

April 12, 1949.

D. JONES

2,467,136

GRIP TO ATTACH SIDE CHUTES

Filed Feb. 28, 1946

2 Sheets-Sheet 1

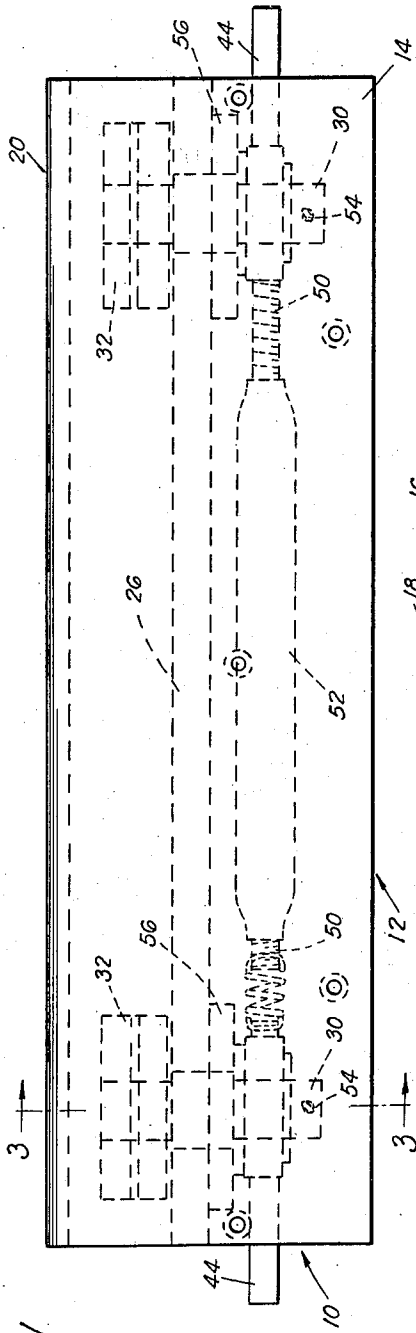


FIG. 1

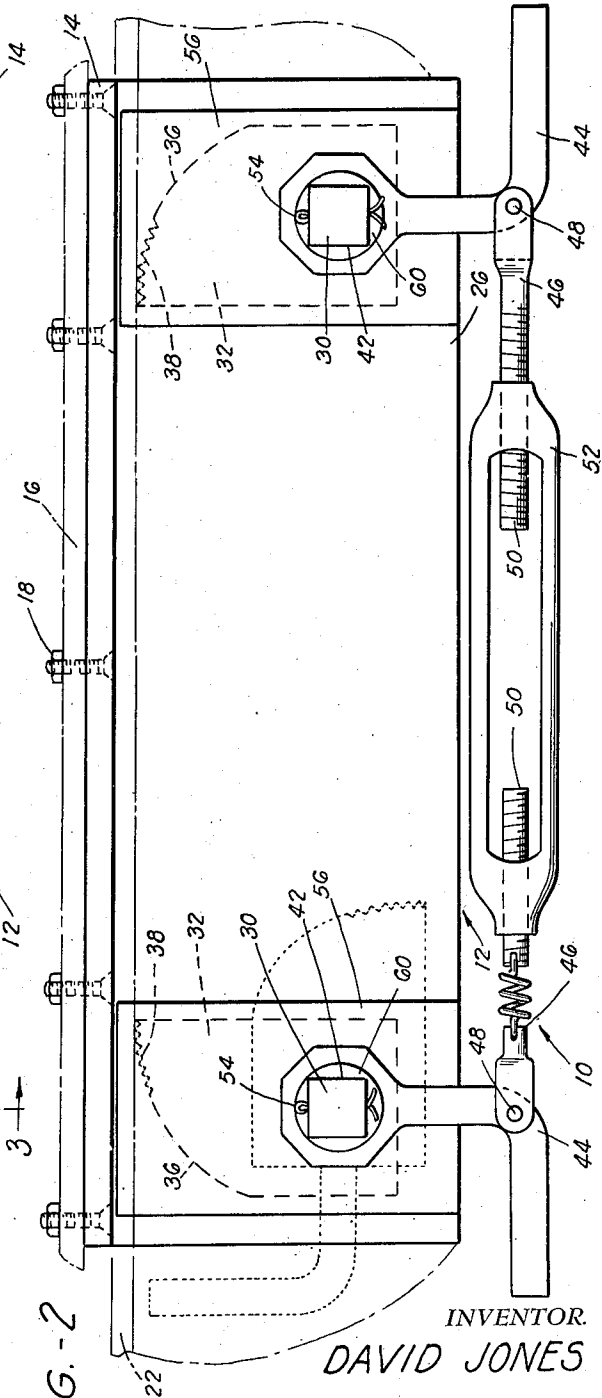


FIG. 2

INVENTOR.

DAVID JONES

BY *Victor J. Evans & Co.*

ATTORNEYS

April 12, 1949.

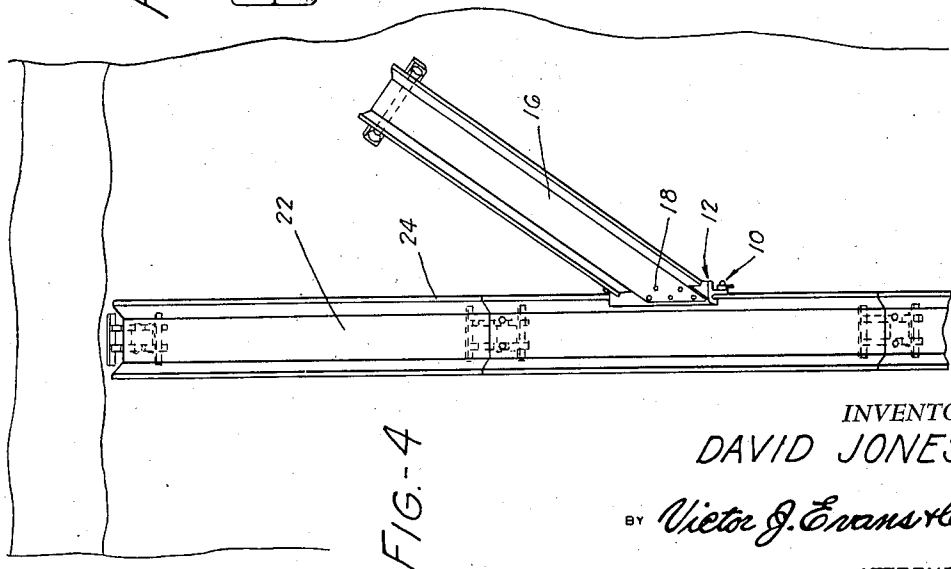
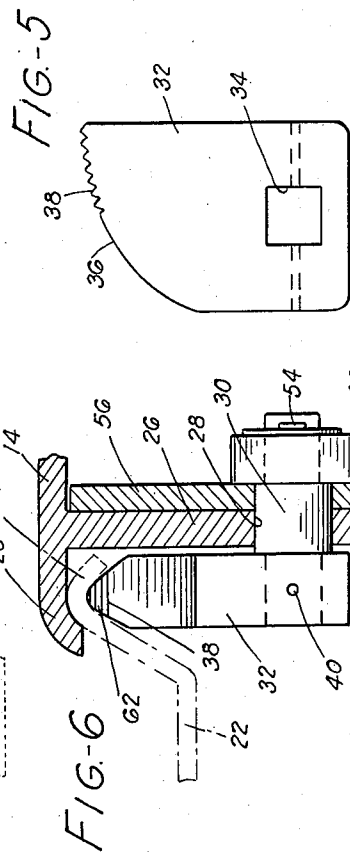
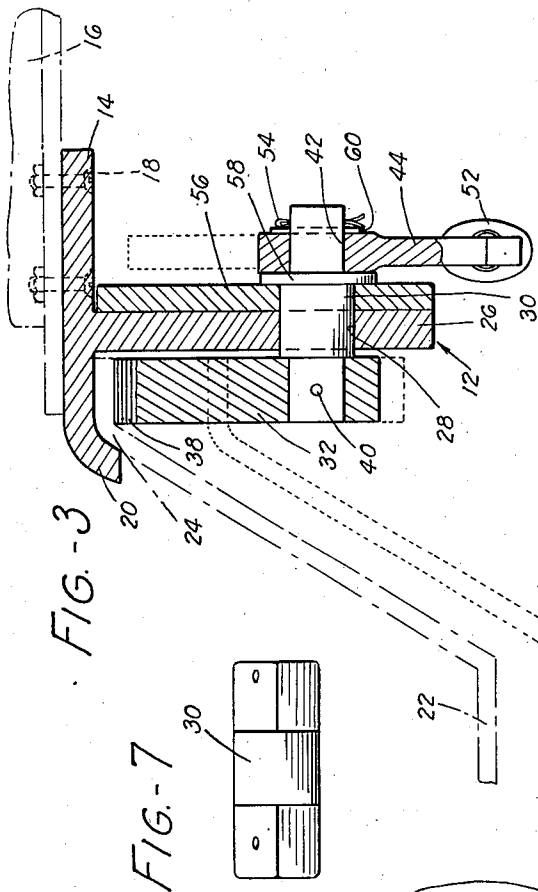
D. JONES

2,467,136

GRIP TO ATTACH SIDE CHUTES

Filed Feb. 28, 1946

2 Sheets-Sheet 2



INVENTOR.  
DAVID JONES  
BY *Victor J. Evans & Co.*  
ATTORNEYS

# UNITED STATES PATENT OFFICE

2,467,136

## GRIP TO ATTACH A SIDE CHUTE

David Jones, Wilkes-Barre, Pa.

Application February 28, 1946, Serial No. 650,985

1 Claim. (Cl. 198—220)

1

This invention relates to a grip for attaching a side shaker chute to the main shaker chute used in a mine shaft.

An object of the invention is to provide a device of this character that will permit the props for the roof to be more closely spaced for safety and yet permit the chute to be as efficiently used as in the regular manner.

Another object of the invention is to provide a device that is simple in construction, durable and efficient in operation and is economical to manufacture.

With the above and other objects and advantages in view the invention consists of the novel details of construction, arrangement and combination of parts more fully hereinafter described, claimed, and illustrated in the accompanying drawing in which:

Figure 1 is a top plan view of an embodiment of the invention;

Figure 2 is a side view thereof;

Figure 3 is a sectional view on the line 3—3 of Figure 1;

Figure 4 is an elevational view showing the chute grip in relation to the main shaker chute for attaching a side chute;

Figure 5 is a detailed view of one of the clamping members;

Figure 6 is a detailed sectional view of a different shaped dog for a similar shaped chute and

Figure 7 is a detailed elevational view of the shaft or pin for the clamping members.

Referring more in detail to the drawings the reference numeral 10 designates the clamp comprising the body portion 12 which is substantially T-shaped in cross section having the straight flange 14 for connection to the side chute 16 by fasteners 18 and the curved flange 20 to engage the main chute 22 the flange 20 being curved to conform to the marginal rim edge 24 of the chute 22.

The stem 26 of the body is provided with bearing openings 28 to mount the shaft or pin 30 at the center thereof. The ends of the pins are square shaped to mount the clamping dogs 32 by means of the square shaped opening 34 and the dogs are provided with the curved clamping face 36 which is straight in cross section and partially serrated at 38. A pin 40 fixes the dog to the shaft. The other end of the shaft being received in the square shaped opening 42 in the levers 44, and links 46 are pivotally connected at 48 to the levers 44 and have threaded ends 50 to receive the turnbuckle 52. The levers are retained on the shaft by cotter keys 54.

2

Secured to the stem of the body intermediate the levers 44 and the stem is the reinforcing plate 56 and a washer 58 spaces the levers from the plate as shown in Figure 3 and a washer 60 is interposed between the key and lever.

In Figure 6 the clamping face 62 of the dog 32 is substantially conical shaped in cross section to conform to the similarly curved rim edge 64 of the chute 22 otherwise the structure is as previously described.

When the clamp is to be applied to the main chute the turnbuckle 52 is removed, the flange 20 is fitted over the chute 22 and the chute 16 already being connected to the clamp is easily clamped to the chute by engaging the dogs 32 and rethreading the turnbuckle on the links 46.

The chute 16 can be clamped to any desired point on the chute 22 and since the dogs clamp in both directions the forward and backward movement of the chute only tends to make the dogs grip tighter.

Thus there has been provided a clamp which is easily removed and attached as desired, providing a saving in labor and acting as a safety feature where the men in the mine are concerned since a chute so attached will not interfere with the props used to support the roof of the mine shaft.

It is believed that the operation and construction of the clamp will be apparent to those skilled in the art and it is to be understood that changes in the details of construction, arrangement and combination of parts may be resorted to without departing from the spirit of the invention or the appended claim.

Having thus described the invention what is claimed as new and desired to be secured by Letters Patent is:

A device of the character described for attaching a side shaker chute to a main shaker chute, comprising a body which is T-shaped in cross-section and formed with a vertically disposed stem and a horizontally disposed cross piece, a pair of relatively spaced clamping members pivotally mounted on the stem portion of said body at the opposite ends thereof, said body having a portion of the cross piece thereof resting on the marginal rim of the main chute, and curved to fit the marginal rim of the main chute at the outer marginal edge of the cross piece, the other portion of the cross piece of said body secured to the bottom of the side chute, and formed to conform to the flat surface of the bottom of the side chute, a shaft mounted in the stem portion of said body at each opposite end thereof, said body clamping members comprising a clamping dog

having a serrated contact edge, a clamping dog being adapted to be fixed to one end of each shaft on said body for the pivoted movement of each dog, an apertured reinforcing plate on the opposite side of the stem portion of the body, a lever 5 fixed on the opposite end of each shaft outwardly of each reinforcing plate, the movement of each lever causing the clamping action of each dog to clamp the cross piece of said body to the main chute, and a single spring tensioned turnbuckle 10 connected between the two levers to retain the levers in clamping position with relation to the dogs.

DAVID JONES.

#### REFERENCES CITED

The following references are of record in the file of this patent:

#### UNITED STATES PATENTS

Number	Name	Date
1,472,618	Schwartz -----	June 11, 1929
1,472,928	Schwartz -----	June 11, 1929
1,846,155	Spelman -----	Feb. 23, 1932

#### FOREIGN PATENTS

Number	Country	Date
325,243	Great Britain -----	Feb. 14, 1930