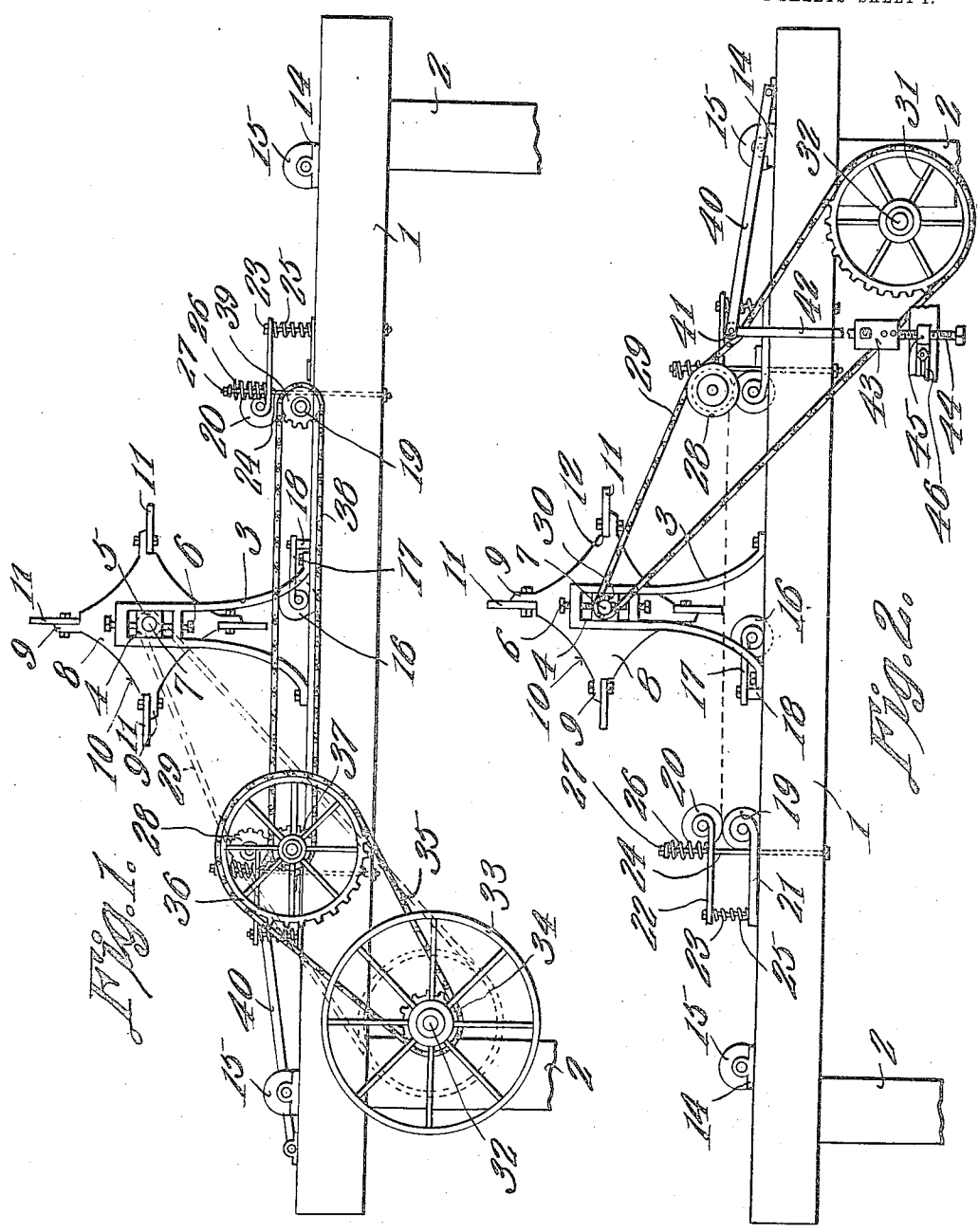


J. S. COLLINS.
 PALLET CLEANING MACHINE.
 APPLICATION FILED FEB. 21, 1911.

1,045,677.

Patented Nov. 26, 1912.
 2 SHEETS-SHEET 1.



Witnesses

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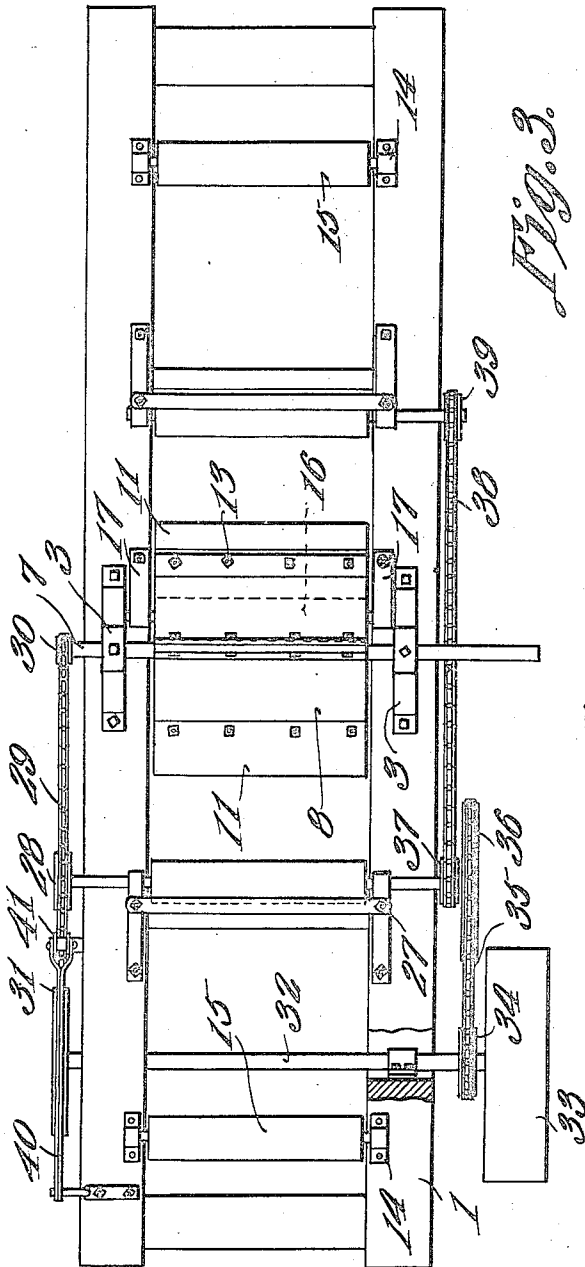


Fig. 3.

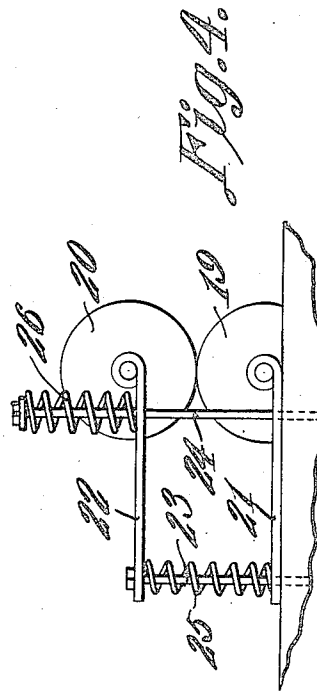


Fig. 4.

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UNITED STATES PATENT OFFICE.

JOHN S. COLLINS, OF LEWISTOWN, PENNSYLVANIA.

PALLET-CLEANING MACHINE.

1,045,677.

Specification of Letters Patent.

Patented Nov. 26, 1912.

Application filed February 21, 1911. Serial No. 610,016.

To all whom it may concern:

Be it known that I, JOHN S. COLLINS, a citizen of the United States, residing at Lewistown, in the county of Mifflin and State of Pennsylvania, have invented a new and useful Pallet-Cleaning Machine, of which the following is a specification.

This invention relates to machines for cleaning metal pallets such as used in the manufacture of what is commonly known as "sand brick."

It has been found, in the manufacture of bricks of this type that a deposit is left by the bricks upon the pallet and this deposit adheres to the pallet with such tenacity as to render its removal extremely difficult, and, unless it is removed, the next series of bricks placed on the pallet will be marred to an undesirable extent by these deposits.

The principal object of the present invention is to provide a machine by means of which pallets of this type can be quickly and thoroughly cleaned.

Another object is to provide a cleaning machine the parts of which can be conveniently adjusted, said machine requiring but little power to operate it.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of invention herein disclosed can be made within the scope of what is claimed without departing from the spirit of the invention.

In the accompanying drawings the preferred form of the invention has been shown.

In said drawings:—Figure 1 is an elevation of one side of the machine. Fig. 2 is an elevation of the other side thereof. Fig. 3 is a plan view, a portion of the frame being broken away. Fig. 4 is an enlarged detail view of the bearings at one end of one pair of rolls.

Referring to the figures by characters of reference 1 designates the frame of the machine, the same being mounted on suitable supports 2 and having standards 3 upon the sides thereof. Each of these standards is formed with an elongated opening 4 in the upper portion thereof and within which is slidably mounted a box 5 held by upper and lower adjusting screws 6 these screws engaging the standards and being readily acces-

sible for the purpose of shifting the box vertically.

The boxes 5 constitute bearings for a shaft 7 and this shaft has a hub 8 formed with radial wings 9 extending longitudinally thereof, these wings being preferably located 90 degrees apart and those faces of the hub between the wings being preferably concaved longitudinally as indicated at 10. A cleaning blade 11 of steel or other suitable hard metal is bolted to each flange and a shoulder 12 is formed upon the hub along the base of each flange 9 and constitutes an abutment for the adjacent blade 11. These blades are all of the same proportions and the outer or working edges thereof are all the same distance from the axis of the shaft 7. It is to be understood that the blades are detachably held upon the flanges, bolts 13 or the like being utilized for this purpose.

Brackets 14 are secured upon the sides of frame 1 adjacent the ends thereof and constitute bearings for rolls 15 extending transversely of the frame. Another roll 16 is arranged transversely of frame 1 between the standards 3 and is journaled within spring plates 17 bolted or otherwise fastened, at one end, to supporting blocks 18 mounted on the frame. It will thus be seen that the roll 16 is yieldingly supported. Arranged between roll 16 and each roll 15 is a pair of rolls 19 and 20 arranged one above the other, each roll 19 being journaled within plates 21 secured to the sides of the frame 1 while each roll 20 is journaled within plates 22 mounted on guide rods 23 and 24. A spring 25 is mounted on each rod 23 and bears at its ends against the plates 21 and 22, thus constituting a yielding support for the plate 22. Another spring 26 is mounted on the upper end portion of each rod 24 and bears at one end against a head 27 on the rod and at its other end, upon the upper face of plate 22, thus operating to hold the upper roll 20 yieldingly in contact with the lower roll 19. The roll 20 at one end of the machine has a sprocket 28 engaged by the upper run of an endless chain 29, this chain being mounted on a sprocket 30 connected to one end of shaft 7 and upon a much larger sprocket 31 secured to a drive shaft 32 extending under the frame 1 and transversely thereof. A pulley 33 is connected to the shaft 32 and is adapted to receive motion from a belt, not shown, and driven by any suitable mo-

tor. It is to be understood, however, that, if preferred, a pulley may be secured to shaft 7 and power applied to the machine at that point rather than to the shaft 32.

A sprocket 34 is secured to shaft 32 adjacent pulley 33 and drives a chain 35 mounted on a sprocket 36 which is secured to the roll 19 located under that roll 20 to which the sprocket 28 is connected. A small sprocket 37 is secured to the same roll as is sprocket 36 and transmits motion through an endless chain 38 to a sprocket 39 secured to the other roll 19.

A lever 40 is pivotally connected to one end portion of frame 1 and carries a roller 41 bearing downwardly on that portion of chain 39 located between sprockets 28 and 31, this lever being connected to an adjusting rod 42 extending downwardly to a block 43 in which an adjusting screw 44 is swiveled, this screw engaging an eye 45 in one end of the plate 46 fixedly connected to the supporting structure of the machine. It will be apparent that by adjusting lever 40 downwardly by means of screws 44, roller 41 will be caused to press on chain 29 and thus take up slack therein and cause it to firmly engage the sprocket 28.

In operation, motion is transmitted from sprocket 31 to sprocket 30 through chain 29 and the series of blades 11 is thus caused to rotate at a high speed. The rolls 19 are both rotated in the same direction and chain 29 coöperates with sprocket 28 to rotate the adjacent roll 20 at the same speed but in the opposite direction. The pallet to be cleaned is placed on roll 15 at one end of the machine and fed to the pass between adjacent rolls 19 and 20. As these rolls are positively driven in opposite directions they will grip the pallet and shift it longitudinally so that it will pass under the series of

rotating scraping blades 11 and thence to the pass between the other rolls 19 and 20 and from the machine. The distance between shaft 7 and the upper surface of the pallet is such that the blades, as they rotate, are caused to just touch the upper surface of the pallet, thus scraping from said surface any accumulations thereon. The speed of the rotation of the blades is such that the pallet will be thoroughly cleaned by them. As the plates 22 are yieldingly held, it will be obvious that the upper rows 20 can move upwardly to a sufficient extent to enable the pallet to readily pass between the upper and lower rolls.

What is claimed is:—

In a machine for cleaning metallic pallets, a frame, a shaft journaled above and extending transversely of the frame, a plurality of non-flexible scraping blades connected to and radiating from the shaft between its journals and having blunt working edges straight from end to end, spring plates secured to the frame adjacent the path of the blades, a pallet engaging roll yieldingly supported by the plates and below but out of vertical alinement with the shaft, means for adjusting the shaft toward or away from the roll, feed rolls revoluble in unison for feeding a pallet between said yielding roll and the path of the blade edges, and a spring pressed upper roll above each feed roll and normally bearing thereagainst.

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

JOHN S. COLLINS.

Witnesses:

FRANK B. OCHSENREITER,
M. E. GEIER.