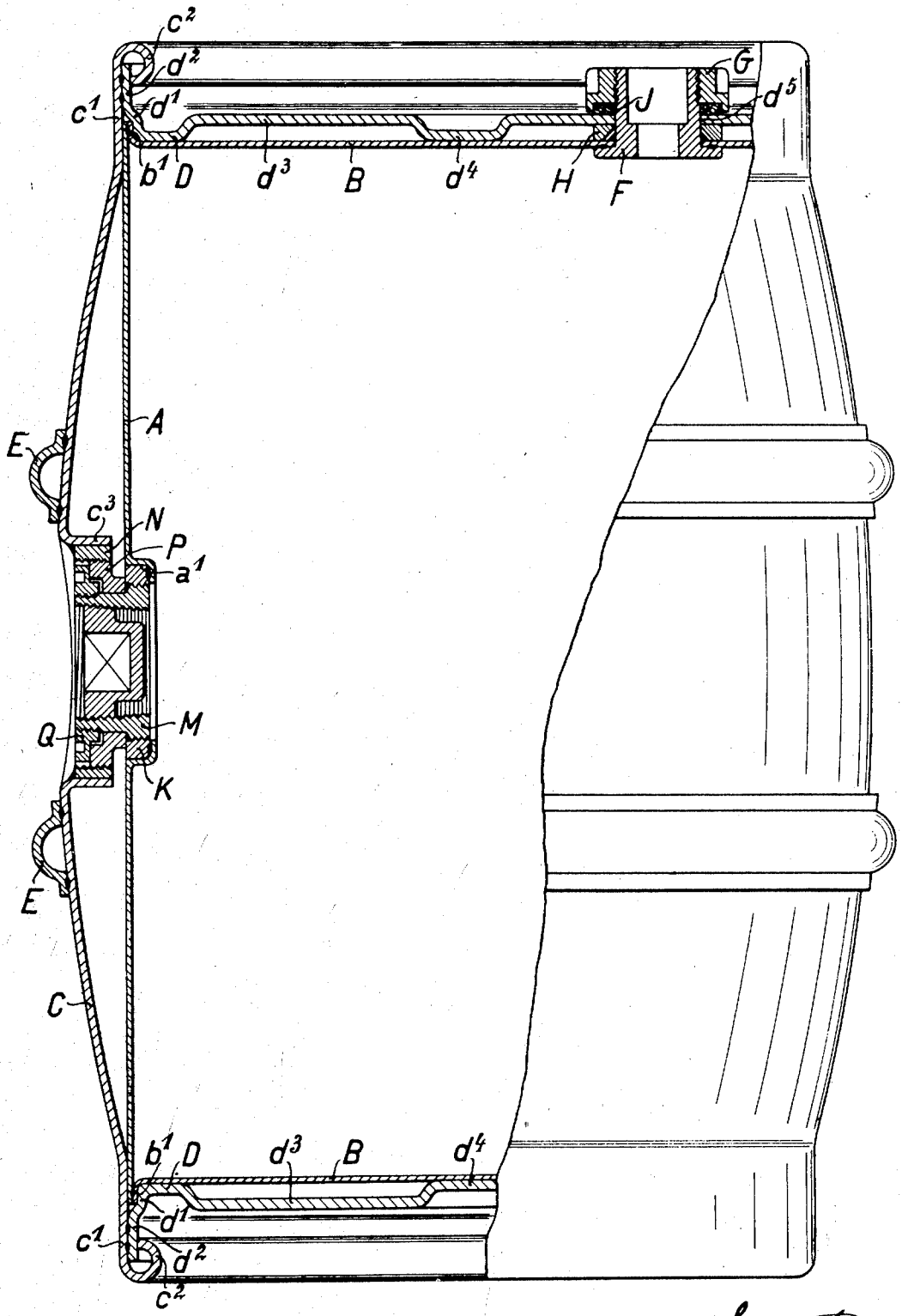
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METAL DRUM

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METAL DRUM

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The invention relates to jacketed metal drums and has for its object to so improve drums of this type that the inner receptable or proper drum is protected in a very simple manner from displacing within the jacket and that an air layer exists between the wall of the proper drum and of the jacket by which air layer the transition of heat is rendered more difficult. According to the invention the proper drum is fixed in the jacket by the ends of its shell abutting on the shell of the jacket and by its front walls abutting on those of the jacket, these front walls further being arranged, in a manner known in itself, in such a manner that the front walls of the proper drum substantially are protected from being bruised.

In order that the invention can be more easily understood, an embodiment of the same is illustrated by way of example in the accompanying drawing that shows a metal drum designed according to the invention in sectional elevation.

Referring to this drawing, A denotes the shell of the proper drum which shell is of a substantially cylindrical shape and closed at its ends by front walls B. To this end each front wall B has an outwardly extending flange b^1 connected to the corresponding outer edge of shell A by welding. The proper drum A B is made of rustless steel and has a wall thickness of about 0.5 mm. so that it possesses sufficient own strength. The jacket is made of ordinary mild steel and has a greater wall thickness, about of 2.5 mm. It is composed of a barreled shell C and front walls D. Each of the front walls D is provided like the walls B, with a flange, and, more particularly, with a flange portion d^1 next to wall D the outer diameter of which flange portion is somewhat smaller than the smallest inner diameter of shell C, the latter having a cylindrical portion c^1 on each end. To flange portion d^1 is attached a flange portion d^2 the outer diameter of which corresponds to the inner diameter of the cylindrical portion c^1 of shell C with which it is connected by welding. Into the annular gap existing between flange c^1 and the narrowed portion d^1 of flange d^1 d^2 projects flange b^1 with the respective edge of shell A of the proper drum A B, the outer diameter of this edge corresponding to the inner diameter of the cylindrical portion c^1 of the jacket shell C. Each of the front walls D is provided with an outwardly projecting annular depression d^3 that surrounds a central portion d^4 flush with the edge of the front wall. An inwardly bent flange c^2 finally is arranged on the cylindrical portions c^1 of shell C of jacket C D which flange c^2 engages over the flange portion d^2 of wall D and serves to reinforce jacket C D. To further reinforce the latter, beads E of semicircular cross section are provided on shell C.

The described drum possesses in the usual manner a bung hole, and a spile hole in one of the front walls B. The spile hole is arranged in a socket F welded onto wall B of the proper drum and projecting through an aperture d^5 of wall D of the jacket, the socket F carrying a nut G on its outer end. Between the drum and the jacket socket F is surrounded by an intermediate ring H and above the jacket by a packing ring J which can be tightened by nut G. The space existing between drum and jacket thus can be tightened toward the outer air in the range of the spile hole by driving home nut G, so that any penetration of moisture is impossible. At the bung hole jacket A has an annular depression a^1 in which is fixed by welding a reinforcing ring K. The height of ring K is so determined that its outer surface lies flush with shell A. Ring K has screwed into it a socket M projecting through an aperture, surrounded by an inwardly bent flange c^3, of shell C. In flange c^3 is fixed by welding a reinforcing ring N having internal threads engaged by an intermediate ring P. The latter surrounds socket M and rests on ring K. A further ring Q rests on the intermediate ring P and is screwed onto socket M. In this manner the space existing between drum and jacket is so tightened in the range of the bung hole that any moisture cannot penetrate.

In manufacturing the described metal

drum one proceeds in the following manner. The proper drum is manufactured first and separately together with the parts rigidly connected thereto, the same is the case with the jacket, except the wall D, carrying socket F, and the round flange c^2. After having mounted on socket F, the intermediate ring H, drum A B is slid into jacket C D, whereupon drum and jacket are interconnected in the range of the spile hole and bung hole by driving home the respective threaded parts. Thereupon the other front wall D of the jacket is slid so far into shell C as to firmly rest on drum A B and is tightly welded with shell C, and also the opposite front wall D. The formation, then following, of the round flange c^2 terminates the manufacture of the metal drum.

As it will be seen from the foregoing, an air layer exists almost everywhere between drum and jacket which air layer sufficiently protects the content of the drum, e. g. beer, from heat or cold. The proper drum further possesses a sufficient own strength and is protected in a very simple manner from any displacement within the jacket owing to its abutting on the respective portions of the jacket on the ends of its shell portion, on its periphery, and in the midst of its front walls, so that the connections, situated in the range of the drum holes, between drum and jacket are not stressed as to their strength and a permanent tight condition is secured. The connection between drum and jacket becomes more intimate still by the flanges b^1 and the appurtenant edges of drum shell A projecting into the annular gap existing between the parts d^1 and c^1. By this arrangement further the structural length of the metal drum is reduced.

Owing to the socket M being screwed into the proper drum that means being detachably connected thereto, and due to the reinforcing ring K lying flush with the outer side of shell A, the proper drum A B can be slid into jacket C D without any difficulty. Finally, the fact that the intermediate ring P resting on ring K which belongs to the proper drum A B is arranged within flange c^3, affords the advantage of the proper drum A B in the range of the bung hole having no outwardly projecting parts.

I claim:

1. A metal drum consisting of a proper drum having end walls and a substantially cylindrical shell, and of a jacket having end walls and a barreled shell, an outwardly extending flange arranged on each of the end walls of said proper drum and connected to the respective shell by welding, the end walls of said jacket having a diameter smaller than the inner diameter of the jacket shell, an outwardly extending flange arranged on each of said jacket end walls and stepped so as to form a gap near the edge of said jacket end walls, the welded ends of said inner drum and its end wall flanges being lodged in said gaps.

2. A metal drum consisting of a proper drum having end walls and a substantially cylindrical shell and of a jacket having end walls and a barreled shell, the proper drum being constructed as a unit independent of said jacket and firmly held within said jacket solely by the ends of the shell of said proper drum abutting on the ends of the shell of said jacket and the end walls of the proper drum abutting on the end walls of the jacket whereby the end walls of the proper drum are substantially protected from being bellied.

3. In a metal drum according to claim 2, an outwardly extending flange arranged on each of the end walls of said proper drum and connected to the respective shell by welding, the end walls of said jackets having a diameter smaller than the inner diameter of the jacket shell, an outwardly extending flange arranged on each of said jacket end walls and stepped so as to form a gap near the edge of said jacket end walls, the welded ends of said inner drum and its end wall flanges being lodged in said gaps.

The foregoing specification signed at Cologne, Germany, this 14th day of March, 1929.

JULIUS KNIGGE.