A. WILSON.

Machines for Affixing Middle-Bits to Umbrella Ribs.

No. 143,210. Patented September 23, 1873.

FIG 1

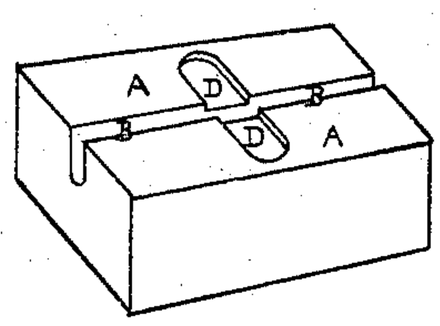


FIG 2

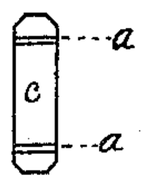
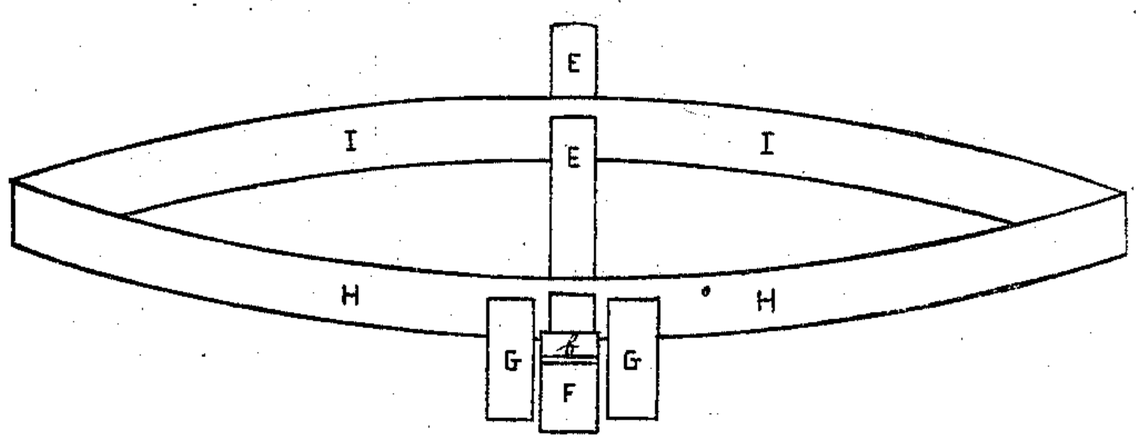


FIG 3



SCALE FOR FIG 3

Witnesses:-
Franklin E. Fellow.
Saml. N Small.

Inventor:-
Arthur Wilson

AM. PHOTO-LITHOGRAPHIC Co. N.Y. (OSBORNE'S PROCESS)

UNITED STATES PATENT OFFICE.

ARTHUR WILSON, OF BIRMINGHAM, ENGLAND, ASSIGNOR TO JAMES CONAWAY AND JOHN LOCKEN, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN MACHINES FOR AFFIXING MIDDLE-BITS TO UMBRELLA-RIBS.

Specification forming part of Letters Patent No. **143,210**, dated September 23, 1873; application filed November 25, 1872.

To all whom it may concern:

Be it known that I, ARTHUR WILSON, of Birmingham, England, have invented a Machine for Making and Affixing Connections or Laps on the Ribs of Umbrellas and Parasols, of which the following is a specification:

The object of my invention is to furnish a machine that will put on and fasten to the ribs of umbrellas and parasols the connections or laps that serve to unite the stretchers to the ribs, and act as levers to impart a reciprocating motion to the ribs to open or close the umbrella or parasol.

By my invention the connections or laps are adjusted and fastened by a single operation, instead of requiring several distinct operations, as has been the practice heretofore.

Figure 1 represents the grooved bed. Fig. 2 represents a brass strip to be converted into a connection or lap. Fig. 3 represents the punch and springs.

A is a metal bed that sets in an ordinary screw-press, and provided with a central groove, B, over which is placed the brass strip C, that fits in a set, D, which spans the groove B. E is a square piece of metal that fits into the screw-press, and is held in position by a set-screw. It has a shoulder, *b*, near its lower extremity, which terminates in a cuneiform blade, F, that forms the center of a punch, of which the pegs G G affixed to the lower surface of the spring H are the other constituents. The springs H and I are elliptical in form, and severally have a square aperture in the center, through which passes the metal piece E, whose shoulder *b* sustains the spring H.

The ribs of the umbrella or parasol may be either corrugated or solid. If the rib be solid the pegs G G must be corrugated, and, conversely, if the ribs be grooved, the pegs must be solid and cuneiform in shape.

In the operation of my machine the rib is placed on the pegs G G. The screw-press is then drawn down, whereby the pegs are caused to descend on the rib and press it down on the brass strip C, which is forced into the groove B, and the center of the punch moves downward, doubling up, by its momentum, the extremities of the strip C until the chords or flanges *a a*, near its several ends, are forced into the groove on the rib by the superincumbent pressure of the pegs G G, and securely fastened by the impact of the central section of the punch.

I claim as my invention—

A machine for affixing connections or laps on the ribs of umbrellas and parasols, composed of the metal bed A provided with a central groove, B, a set, D, the metal piece E provided with a shoulder, *b*, and terminating in the cuneiform blade F, the pegs G G, and the springs H and I, or their equivalents, arranged and constructed to operate in the manner and for the purposes substantially as described.

ARTHUR WILSON.

Witnesses:

FRANKLIN E. FELTON,

SAML. N. SMALL.