March 24, 1925. 1,530,725

C. G. JOHANNESMEYER ET AL

DRIP PAN

Filed Nov. 17, 1923 2 Sheets-Sheet 1

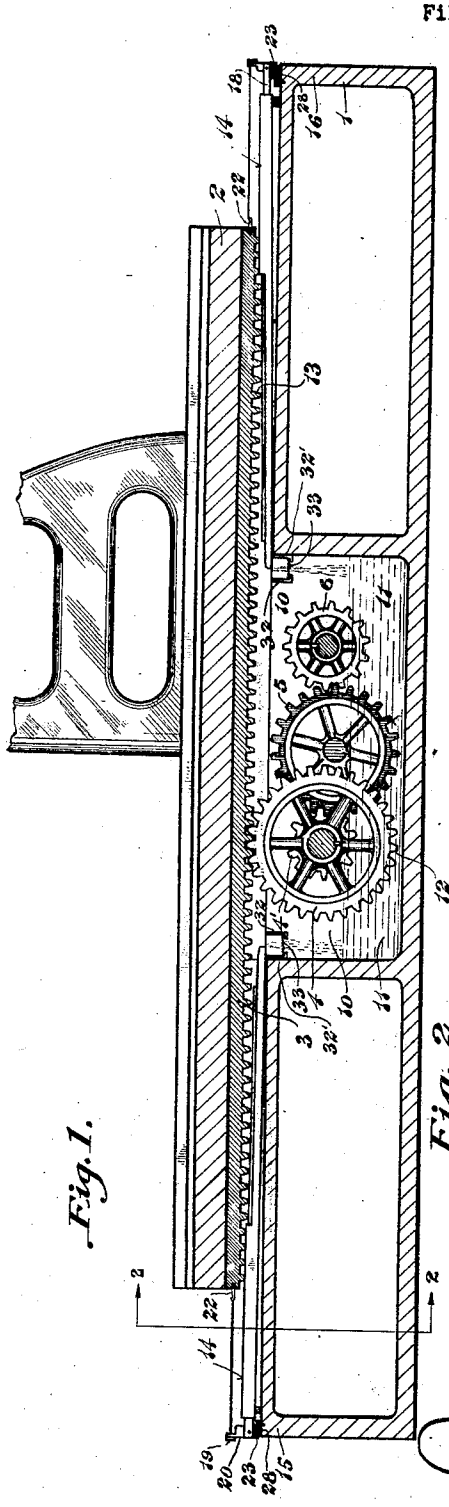


Fig. 1.

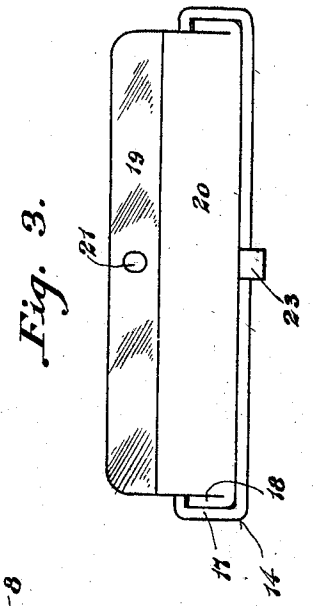


Fig. 3.

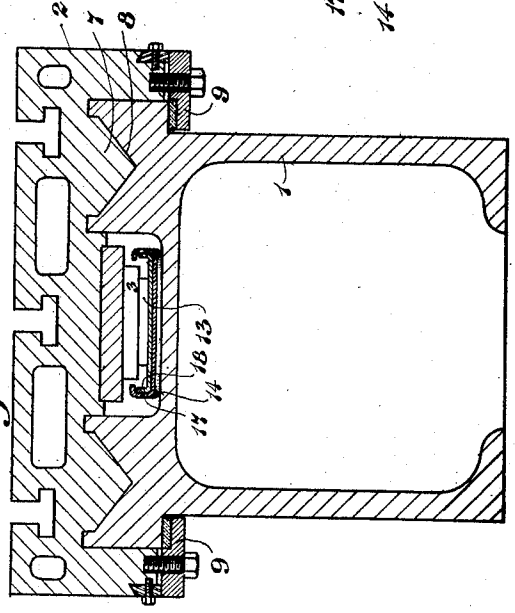


Fig. 2.

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Fig. 4.

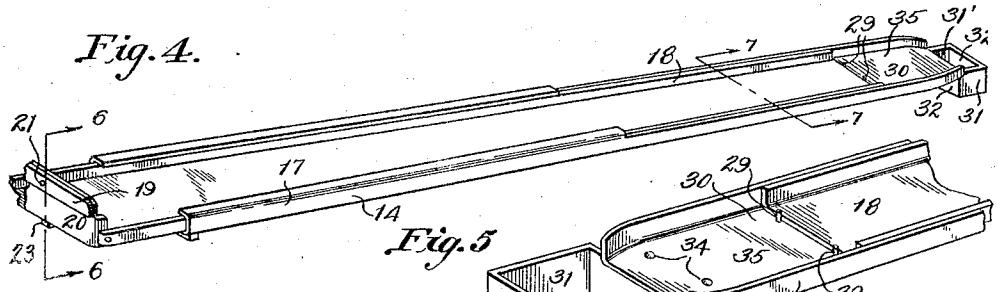
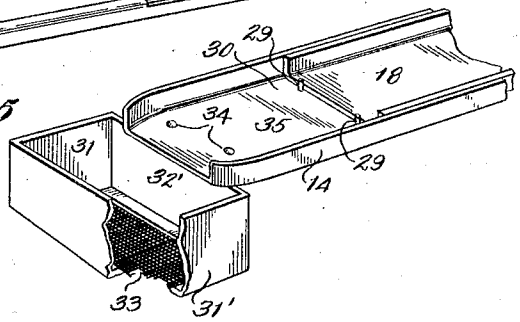


Fig. 5



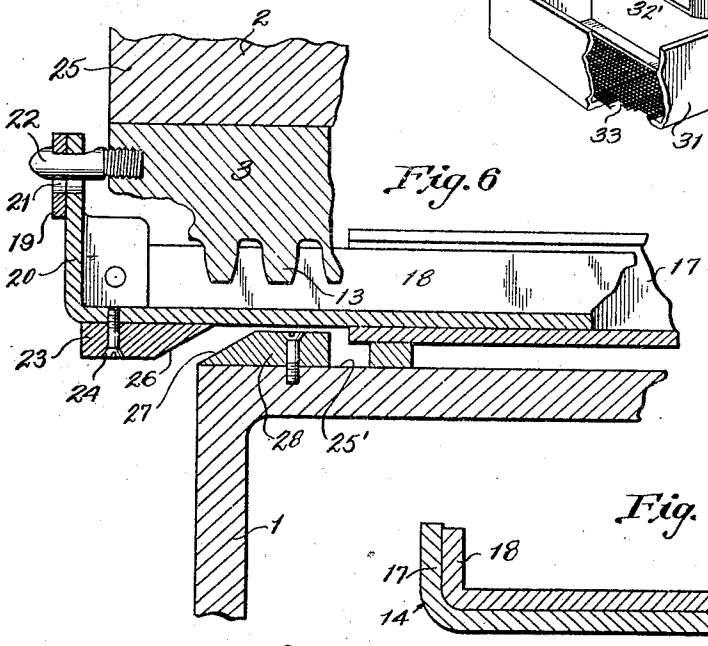


Fig. 6

Fig. 7

Fig. 8

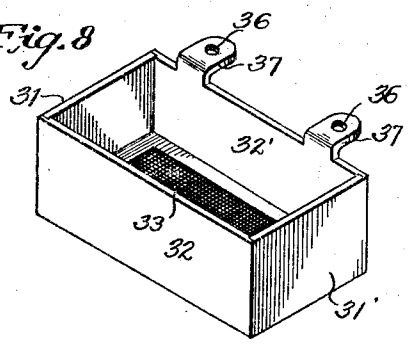
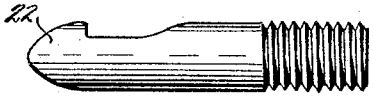


Fig. 9



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Patented Mar. 24, 1925. 1,530,725

UNITED STATES PATENT OFFICE.

CHARLES GEORGE JOHANNESMEYER, OF GLENDALE, AND ALFRED R. McCANN, OF HAMILTON, OHIO, ASSIGNORS TO THE LIBERTY MACHINE TOOL COMPANY, OF HAMILTON, OHIO, A CORPORATION OF OHIO.

DRIP PAN.

Application filed November 17, 1923. Serial No. 675,408.

To all whom it may concern:

Be it known that we, CHARLES GEORGE JOHANNESMEYER and ALFRED R. McCANN, citizens of the United States, and residents, respectively, of Glendale, in the county of Hamilton and State of Ohio, and Hamilton, in the county of Butler and State of Ohio, have invented certain new and useful Improvements in Drip Pans, of which the following is a specification.

Our invention relates to novel drip pans which are more particularly adapted for use on metal planers.

The objects of our invention are to provide oil drip pans adapted to travel with the planer table to the end of its outward strokes and adapted to be returned part way therewith; to provide means whereby the planer bed may be constructed considerably shorter than the distance as measured from an outer end of the table when extended in one direction beyond the end of planer bed to its outer end when extended in the other direction beyond the end of the planer bed without the loss of oil in dripping from an extended end of the planer table; to provide means whereby oil which drips from the planer table is returned to the main reservoir; to provide means whereby movable drip pans are automatically extended by outward travel of the planer table and automatically returned to their normal positions with the inward travel of the planer table; to reduce the expense in constructing a metal planer and increase the available space for use for other purposes.

Our invention consists in a drip pan, preferably channeled, adapted to slidably receive an extendable drip pan having a perforation in the end thereof adapted to receive a hook or pin fixed to an end of the planer table; further, in constructing said hook or pin in such a manner as to adapt it to return said extendable drip pan to its normal position; further, in means fixed to the planer table and adapted to engage means fixed to the planer bed whereby said pin or hook is induced to disengage said planer table; and further, in the construction, combination and arrangement of parts as herein set forth and claimed.

In the drawings:

Fig. 1 is a longitudinal section of a metal planer showing our invention;

Fig. 2 is a transverse section of the same taken on the line 2—2 of Fig. 1;

Fig. 3 is an end elevation of our improved drip pan;

Fig. 4 is a perspective view of the same;

Fig. 5 is a perspective view showing our improved drip pan and oil strainer partly broken away;

Fig. 6 is a fragmental enlarged longitudinal section taken on the line 6—6 of Fig. 4 and in addition showing the planer table in engagement with the drip pan;

Fig. 7 is a transverse section taken on the line 7—7 of Fig. 4;

Fig. 8 is a perspective view showing our oil strainer in enlarged form; and

Fig. 9 is a side elevation showing our drip pan engaging pin or hook in enlarged form.

In the preferred construction of our invention 1 is a planer bed, 2 is a planer table, 3 is a rack fixed to the planer table and actuated by the usual train of gears 4, 4′, 5 and 6 actuated by any suitable means. Planer table 2 has the usual longitudinal V's 7 adapted to travel in the usual V track 8 in the planer bed, and the planer table is secured against upward movement by suitable mechanical means as at 9. The planer bed has reservoir 10 formed therein containing lubricating oil 11 in which the lower portion of gears 4, 4′, 5 and 6 rotate. Reciprocating motion is imparted to planer table 2 by bull gear 4 meshing with rack 3 fixed to the lower portion of the planer table. Sufficient lubrication is provided for the rack and gear by teeth 12 of the bull gear carrying oil to teeth 13 of the rack from the oil reservoir. The portion of the mechanism as described up to this point is of usual form commonly employed in metal planer construction. It has been customary to construct the planer bed of sufficient length as measured from one outer end of the table when extended in one direction to its outer end when extended in the other direction, to return means for the oil which is carried by the bull gear to the rack and drips therefrom onto the planer bed, the top portion of which is slightly inclined toward the reservoir. The oil is induced to return from the top of the planer bed to the oil reservoir by gravitation. Considerable expense is thereby entailed in constructing a planer bed having sufficient length to return the oil.

For the purpose of reducing the construction cost, the weight and space consumed by a planer bed as well as other objects herein specified, we provide means whereby the oil may be returned to reservoir 10 as heretofore without the necessity of constructing the planer bed of the usual length.

We preferably provide a drip pan 14 fixed to each end 15 and 16 of planer bed 1 and having channeled sides 17 adapted to slidably receive drip pan 18 having plate 19 fixed to its end 20. A hole 21 extends through end 20 and plate 19 for receiving hook 22 fixed to the end of the planer table by any suitable means such as being threaded thereto. Wedge member 23 is fixed to the lower end 20 of drip pan 18 by screw 24. At a predetermined point in the return movement of end 25 of table 2 the angular surface 26 of the wedge member is adapted to engage angular surface 27 of wedge member 28 fixed to the upper end 25′ of bed 1 thereby elevating end 20 of the drip pan for the purpose of disengaging hook 22 from hole 21 of the drip pan to permit the table to continue its inward movement disengaged from drip pan 18. Pins 29 fixed in bottom 30 of drip pan 14 are adapted to stop inward movement of drip pan 18 produced by momentum after hook 22 is released from engagement with hole 21 of drip pan 18.

Oil strainer as shown in enlarged form in Fig. 8 comprises ends 31 and 31′ and sides 32 and 32′ secured together in any suitable manner and has a wire screen 33 or other suitable material fixed to the bottom thereof. Bolts 34 combinedly received in holes in end 35 of drip pan 14 and holes 36 in ears 37 fixed to side 32′ of the oil strainer secures the oil strainer in the position as shown in Fig. 1 to end 35 of drip pan 14 for the purpose of separating foreign matter from the oil that drips from rack 3 onto pans 14 and 18.

In operation the mechanism of our invention is as follows: Rotatable bull gear 4 meshing with rack 3 imparts reciprocating motion to planer table 2 secured to the rack. The end 25 of the planer table in its outward travel causes hook 22 to engage hole 21 in end 20 of drip pan 18 thereby sliding drip pan 18 outwardly to the extreme point of travel of the table whereupon bull gear 4 reverses its direction of rotation thereby causing rack 3 to reverse the direction of travel of the table. Hook 22 being in engagement with end 20 of drip pan 18 at hole 21 carries drip pan 18 inwardly until angular surface 26 of wedge member 23 fixed to the lower end of the table contacts angular surface 27 of wedge member 28 fixed to the upper end of the bed thereby elevating end 20 of drip pan 18 and disengaging hook 22 from the pan. The table continues its inward movement to a predetermined point on the bed when the bull gear reverses its direction of rotation thereby causing the planer table to reverse its direction of travel from inward motion to outward motion whereupon hook 22 fixed to the end of the planer table is again projected through hole 21 in end 20 of drip pan 18 and the outer end of the table contacts the inner side of end 20 of drip pan 18 thereby pushing it outwardly. This operation is repeated with each reciprocating movement of the table thereby maintaining drip pan 18 in position beneath rack 3 for receiving oil which drips from the rack. Drip pans 14 and 18 are slightly inclined toward oil reservoir 10 and the oil is caused by gravitation to flow inwardly toward the reservoir through oil strainer 30 free from impurity and foreign matter such as dirt, grit, etc.

It is noted that there is a fixed drip pan 14 on each end of bed 1 and also a cooperating slidable or telescoping drip pan 18 and that each slidable drip pan is adapted to be operated in the manner above described. When the table is moving beyond either end of the bed it carries with it in the direction it is moving the adjacent slidable drip pan and during that time the other slidable drip pan is standing in the position as shown at either end of Fig. 1. Thus the oil dripping from the rack during the entire operations of the table is effectively caught and returned to the oil reservoir.

While we have described the details of the preferred embodiment of our invention it is to be understood that it is capable of other adaptations and modifications within the scope of the claims.

Having thus described our invention what we claim as new and desire to secure by Letters Patent is:

1. In a metal planer having a bed provided with an oil reservoir, gearing in said reservoir, a reciprocating table mounted on said bed and having a rack engaging said gearing whereby oil in said reservoir is communicated to said rack, a drip pan mounted on said bed and a cooperating drip pan adapted to be automatically moved by said table beyond the end of the bed and returned to position over the bed.

2. In a metal planer having a bed, a longitudinally reciprocable table mounted thereon, an oil drip pan fixed to each end of said table, a telescoping sliding drip pan supported by said fixed drip pan and means for moving each slidable drip pan into extended position and means for moving it to retracted position.

3. A metal planer comprising a bed, a table, a rack fixed to said table, an oil reservoir in said bed, a gear in contact with oil in said reservoir and meshing with said rack, a stationary pan fixed to said bed, a movable pan in engagement with said stationary pan

and slidable thereon, substantially as and for the purposes specified.

4. A metal planer comprising a bed, a table, a rack fixed to said table, an oil reservoir in said bed, a gear in contact with oil in said reservoir and meshing with said rack, a channeled drip pan fixed to said bed, a movable drip pan having a hole therein and in slidable engagement with said channeled drip pan and a hook fixed to said table and adapted to engage said hole, substantially as and for the purposes specified.

5. A metal planer comprising a bed, a table, a rack fixed to said table, an oil reservoir, a gear in contact with oil in said reservoir and meshing with said rack, a channeled drip pan fixed to said bed, a movable drip pan having a hole therein and in slidable engagement with said channeled drip pan, and a hook fixed to said table and adapted to engage said slidable drip pan, substantially as and for the purposes specified.

6. A metal planer comprising a bed, a table, a rack fixed to said table, an oil reservoir, a gear contacting oil in said reservoir and meshing with said rack, a channeled pan fixed to said bed, a slidable pan in engagement with said channeled pan, means whereby said slidable pan is adapted to be carried on the outward and inward travel with said table, and means adapted to release said slidable pan from said table at a predetermined point on the inward travel of said table.

7. A metal planer comprising a bed, a table, a rack fixed to said table, an oil reservoir, a gear contacting oil in said reservoir and meshing with said rack, a pan fixed to said bed, a slidable pan in engagement with said fixed pan and having a hole in the end thereof, means comprising a hook fixed to said table adapted to engage said hole whereby said slidable pan is adapted to be carried on the outward and inward travel with said table, and means comprising a wedge member fixed to said slidable pan adapted to engage a wedge member fixed to said table and adapted to release said slidable pan from said table at a predetermined point on the inward travel of said table.

8. In a metal planer, a stationary channeled drip pan, a movable drip pan slidable relative to said stationary channeled drip pan, and means whereby said movable drip pan is extended from said stationary channeled drip pan, substantially as and for the purposes as specified.

9. In a metal planer, a stationary drip pan, a movable drip pan slidable relative to said stationary drip pan, and means whereby said movable drip pan is extended from said stationary drip pan, substantially as and for the purposes as specified.

10. A metal planer comprising a bed, a table, a rack fixed to said table, an oil reservoir in said bed, a gear contacting oil in said reservoir and meshing with said rack, a drip pan comprising a channeled pan fixed to said bed and a non-channeled pan slidable therein and means for extending said non-channeled pan relative to said channeled pan, substantially as and for the purposes specified.

11. A metal planer comprising a bed, a table, a rack fixed to said table, an oil reservoir in said bed, a gear contacting oil in said reservoir and meshing with said rack, a drip pan comprising a pan fixed to said bed, and a pan slidable therein, and means for extending and retracting said slidable pan relative to said fixed pan comprising a hooked member fixed to said table and adapted to engage said slidable pan, a wedge member fixed to said table, an angular member fixed to said bed and positioned to engage said wedge member on each return trip of said table and adapted to disengage said hooked member from said slidable pan, substantially as and for the purposes specified.

12. In a metal planer, the combination of a bed, a table slidable longitudinally of said bed, a rack fixed to said table, an oil reservoir, a gear contacting oil in said reservoir and meshing with said rack, a pair of drip pans, one of said pans slidable within the other of said pans, and means whereby one of said pans is carried by said table outwardly and inwardly, substantially as and for the purposes specified.

13. In a metal planer, the combination of a bed, a table slidable longitudinally on said bed, a rack fixed to said table, an oil reservoir, a gear engaging oil in said reservoir and meshing with said rack, a pair of drip pans, one of said pans slidable within the other of said pans, and means whereby one of said pans is carried by said table outwardly and inwardly, comprising a hook fixed to said table and adapted to engage one of said pans, a wedge member fixed to one of said pans and an angular member fixed to said table and adapted to engage said wedge member when said table is traveling inwardly for the purpose of disengaging said table from one of said pans at a predetermined position, substantially as and for the purposes specified.

14. In a metal planer, a drip pan comprising a stationary member and a cooperating slidable member.

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