E. RUHLMANN.

Machine for Manufacturing Moth-Traps for Trees, &c.

No. 206,619. Patented July 30, 1878.

FIG. 1.

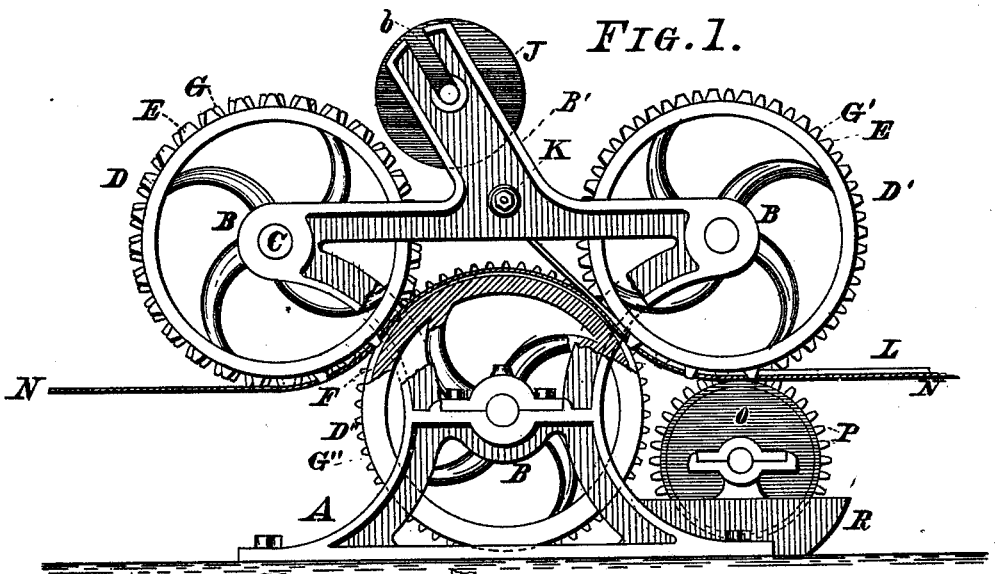


FIG. 2.

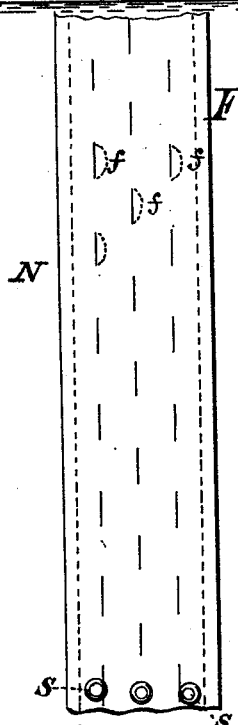


FIG. 3.

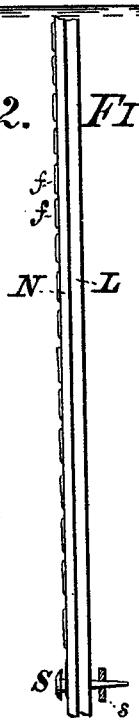
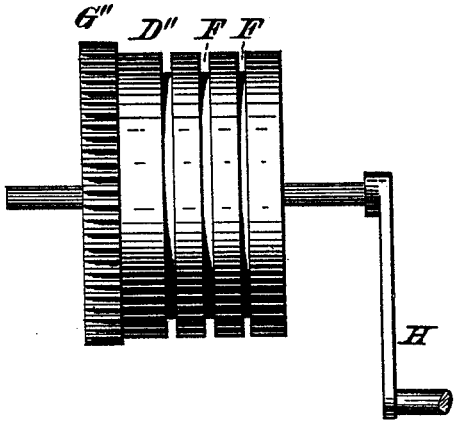


FIG. 4.



Witnesses:

Frank Hirsch

Chas. Brosart

Inventor:

Eugene Ruhlmann.

by Michael J. Stark Atty.

UNITED STATES PATENT OFFICE.

EUGENE RUHLMANN, OF LOCKPORT, NEW YORK.

IMPROVEMENT IN MACHINES FOR MANUFACTURING MOTH-TRAPS FOR TREES, &c.

Specification forming part of Letters Patent No. **206,619**, dated July 30, 1878; application filed May 11, 1878.

To all whom it may concern:

Be it known that I, EUGENE RUHLMANN, of Lockport, in the county of Niagara and State of New York, have invented certain new and useful Improvements on a Machine for Manufacturing Moth-Traps; and I do hereby declare that the following description of my said invention, taken in connection with the accompanying sheet of drawings, forms a full, clear, and exact specification, which will enable others skilled in the art to which it appertains to make and use the same.

This invention has general reference to machinery for producing a new and improved article of manufacture—a cotling-moth trap; and it consists in the peculiar arrangements of parts and details of construction, as hereinafter first fully set forth and described, and then pointed out in the claims.

In the drawings, hereinbefore mentioned, Figure 1 is a front elevation, parts being broken away and others in section, to illustrate the general arrangement of my machine. Fig. 2 is a plan, and Fig. 3 an edge view, of the band, and Fig. 4 a plan of one of the rollers.

Like letters of reference indicate corresponding parts in all the figures.

A are two standards, placed a suitable distance apart, and provided with bearings B for the shafts C, carrying the rollers D, D′, D″, J, and O, respectively. The rollers D D′ are each provided with a series of knife-shaped projections, E, arranged in three rows, the center one being placed about midway between the outer ones. The lower roller, D″, has three grooves, F, matching the three rows of knives E on the rollers D D′. These three rollers are so disposed within the standards that the projections E in the upper rollers enter the grooves in the lower one, and they are connected together by means of gear-wheels G G′ G″, respectively, and revolved by means of a crank or similar device, H, as shown in Fig. 4. The standards have a projecting part, B′, provided with a slotted aperture, *b*, within which revolves the spool or roller J. Upon the base for the standards A is secured a receptacle or trough, R, within which revolves a roller, O, driven from the gear-wheel G′ by the gear-wheel P.

The object of this machine is to perforate or incise strips of paper or similar material while being passed through the machine between the rollers D D″, and then to secure a band of textile or fibrous material or cotton batting on one side of said paper, &c., band, and this is accomplished in the following manner: A strip of paper of proper width—say from three to four inches—is passed between the rollers D D″, where the teeth or knives E of the former, operating within the grooves F of the latter roller, perforate or produce incisions in said band, as shown at *f*, Fig. 2. Upon the spool J is wound a strip of textile or fibrous material or cotton batting, L, the latter being preferred, and the end thereof, being passed beneath the guide-rod K, is entered on the top side of the strip N, between the rollers D′ D″. This strip of textile or similar fabric is preferably left somewhat narrower than the paper strip, as indicated in Fig. 2 in dotted lines, and when passing between the rollers D′ D″ the projecting teeth on the former force the said textile or fibrous material through the incisions *f*, causing it to somewhat project on the under side of the paper strip. In this manner the two bands are temporarily secured together, and are then permanently attached by means of painting the under side of the paper strip N by any waterproof paint, either by hand or by means of the roller O, having on its periphery an absorbent strip of material, such as cotton ticking, &c., or being otherwise arranged to deliver the paint contained in the trough R to said band N.

The object of the bands thus produced by my machine is to serve as a protection to trees from the moth commonly called "cotling-moth or apple-worm," which, as is well known, climbs up the trunks of trees to form their cocoons, seeking a dark and soft place for this purpose. A band of proper length, of the description heretofore given, is saturated on the cotton-batting side with any strongly poisonous substance, corrosive sublimate having been found by me to be excellent, it being colorless and odorless, and then wound around the trunk of the tree with the cotton batting toward the bark, and fastened, in any suitable manner, by means of tacks S or other contrivance. The moth, when ascending the trunk,

reaches the cotton-covered band and settles therein, but, being during this time under the influence of the poison, is speedily killed. I have found by practical experiments that the moth will never pass the band when properly applied, which thus forms a sure and safe means of exterminating this moth.

For the paper band I prefer to use resin-sized paper, owing to its water-proof qualities, which are further enhanced by the coating of water-proof paint on the back, (the side exposed to view when applied to the tree,) and such a band will last for years before a renewal becomes necessary. Other paper or material may, however, be used, and answer the purpose more or less satisfactorily.

The rollers D D′, with the knives E, may be made in any convenient manner, one method being to construct the knives in the manner of a circular-saw plate, securing the same between disks interposed between the various plates.

For the convenience of the farmers and others using this band, I prefer to furnish the tacks S directly with said bands, retaining them by means of leather washers *s*, as clearly illustrated in Fig. 3.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent of the United States—

1. As a new and improved article of manufacture, a band of paper or similar material, having a band of fibrous or textile fabric secured to one of its sides by portions of said fabric passing through incisions in the said paper, &c., band, as and for the object specified.

2. As an improved article of manufacture, compound bands of paper or similar material and textile or fibrous fabric, the latter being saturated with a poisonous substance, as stated.

3. The compound band hereinbefore described, consisting of a layer of paper and a layer of cotton batting or analogous materials, the two layers being secured together by portions of the latter being passed through incisions in the former, and fastened on the under side by means of a water-proof paint, as stated.

4. The compound band hereinbefore described, consisting of a layer of paper and a layer of cotton batting or similar materials, secured together as specified, the batting being saturated with a poisonous substance, as stated, and the band adapted to be applied to a tree for protection, as stated.

5. In a machine for perforating and securing the bands, the combination of two standards, A, carrying between them the rollers D D′, provided with the projecting teeth E and roller D″, having the grooves F, and the roller J, as and for the purpose stated.

6. The machine for perforating, attaching, and securing the bands, consisting of two standards, A, rollers D, D′, D″, J, and O, arranged within said standards, substantially as and for the use and purpose specified.

In testimony that I claim the foregoing as my invention I have hereto set my hand in the presence of two subscribing witnesses.

E. RUHLMANN.

Attest:

MICHAEL J. STARK,
FRANK HIRSCH.