H. T. TAIT.
CAN STRAIGHTENING MACHINE.
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Fig. 1.

Fig. 2.

Fig. 3.

Inventor

Witness

By

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To all whom it may concern:

Be it known that I, HARRY T. TAIT, a citizen of the United States, residing at Springfield, in the county of Hampden and State of Massachusetts, have invented certain new and useful Improvements in Can-Straightening Machines, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to certain new and useful improvements in can straightening machines for straightening cylindrical cans, the object being to provide a machine by means of which the indentations can be quickly removed from cans after they have been in use.

Another object of my invention is to provide a can straightening machine in which a pivoted handle is employed having a hammer at its free end and provided with a spring at the opposite side of the fulcrum thereof for forcing said hammer downwardly after the same has been raised so as to produce upon the inside of the can a series of tacks so that when said can is placed on an anvil and the machine is started a series of tacks are produced upon the inside of the can so as to remove any dents therefrom, as by moving the can when the machine is in operation, the same can be easily straightened without any injury thereto.

Another object of my invention is to provide a machine which is exceedingly simple and cheap in construction and one in which a revoluble shaft is provided with oppositely disposed tappets arranged to engage the end of the helve so as to raise the hammer carried thereby so that when one of said tappets passes out of engagement with the helve, a spring arranged under the helve will force the hammer downwardly so that a blow will be struck in order to remove the indentations in an old can after the same has been in use.

Other and further objects and advantages of the invention will be hereinafter set forth and the novel features thereof defined by the appended claims.

In the drawings:

Figure 1 is a side elevation of my improved construction of can straightening machine showing a can in dotted lines in position to be operated upon;

Fig. 2 is a top plan view of the machine having a can in dotted lines; and

Fig. 3 is a perspective view of the operative parts of the machine detached.

Like numerals of reference refer to like parts in the several figures of the drawings.

In carrying out my improved invention I employ a work bench or table 1 provided with the usual legs and having at one end an anvil 2 provided with a concaved face, and at the opposite end a motor 3, said motor being arranged on a lowered portion of the table or bench and being provided with the usual drive shaft 4. Secured on the bench in alignment with the drive shaft 4 is a bearing 5 in which is mounted a shaft 6 carrying a worm gear 7 inclosed by a housing 8, said housing being provided with an opening to receive the end of the shaft 4 of the motor 3, and upon which is mounted a worm 9 meshing with the worm gear 7 so as to rotate said gear.

The gear 7 is fixed on one end of the shaft 6 and said shaft projects outwardly as shown in Fig. 3, and has secured on the end thereof, a cam 10 forming oppositely disposed tappets for a purpose hereinafter fully described. Mounted on the table in alignment with the cam 10 is a bracket 11 provided with oppositely disposed bearings in which are mounted trunnions 12 of a helve 13, said trunnions passing through plates 14 secured to the sides of the helve, as clearly shown in Fig. 3. The trunnions form a fulcrum for the helve adjacent the end thereof, said end projecting under the cam 10 in such a manner that when the cam 10 is rotated, the tappets formed thereby are brought alternately into engagement with the free end of the helve so as to raise the opposite end thereof. As the end of the helve is depressed, the hammer 15 carried by the opposite end thereof is raised, which hammer is provided with a concaved face, the curvature of which corresponds with the curvature of the face of the anvil and is adapted to be brought into contact with the inner face of the can.

Arranged under the end of the helve is a coil spring 16 which is mounted in a socket carried by the bracket 11 and projects over a pin projecting downwardly from the helve 105 so as to hold the same in position so that
when the hammer is raised by the tappets and is released thereby, the coil spring which has been compressed will expand so as to produce a blow by the hammer upon the inner face of the can.

In order to provide means for holding the helve out of the path of travel of the cam 10 I provide the bracket 11 with a cross shaft 17 arranged above the helve and on which is mounted a cam 18 which is adapted to be swung by a lever 19 fixed to the shaft into engagement with the helve so as to hold the same in the position shown in Fig. 1 whereby the cam 10 is allowed to rotate without coming into contact with the helve and the hammer is held in raised position so that a can can be slipped over the end of the same into position to be operated.

In the operation of a machine as shown, assuming that the hammer is in the position shown in Fig. 1, a can as shown by dotted lines is placed on the anvil over the end of the hammer, and the operator then throws the cam 18 out of the path of the helve and by starting the motor 3, through the medium of the gearing, the cam will be rotated so as to cause the tappets formed thereby to be alternately brought into engagement with the end of the helve so as to depress the same whereby a series of successive blows will be produced upon the can by the hammer which can be moved back and forth over the anvil so that the indentations will be removed therefrom, and the sides straightened.

What is claimed is:

1. In a can straightening machine, the combination with an anvil having a concaved face to receive a circular can of a pivoted helve, a hammer carried by said helve having a convex face adapted to engage the inner face of the can over said anvil, a rotary shaft, oppositely disposed tappets carried by said shaft cooperating with the end of said helve, and a spring arranged under the end of the said helve for forcing said helve toward said anvil.

2. In a can straightening machine, the combination with an anvil having a concaved face for supporting a circular can, of a pivoted helve having a hammer provided with a convexed face adapted to engage the inner face of the can over said anvil, a spring arranged under the free end of said helve, and revoluble tappets mounted above said helve and cooperating therewith for raising said hammer so as to compress said spring intermittently.

3. In a can straightening machine, the combination with a support, of an anvil arranged above said support having a concaved face for supporting a circular can, a helve mounted in said bracket having a hammer provided with a convexed face adapted to engage the inner face of the can over said anvil, a coil spring arranged under said helve, a revoluble shaft carrying oppositely disposed tappets mounted above said helve, and adapted to cooperate therewith for raising said hammer, and means for locking said hammer in raised position.

4. In a can straightening machine, the combination with an anvil provided with a concaved face for supporting the can, of a pivoted helve, a hammer carried by said helve having a convexed face adapted to engage the inner face of said can over said anvil, a spring arranged under the free end of said helve, means for forcing said helve downwardly so as to compress said spring, and a cam arranged in the path of said helve for holding said helve in raised position.

5. In a can straightening machine, the combination with a support, of brackets mounted upon said support, a shaft mounted in said brackets, means for driving said shaft, an anvil mounted upon said support having a concaved face for supporting a can, means for driving said shaft, a helve mounted in said brackets, tappets carried by said shaft in a plane above said helve, a spring arranged under said helve, a hammer carried by said helve having a convexed face adapted to engage the inner face of the can over said anvil, and a cam mounted in said bracket for holding said helve out of the path of said tappets.

6. In a circular can straightening machine, the combination with a pivotally mounted helve, of a spring arranged under the free end of said helve, an anvil having a concaved face to receive the can, a hammer carried by the helve having a convexed face for engaging the inner face of the can over said anvil, tappets for forcing said helve downwardly to compress said spring, and means for holding said helve out of the path of travel of said tappets.

7. In a can straightening machine, the combination with a pivoted helve having a hammer at one end provided with a convexed face disposed transversely of said helve, of a coil spring arranged under the opposite end of said helve, revoluble tappets mounted upon said helve, and adapted to cooperate therewith for compressing said spring, an anvil having a convexed face for supporting the can around said hammer, and a cam arranged above said helve for holding said helve out of the path of travel of said tappets.

8. In a circular can straightening machine, the combination with a table, of an anvil having a concaved face on said table for supporting a can, a bracket mounted upon said table, a helve provided with trunnions mounted in said brackets, a hammer carried by the free end of said helve having a convexed face adapted to engage the inner face of the can over said anvil, a socket...
formed in said bracket, a pin projecting downwardly from said helve, a coil spring mounted in said socket extending over said pin, a revolvable shaft, tappets carried by said shaft adapted to cooperate with said helve for alternately compressing said spring, and a cam arranged above said helve for holding said helve out of the path of said tappets.

10. In a can straightening machine, the combination with a support having an anvil provided with a concaved face for supporting the can, of a supporting bracket mounted upon said support, a helve provided with trunnions pivotally mounted in said bracket having a rearwardly projecting portion at one end, a hammer carried by the opposite end of said helve having a concaved face adapted to engage the inner face of the can over said anvil, a revolvable cam arranged above and adapted to cooperate with the rearwardly projecting end of said helve, means for holding said helve out of the path of travel of said cam and a spring arranged under the projecting end of said helve.

15. A can straightening machine comprising a table having an anvil mounted thereon, provided with a concaved face for supporting a can, a supporting bracket arranged upon said table and spaced from said anvil, a helve provided with trunnions pivotally mounted in said bracket provided with a rearwardly projecting portion at one end, a spring arranged under the rearwardly projecting end of said helve, a hammer carried by the opposite end of said helve having a concaved face adapted to engage the inner face of the can over said anvil, a revolvable tappet arranged above the rearwardly projecting end of said helve and adapted to contact intermittently therewith for raising the hammer end of said helve, said bracket having an extension, a cross shaft mounted in said extension, a cam arranged upon said shaft, and a lever fixed to the shaft for adjusting the position of said cam extension to said helve for holding said helve in inoperative position.

11. In a can straightening machine, the combination with a support having an anvil provided with a concaved face for supporting the can, of a supporting bracket mounted upon said support, a helve pivotally mounted on said bracket having a rearwardly projecting portion at one end, a hammer carried by the opposite end of said helve having a concaved face adapted to engage the inner face of the can over said anvil, a revolvable cam arranged above and adapted to cooperate with the rearwardly projecting end of said helve, means for holding said helve out of the path of travel of said cam and a spring arranged under the projecting end of said helve.

In testimony whereof I hereunto affix my signature in the presence of two witnesses.

HARRY T. TAIT.

Witnesses:
M. J. Fitchette,
A. W. Brown.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D.C."