April 24, 1951 C. F. FITZGERALD 2,549,965

RECEPTACLE

Original Filed Nov. 14, 1946

Fig. 1

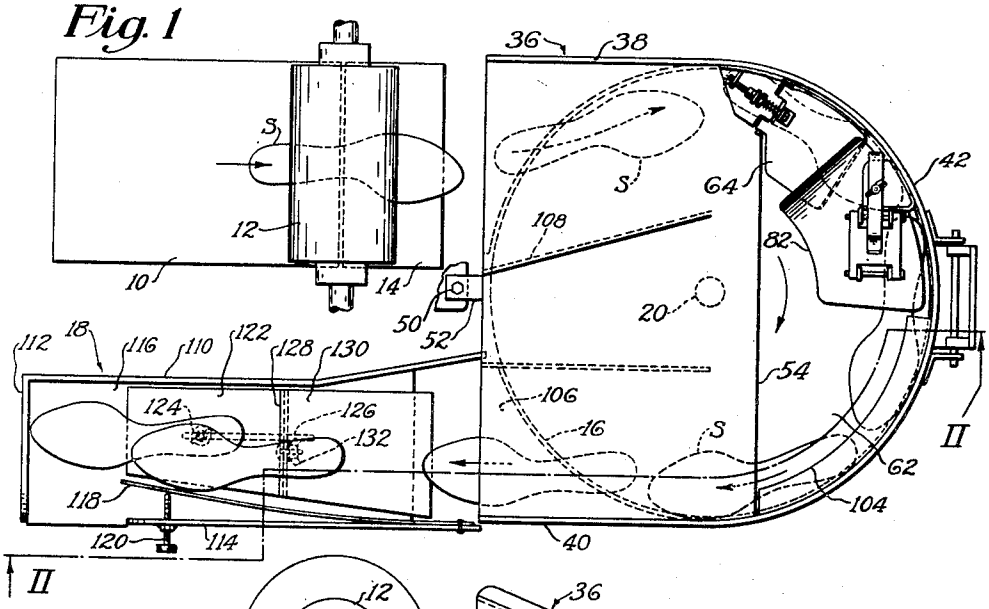
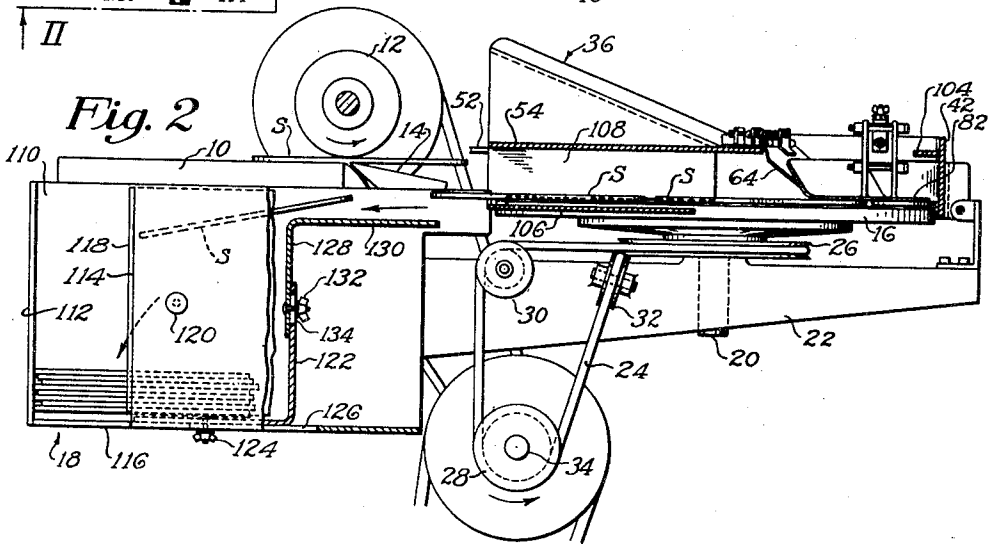


Fig. 2



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RECEPTACLE

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5 Claims. (Cl. 271—86)

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This invention relates to receptacles, and is herein illustrated as embodied in a receptacle for stacking work pieces such as insoles, or other shoe parts.

In the operation of certain shoemaking machines, such as those used for splitting soles for example, soles are fed into the machine at the front thereof, where the operator stands, and usually are discharged behind the machine beyond the normal reach of the operator. In order to eliminate the danger and inefficiency of leaning over or walking around the machine, it is desired that the finished soles be returned to a place conveniently located with reference to the operator's station. In one prior machine of this type, as disclosed in the Hood Patent No. 2,319,324, granted on May 18, 1943, a rotary disk is arranged to receive the soles after they have been operated upon, reverse their direction of motion and transfer them into a receptacle adjacent to the operator's station.

An improved sole handling or transfer device of this type forms the subject-matter of my copending application Serial No. 709,703, filed on November 14, 1946, of which this application is a division.

It is a general object of this invention to provide an improved receptacle adapted to receive work pieces from a machine, or from a transfer device, and stack them in orderly fashion, giving consideration to the need for accommodating soles of various sizes and providing access to the soles for purposes of removing them from the receptacle.

In accordance with one feature of the invention, the illustrated receptacle is provided with a pair of converging side walls and a second pair of end walls, the walls of each pair being relatively adjustable to permit the space bounded by them to be varied according to the width of the soles to be stacked therein. In the illustrative receptacle, one side wall and one end wall are adjustable, the other wall of each pair being fixed.

Preferably, and in accordance with another feature of the invention, the adjustable side wall is constituted by a flexible shield which may be deflected into any desired degree of convergence with the other side wall, whereby the soles are guided by the funneling action of the walls into an orderly pile as they are collected in the receptacle. Access to the soles, by which their removal from the receptacle is facilitated, is furthered, in accordance with another feature of the invention, by arranging the above-mentioned shield so

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that one end thereof is spaced from the adjacent end wall throughout the height of the receptacle. This construction provides an opening which permits the operator to grip the pile of soles conveniently and to lift them freely out of the receptacle.

These and other features of the invention will be more fully understood from the following specification, when read in connection with the accompanying drawings, and will be pointed out in the claims.

In the drawings,

Fig. 1 is a plan view of an illustrative receptacle embodying the invention, the receptacle being shown as applied to a splitting machine, and

Fig. 2 is a sectional elevation of the structure shown in Fig. 1, the section being taken along the line II—II in Fig. 1.

For purposes of illustration, the present receptacle is disclosed herein as applied to a sole splitting machine of the general type of which the machine disclosed in the above-mentioned Hood patent is an example. This type of machine has a table 10 along which soles S are advanced by a roll 12 toward a knife 14 for removing a skiving from the lower side of the sole. The soles S are discharged from the splitting mechanism onto a transfer device which forms the subject-matter of, and is claimed in, my above-mentioned prior application. This device comprises a rotating disk 16 which reverses the motion of the soles and discharges them in a direction opposite to that of their feeding movement into a receptacle 18 which is fixed (by connections not shown) to the frame of the splitting machine beside the splitting mechanism where the operator, who normally stands in front of the table 10, can easily reach and remove a pile of soles from the receptacle without moving or leaning from his normal position.

Extending from the lower side of the disk 16 is a shaft 20 which is arranged to turn freely in an arm 22, fixed to the frame of the splitting machine, or otherwise supported so as to hold the disk slightly below the level of the table 10 and close to the rear edge of the knife 14. The soles S, upon being discharged from the splitting mechanism, are projected onto the disk which is rotated at a higher speed than that of the feed movement of the soles so as to avoid any tendency of the soles to accumulate behind the knife 14. The disk 16 is driven by a belt 24 which runs over a pulley 26 fixed to the shaft 20, the belt being driven by another pulley 28 Idler pulleys 30 and 32, mounted on the arm 22, are arranged to direct

the runs of the belt 24 properly between the pulleys 26 and 28 which are at right angles to each other. The pulley 28 may be driven by any suitable means, such as a rotating shaft 34, which corresponds to the countershaft 81 of the above-mentioned Hood machine.

A guard 36 is mounted over the disk 16 for the purpose of controlling the movement of the soles during their travel onto the disk, during the period when their movement is reversed, and following that, the discharge of the soles into the receptacle 18. This guard comprises straight runs 38, 40 disposed parallel to each other and at opposite sides of the disk, these runs being connected to and continuous with an arcuate run 42 which conforms to that half of the rim of the disk 16 which is remote from the splitting mechanism. The lower and operative position of the guard is determined and can be adjusted by a screw 50, which is adapted to bear against the frame of the splitting machine. This screw is threaded in a strut 52 which is fixed to a plate 54 arranged to connect the straight runs 38, 40, and to cover that half of the disk 16 which is adjacent to the splitting mechanism and the receptacle 18.

The soles S are discharged from the splitting machine onto the disk 16 beside the run 38. As they reach the arcuate run 42 and their turning movement begins, the soles pass beneath a finger 64 which is mounted on the run 42 and yieldingly holds the soles against the disk. While the soles are still under the influence of the finger 64 they move beneath a plate 82, which also is mounted on the run 42 for parallel movement with respect to the disk and is yieldingly urged toward the disk.

By the time that a sole will have passed from beneath the plate 82, the reversal of its motion will nearly have been completed. During the period of reversal the finger 64 and plate 82, by holding the soles against the disk, not only insure that the soles will be moved according to the speed of the disk, but also overcome any tendency of the soles to be retarded by rubbing against the arcuate run 42 owing to the effect of centrifugal force. A narrow arcuate plate 104, fixed to the run 42 near its upper edge, extends between the plate 82 and the plate 54 so as to prevent soles from rising out of the guard during their travel through this portion of it.

For a more detailed description of the transfer device reference may be made to my above-mentioned prior application.

In the normal operation of the device the soles S are discharged from the disk 16 tangentially thereof under the guidance of the straight run 40. At this time the soles are also moving at such a rate as to be projected through space into the receptacle 18. At any abnormally low speed of discharge from the disk, the soles are guided by a plate 106 which is integral with the run 40 and is disposed slightly below the upper surface of the disk. Under the same conditions a wall 108, which just clears the top of the disk and is fixed to the plate 54 at its lower side, further insures that the soles will be directed properly toward the receptacle 18.

The receptacle comprises an inner side wall 110, a fixed end wall 112, and an outer wall 114, all of which extend downwardly to a bottom 116 which is integral with the above-mentioned walls. Fixed to the end of the wall 114 adjacent to the guard 36 is a flexible shield 118 which, in effect, is an adjustable side wall and a continuation of

the straight run 40. All the above-mentioned walls extend heightwise from the bottom 116 to a level somewhat above the disk 16. The shield 118 is adapted to be flexed by varying amounts, to provide a converging space for the reception of soles of different widths, by a screw 120 which is threaded in the outer wall 114.

The effective length of the receptacle 18 can be controlled by adjusting a second end wall or stop 122 with respect to the end wall 112. This stop is arranged to be fixed in any desired position by a bolt 124 which is received in an elongated slot 126 formed in the bottom 116. The stop has an upper section 128 which is bent to form a horizontal flange 130 normally disposed somewhat below the levels of the disk 16 and the upper edges of the side walls 110, 118 and end wall 112. The flange and side walls cooperate to form a chute for directing the soles into the receptacle. Provision for adjusting the height of the flange 130 is afforded by a bolt 132 which extends through a vertical slot 134 formed in the stop 122.

The soles S, as they move into the receptacle, will settle into an orderly stack under the funneling action and lateral guidance of the converging side walls 110, 118, and under the endwise guidance of the end walls 112 and 122. It will be evident from Fig. 2 that the bottom 116 of the receptacle is disposed at a level far enough below that of the disk to permit a conveniently large pile of soles to be collected before their removal from the receptacle becomes necessary. Owing to the fact that the side wall 114 and the shield 118 terminate short of the end wall 112 (Fig. 2), a space is provided through which the operator will have unobstructed access throughout the height of the receptacle for gripping a stack of soles as they are removed from the receptacle.

Having thus described my invention, what I claim as new and desire to protect by Letters Patent of the United States is:

1. A receptacle for receiving and stacking work pieces as they are projected toward it, said receptacle having converging side walls which are relatively adjustable to vary the effective width of the receptacle and end walls one of which is adjustable toward and away from the other, said adjustable end wall having a flange arranged to extend away from said other end wall below the level of the upper edge thereof.

2. A receptacle for receiving and stacking work pieces as they are projected toward it, said receptacle having converging side walls, a fixed end wall arranged to arrest the movement of the work pieces toward the receptacle, and an adjustable end wall at the end of the receptacle through which the work pieces are received, the end of one of said side walls adjacent to said fixed end wall being spaced from the last-mentioned wall thereby to provide an opening for permitting access throughout the height of the receptacle to the soles stacked therein.

3. A receptacle for receiving and stacking work pieces as they are projected toward it, said receptacle having fixed end and side walls, adjustable end and side walls opposite to said fixed end and side walls respectively, said adjustable side wall comprising a flexible shield, and means for variably deflecting said shield into converging relation to said fixed side wall.

4. A receptacle for receiving and stacking work pieces as they are projected toward it, said receptacle having an end wall arranged to arrest movement of the work pieces toward the recepta-

cle, a second end wall mounted for adjustment toward and away from said first-mentioned end wall, and opposed side walls, one of which comprises a flexible shield arranged to converge with the other side wall, the end of said shield adjacent to said first mentioned end wall being spaced therefrom thereby to provide access to the work pieces throughout the height of the receptacle.

5. A receptacle for receiving and stacking work pieces as they are projected toward it, said receptacle having converging side walls, a fixed end wall arranged to arrest the movement of the work pieces toward the receptacle, the end of one of said side walls adjacent to said fixed end wall being spaced therefrom to provide access throughout the height of the receptacle to the work pieces therein, a second end wall having a flange arranged to extend away from said fixed end wall below the level of the upper edge thereof, said flange being mounted for adjustment upon said second end wall heightwise thereof.

CHARLES F. FITZGERALD.

REFERENCES CITED

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

UNITED STATES PATENTS

Number	Name	Date
2,359,852	Morse	Oct. 10, 1944