

(No Model.)

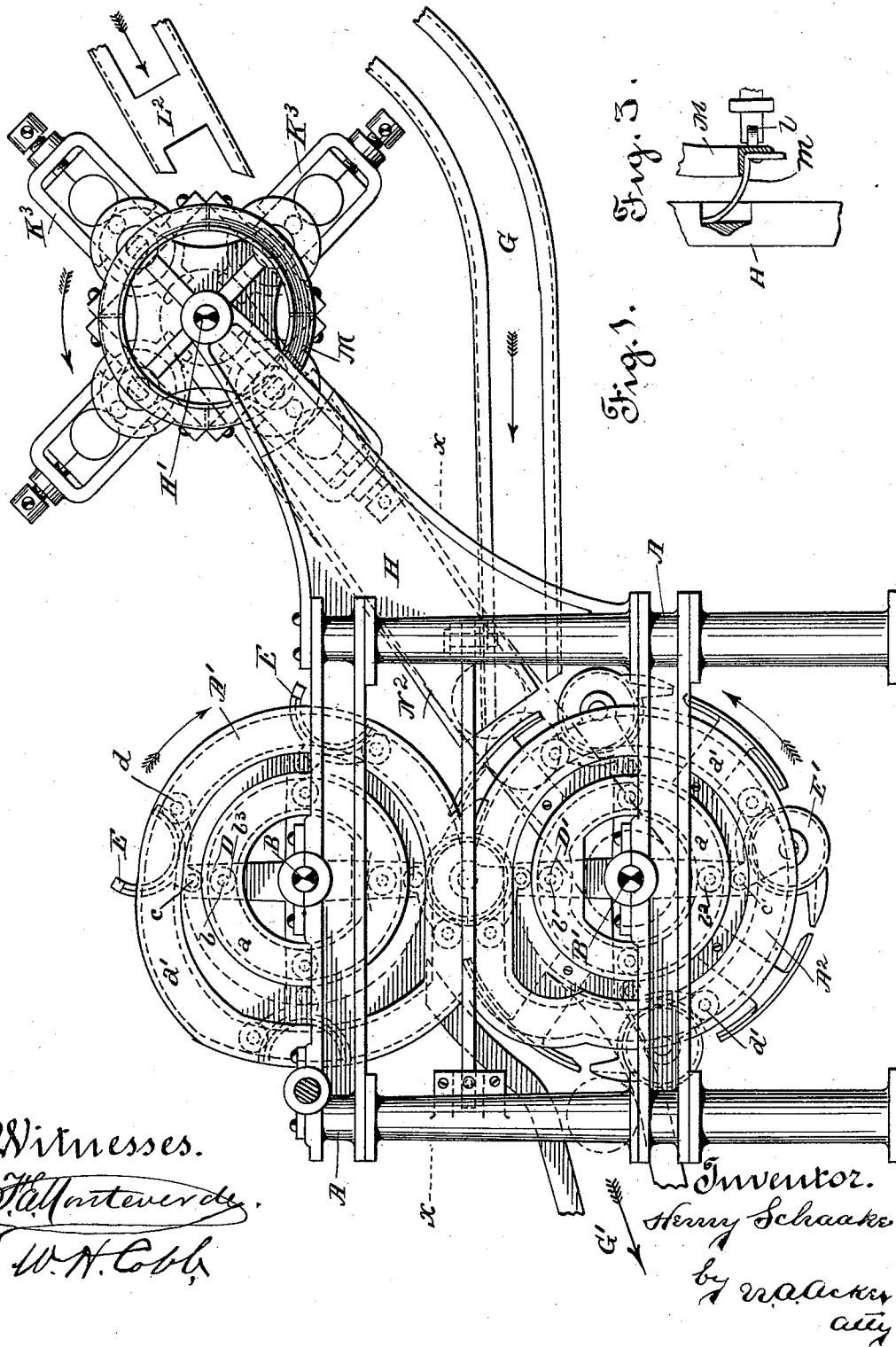
2 Sheets—Sheet 1.

H. SCHAAKE.

COMBINED CRIMPING AND HEADING MACHINE.

No. 557,028.

Patented Mar. 24, 1896.



Witnesses.

J. H. Antevy
W. N. Cobb

Inventor.
Henry Schaaque
by *W. A. Schaaque*
att'y

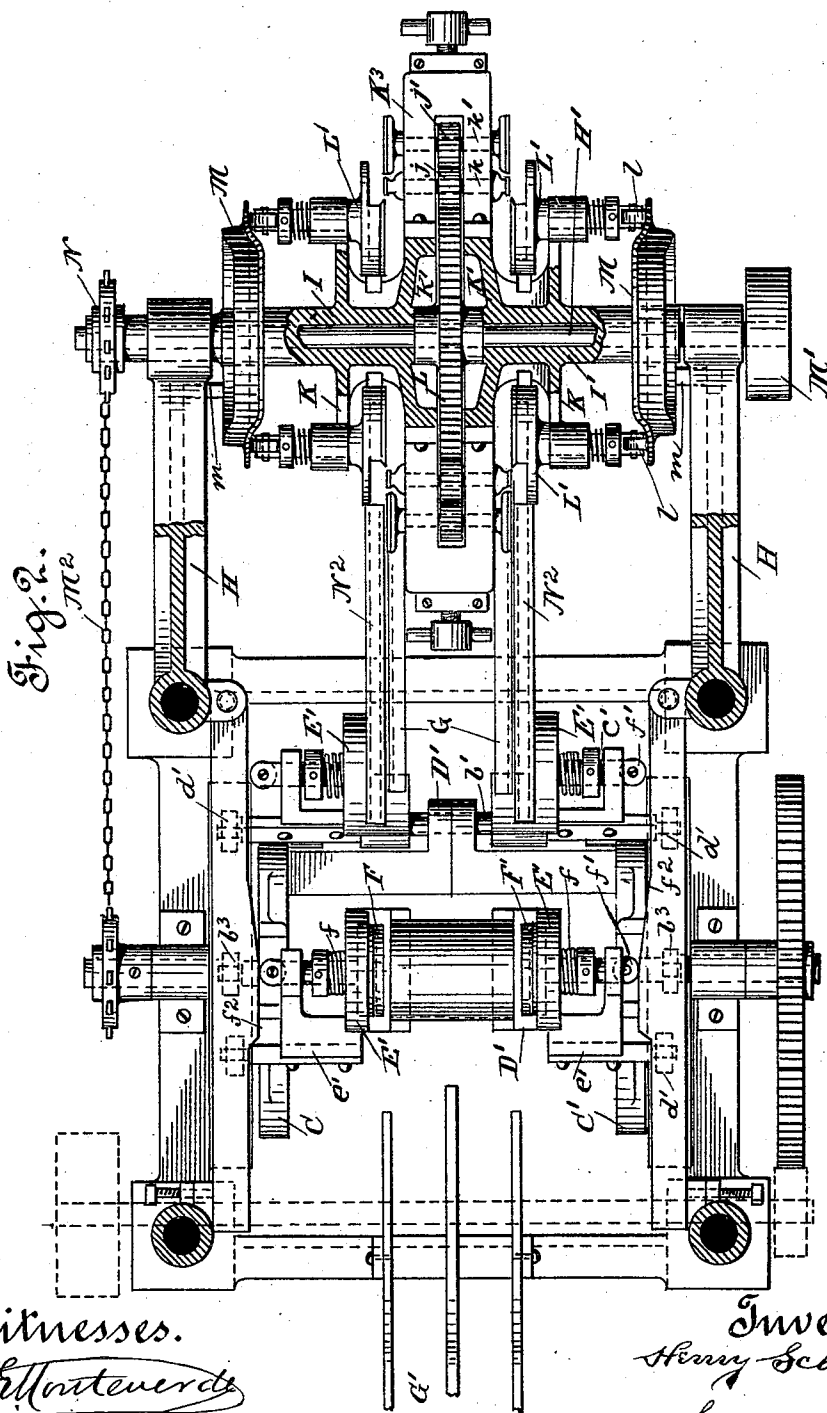
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UNITED STATES PATENT OFFICE,

HENRY SCHAAKE, OF SAN FRANCISCO, CALIFORNIA.

COMBINED CRIMPING AND HEADING MACHINE.

SPECIFICATION forming part of Letters Patent No. 557,028, dated March 24, 1896.

Application filed March 17, 1894. Serial No. 504,091. (No model.)

To all whom it may concern:

Be it known that I, HENRY SCHAAKE, a citizen of the United States, residing at San Francisco, in the county of San Francisco and State of California, have invented certain new and useful Improvements in a Combined Crimping and Heading Machine; and I do hereby declare the following to be a full, clear, and exact description of said invention, such as will enable others skilled in the art to which it most nearly appertains to make, use, and practice the same.

The present invention relates to a combined crimping and heading machine for cans, and more particularly to that class of machine for placing heads inside of can-bodies, the object of the invention being to assemble the body and heads, the heads having the flange thereof intumed or crimped in one machine, and apply the heads inside the can-body, the operation of the heading and crimping mechanism being synchronous.

In a prior application filed by me on the 19th day of December, 1893, I have fully described the mechanism which I herein show for applying the heads inside the can-body, which application bears Serial No. 494,000, and in another application filed by me on the 19th day of December, 1893, the crimping mechanism herein shown will be found fully described, which application bears Serial No. 493,998, and to each of said applications I make reference herein, the present invention merely consisting in combining the mechanisms disclosed by said applications in one organized machine for crimping the flange of the can-head, feeding the crimped heads and the can-bodies to the heading-machine, and applying the heads inside the can-body.

Referring to the drawings forming a part of this application, wherein similar letters of reference are used to denote corresponding parts throughout the entire specification and several views, Figure 1 is a side elevation of the machine; and Fig. 2 is a top plan of Fig. 1, showing a portion of the crimper broken away, the heading-machine being in cross-section, taken on line *xx*. Fig. 3 is a detail view to show the manner of securing the cam which operates the crimping-plungers.

The outer frame of the heading-machine is indicated by the letter A, and within this

frame I bolt or otherwise secure two pairs of plates *A' A'*², one above the other. These plates are loosely secured upon the operating-shafts *B B'*, and from the inner faces thereof project the ribs which form the circular pathways *a a'*.

To the operating-shafts *B B'*, I rigidly fasten the disks *C C'*, which are rotated and carried around by the movement of the drive-shafts, said disks being located between the stationary plates *A' A'*². To these disks are connected the trucks *D D'*, mounted upon the axles *b b'*, to the outer ends of which are secured the rolls *b² b³*, which rolls travel within the circular pathway *a* and serve to throw the trucks in or out, so as to force the header and retaining-jaws *E E'* to or from each other during the rotary travel of the circular disks *C C'*. These jaws are mounted upon the shafts *c c'*, as shown, and in order to facilitate and secure a perfect registering thereof during a portion of their rotary travel I provide the rolls *d d'*, which are held in place upon the brackets, as *e'*, by pins. These rolls travel within circular pathway *a'*.

Through the header-jaws *E'* work the pistons *F F'*, which force the can-heads into the can-bodies. These pistons are surrounded by springs *f* and are forced inward by the rolls *f'* engaging with the cams *f²* during rotary travel of the trucks and header-jaws. After the rolls *f'* move from engagement with the cams the resiliency of the springs *f* force the pistons outward. The pistons as moved inward serve to force the can-heads inside of the can-body held by the two jaws.

The can-bodies are fed to the jaws by means of the chute *G*, and are discharged from the machine after being headed into the chute or runway *G'*, in the same manner as set forth in Letters Patent No. 450,624.

The style of jaws made use of by me in the present machine are the same in construction as those shown in my aforesaid application, filed on the 19th day of December, 1893, Serial No. 494,000, to which reference is hereto made.

From the frame *A* extends the plates or side pieces *H*, through which works the shaft *H'*. Upon this shaft I loosely mount the sleeves *I I'*, from which project the disks *K K'*. The disks *K'* are connected by the yokes *K³*. Consequently the motion of one sleeve is

imparted to the other. Between the yokes are secured the sliding boxes, through which boxes extend the axles $k k'$, to which are secured the crimping-rolls. The axles $k k'$ have the pinions $j j'$ located thereon, which pinions intermesh and receive motion from the gear-wheel L, keyed to the shaft H', located between the disks K'.

Through the disks K works the piston L', the head of which is formed into a holding seat, pocket or cup for the reception of the can-heads as discharged therein by the chute L². These pistons are spring-actuated and to the outer end thereof I secure the roll l , which roll bears against the flange of the cam-ring M, rigidly connected to the plates H by bracket m . As the pistons are carried around, they are forced inward by the roll thereof bearing against the inwardly-curved portion of the flange of the cam-ring. This inward movement of the pistons forces the flanges of the can-head between the crimping-rolls. The shaft H' is rotated by means of the drive-wheel M' secured on one end of said shaft, while the sleeves and disks are rotated through the medium of the belt or chain M², which works over belt or sprocket wheel N, secured to an extension of the sleeve I projecting toward the opposite end of the shaft H'.

The can-heads after being crimped are discharged into a chute N², by means of which

they are conveyed to the header-jaws of the heading portion of my machine.

Having thus described my machine, what I claim as new, and desire to secure protection in by Letters Patent, is—

1. In an organized machine for crimping the flange of can-heads and placing the heads inside of can-bodies, the combination with the can-head crimper, of the heading mechanism for placing the heads inside of the can-body, a chute for supplying the can-bodies to the header-jaws of the heading mechanism, the chute for receiving the crimped heads from the crimper and conveying the same to the heading-jaws, and of the chute for receiving the headed cans from the heading-machine.

2. In a machine for placing crimped heads inside of can-bodies, the combination with the device for crimping the can-head flange, of the heading mechanism for placing the heads inside the can-body, chutes for supplying bodies to said mechanism and conveying crimped heads thereto from the crimping device and of mechanism for synchronously operating the heading mechanism and crimping device.

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

HENRY SCHAAKE.

Witnesses:

N. A. ACKER,

LEE D. CRAIG.