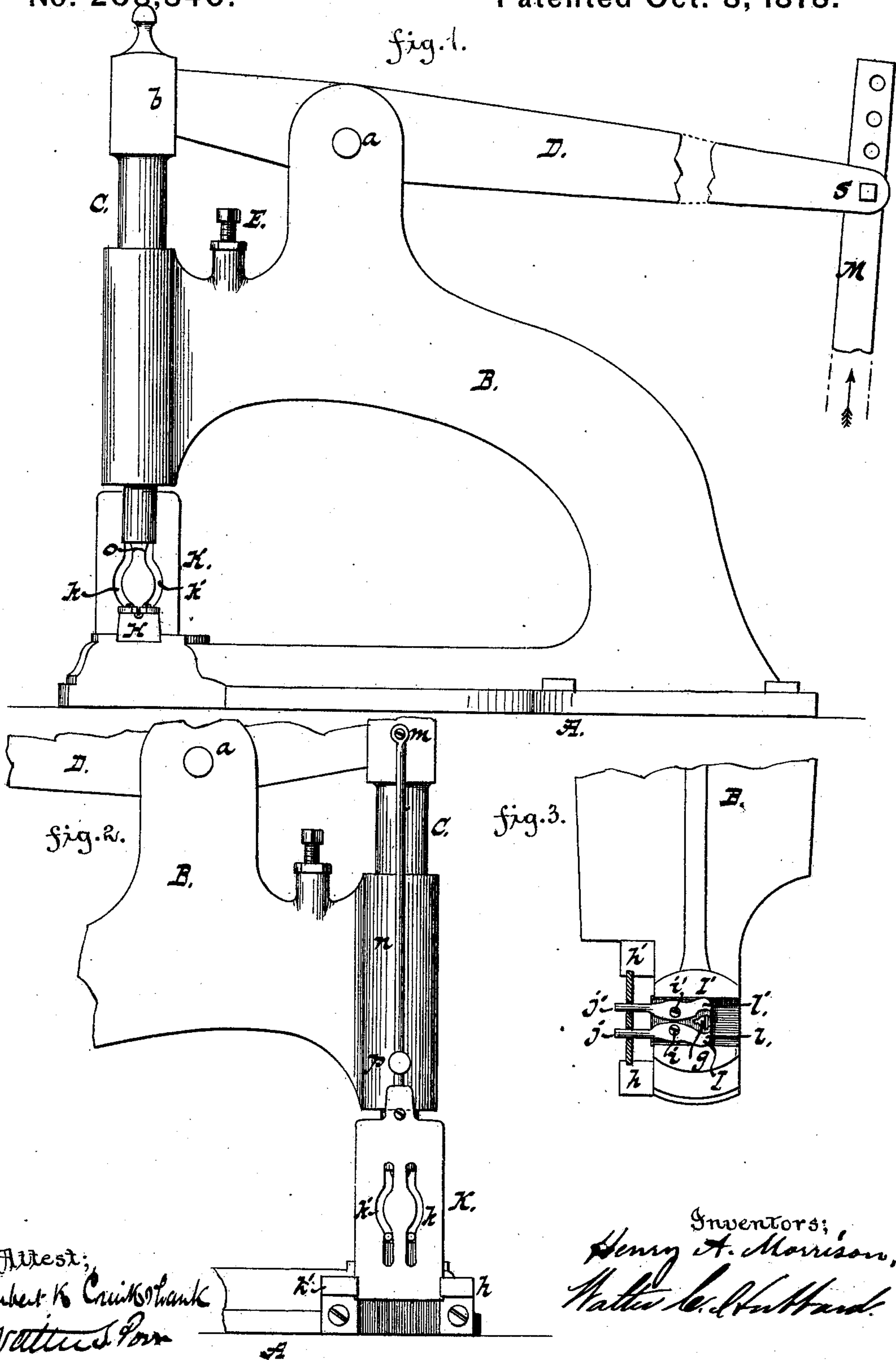


H. A. MORRISON & W. C. HUBBARD.  
Machine for Fastening Tips Upon Umbrella Ribs.  
No. 208,840. Patented Oct. 8, 1878.



Attest;  
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# UNITED STATES PATENT OFFICE

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## IMPROVEMENT IN MACHINES FOR FASTENING TIPS UPON UMBRELLA-RIBS.

Specification forming part of Letters Patent No. 208,840, dated October 8, 1878; application filed February 14, 1878.

*To all whom it may concern:*

Be it known that we, HENRY A. MORRISON, of the city of Brooklyn, county of Kings and State of New York, and WALTER C. HUBBARD, of the city, county, and State of New York, have invented a new and useful Improvement in Machines for Fastening Tips Upon Umbrella-Ribs, which improvement is fully set forth in the following specification, reference being had to the accompanying drawings.

The invention is a machine for fastening the covering of umbrellas, parasols, sun-shades, and similar articles to the ends of the ribs thereof by means of metallic tips.

In the drawings hereto annexed, Figure 1 is a right-side view of the machine. Fig. 2 is a left-side view. Fig. 3 is a view of the female die and nippers. Fig. 4 is a view of the machine with umbrella and arrangement for holding the same while putting on the tip.

The same letters refer to the same parts in the different figures.

A is an ordinary bench or table, to which the punch or press frame is securely fastened. B is an ordinary punch or press frame. C is the drop of the punch or press. D is a lever, having its fulcrum at *a* on the arm of the punch-frame, and attached to the drop at *b*. E is a stop, cushioned or not, to prevent injury to the dies. F is an upright support passing through or held at the side of the table, carrying and holding the slides *c c'*. This support may be securely fastened or made so as to turn easily in a socket. G is an arm passing through the slide *d*, at the outer end of which is a spring clasp or hook, *e*. G' is an arm passing through the slide *d'*, having at its outer end a cup, *f*. H is a die block or plate, securely fastened to the bed of the press or punch, in which is cut a female die, *g*, of the exact shape of the tip, so placed as to be directly beneath the drop C. The other end of the block is provided with grooves or flanges *h h'*, through which the slotted plate K moves up and down. I I' are nippers or pliers, fastened to the top of the die-block H at *i i'*, the handles *j j'* being elongated, so as to pass through the slots *k k'* in the plate K.

The jaws *l l'* of the nippers are hollowed out, so as to resemble the shape of the tip, and the inner sides beveled on the top, so as to present a rounded edge. K is a plate, having two slots, *k k'*, to receive the handles *j j'* of the nippers or pliers, and is fastened by means of a connecting-rod, *n*, to the upper end of the drop C at *m*, and moves up and down with the drop through the grooves *h h'*.

The slots are first parallel, then convex, then parallel, as shown in the drawings, and so arranged that when the drop is raised the handles of the pliers or nippers are brought together and the jaws opened. As the drop descends, the handles are separated, the jaws closed; as it farther descends, the handles are again brought together, the jaws opened, permitting the male die *o*, fastened to or cut upon the lower end of the drop C, to rest upon the female die *g*. The connecting-rod *n* may pass through a guide, *p*, fastened to the side of the press or punch frame. The slides *c c'* move easily on the upright, and are held in their places by the pinch-screws *q q'*. The slides *d d'* are securely fastened to the slides *c c'*, crossing the same at right angles, and contain pinch-screws *q<sup>2</sup> q<sup>3</sup>* for holding the arms G G'.

The upright, slides, arms, clasp, and cup form a frame or rack, capable of being adjusted so as to receive an umbrella or parasol.

We have described a press or punch frame operated by means of the lever D, but any kind of press or punch suitable for the purpose may be used.

The slotted plate K, instead of being fastened as described, may be secured to the lower end of the drop, or in any other manner to accomplish its purpose, or may be made a part thereof. L is an umbrella or parasol, with the rib *r* bent down and ready to be tipped.

To operate the machine, adjust the slides *c c'* and the arms G G' to the size of the umbrella or parasol; place the tip in the female die *g*, open side up; place the top of the umbrella-staff in the cup *f* and the handle in the clasp *e*; bend the rib *r* outward and downward, and place the end over the cloth or covering in the tip. The drop C is made to de-

scend by means of a treadle beneath the table, attached by a connecting-rod, M, to the lever D at s. As the drop descends the jaws of the nippers or pliers are brought together, closing the tip over the rib and covering. As the male die approaches the female die the jaws of the pliers or nippers open, the male die presses down upon and firmly secures the tip over the rib and cloth or covering, and gives to the tip a neat and perfect finish. The pressure upon the treadle is then removed, the drop raised, and the machine is ready for another tip.

What we claim, and desire to secure by Letters Patent, is—

1. The combination of the drop C, the slotted plate K, and the nippers or pliers I I'.

2. The combination of the drop C, the male die *o*, the female die *g*, and the nippers or pliers I I'.

3. The combination of the drop C, the nippers or pliers I I', the slotted plate K, male die *o*, and female die *g*.

4. The combination of an adjustable rack or frame for holding umbrellas, parasols, or similar articles, with mechanism for fastening the tips or cloth upon the ribs of such articles, substantially as described.

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Witnesses:

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