S. E. PITTMAN.

ROLL HOIST.

APPLICATION FILED MAY 29, 1918.

1,280,083.

Patented Sept. 24, 1918.

2 SHEETS—SHEET 1.

Fig. 1.

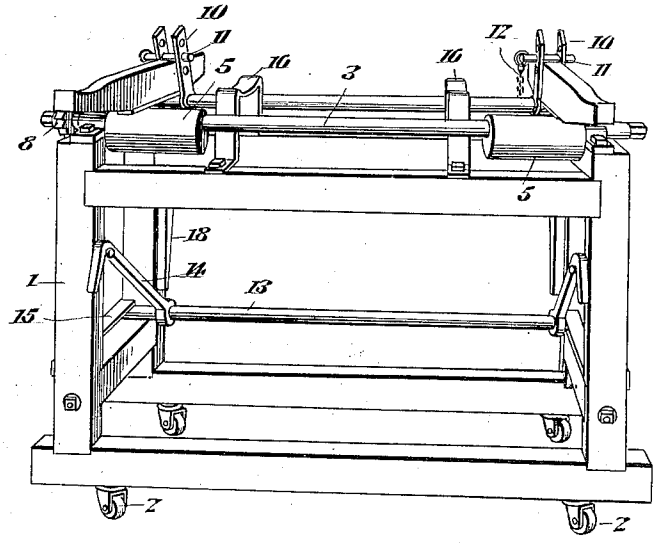
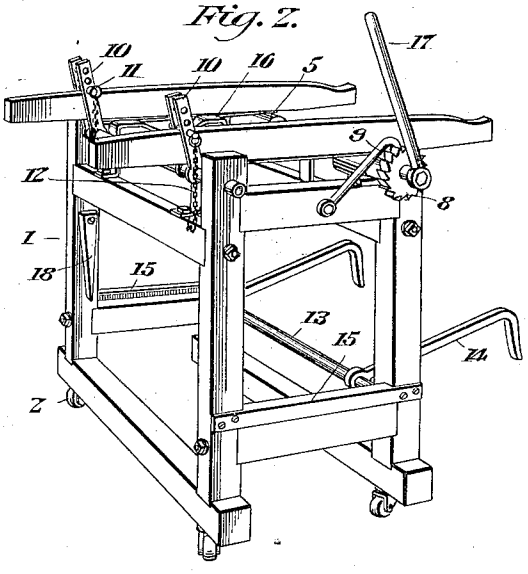


Fig. 2.



Witnesses

W. D. Shafer

T. F. Tarpin

Inventor

S. E. Pittman

By Victor J. Evans

Attorney

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

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2 SHEETS—SHEET 2.

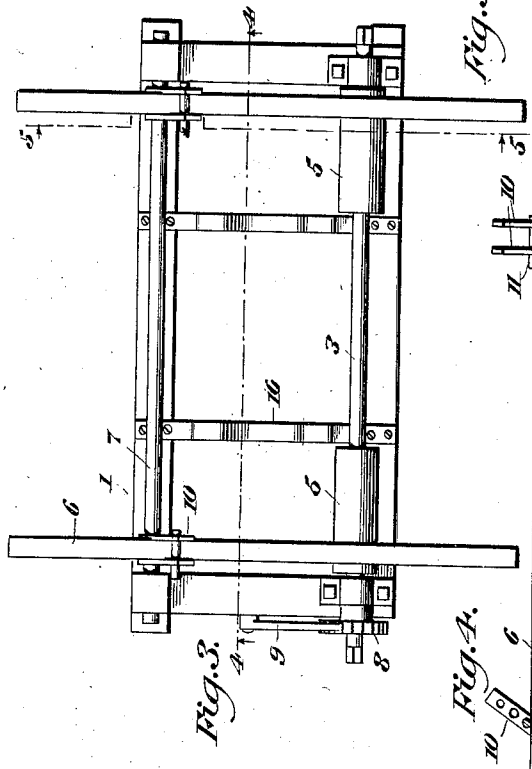


Fig. 3.

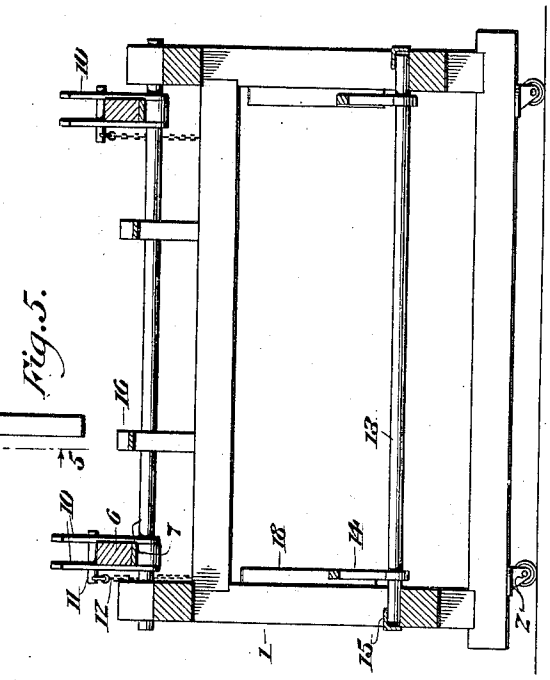


Fig. 5.

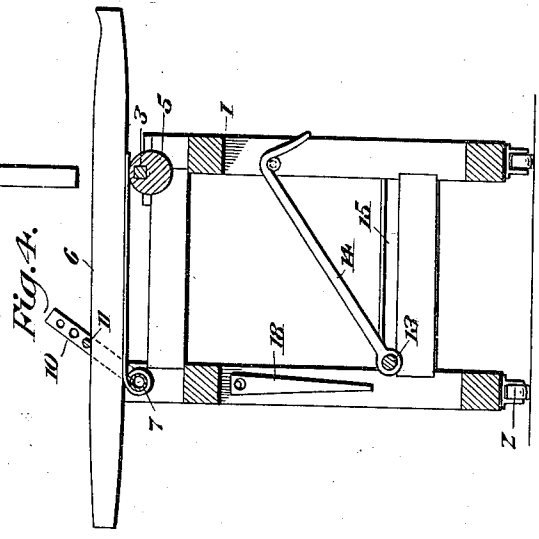


Fig. 4.

Witnesses

M. D. Phelps

T. F. Turpin

Inventor

S. E. Pittman

By Victor J. Evans

Attorney

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTO

UNITED STATES PATENT OFFICE.

STEVEN E. PITTMAN, OF WICHITA, KANSAS.

ROLL-HOIST.

1,280,083. Specification of Letters Patent. Patented Sept. 24, 1918.

Application filed May 29, 1918. Serial No. 237,264.

To all whom it may concern:

Be it known that I, STEVEN E. PITTMAN, a citizen of the United States, residing at Wichita, in the county of Sedgwick and State of Kansas, have invented new and useful Improvements in Roll-Hoists, of which the following is a specification.

My present invention relates to replacing of heavy steel rolls—*i. e.*, the taking of such rolls out for regrinding and the subsequent replacing of the rolls in operative position.

Heretofore the removal and replacing of rolls such as referred to has been attained by the expenditure of great effort on the part of several men, and the object of my invention is to provide a roll hoist through the medium of which one man can accomplish the handling of a heavy roll and this with but little effort.

To the attainment of the foregoing object the invention consists in the peculiar and advantageous construction novel combinations and adaptation of parts hereinafter described nd claimed.

In the accompanying drawings which are hereby made a part hereof,

Figure 1 is a perspective view of the roll hoist constituting the best practical embodiment of my invention of which I am aware.

Fig. 2 is a perspective of the hoist taken from a different view point,

Fig. 3 is a top plan view of the apparatus, and Figs. 4 and 5 are transverse sections taken in the planes indicated by the lines 4—4 and 5—5 respectively of Fig. 3.

Similar numerals of reference designate corresponding parts in all of the views of the drawings.

The main frame 1 of my novel hoist apparatus is preferably, though not necessarily, made of wood, and is rectangular in general configuration. I prefer to mount the frame 1 upon casters 2 to permit of it being readily moved from one point to another in a flour mill or other factory, but of course, I do not desire to be understood as confining myself to the portable characteristic of the hoist inasmuch as the invention may be embraced in a stationary apparatus without departure from my appended claims.

Journaled in the upper portion of the frame 1 and extending longitudinally thereof is a shaft 3, the ends 4 of which are of angular form in cross section. This shaft 3 extends through two eccentrics 5. It is manifest in this connection that a single eccentric extending between the spaced end bars of the frame might be employed in lieu of the two eccentrics, but I prefer for the sake of lightness to use the two eccentrics as stated.

Arranged above the end portions of the frame 1 are levers 6 which are preferably though not necessarily, of hard wood, and disposed under the said levers 6 and arranged in parallel relation to the first named shaft is a shaft 7. The levers 6 are provided at their under sides with metallic strips which embrace the shaft 7. It will also be observed that the shaft 3 is equipped with a ratchet disk 8, and that a pawl 9 is provided in operative relation to the disk 8 so as to prevent casual retrograde rotation of shaft 3.

Disposed at opposite sides of each of the levers 6 are bars 10, preferably of metal, which are provided with apertures to permit of them being adjustably secured on the levers 6 through the medium of pins 11 connected through chains 12 with the frame 1.

The said bars 10 are also connected to the shaft 7 as shown.

In addition to the elements enumerated my novel apparatus comprises a comparatively low shaft 13 which carries hooks 14 designed to be fastened to a roll. The shaft 13 is arranged and movable forwardly and rearwardly in guideways 15 formed above the lower end bars of the frame 1.

By reference to the drawings it will be noted that the shaft 7 extends through the bars 10, and that each lever 6 is provided with a plurality of tranverse apertures for adjustment purposes.

Disposed at right angles to and between the shaft 3 and the shaft 7, and superimposd on the upper longitudinal bars of the frame 1 are the roll-receiving saddles 16 of the apparatus.

17 is a lever wrench designed to be applied to one end of the shaft 3 for the turning thereof incidental to the operation of the apparatus.

The apparatus also comprises two wedges 18, disposed as shown relative to the frame.

In the practical use of my novel hoist it will be manifest that turning of the eccentrics 5 will have the effect of raising the levers 6, or permitting downward movement of said levers according to the direction of

rotation of the shaft 3; it being understood in this connection that the levers 6 are arranged above and in engagement with the eccentrics 5. It will also be manifest that the rotation of the shaft 3 necessary to the handling of the roll, a flour mill roll for instance, may be accomplished with the expenditure of little effort on the part of a single workman.

It will be gathered from the foregoing that my apparatus is designed specifically for taking rolls out of the substance in flour mills for regrinding and this without the aid of chain falls. Incidental to the said operation the machine is moved up through a stand of rolls, and the hooks 14 are fastened to the countershaft box. The levers 6 are inserted under the roll shaft, and the roll is raised through the levers 6 by pulling downwardly on the handles of the levers which raises the roll about two and one-half inches and brings it out on the receiving saddles.

Having described my invention what I claim and desire to secure by Letters-Patent is:

1. A roll hoist comprising a frame, roll receiving means mounted on the frame, a shaft journaled in the frame and having eccentric means at one side of the roll receiving means, a shaft disposed in the frame and arranged at the opposite side of the roll receiving means, levers superimposed upon and movable by the eccentric means, and means connecting the second named shaft and the levers.

2. A roll hoist comprising a frame having forwardly and rearwardly extending guideways, a shaft disposed and movable laterally in said guideways and having hooks, a shaft mounted in the upper portion of the frame and equipped with eccentric means, levers superimposed upon and movable by said eccentric means, a shaft mounted in the frame and arranged in parallel relation to the shaft carrying the eccentric means, means connecting the third named shaft and the levers, and roll receiving means disposed on the frame and arranged between the second named shaft and the third named shaft.

3. A roll hoist comprising a frame having forwardly and rearwardly extending guideways in its lower end portions, a shaft movable laterally in said guideways and having angularly disposed hooks, a shaft arranged longitudinally in the upper portion of the frame and equipped with eccentric means and a ratchet disk, a pawl connected to the frame and arranged in operative relation to said disk, and a longitudinal shaft mounted in the frame in substantially the same plane as the eccentric shaft, levers superimposed upon the eccentric means and the last named shaft and having straps at their undersides receiving said shaft, and bars connecting the levers and the last named shaft; the eccentric shaft being provided with an angular end for the application of a turning appliance.

In testimony whereof I affix my signature.

STEVEN E. PITTMAN.

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