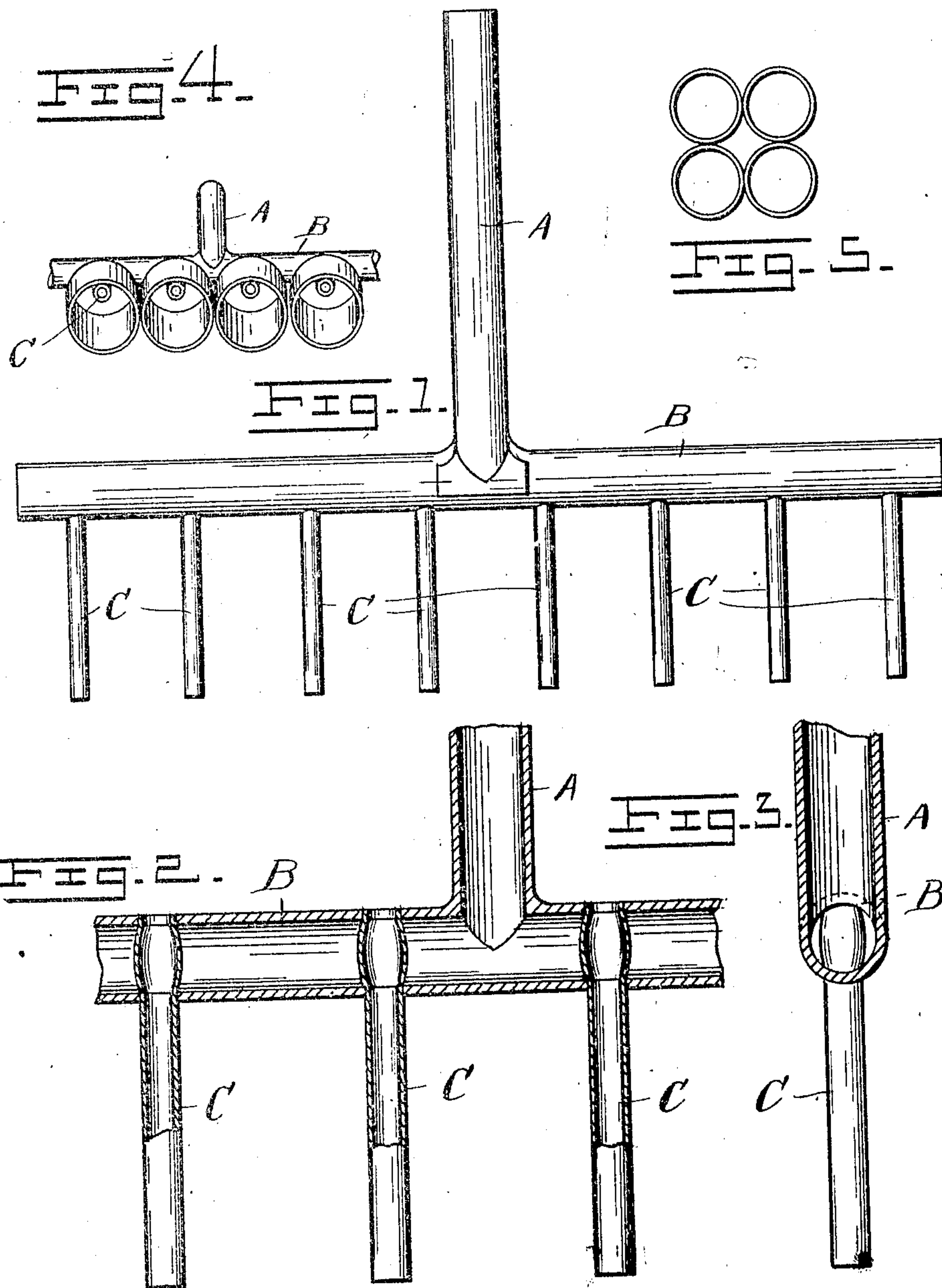


No. 885,580.

PATENTED APR. 21, 1908.

R. M. BRECKENRIDGE.
CAN FORK OR CAN LIFTER.
APPLICATION FILED FEB. 24, 1906.



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ROELIFF MORTON BRECKENRIDGE, OF HAMILTON, ONTARIO, CANADA.

CAN-FORK OR CAN-LIFTER.

No. 885,580.

Specification of Letters Patent.

Patented April 21, 1908.

Application filed February 24, 1906. Serial No. 303,825.

To all whom it may concern.

Be it known that I, ROELIFF MORTON BRECKENRIDGE, a citizen of the United States, residing at the city of Hamilton, in the county of Wentworth and Province of Ontario, Canada, have invented a new and useful Appliance for Use in Tin-Can Factories, which appliance may be called a "can-fork" or "can-lifter," and of which the following is a specification.

When cylindrical tin cans are in course of manufacture in a tin-can factory, they are transferred from one machine or operation to another by rolling on their peripheries by force of gravity or otherwise down or along chutes or run-ways on which the cans automatically arrange themselves side by side and in contact one with another.

It frequently happens in the manufacture, warehousing or shipping of cans that it is desirable or necessary to shift the cans from one chute or place to another place, and to arrange them there in orderly compact piles or rows. This has been ordinarily done heretofore by hand, the operator or laborer picking up as many cans as he can take hold of between his fingers and carrying them over and spreading them out on the chute or place to which they are being transferred. A practiced laborer is able to seize in one hand and lift from one place to another at most four cans of ordinary dimensions; in the act of grasping the cans between his fingers he necessarily "bunches" them, as illustrated in the drawings hereinafter referred to, and cannot keep them in a horizontal line side by side as they were on the chute or place from which they were taken, and as they should be placed on the place to which they are being transferred. And to prevent injury to the hands of the workman from the sharp edges of the cans, it is necessary either that he shall be supplied with gloves, which are a constant source of expense, or that he shall be unusually careful and deliberate in his movements when taking hold of the cans with his hand.

My invention enables a workman to remove from one chute or place and arrange on another place a much larger number of cans in the same time and with no greater exertion than is now practicable, and dispenses with the necessity of providing the workman with gloves.

By the use of my invention he can take up with one hand eight or more cans at a time,

and, as the cans are carried on the lifter in the same relative position with regard to each other as they occupied on the chute from which they have been removed, they can be placed on the chute or place to which they are being transferred in that same position without any expenditure of time in rearranging them, as is necessary where my invention is not used.

I attain these objects by the device or appliance illustrated in the accompanying drawing, in which

Figure 1 is a plan of the can lifter, Fig. 2 is an enlarged sectional plan of part of the can lifter, Fig. 3 is a sectional end elevation of the can lifter, through the handle, Fig. 4 is a reduced perspective elevation of part of the can lifter showing the cans in position on the lifter when the latter is being used, Fig. 5 is an elevation of a group of cans in the "bunched" position which they necessarily assume when being lifted by hand without the use of my invention.

Similar letters refer to similar parts throughout the several views.

The appliance may be simply described as a fork, consisting of a handle "A", cross-piece "B" fastened to such handle, and fingers or tines "C" securely fastened to the cross-piece and projecting therefrom in the same plane as, but on the opposite side of the cross-piece from, the handle, as shown in Fig. 1.

The appliance should be light but strong, and I have found the most serviceable and economical material for its construction to be light iron or steel tubing, the handle and cross-piece being of a diameter of about an inch and a quarter, and the tines of a diameter of half an inch. I fasten or secure each tine to the cross-piece by running the tine through two holes of the same diameter as the tine, bored on diametrically opposite sides of the cross-piece in the same plane as the axis of the handle, and by expanding with an expander that part of the tine which is within the circumference of the cross-piece, and upsetting or riveting the end of the tine which is made to project slightly through the cross-piece on the handle side thereof.

It is essential that the tines be equidistant one from the other, the distance or space from the middle line of one tine to the middle line of the next one adjacent being approximately the diameter of the cans, for the handling of which the lifter is intended.

This insures that the cans, when taken up on the lifter, shall be in slight contact one with the other, as they were on the chute or place from which they were lifted, and makes it almost impossible that any one or more of the cans shall be accidentally prematurely dislodged from the lifter. It is also important that the length of the tines from the extremity "C" to the point of junction with the cross-piece shall be considerably more than half, but something less than the whole depth of the can. If the tines were in length equal to or greater than the depth of the cans, there would be a constant risk of injury to cans which were closed at one end, by the point of the tine, in the act of being thrust into the can, coming in contact with the closed end of the can and denting it. If the tines are not considerably longer than half the depth of the cans, the cans on them would be in a state of instability and apt to fall off. It follows that different sizes of lifters will be necessary for using with different sizes of cans. The tines may be any practicable number; the larger the number the more cans can be lifted on it at a time. There would be very little economical gain in a lifter with not more than four tines, as four cans can be lifted at one time by hand. I have found eight tines a generally convenient number, but ten or twelve might not make the tool unwieldy.

It is generally most convenient that the handle and tines or prongs should be in

the same plane, but if it is desired to construct a lifter to be used especially for transferring cans from or to places higher than the ordinary reach of the operator, the tines may be set at a convenient angle (not being less than a right angle) to the longitudinal line of the handle.

I find that a generally suitable and convenient length for the handle is from twelve to fifteen inches. The length of the cross-piece will be regulated by the number of tines or prongs, and the distance between them. In order to prevent the lifter having a tendency to turn in the hand of the person using it, the handle should join the cross-piece in the middle of its length and the tines should be so spaced that there is an equal number of them on each arm of the cross-piece, the distance between the center of the cross-piece and the nearest tine on each side of the center being the same.

I claim—

A fork for lifting hollow cylindrical bodies comprising a handle, a hollow cross-piece attached thereto, a series of hollow tines passing transversely through the cross-piece, the portion of the tines between the inner walls of the cross-piece being expanded laterally, whereby they are securely held from longitudinal movement in the cross-piece.

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