W. TINDER, J. STAEMPFLI & J. N. MILES.

PISTON SUPPORTER.

APPLICATION FILED APR. 27, 1918.

1,281,882.

Patented Oct. 15, 1918.

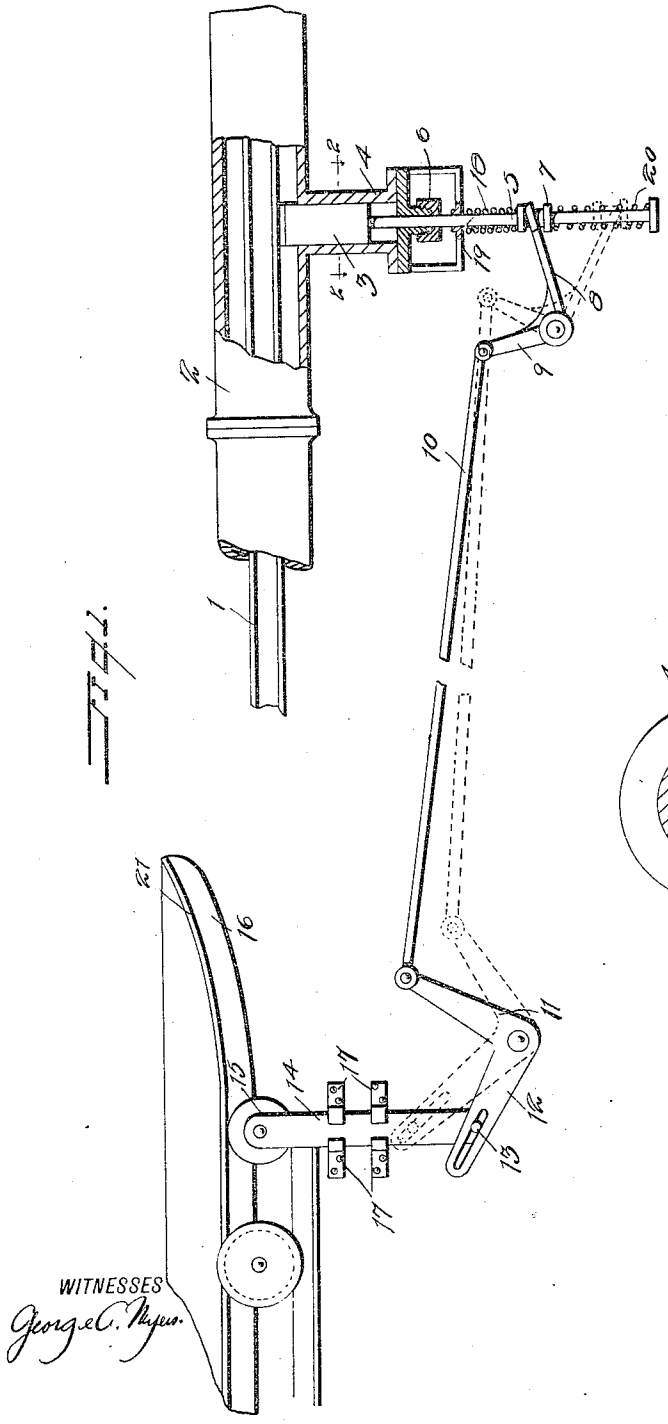


Fig. 1.

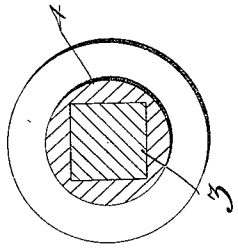


Fig. 2.

WITNESSES

George C. Myers.

INVENTOR

WM. TINDER,

J. N. MILES,

JOE. STAEMPFLI,

BY Munn & Co.,

ATTORNEYS

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

WILLIAM TINDER, JOSEPH STAEMPFLI, AND JOSEPH N. MILES, OF SLIDELL, LOUISIANA.

PISTON-SUPPORTER.

1,281,882. Specification of Letters Patent. Patented Oct. 15, 1918.

Application filed April 27, 1918. Serial No. 231,227.

To all whom it may concern:

Be it known that we, WILLIAM TINDER, JOSEPH STAEMPFLI, and JOSEPH N. MILES, citizens of the United States, and residents of Slidell, in the parish of Saint Tammany and State of Louisiana, have invented certain new and useful Improvements in Piston-Supporters, of which the following is a specification.

Our invention is an improvement in piston supporters, and has for its object to provide mechanism of the character specified adapted for supporting the piston of saw mill feeds, to prevent the wear usually attendant on the steam cylinder.

In the drawings:

Figure 1 is a side view of the improved supporter, with parts in section;

Fig. 2 is a section on the line 2—2 of Fig. 1, looking in the direction of the arrows adjacent the line.

As is known, in saw mill feeds, the piston rod will bend down, because of its great length, from forty to sixty feet, and will cut the bottom of the cylinder. To prevent this bending down of the rod the supporter is provided.

In the present embodiment of the invention the piston, whose rod 1 is shown, moves in a cylinder or casing 2, and the said rod is arranged to be supported intermediate its ends by a head 3, which is movable in an extension 4 from the cylinder 2. This extension 4 depends from the cylinder 2, and the head has a stem 5, which extends below the extension through a stuffing box 6 at the lower end of the said extension. The stem has a sleeve 7 fixed thereon, which is provided at each end with an outwardly extending flange, and the sleeve is engaged between the flanges by one of the arms 8 of a bell crank, the said arm being forked and the arms of the fork engaging the sleeve. The other arm 9 of the bell crank is connected by a link 10 with one of the arms 11 of another bell crank, consisting of the arm 11 and another arm 12. These bell cranks 8—9 and 11—12 are pivotally mounted, the pivotal connection being at the junction of the arms. The arm 12 of the bell crank is longitudinally slotted, for engagement by a pin 13 on the lower end of a vertically moving slide 14. This slide is provided at its upper end with a roller 15, which is adapted for engagement by the carriage 16 of the saw mill, to move the said slide vertically, and the slide is guided in its vertical movement by guides 17. A coil spring 18 encircles the stem 5 between the sleeves 7 and a guide 19 connected with the extension 4, and a second spring 20 encircles the stem between the sleeve and a head on the lower end of the stem.

In the operation of the device, when the carriage comes forward, the running board of the same will engage the roller 15 and will swing the bell crank 11—12. Through the link connection 10 the bell crank 8—9 will be swung and the head will be lifted into the full line position of Fig. 1, supporting the piston. The carriage 16 is provided with a member indicated at 21 for engaging the roller 15 to depress the slide 14, and this element 21 is so arranged that it will not strike the roller 15 until the piston head in the cylinder 2 has passed beyond the head 3 a distance of from six to ten feet. Then the element 21 strikes the roller and raises the supporter or head 3 beneath the piston rod to support the same.

When the carriage releases the slide 14 the spring 18 moves the supporter or head 3 downward out of the way of the piston, and should there be breakage of any of the parts, the spring will serve the same purpose— namely, to move the supporter or head 3 downward. It will be noticed that the head or supporter 3 is square in cross section and the extension 4 is similarly shaped to prevent turning of the head. It will be obvious that the supporter or head 3 might be lifted with any other suitable mechanism than that shown.

We claim:

The combination with the piston rod, of means for supporting the same intermediate the ends thereof, said means comprising a head or supporter movable toward and from the rod, a spring normally pressing the supporter downward, and means controlled by the forward movement of the carriage for elevating the supporter after the

piston has passed the same, said means comprising pivotally mounted bell cranks, one at the supporter and one at the carriage and connected together to move in unison, a connection between that arm of the bell crank adjacent to the supporter and the supporter, and a slide mounted for vertical movement at the carriage and connected to the other bell crank and having a roller at its upper end, the carriage having means engaging the roller to depress the same.

WILLIAM TINDER.
JOS. STAEMPFLI.
JOE N. MILES.

Witnesses:
E. G. HAILEY,
R. B. HAILEY.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."