

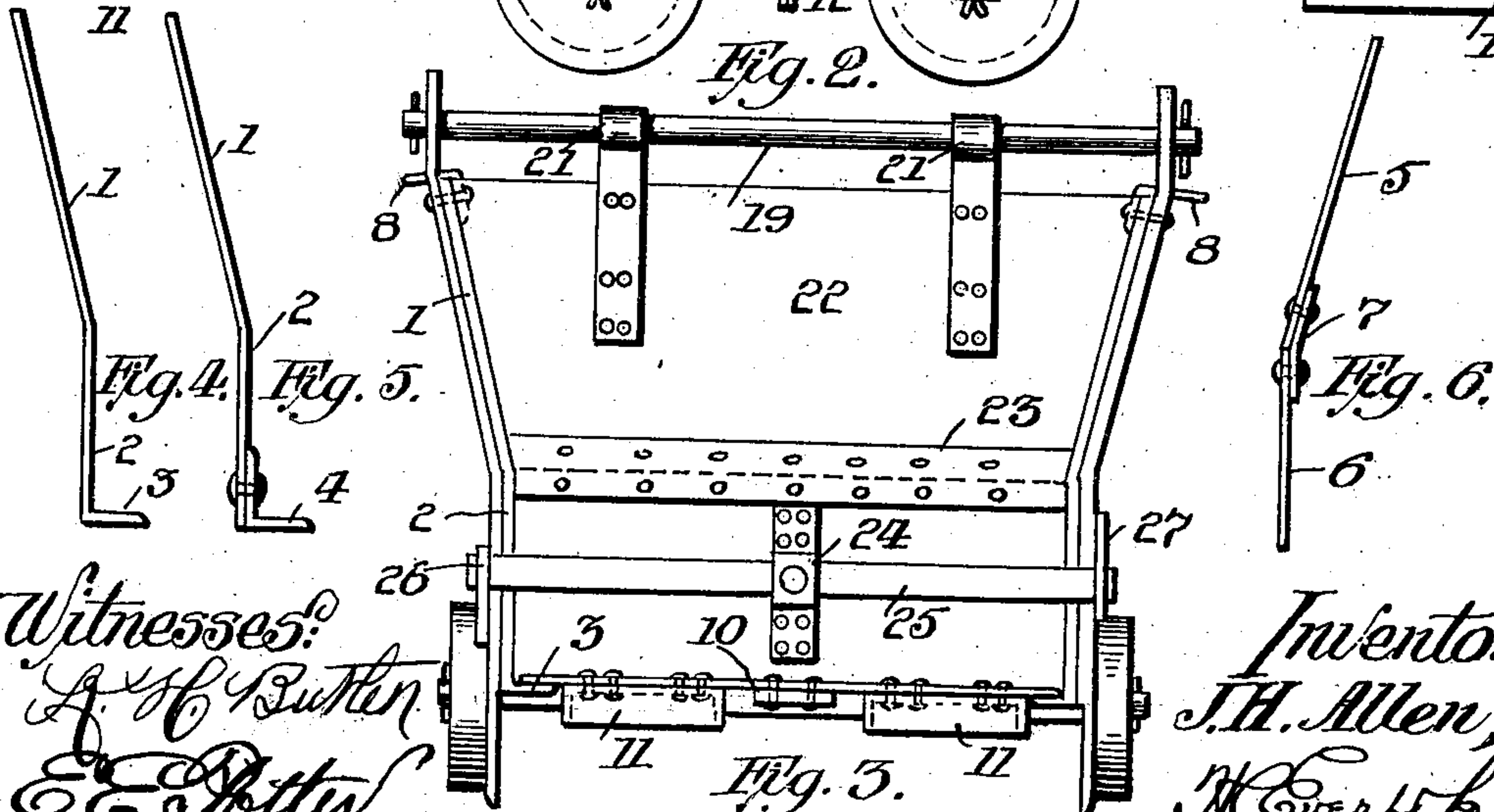
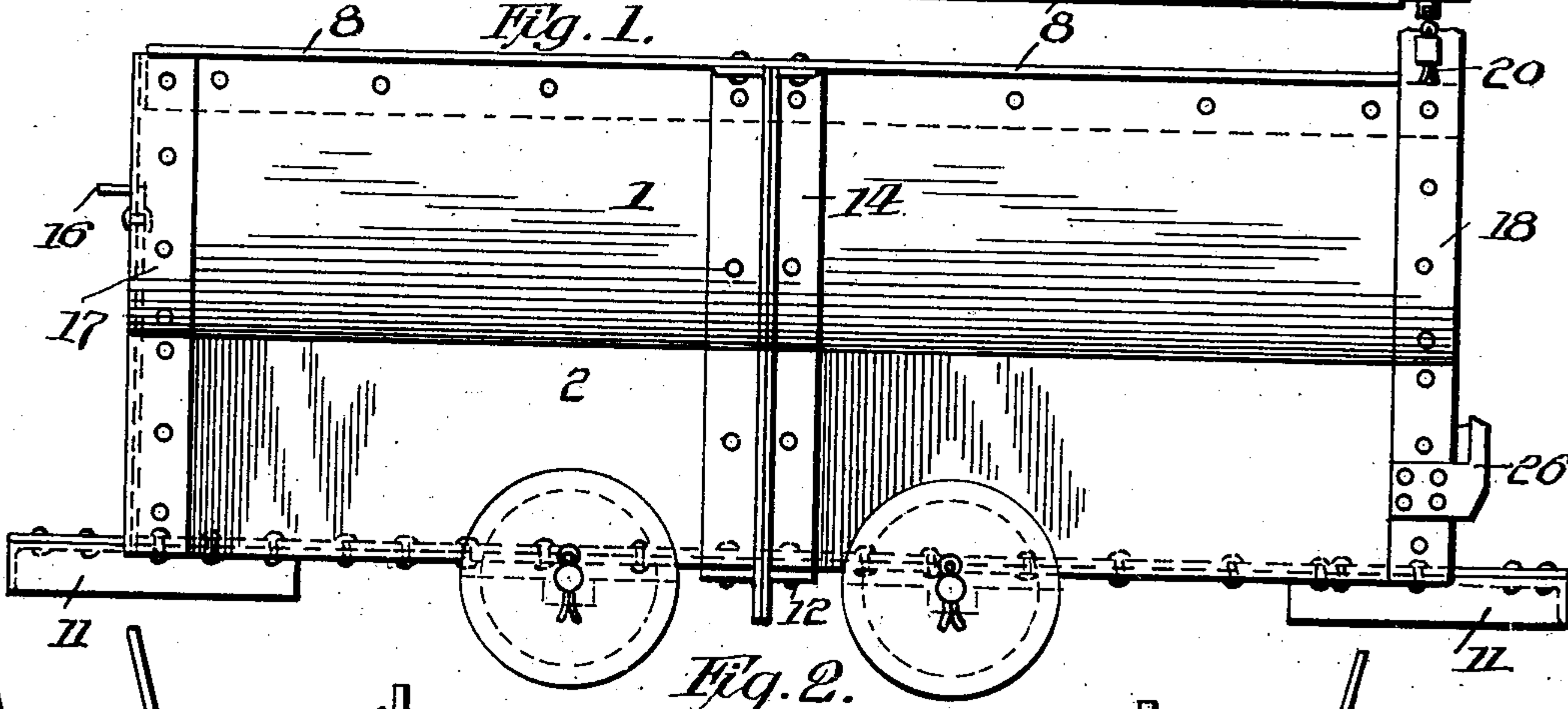
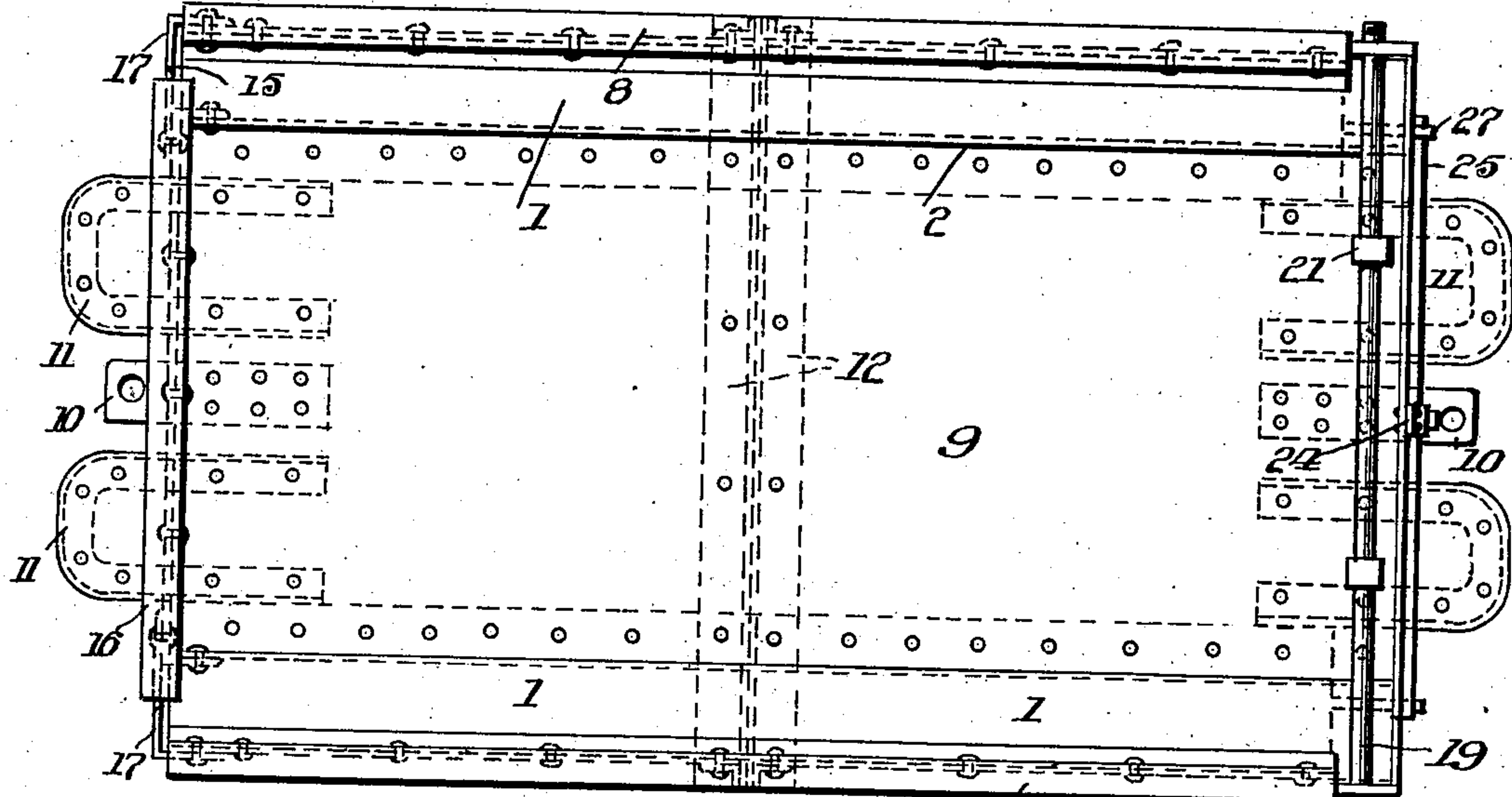
No. 755,342.

PATENTED MAR. 22, 1904.

J. H. ALLEN.
MINE OR PIT CAR.

APPLICATION FILED OCT. 28, 1903.

NO MODEL.



Witnesses:
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UNITED STATES PATENT OFFICE.

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MINE OR PIT CAR.

SPECIFICATION forming part of Letters Patent No. 755,342, dated March 22, 1904.

Application filed October 28, 1903. Serial No. 178,848. (No model.)

To all whom it may concern:

Be it known that I, JAMES H. ALLEN, a citizen of the United States of America, residing at Coal Valley, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Mine or Pit Cars, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to certain new and useful improvements in mining or pit cars; and the primary object of the invention is to construct a simple, strong, durable, and effective car of this type, the body of which car is constructed entirely of structural steel.

A further object of this invention is to construct a car of this type entirely of structural steel, whereby the same may better withstand the rough usage to which cars of this type are ordinarily subjected.

It is a still further object of this invention to construct a car entirely of structural steel without the increasing of the weight to such an extent as to make the car unwieldy, this being accomplished by my improvements in construction.

The invention finally consists in the novel construction, combination, and arrangement of parts to be hereinafter more fully described, and specifically pointed out in the claims.

In describing the invention in detail reference is had to the accompanying drawings, forming a part of this application, and wherein like numerals of reference indicate like parts throughout the several views, in which—

Figure 1 is a top plan view of a mine or pit car constructed in accordance with my invention. Fig. 2 is a side elevation of the same. Fig. 3 is a front or end elevation thereof. Figs. 4, 5, and 6 are end views of modified forms of side wall.

To put my invention into practice, I provide two sides and two ends, one of which ends forms a door and is mounted so as to swing outward when unlocked to permit the dumping of the car to discharge its contents.

Mine or pit cars are generally made wider at the top of the body than at the bottom there-

of, and in my improved construction the sides are made of structural-steel plates a part of which extends outwardly at an incline from the vertical line, this inclined portion 1 comprising the major portion of the plate, the vertical portion 2 of the plate being provided at its lower end with an angle 3, which may be formed integral with the plate, as seen in Figs. 3, 4, or an angle-bar 4, as seen in Fig. 5, may be riveted to the lower edge of portion 2 of the said side. I may form these sides of two separate plates 5 6, placed together, as seen in Fig. 6 of the drawings, and securely held by strap-plates 7, riveted to the plates 5 and 6. To the upper edges of the sides I preferably secure angle-bars 8, one angle of which is securely riveted to the sides and the other angle of which extends outwardly beyond the sides, as clearly shown in the drawings.

The bottom 9 of the car has riveted to its ends a coupling 10 and the bumpers 11, the latter being substantially U shape in form and may be made of channel-bars or angle-bars, as may be desired or found convenient. The bottom is securely riveted to the flanged angles 3 or 4, as the case may be, and to cross-plates 12, extending transversely underneath the bottom. The sides are braced intermediate their ends by side angles 14; the upper ends of which are flanged to permit their being riveted to the angle-bars 8, the side angles 14 being securely riveted to the sides of the car.

The rear end 15 of the car is of less height than the side walls for convenience in loading, the angle bar or strip 16 being placed on the top edge of the rear end in the same manner as the angle bars or strips 8 are placed on the top edge of the sides. The angles 17 are placed at the corner of the car, the inwardly-extending flange of these angles being sheared at the upper end to allow clearance for the ends of angle 16. The two flanges of said angle 17 are securely riveted to the end and to the sides, respectively.

To the sides of the car at the front end thereof are securely riveted structural-steel plates or bars 18, which act as standards for the reception of a shaft 19, mounted therein and se-

curely held, as by keys 20. Straps 21 are mounted to swing on this shaft and are secured to the front 22. This front is usually made in two pieces, owing to the fact that the upper section or member thereof must be sheared at the ends to conform to the flared or inclined sides, the lower section or member of the front end being secured to the upper section or member by structural-steel strip 23, securely riveted to the two members. On the lower section of the front end is mounted a clevis 24, in which is pivoted or fulcrumed a latch-lever 25, the ends of which are adapted to be engaged with the hooks 26 27, securely riveted to the respective sides, the said hooks being set in reverse, whereby the rocking of the latch-lever 25 on its pivot will disengage both ends of the same from its hooks. The car-body is suitably mounted on the axles which carry the traveling wheels.

It will be observed that in this construction I am enabled to dispense with sides made up of several strips, obtaining a very considerable economy in the cost of the car and its weight and at the same time producing a perfectly strong and durable car. The car being constructed of structural steel throughout is better able to withstand the rough usage to which it is subjected in the mines than the ordinary wooden cars.

When the car is to be dumped, the depression of latch-lever 25 at its end engaging in hook 27 elevates the opposite end, so as to disengage it from its hook 26, whereby to allow the end of the car to be free to swing on shaft 19. In the construction of side, as seen in Fig. 6, the flange to receive the floor or bottom may be formed integral with the lower member 6, or the angle 4 may be secured to the member 6, as will be readily apparent.

It will be obvious that various slight changes

may be made in the details of construction without departing from the general spirit of my invention.

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

1. In a structural-steel mine-car, side walls having inturned flanges at the lower edges, a bottom riveted to said flanges, standards secured to the sides at the front end thereof and extending above the sides, a shaft journaled in said extending ends, a door hinged to said shaft, angle-strips secured to the sides at the rear end thereof, and having one of their flanges extending inwardly and sheared at the upper end, a rear end riveted to said inwardly-extending flanges of the angle-strips, angle-strips secured to the upper edge of the sides and to the upper edge of the rear end, and angle-braces secured to the sides, substantially as described.

2. In a structural mine-car, side walls having inturned flanges at the lower edges, a bottom riveted to said flanges, standards secured to the sides at the front end thereof and extending above the sides, a shaft journaled in said extending ends, a door hinged to said shaft, angle-strips secured to the sides at the rear end thereof, and having one of the flanges thereof extending inwardly, a rear end wall riveted to the inwardly-extending flanges of said angle-strips, and angle-iron bumpers bent to the U-shape form and riveted to the bottom at each end of the car, substantially as described.

In testimony whereof I affix my signature in the presence of two witnesses.

JAMES H. ALLEN.

Witnesses:

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E. E. POTTER.