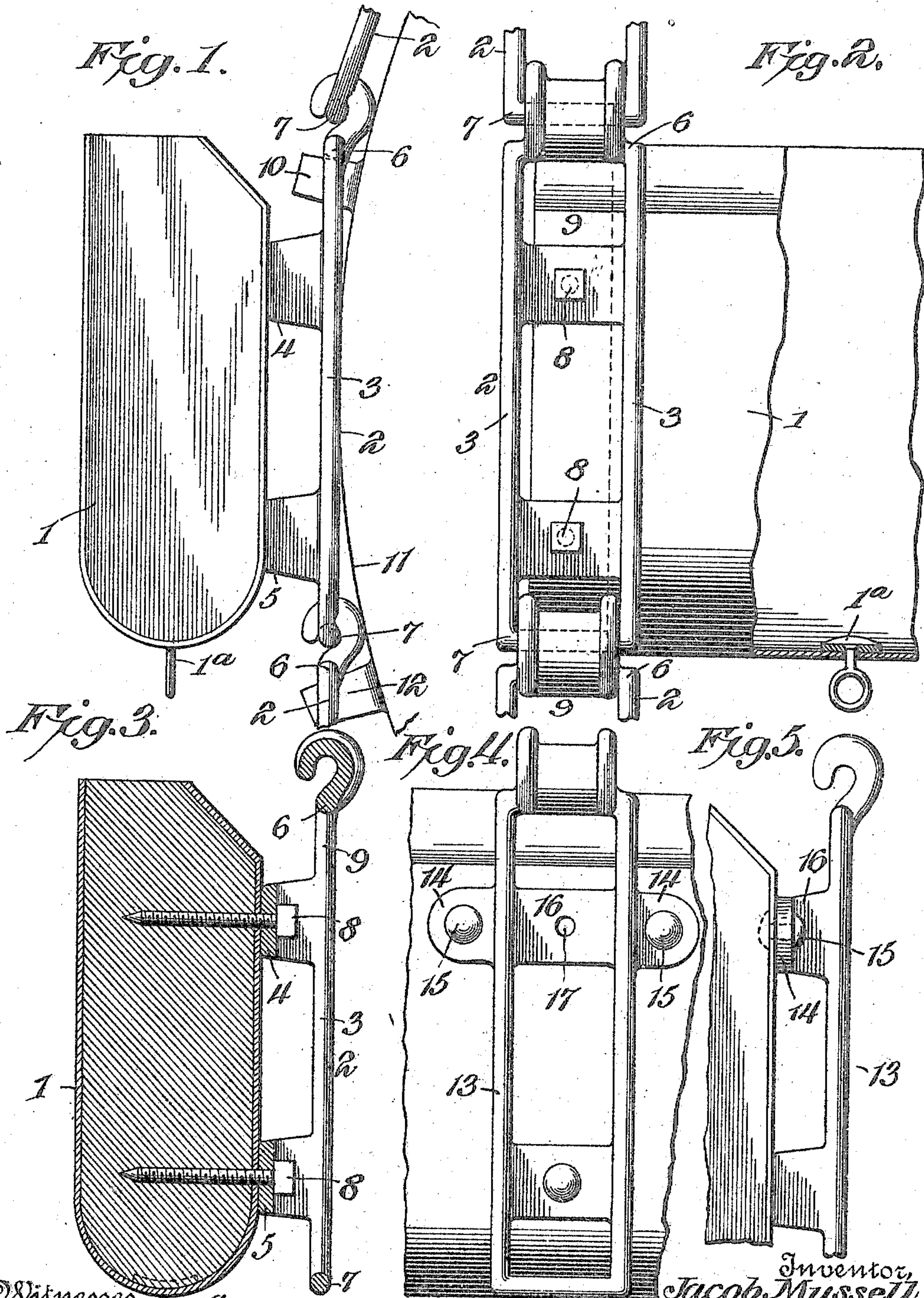


J. MUSSELL.
CONVEYER MECHANISM.
APPLICATION FILED DEC. 18, 1908.

951,738.

Patented Mar. 8, 1910.



Witnesses
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UNITED STATES PATENT OFFICE.

JACOB MUSSELL, OF CALDWELL, IDAHO.

CONVEYER MECHANISM.

951,738.

Specification of Letters Patent.

Patented Mar. 8, 1910.

Application filed December 18, 1908. Serial No. 468,176.

To all whom it may concern:

Be it known that I, JACOB MUSSELL, a citizen of the United States, residing at Caldwell, in the county of Canyon and State of Idaho, have invented a new and useful Conveyer Mechanism, of which the following is a specification.

The invention relates to improvements in conveyer mechanism.

10 The object of the present invention is to improve the construction of conveyer mechanism, more especially that shown and described in Patent No. 898,672, granted to me Sept. 15, 1908, and to increase the strength and durability of such mechanism and to enable the chain and the bucket to be rigidly connected at both the upper and lower portions of the bucket, thereby eliminating the wear resulting from the flexible connection between the chain and the bucket of the aforesaid patent.

20 A further object of the invention is to provide conveyer mechanism including a bucket-supporting link, adapted to materially reduce the number of sprocket teeth of the cooperating sprocket wheel, thereby lessening the cost of the construction and increasing the ease of operation.

30 Another object of the invention is to provide conveyer mechanism of this character, adapted to be applied either to a relatively wide bucket at the ends thereof, or to the center of a relatively narrow bucket.

35 With these and other objects in view, the invention consists in the construction and novel combination of parts hereinafter fully described, illustrated in the accompanying drawing, and pointed out in the claims hereto appended; it being understood that various changes in the form, proportion, size and minor details of construction, within the scope of the claims, may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

40 In the drawing:—Figure 1 is an end elevation of a portion of a conveyer mechanism, constructed in accordance with this invention. Fig. 2 is a rear elevation of the same. Fig. 3 is a vertical sectional view. Fig. 4 is a rear elevation, illustrating a modification of the invention. Fig. 5 is an end elevation of the same.

55 Like numerals of reference designate corresponding parts in all the figures of the drawing.

1 designates a bucket, equipped with a valve 1^a and constructed similar to that shown and described in the aforesaid patent and rigidly secured to a link 2 of a chain, 60 which is of a length about the height of a bucket, but the link may be varied in length with respect to the height of the bucket, as will be readily understood. The link 2, which may be constructed of any suitable 65 metal, is composed of rigid continuous sides 3, front and rear off-set webs 4 and 5, and front and rear ends 6 and 7, the front end 6 being equipped with an integral hook and the rear end being rounded and adapted to 70 engage a similar hook of a corresponding link. The sides are rigid and continuous throughout the entire length of the link, and are disposed in substantial parallelism, as shown, and they take the place of the flexi- 75 ble intermediate link, located between the upper and lower attached portions in the chain of the said patent.

The front and rear webs 4 and 5, which are off-set from the plane of the sides of the link, are formed integral with the same and 80 are fitted against and rigidly secured to the bucket by means of headed fastening devices 8, which preferably consist of screws. The said webs 4 and 5, which are approximately 85 U-shaped, are composed of side portions and connecting transverse portions and they space the side bars of the links from the bucket. The screws 8 are embedded in the wooden end walls of the bucket, as ex- 90 plained in the aforesaid patent.

The upper or front end 6 of the link is spaced from the upper or front web 4 to provide a tooth-receiving space 9, which is of sufficient size to receive a tooth 10 of a 95 sprocket wheel 11. The tooth 10 of the sprocket wheel 11 engages the end of the link at a point beyond the web, and it is thereby positioned so that it will not come in contact with either the bucket or the 100 fastening devices for securing the bucket to the link. This will also enable the bucket to lie closer to the side bars than when the sprocket tooth engages an end bar close to and partially beyond the connecting web. 105 By employing the rigid continuous link, as illustrated in Fig. 1 of the drawing, the two sprocket teeth, which engage the lower attached link and the intermediate connecting link of the chain of the said patent, are 110 dispensed with and a sprocket wheel having materially less teeth than that of the afore-

said patent is employed. The second tooth 12 is spaced from the first mentioned tooth 10 a distance corresponding to the length of the link 2, as clearly illustrated in Fig. 1 of the drawing, and an intermediate portion of the link 2 rests against and is supported by the smooth portion of the periphery of the sprocket wheel between the teeth.

The link illustrated in Figs. 1 to 3 inclusive of the drawing, is designed for use in connection with the relatively wide bucket, shown and described in the aforesaid patent, such a bucket being connected at each end by a chain, but when a relatively narrow bucket is employed, the chain is secured to the bucket at the center thereof, and in order to prevent the bucket from twisting on the chain, the link 13 is provided at the upper web with laterally extending arms 14, which are pierced by suitable fastening devices 15, preferably in the form of rivets. The arms 14, which are formed integral with the off-set front web 16, project from opposite sides of the transverse connecting portion of the front U-shaped web and form a secure connection between the bucket and the chain. The front web 16 is also provided with a central aperture 17, adapted to receive a central fastening device, which will enable the link 13 to be applied to either wide or narrow buckets. The link 13 otherwise is constructed substantially the same as the link 2 heretofore described, the only difference between the links being the addition of the laterally extending arms to the link 13.

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

1. In a conveyer, the combination with a bucket, of a chain having a bucket-supporting link extending substantially the entire length of the bucket and including rigid continuous side bars, front and rear substantially U-shaped webs connecting the side bars at points between the ends thereof and fitted against and rigidly secured to the bucket and spacing the said sides therefrom, and front and rear integral connecting end bars, the front end bar being provided with a hook and spaced from the front web to provide a tooth-receiving opening of sufficient size to position the sprocket tooth beyond the bucket and to prevent the said

tooth from contacting with the fastening means for securing the link to the bucket. 55

2. In a conveyer, the combination with a bucket, of a chain having a bucket-supporting link extending substantially the entire length of the bucket and including rigid continuous side bars, front and rear approximately U-shaped webs composed of sides and transverse connecting portions and formed integral with the side bars at points between the ends thereof and fitted against and rigidly secured to the bucket and spacing the side bars of the links therefrom, the front web being provided at opposite sides with integral arms extending laterally from the transverse connecting portion of the U-shaped front web to enable the link to be applied to either wide or narrow buckets, and front and rear integral connecting end bars, the front end bar being provided with a hook and spaced from the front web to provide a tooth-receiving opening of sufficient size to position the sprocket tooth beyond the bucket and to prevent the said tooth from coming in contact with the fastening means for securing the link to the bucket. 60 65 70 75 80

3. In a conveyer, the combination with a bucket, of a chain, and an elongated bucket-supporting link extending substantially the entire length of the bucket and including rigid continuous side bars, a rear web composed of sides and a transverse connecting portion and formed integral with the side bars near the rear ends thereof and secured rigidly to the bucket and spacing the same from the side bars of the link, front arms off-set from the said side bars and extending laterally from opposite sides of the link near the front end thereof and rigidly secured to and spacing the side bars from the bucket, and front and rear integral end bars, the front end bar being provided with a hook and the link being also provided adjacent to the front end bar with a tooth-receiving opening. 85 90 95 100

In testimony, that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

JACOB MUSSELL.

Witnesses:

JOHN H. SIGGERS,
H. F. RILEY.