

Aug. 12, 1947.

S. FRIEDMAN
OIL REMOVER OR WIPER
Filed Nov. 20, 1943

2,425,526

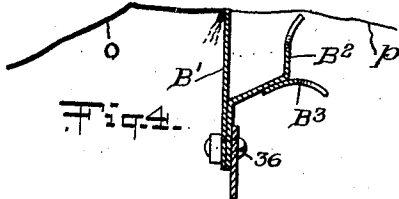
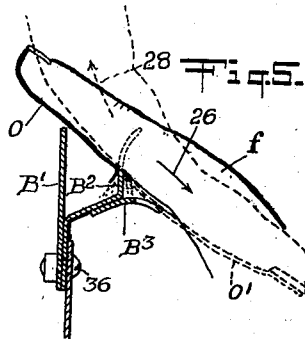
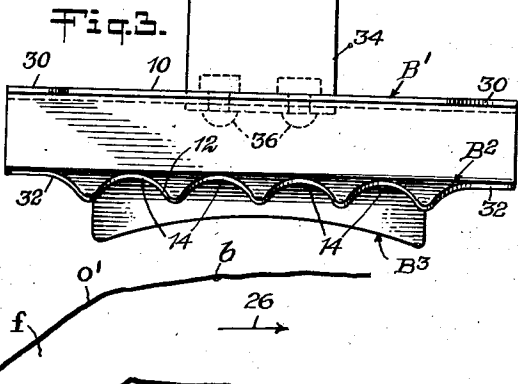
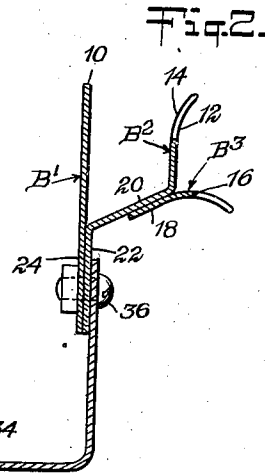
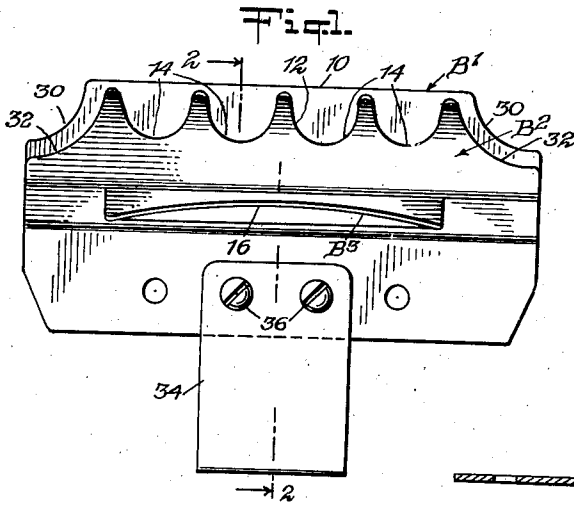


Fig. 6.

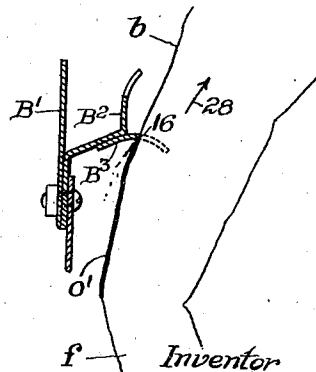
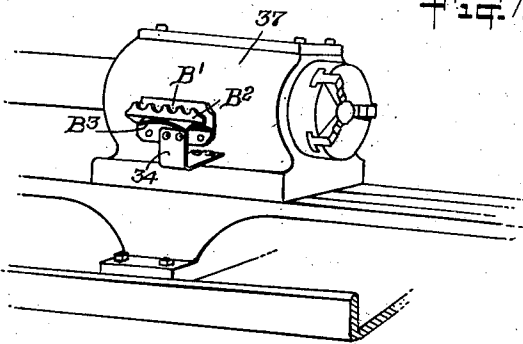


Fig. 7.



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UNITED STATES PATENT OFFICE

2,425,526

OIL REMOVER OR WIPER

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Application November 20, 1943, Serial No. 511,021

6 Claims. (Cl. 15—236)

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This invention relates to a device for removing or wiping oil from the hand or hands of a machine mechanic or operative.

The prime object of my present invention centers about the provision of a device capable of functioning effectively for removing films or coatings of oil covering the hand or hands of a mechanic or operative tending oil consuming or using machines such, for example, as automatic screw machines, turret lathes and the like.

It has been for years common practice in factory plants and machine shops to use cotton waste and cleansing cloths for cleaning or wiping off oil films and coatings adhering to the hands of machine mechanics tending the oil tanks and oil circulation systems of various machines. Besides the undesirable wastage of such cleansing articles, they are nearly always unhandy as well as untidy and they will perform their intended purposes.

The device of the present invention, having for its aim the replacement of such cleansing articles with an all-effective oil cleaning device, is characterized by the following structural and functional features:

(1) It is capable of performing its function of removing or wiping off the oil films or coatings covering and adhering to the hands of the mechanic, with thoroughness and efficiency.

(2) It does not involve wastage of material and may be used and re-used almost indefinitely for the purpose.

(3) It may form a fixture made, for example, in the shape of a machine attachment so that it is always located in a known position, handy and ready for use.

(4) It may be so constructed and designed as to oil-clean all parts and surfaces of the hands of the operative.

(5) It may be used with great rapidity and satisfying convenience and may be made at an exceedingly low cost.

To the accomplishment of these objects and purposes and such other objects as may hereinafter appear, my invention relates to the oil removing or wiping device sought to be defined in the appended claims and described in the accompanying specification taken together with the drawings thereof, in which:

Fig. 1 is a front elevational view of the oil-cleaning device of my present invention, showing one form which it may take;

Fig. 2 is a view thereof taken in cross-section in the planes of the broken line 2—2 of Fig. 1;

Fig. 3 is a top plan view thereof;

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Figs. 4, 5 and 6 are sectional views thereof drawn to a reduced scale and illustrating the functioning thereof and the manner of its use. Of these figures:

Fig. 4 illustrates the oil-cleansing of the palm of the operative's hand;

Fig. 5 illustrates the cleansing of the front of the fingers and may be also considered illustrative of the manner of cleansing the back of the fingers of the operative's hand; and

Fig. 6 illustrates the cleansing of the back of the operative's hand; and

Fig. 7 is a perspective view showing how the device may be attached to the head of a turret lathe.

Referring now more in detail to the drawings and having reference first to Figs. 1 to 3 thereof, the oil-removing device of the present invention comprises a number of wiper blades B', B² and B³, so constructed and so spacially arranged that the operative by one continuous sweep of either hand over the device may effectively wipe or scrape off all of the oil adhering to the front of the hand, and by a return continuous sweep of the hand over the device may effectively wipe or scrape off all of the oil adhering to the back of the hand.

The wiper blade B' may comprise a piece of sheet metal contoured as shown in Figs. 1, 2 and 3 of the drawings, the exposed or top edge 10 of which is line-shaped to fit across the palm of the operative's hand. For this purpose the edge 10 may be a straight knife edge, although it will be understood that the line-shape thereof may be varied or modified.

The wiper blade B² may also comprise a piece of sheet metal, contoured and shaped as depicted in Figs. 1, 2 and 3 of the drawings, the exposed or top edge 12 of which is recess-shaped so as to fit partway around individual fingers of either hand of the operative. More specifically, this edge 12, also a knife edge, is provided with a plurality such as the four recesses or concave depressions 14, 14 shaped to receive and fit partway around the individual four fingers of either of the operative's hands.

The wiper blade B³ may also comprise a piece of sheet metal contoured and shaped as depicted in Figs. 1, 2 and 3 of the drawings, the exposed edge 16 of which is line-shaped to fit across the back of the hand of the operative, this exposed edge being preferably a knife edge curved as best shown in Fig. 3 of the drawings to fit the back of the operative's hand.

These wiper blades B', B² and B³ are relative-

ly arranged and spaced so as to carry out the functions above described and best illustrated in Figs. 4, 5 and 6 of the drawings. These three blades are also secured together so as to form one operative unit or tool. More specifically considered, the blades B' and B² are so spacially arranged and the edges 10 and 12 so relatively disposed that with one continuous sweep of the hand, say in a downward direction, the surfaces of the front of the operative's hand are oil-wiped as will be described more in detail presently; and the blades B³ and B² are so spacially arranged and the edges 16 and 12 thereof so relatively disposed that with a return continuous sweep of the hand, say in an upward direction, the surfaces of the back of the operative's hand will be oil-wiped as will also be described more in detail presently. It will be noted that the finger-wiping blade B² is arranged between the wiping blades B' and B³ and is common thereto; that is to say, it serves its finger-wiping function, first in conjunction with the wiper blade B' and then in conjunction with the wiper blade B³. The blade B³ may be secured to the blade B² as by brazing or spot-welding the base 18 of the blade B³ to the intermediate connecting part 20 of the blade B². Similarly, the blade B² may be secured to the blade B' as by brazing or spot-welding the base 22 of the former to the base 24 of the latter. It will be also noted that the knife edges 10 and 12 of the blades B' and B² face generally in an upward direction, while the knife edges 12 and 16 of the blades B² and B³ face generally in an angular and even horizontal direction so that the most convenient downward and return upward sweeps of the hand may be used in the cleansing movements.

Figs. 4 and 5 taken together illustrate the use and operation of the oil-cleaning device for cleaning all of the surfaces of the front of the operative's hand. The hand is first moved in one continuous sweep as indicated by the arrows 26, 26 in Figs. 4 and 5 of the drawings from the wrist to the fingertips. The first movement is with the palm *p* of the hand scraping against the line-shaped edge of the first blade B', thus scraping off the oil film *o* from the surfaces of the palm. This movement continues until the base of the fingers *f* of the operative meet and are ready to be fitted into the recesses or depressions 14, 14 of the blade B². From this point on the movement and action proceeds as illustrated in Fig. 5 of the drawings. The continuing movement of the hand in the arrowed direction results in scraping or wiping off the oil film adhering about the fingers of the operative. Since the four grooves or recesses 14, 14 fit partway (somewhat more than midway) around the individual fingers of the operative's hand, it will be seen that with the completion of the stated directional sweep of the hand over the cleaning device, all of the surfaces of the hand including the palm and fingers, which may be described as the front of the hand, are thoroughly oil-scraped or wiped in the operation of the device.

Figs. 6 and 5 taken together illustrate the use and operation of the oil-cleaning device for cleaning all of the surfaces of the back of the operative's hand. The hand is first moved in one return continuous sweep as indicated by the arrows 28, 28 in Figs. 6 and 5 of the drawings, again from the wrist to the fingertips. The first movement is with the back of the hand *b* scraping against the line-shaped or curved edge of the blade B³, thus scraping or wiping off the oil film

o' from the back of the hand. This movement continues until again the base of the fingers *f* meet and are ready to be fitted into the recesses or depressions 14 of the blade B². From this point on the movement and action proceeds as is illustrated in dotted lines in Fig. 5 of the drawings. The continuing movement of the hand in the arrowed direction results in scraping or wiping off the oil film adhering about the fingers of the operative; here again, since the grooves or recesses 14, 14 fit somewhat more than midway around the individual fingers, it will be seen that with the completion of the stated return directional sweep of the hand over the cleaning device, all of the surfaces of the hand including the back and the fingers, which may be described as the back of the hand, are thoroughly oil-scraped or wiped in this return operation.

For oil-cleaning the sides of the hand as well as the surfaces of the thumb, at least one of the wiping blades and preferably the wiping blades B' and B² is or are provided at its opposite sides with curved edges adapted for fitting and for scraping engagement with the sides of the operative's hands. Thus the blade B' is provided with opposite curved scraping edges 30, 30 and the blade B² is similarly provided with the opposite curved edges 32, 32.

The unitary device comprising the three blades B', B² and B³ may be formed as shown, so that the same may comprise a suitable machine attachment. Thus the produced unit may be secured to an angle bracket 34 by means of the bolts 36, and this angle bracket may serve as the means for supporting the device on the head 36 of a suitable oil-consuming or using machine such as a turret lathe or automatic screw machine or the like, as best illustrated in Fig. 7 of the drawings. When so attached to a machine, the device is in an accessible location ready and handy for use whenever needed.

The construction, operation and use of the oil-cleaning device of the present invention will be apparent from the above detailed description thereof. It will also be apparent that the advantages described therefor are all obtained in its operation and use. It will be seen that the device is capable of performing its cleansing function with thoroughness and efficiency; all of the oil films being completely wiped from the surfaces of the hand. The device does not involve any wastage of material and may be used and re-used practically indefinitely. When used as a fixture, it may be readily attached to any part of the machine and is in a position always handy and ready for use. Its functions to oil-clean all parts and surfaces of both hands of the user. It may be used to clean any foreign substance adhering to the hands such as paints, molasses, etc.; and wherever the word "oil" has been used herein, it will be understood to include any foreign matter adhering to the user's hands. The device obviously may be used with great rapidity. Its construction is simple and may be made at an exceedingly low cost.

It will further be apparent that changes may be made in the construction and arrangement of the parts of the device without departing from the spirit of the invention defined in the following claims.

I claim:

1. A device for removing oil from an operative's hand, comprising a pair of spacedly arranged wiper blades, one of the blades having an edge line-shaped to fit across the palm of the hand

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and the other of the blades having an edge provided with a plurality of laterally spaced concave recesses adapted to fit partway around individual fingers of the hand, the lateral spacing of the concave recesses corresponding to the lateral spacing of the fingers of the operative's hand, the said pair of blades being spacedly arranged in a direction perpendicular to the edges of the blades and hence in the direction of a hand scraping operation, whereby the front of the operative's hand may be moved in one sweep in oil-wiping contact first with the palm scraping against the line-shaped edge of the first blade and then with the fingers scraping against the recess-shaped edge of the second blade.

2. A device for removing oil from an operative's hand, comprising a pair of spacedly arranged wiper blades, one of the blades having an edge line-shaped to fit across the back of the hand and the other of the blades having an edge provided with a plurality of laterally spaced concave recesses adapted to fit partway around individual fingers of the hand, the lateral spacing of the concave recesses corresponding to the lateral spacing of the fingers of the operative's hand, the said pair of blades being spacedly arranged in a direction perpendicular to the edges of the blades and hence in the direction of a hand scraping operation, whereby the back of the operative's hand may be moved in one sweep in oil-wiping contact first with the back of the hand scraping against the line-shaped edge of the first blade and then with the fingers scraping against the recess-shaped edge of the second blade.

3. A device for removing oil from an operative's hand, comprising three spacedly arranged wiper blades, one of the blades having an edge line-shaped to fit across the palm of the hand, another of the blades having an edge line-shaped to fit across the back of the hand, and the third blade, positioned between the first and second blades, having an edge provided with a plurality of laterally spaced concave recesses adapted to fit partway around individual fingers of the hand, the lateral spacing of the concave recesses corresponding to the lateral spacing of the fingers of the operative's hand, the said three blades being spacedly arranged in a direction perpendicular to the edges of the blades and hence in the direction of a hand scraping operation, whereby the front of the operative's hand may be moved in one sweep in oil-wiping contact first with the palm scraping against the line-shaped edge of the first blade followed by the fingers scraping against the recess-shaped edge of the third blade, and then so that the back of the operative's hand may be moved in a return sweep in oil-wiping contact first with the back of the hand scraping against the line-shaped edge of the second blade followed by the fingers scraping against the recess-shaped edge of the third blade.

4. A device for removing oil from an operative's hand, comprising a pair of spacedly arranged wiper blades, one of the blades having a straight knife edge to fit across the palm of the hand and the other of the blades having a knife edge provided with a plurality of laterally spaced concave recesses adapted to fit partway around the individual fingers of the hand, the said pair of blades being spacedly arranged in a direction

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perpendicular to the edges of the blades and hence in the direction of a hand scraping operation, whereby the front of the operative's hand may be moved in one sweep in oil-wiping contact first with the palm scraping against the straight edge of the first blade and then with the fingers scraping against the edge provided by the plurality of recesses of the second blade.

5. A device for removing oil from an operative's hand, comprising a pair of spacedly arranged wiper blades, one of the blades having a curved knife edge to fit across the back of the hand and the other of the blades having a knife edge provided with a plurality of laterally spaced concave recesses adapted to fit partway around the individual fingers of the hand, the said pair of blades being spacedly arranged in a direction perpendicular to the edges of the blades and hence in the direction of a hand scraping operation, whereby the back of the operative's hand may be moved in one sweep in oil wiping contact first with the back of the hand scraping against the curved edge of the first blade and then with the fingers scraping against the edge provided by the plurality of recesses of the second blade.

6. A device for removing oil from an operative's hand, comprising three spacedly arranged wiper blades, one of the blades having a straight knife edge to fit across the palm of the hand, another of the blades having a curved knife edge to fit across the back of the hand, the third of the blades, positioned between the other two blades, having a knife edge provided with a plurality of laterally spaced concave recesses adapted to fit partway around the individual fingers of the hand, the said three blades being spacedly arranged in a direction perpendicular to the edges of the blades and hence in the direction of a hand scraping operation, whereby first the front of the operative's hand may be moved in one sweep in oil-wiping contact with the palm scraping against the straight edge of the first blade followed by the fingers scraping against the edge provided by the plurality of recesses of the third blade, and so that then the back of the operative's hand may be moved in a return sweep in oil-wiping contact first with the back of the hand scraping against the curved knife edge of the second blade followed by the fingers scraping again against the edge provided by the plurality of recesses in the third blade.

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