

(No Model.)

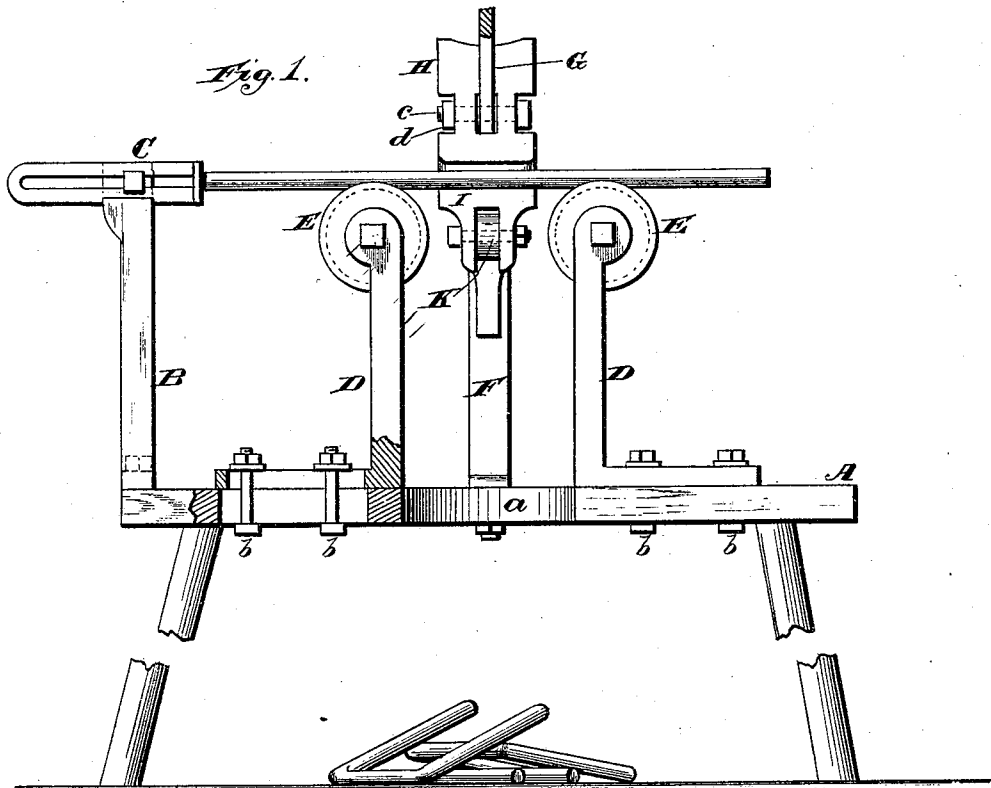
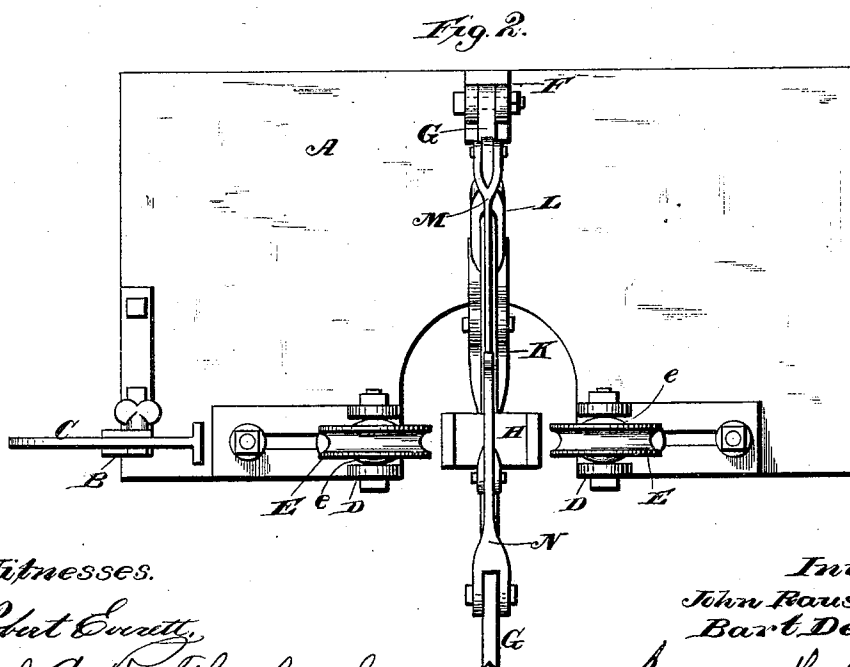
2 Sheets—Sheet 1.

J. RAUSCHENBERGER & B. DEAN.

MACHINE FOR MAKING CARRIAGE CLIPS.

No. 246,340.

Patented Aug. 30, 1881.



Witnesses.

Robert Curitt,
J. A. Rutherford

Inventors.
John Rauschenberger,
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By James L. Norris,
Atty.

(No Model.)

2 Sheets—Sheet 2.

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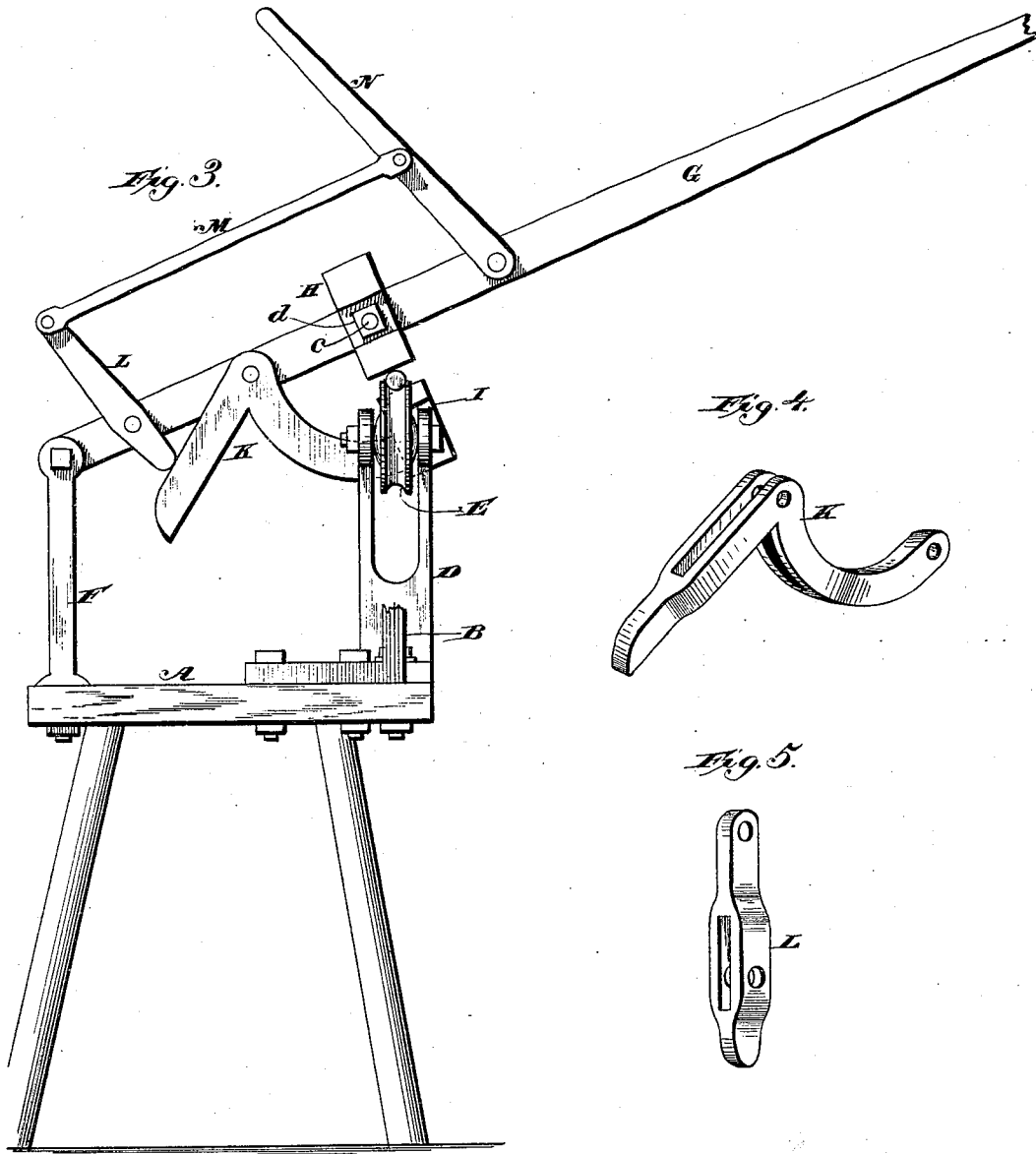
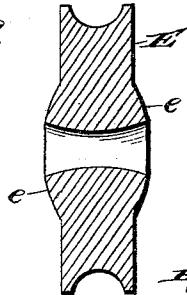


Fig. 6.



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UNITED STATES PATENT OFFICE.

JOHN RAUSCHENBERGER AND BART DEAN, OF JEFFERSONVILLE, INDIANA.

MACHINE FOR MAKING CARRIAGE-CLIPS.

SPECIFICATION forming part of Letters Patent No. 246,340, dated August 30, 1881.

Application filed June 7, 1881. (No model.)

To all whom it may concern:

Be it known that we, JOHN RAUSCHENBERGER and BART DEAN, citizens of the United States, residing at Jeffersonville, in the county of Clarke and State of Indiana, have invented new and useful Improvements in Machines for Making Carriage-Clips, of which the following is a specification.

This invention relates to machines for forming stirrups, links, carriage-clips, and similar articles, the object being to construct a machine adapted to be operated by levers to perfectly bend the blank in the form desired.

Our invention consists in the combination, with a set-gage, grooved rollers journaled in adjustable standards, and a main operating-lever fulcrumed to a standard on the bed or table, and carrying a suitable upper former, of a lower former or griper attached to a cam-lever pivoted to the main lever and adapted to be operated by intermediate links and levers, also pivoted to the main lever.

The invention embraces other features, all of which will be fully hereinafter set forth in detail.

In the accompanying drawings, which fully illustrate the invention, Figure 1 represents a front elevation of a machine constructed according to our invention; Fig. 2, a top or plan view of the same; Fig. 3, an end elevation; Figs. 4 and 5, detail views of the cam-lever and link-lever, and Fig. 6 a sectional view of one of the grooved rollers.

Similar parts are indicated by like letters in the several views.

The letter A indicates a table or the bed of the machine, which supports at one end a standard, B, carrying a set-gage, C, by which the blank is adjusted. The bed A is provided in the center of one side with a curved recess, *a*, and on each side of this recess it is slotted to correspond with slots in the horizontal portions or arms of the brackets D D, which are adjustably secured to the table or bed by screw-bolts *b b* passing through the said slots. In the upper bifurcated ends of the brackets D D are journaled the grooved rollers E E, which support the blank to be formed. A standard, F, is secured to the table on the side opposite to the recess *a*, and carries at its upper end the main lever G, which is pivoted thereto. At-

tached to this lever is the upper or principal former, H, which is slotted for the passage of the lever, to which it is secured by the bolt *c* and nut *d*. The former H is arranged on the lever G, over the recess *a*, between the grooved rollers E E, and may be of such form as to bend the blank by pressure between it and the rollers into a curved or rounded form when making round stirrups.

In order to form the stirrup or clip with square or right-angled corners an additional former, I, is employed. This former or griper I is bolted beneath and in line with the former H to one end of a cam-lever, K, which is pivoted to the main lever G at a suitable point. The cam-lever K is operated by contact with the end of a link-lever, L, which is also pivoted to the lever or handle G and connected by a rod, M, with a lever, N, that is pivoted to the lever G in front of the point where the former H is attached.

The blank to be formed into a stirrup or clip having square corners is placed upon the grooved rollers E E, with one end resting against the set-gage C, which is set from the center one-half the length of the rod or blank. The main lever G is now pressed or drawn down, while the lever N is thrown or held back, which causes the lower former or griper, I, to bear upward against the blank and hold it firmly in contact with the upper former, H. As the formers now descend, with the increased power applied to the main lever, the blank, which is firmly grasped by the formers H I, is drawn or bent down in the grooved peripheries of the rollers E E, between said rollers and the upper former. The standards or brackets supporting the rollers are so adjusted toward or from each other, according to the thickness of the blank, as to hold the latter in close contact with the formers, and thus impart to it the desired shape.

As before observed the lower former or griper, I, and its levers are not employed when curved stirrups are to be formed, because they can be readily made by means of the grooved rollers and upper former, H. Either or both formers may be made in any shape or size desired, according to the work they are to perform.

The grooved rollers E E are so constructed

with the openings for the journals enlarged at their edges, and with raised or rounded hubs *e e*, (see Fig. 6,) that they have sufficient play to accommodate themselves to the radii of the levers and formers, so as not to twist or bend the blank unequally.

By varying the shape and dimensions of the formers and properly adjusting the grooved rollers and set-gage stirrups or clips of any desired form may be readily made.

Having thus described our invention, what we claim is—

1. In a machine for shaping stirrups or clips, the combination, with a set-gage, grooved rollers journaled in adjustable standards, and a main operating-lever fulcrumed to a standard on the bed or table and carrying a suitable upper former, of a lower former or griper attached to a cam-lever pivoted to the main lever and adapted to be operated by intermedi-

ate links and levers, also pivoted to the main lever, substantially as and for the purpose set forth.

2. In a machine for shaping stirrups or clips, the combination of the recessed table A, standard B, carrying set-gage C, grooved rollers E E, journaled in adjustable bearings D D, main lever G, fulcrumed to standard F, and carrying upper former, H, cam-lever K, carrying lower former, I, levers L N, and connecting-rod M, substantially as and for the purpose shown and described.

In testimony whereof we have hereunto set our hands in the presence of two subscribing witnesses.

JOHN RAUSCHENBERGER.
BART DEAN.

Witnesses:

ALFRED O. SCHULER,
HENRY SITTEL.