

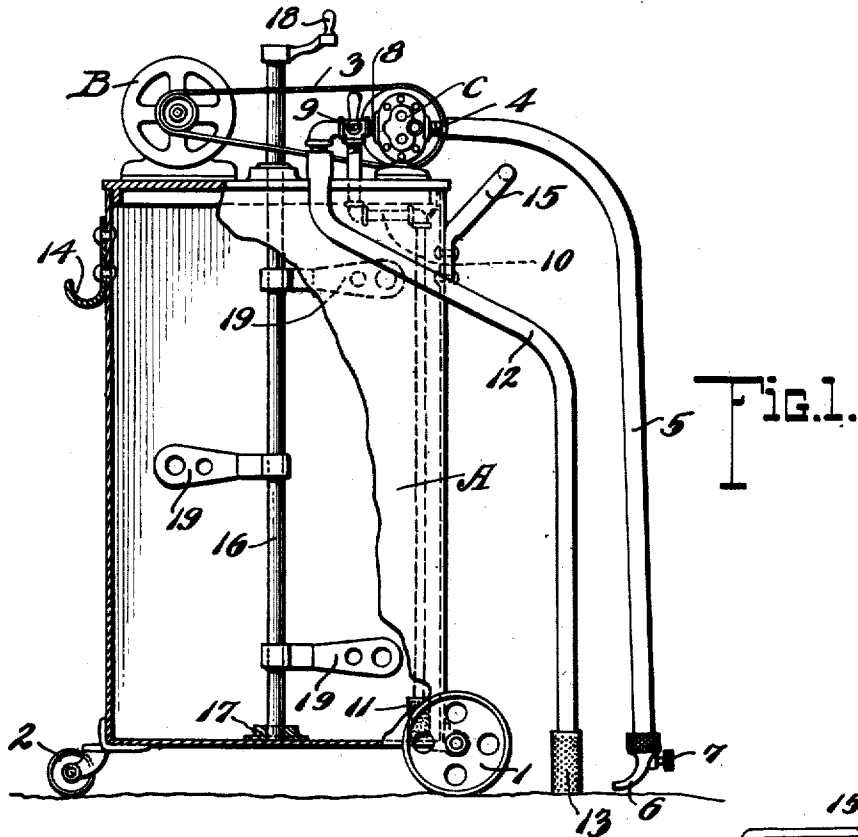
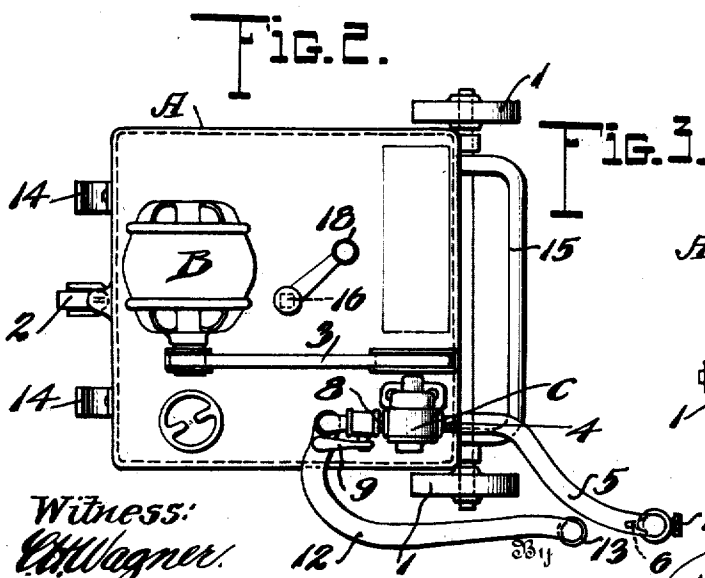
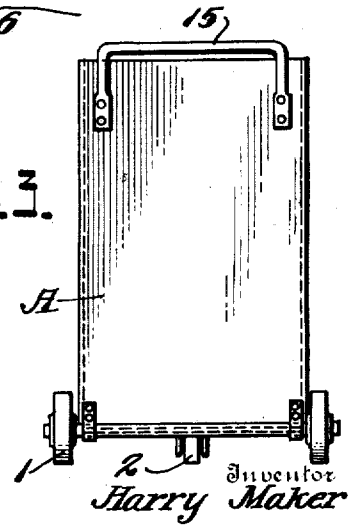
Aug. 26, 1924.

1,506,652

H. MAKER

PORTABLE AUXILIARY PUMP

Filed Sept. 10, 1923



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UNITED STATES PATENT OFFICE.

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PORTABLE AUXILIARY PUMP.

Application filed September 10, 1923. Serial No. 862,002.

To all whom it may concern:

Be it known that I, HARRY MAKER, citizen of the United States, residing at Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in Portable Auxiliary Pumps, of which the following is a specification.

It is well known that in large factories, especially those where metal working machines are employed, a large number of such machines are equipped with oil feeding apparatus for supplying oil, soluble compound or a suitable cooling medium to the metal working tools while in operation. At times the feed pump which is used to force the oil to the operating tool of the metal working machine becomes disabled, or incapacitated for some reason or other, and the entire machine is caused to be inoperative until the feed pump is repaired or again put into action.

Obviously the incapacitating of the whole machine having the oil feed equipment for its operating tool, for any period of time, makes for a resultant loss to the factory owner, and the primary object of this invention is to remedy the foregoing condition by an especially designed apparatus for the purpose.

In the carrying out of my invention, I utilize what may be termed a portable lubricant holding and pumping machine, or apparatus. Equipped with its own motor operating means and capable of being shifted about a factory from machine to machine at will, my portable apparatus comprises a lubricant tank carried by wheels, and therefore, adapted to be rolled from place to place very quickly. This tank is equipped with a pump, for pumping the lubricant or oil therefrom to a supply nozzle adapted to be temporarily associated with the cutting, or operating tool, of a metal or similar working machine, requiring the feeding of oil to its tool while in action.

Thus should any machine in the factory have its oil feed pump temporarily disabled, my portable apparatus may be quickly brought up to said machine, the oil nozzle arranged properly in relation to its cutting tool, and the pump started into operation on the portable machine to temporarily take the place of, or rather assume the function of, the pump of the main machine which is

temporarily out of order. Under these conditions therefore, the main metal, or other working machine, may be started into operation, and continued in such operation notwithstanding that its oil feed pump is out of order, and there will be no loss incident to the inactivity of the machine, that would otherwise be suffered by the factory owner. Meanwhile the portable pumping apparatus of my invention is in use, workmen may attend to the repair or other requirements of the oil feed pump of the metal working machine, and get the same in condition for operation notwithstanding that the said machine is all the time being used for performing its regular work.

As additional features of my portable oil pumping apparatus, I utilize an agitator, for agitating the lubricant in my portable tank, as at times said lubricant is composed of a special lubricating compound agitation of which is required, or desirable. Furthermore, I make provision in the event that the lubricant in my tank is exhausted, for connecting up my auxiliary pump which is carried by the tank, to some other source of oil supply, and in this way the continued operation of the apparatus is assured under all possible conditions of service.

In the accompanying drawings I have shown my preferred form of my invention, but it is to be understood that the construction illustrated may be modified considerably within the purview of said invention, and I therefore do not wish to be limited to the particular specific features of construction that are illustratively presented hereby.

In the said drawings the figures may be briefly set forth as follows:

Figure 1 is a side elevation of one of my portable apparatus, a side of the tank being broken away to more clearly illustrate the agitating shaft and one of the agitating members thereon.

Figure 2, is a top plan view of the same.

Figure 3 is a side view looking at right angles to Figure 1 and omitting the motor pump and agitating shaft features.

The term "oil" as used herein contemplates the employment of such substance or any equivalent such as a soluble compound or any liquid lubricant or cooling compound suitable for the purposes in view.

Describing my invention specifically in

conjunction with the annexed drawings, I have designated my portable tank as A, and the same will be seen to be mounted upon main wheels, or rollers, 1 and a supporting 5 caster 2 located at opposite sides, or portions, of the said tank at its base. At the rear of the tank and supported by its top is a motor B, connected by a belt or equivalent driving member 3 with the pump C mounted 10 at the front portion of the tank, and also on its top. The motor B is preferably an electric motor and carries an electric cord connection adapted to be attached to an electric light socket, many of which are conveniently 15 located in factories at points near the machines where the workmen work. The said electric cord connection is not illustrated in the drawing, being conventional.

The pump C, is equipped with an outlet 20 coupling 4 to which is attached a relatively long flexible oil feed tube 5, having a nozzle 6 at its outer end, said nozzle having a controlling valve 7 to regulate the flow of the oil, or lubricant feed, through the nozzle in 25 the operation of the apparatus. Likewise, the pump C has an inlet coupling 8, with which is connected a three way valve 9 mounted in a union from which leads the supply pipe 10. The supply pipe 10 passes 30 through the top of the tank A, and leads to the bottom of said tank at which point it is equipped with a strainer 11. Also attached to the union, or coupling, which carries the valve 9 is an auxiliary supply pipe 12, which 35 is made of flexible tubing and equipped at its outer extremity with a strainer 13, which corresponds in function to that of the strainer 11.

On the reverse side of the tank A are 40 hooks 14 upon which the auxiliary supply pipe 12 and the oil feeding pipe, or tube, 5 may be supported when the apparatus is not being used.

Attached to the front of the tank A is a 45 handle 15, by which the apparatus may be conveniently pulled from place to place while supported by its rollers 1 and the caster 2.

About at the central portion of the tank, I 50 locate an agitating shaft 16 supported in a suitable bearing 17 on the bottom of the tank and journaled in an opening in the top of the tank, which opening may be suitably packed by the use of a packing box, if desired. The shaft 16 projects through the top 55 of the tank and has a crank handle 18 whereby it may be readily turned so as to rotate agitators 19 projecting from the shaft 16, and capable of steering the lubricant within the tank A if such lubricant be a compound 60 of such nature that agitation is required or desired.

With the foregoing construction of my apparatus in mind, it will be apparent that 65 when the tank A is provided with a supply of lubricant, the valve 9 may be adjusted so

that the pump C will draw the lubricant from the tank and force it through the oil feed pipe 5; assuming that the apparatus has been temporarily located beside a machine whose oil feeding pump is temporarily 70 incapacitated, the nozzle 6 of the flexible pipe 5 may be readily positioned to supply the lubricant to the metal working tool for cooling said tool as it is in operation. Of course, under these conditions the pump C is oper- 75 ated by the motor B, which is at the same time temporarily connected with a source of current supply. The motor B might be substituted by any driving connection that could be attached to a driving member, such 80 as a pulley or the like.

It will be particularly understood that the supply pipe 12 is especially designed to be introduced in the usual oil sump of the metal working machine, if desired, or available, in 85 which event the regular oil supply is fed by the pump to the working tool through the pipe line and pump of this portable device and the supply of oil in the tank A is not required. But if the oil supply of the 90 machine is not usable it merely requires the shifting of the valve 9 to render the tank supply available.

In the event the supply of oil, or cooling 95 medium, in the tank A becomes exhausted, or the particular contents thereof are not desirable, the auxiliary supply pipe 12 may be placed in action by inserting its strainer end in a barrel or other receptacle containing a lubricant adapted to flow freely, and the valve 9 adjusted so as to cut off communication between the pump C and the pipe 10 and establish communication between the pipe 12 and said pump. Such an 105 arrangement is especially useful whenever the oil supply of a particular machine becomes exhausted or needs replenishing and it is not desired to take the time to give it attention until the end of a particular job 110 of work at the end of a day, and it is furthermore apparent that the machine may be employed for removing oil from a reservoir through the pipe 12 and into the tank A through the feed pipe 5 for filling this tank 115 or transferring a liquid from one place to another.

It is a prerequisite that the pipes 5 and 12 be flexible in order that the pipe 5 may be readily adjusted to occupy a good and effective working position in relation to the 120 metal working tool which is to be cooled by the lubricant supplied from the nozzle 6. The flexibility of the pipe 12 admits of readily inserting the same in any convenient 125 receptacle, or other source of supply, at the strainer end of said pipe, and irrespective of which side of the tank A the lubricant supply is located.

It will be evident that my apparatus is, 130 generally speaking, a portable metal cooling

system, one which may be shifted about to various places with celerity, and which will be quite effective irrespective of where it is located.

5 Having thus described my invention, what I claim as new and desire to secure by Letters Patent is;

1. In a portable lubricating apparatus of the class described, comprising in combination a portable wheeled tank adapted to be 10 rolled about in a factory from machine to machine, a lubricant pump mounted on said tank, supply pipes, one intermediate said pump and the interior of the tank, and 15 one flexible and leading from the pump exterior of the tank and adapted to have its supply end inserted in the oil sump of a metal or similar working machine, a flexible feed pipe leading from the pump and adapted 20 to extend some distance from the tank to supply a cooling lubricant to a cutting tool of a machine, a lubricant feed nozzle carried by said feed pipe, and means to connect the feed pipe with either supply pipe, 25 together with operating means for said pump.

2. In a portable apparatus of the class described, a lubricant holding tank, wheel sup-

porting means therefor, a pump mounted on the tank, a feed pipe leading from said 30 pump and adapted to extend to a metal working tool for supplying the lubricant pumped by the pump to said tool, said feed pipe being equipped with a lubricant feeding nozzle, and a plurality of lubricant supply 35 pipes connected with the pump, one leading from the interior of the tank to the pump and the other from a point exterior of the tank to said pump, a single valve means for controlling the communication be- 40 tween said supply pipes and the pump to alternately render said communication effective in relation to the pipes, operating means for the pump, the supply pipe leading to the pump comprising a rigid pipe extending 45 into the tank to a point near its bottom, and a flexible pipe, the latter being the one exterior to the tank and adapted to have its supply end inserted in the oil sump of a metal or similar working machine, and op- 50 erating handle on said shaft at a point exterior to the tank, and a motor mounted on the tank and operably connected with the pump for actuating the same.

In testimony whereof I affix my signature.

HARRY MAKER.

Certificate of Correction.

It is hereby certified that in Letters Patent No. 1,506,652, granted August 26, 1924, upon the application of Harry Maker, of Milwaukee, Wisconsin, for an improvement in "Portable Auxiliary Pumps," an error appears in the printed specification requiring correction as follows: Page 3, lines 50 to 52, strike out the words and comma "and operating handle on said shaft at a point exterior to the tank,"; and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 4th day of November, A. D. 1924.

[SEAL.]

KARL FENNING,
Acting Commissioner of Patents.