To all whom it may concern:

Be it known that we, LOUIS R. HEITZ and LOUIS T. HEITZ, citizens of the United States, residing at Muscatine, in the county of Muscatine and State of Iowa, have invented certain new and useful Improvements in Devices for Emptying Liquid-Containers; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to apparatus for emptying tanks or barrels filled with gasoline or other liquid, by forcing air into the barrel or container in such manner as to create a pressure that will drive the liquid contents of the container out and into an automobile tank or other vessel adapted to receive the same.

The objects of the invention are to provide an improved device of the character referred to, especially designed for use in filling the tanks of automobiles with gasoline by forcing the same from a wood or steel barrel or container by air pressure, together with means for regulating and automatically relieving the pressure of the air within the barrel or container when raised sufficiently high to be liable to burst or injure the containing vessel.

The invention will first be hereinafter more particularly described, with reference to the accompanying drawing, which forms a part of this specification, and then pointed out in the claims at the end of the description.

In said drawing, we have shown a side elevation, partly in section, of a device embodying a preferred form of our invention, showing the same applied to a barrel filled with gasoline to be emptied in filling automobile tanks or other vessels.

Referring to said drawing, the letter A denotes an inverted L-shaped pipe extending from within the barrel or container B to a suitable height and having its free end bent or turned downwardly into position for emptying the contents of the barrel or container into the tank of an automobile or other vessel to be filled. The letter C may denote a tubular member or casting provided with a smooth bore extending substantially its entire length in which the pipe is adapted to snugly fit whereby it can be revolvably and longitudinally adjusted and is held in such adjusted position. The casting preferably has an exteriorly tapered screw-threaded portion c tapped through the barrel or container B, and an exteriorly threaded upper end e on which is screwed a metal cap or nut D, between which and the upper end of the casting may be placed any suitable packing material, as at c so that when the cap is screwed tightly onto the casting it will force the packing down against the head or upper end of the casting and cause it to press tightly against the pipe A, so as to form an air tight joint around said pipe to prevent leakage of air or liquid within the container. The casting C has lateral arms c and e the free ends of which are preferably reduced in size and screw threaded to permit an interiorly threaded tubular part to be screwed thereon. In this instance, a flexible tube 1 is screwed on the arm c, for connection with an air pump, or a source of compressed air, while a tubular part or cap E is screwed on the other arm e. Each arm c and e has an air duct therethrough which communicates with a similar duct in the part c leading into the container. In emptying heavy liquids, which run slowly, the barrel or container is liable to burst when the air is first turned on, or afterward, under excessive pressure, unless the operation is carefully watched and the pressure so regulated as to keep it below the bursting point, and to avoid this danger and the necessity for careful watching the tubular part or cap E is provided with an air vent e in the end thereof in communication with the air duct through the casting and contains a coiled or other suitable spring F arranged to press and normally hold a ball or other suitable valve G against a valve seat at the end of the arm e so as to normally close the air duct leading to the interior of the container; but in the event of the pressure within the container rising too high and tending to burst or injure the container, the spring F will yield and allow the valve G to open and permit the air to escape, thus automatically relieving the pressure when too high. The pressure required to open the valve may be varied by screwing the cap E to the right or left, thereby varying the tension of the spring F to adapt it to press more or less tightly against the ball or other valve, as may be desirable in emptying barrels or tanks filled with liquids of different kinds or of greater or less density.
The operation of our invention will be readily understood from the foregoing description, when taken in connection with the accompanying drawings. The apparatus being applied in the manner illustrated in the drawings, for use in emptying a barrel or tank containing gasolene, the pipe A may be revolved to position and longitudinally adjusted by means of an upward pull until the free end is directly over the vessel to be filled, and thereupon air may be pumped or otherwise forced through the tube D into the container, and the pressure on the liquid contents of the vessel will force the same upwardly through and out of the discharge pipe from which it may flow into the tank of an automobile or other vessel; and in the event that the pressure of the air in the barrel or container exceeds a certain amount or limit, it will force the ball valve from its seat, allowing sufficient air to escape to reduce the pressure to the desired limit, whereupon the valve will be closed and will remain closed until the pressure is again excessive, causing the valve to open and again reduce the pressure.

It will be understood, of course, that our invention is not limited in its application to emptying barrels or vessels containing gasolene or oil, but may be used for various other purposes, in emptying the liquid contents of various kinds of vessels and filling vessels of various kinds.

To facilitate the entrance of the liquid into the inlet end of the discharge pipe, and to prevent said end from being closed by contact with the bottom of the liquid container, the lower end of said pipe is preferably cut away on opposite sides thereof, as at a, to provide suitable feet for supporting said inlet end above the bottom of the barrel or other vessel to be emptied.

Having thus described our invention, what we claim as new and desire to secure by Letters Patent of the United States is:

1. A device for emptying liquid containers comprising a tubular body adapted for insertion in a hole in the container, said body having a smooth bore extending substantially its entire length and laterally projecting arms each having an air duct therethrough in communication with an air duct in said body extending to its lower end, one of said arms being adapted for the attachment thereto of a tube through which air may be forced into the container and the other arm provided with a safety valve controlling the escape of air through the air duct therein, together with a revolvable and longitudinally adjustable discharge pipe extending through said smooth bore and closely fitting therein whereby it is held in adjusted position and means on the upper end of said body for confining and compressing packing material around said pipe.

2. A device for emptying liquid containers comprising a tubular casting having integral lateral arms and a smooth bore extending substantially its entire length, a discharge pipe extending snugly through said bore into the container and revolvably and longitudinally adjustable therein, one arm being adapted for connection to a source of pressure, a tubular housing detachably connected to the other arm, and a spring-pressed valve included in said housing, each arm having an air duct therethrough, the casting being also provided intermediate its inner and outer walls with a longitudinal duct opening at the end of the casting and arranged to connect with the air ducts in the arms, and means on the upper end of said body for confining and compressing packing material around said pipe.

In testimony whereof we affix our signatures in the presence of two witnesses.

LOUIS ROBERT HEITZ.
LOUIS THEO. HEITZ.

Witnesses:

WM. L. MOORE,
Ed. M. SCHWEITZER.