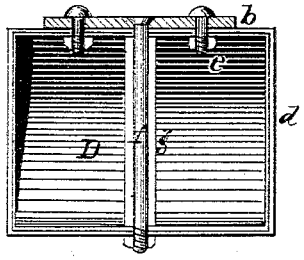


FIG. 7.



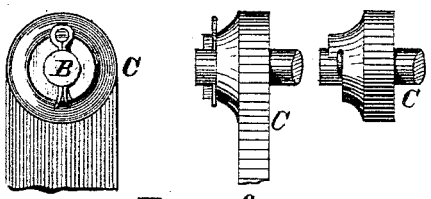


FIG. 8.

WITNESSES:

Michael J. Stark
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INVENTOR:

Fred. H. C. Mey.

UNITED STATES PATENT OFFICE.

FREDERIC H. C. MEY, OF BUFFALO, NEW YORK.

IMPROVEMENT IN ELEVATOR-BELTS FOR HOISTING-BUCKETS.

Specification forming part of Letters Patent No. **181,355**, dated August 22, 1876; application filed July 5, 1876.

To all whom it may concern:

Be it known that I, FREDERIC H. C. MEY, of the city of Buffalo, in the county of Erie and State of New York, have invented an Elevator-Belt; and I do hereby declare that the following description, taken in connection with the accompanying sheets of drawings, forms a full, clear, and exact specification.

This invention relates, in general, to metallic belts for grain, &c., elevators; and it consists in the arrangements of parts and details of construction, as will hereinafter more fully appear, and be pointed out in the claims.

In the hereinbefore-mentioned drawings, Figure 1 is a front view of an elevator-belt embodying my improvements. Fig. 2 is a similar view. Fig. 3 is a rear view. Fig. 4 is a longitudinal section on line *x x*, Fig. 1. Fig. 5 is a side elevation, and Figs. 6 and 7 transverse sections on the line *y y* of Figs. 1 and 2, respectively. Fig. 8 are detached views of the connections C.

Corresponding parts are designated by similar letters of reference in all the figures.

A are a series of metallic links, secured together by means of staples B. These links consist each of a flat body, provided on both extremities with eyes *a*, and centrally with side wings *b*. I prefer to produce the same in the process of casting, and subsequently annealing, either of iron or steel, with the passages for the staple B directly cast therein; but they may also be made of wrought-iron, with the eyes *a* bent thereon, and the side wings *b* produced by securing a cross-bar to the body A. A number of these links are pivoted one to the other by means of the staple B passing through passages in the eyes. These staples consist each of a piece of round iron, of proper thickness, double bent, the parallel members being of a length to correspond with the width of belting to be produced, and the distance between them such as to allow the belt to turn easily over a proper-sized pulley. The parallel members serve as pivots, and are connected on their free ends by means of a connecting-bar, C, provided with suitable perforations for this purpose. The extremities of the staple are either screw-threaded and provided with nuts, or a hole is made through them, and a split pin inserted to keep the connecting-bars and staples in proper position. E are cross pieces or braces connecting the two lines of belting. They are also, preferably, produced of malleable iron or cast-steel, and provided with eyes corresponding to those of the links A. They serve to keep the two lines of belting at proper distance apart, and at the same time act as braces to strengthen the connection between each link, and to prevent the advancing or retarding of one or the other of the two lines of links, which is frequently the case if they are not connected with each other. *b*, as heretofore mentioned, are wings on the body A. They serve as a means for attachment of the buckets D, and are therefore provided with apertures *c* for the passage of bolts. D is the elevator-bucket. It does not vary in construction from those usually made, and has around its upper edges a strengthening-band, *d*. This bucket is attached to the cross bar or wings *b* by means of the bolts *e*, passing through the rear side of the bucket and the before-mentioned wings. In order to strengthen the front edge of the bucket, which is subject to severe strain when in operation, I pass one or more bolts, *f*, through the front and rear sides of the bucket, and place a tube, *g*, between these sides, through which said bolt passes. When these bolts are drawn tight they will directly connect the front side of the bucket with its rear side and the wings *b*, and thereby strengthen the same to such an extent as to enable it to withstand the severest strain to which it may be put, while at the same time the bucket may be readily separated from the belt, if occasion demands.

I have shown in Fig. 1 a belt having two lines of links, and in Fig. 2 one consisting of one line only. In the latter case I do not need the braces E, and simply connect them by the staple B and connection C.

In metallic belts for elevators it is desirable to support the loaded side by allowing it to slide over a bed. This necessitates a perfectly smooth back of the belting, which, as will be readily seen, is attained in my improved belting. Here the links are perfectly flat, and can easily slide over a guideway of a width corresponding to that of the body of the links, all the bolt-heads and nuts used for

attachment of the buckets being placed in the wings *b*. These wings are therefore a very desirable feature, and constitute an essential part of my improvements in elevator-belting.

It will be observed that a belting constructed in the manner described answers all the purposes of a leather or rubber belt for flexibility, while for ease of attachment and removal of the buckets, for strengthening the same, and for ready separation of the links, it far surpasses the ordinary belts.

It will be further observed that the winged links are only necessary where a bucket is to be attached, and that the remaining links may be plain; but for facilitating the introduction of additional buckets I prefer to insert one in about the middle between two buckets, so that an additional number can easily be attached without change or removal of the belt.

Having thus fully described my invention, in order to enable others skilled in the art to which it appertains to make and use the same, I desire to secure to me by Letters Patent of the United States—

1. The combination, with the links A, of the buckets D, and one or more bolts, *f*, surrounded by the tubes *g*, said bolts *f* being arranged to connect the front and rear sides of said buckets with each other, and the buckets with the belt-links, substantially in the manner as and for the use and purpose stated.

2. The combination of the links A, provided with the eyes *a*, with the wings *b*, having the apertures *c*, substantially as described, for the use and purpose stated.

3. The brace E, in combination with the links A and staple B, for the purpose mentioned.

4. The combination, with the links A, having wings *b*, and being connected with one another by the staples B, of the buckets D, secured to the said wings by the bolts *e* and *f*, the latter being provided with the tubes *g*, the whole constructed and arranged substantially in the manner and for the use and purpose stated.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

FRED. H. C. MEY.

Attest:

MICHAEL J. STARK,

FRANK HIRSCH.