H. W. GUEST.

MACHINE FOR MAKING ASBESTUS PACKING.

No. 189,893. Patented April 24, 1877.

Fig. 1

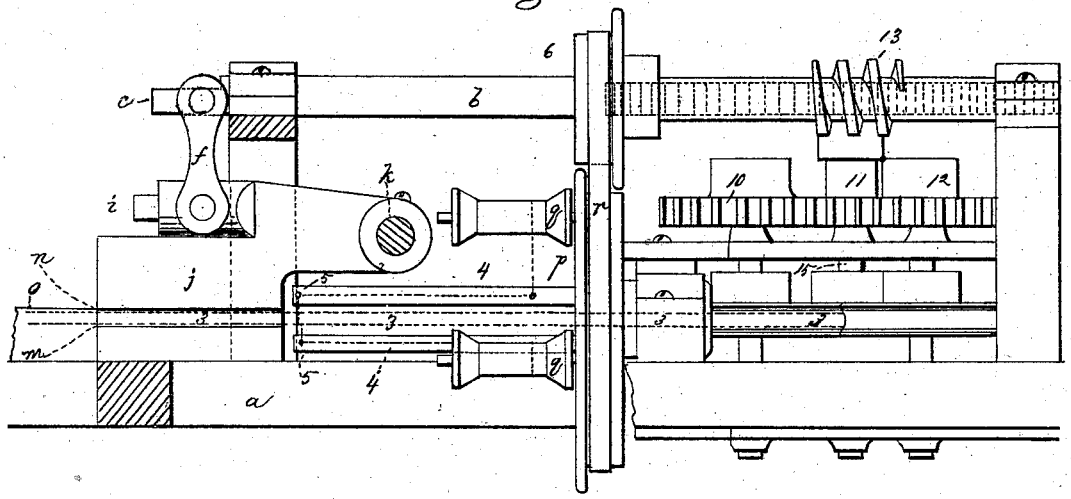


Fig. 2.

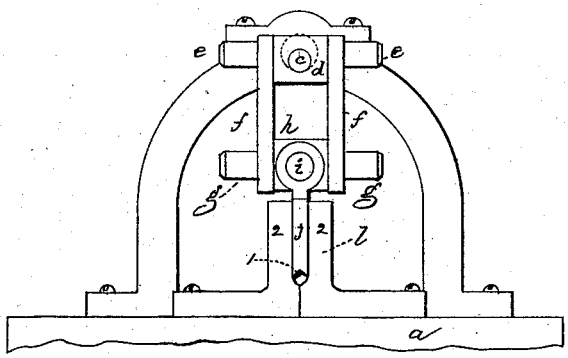
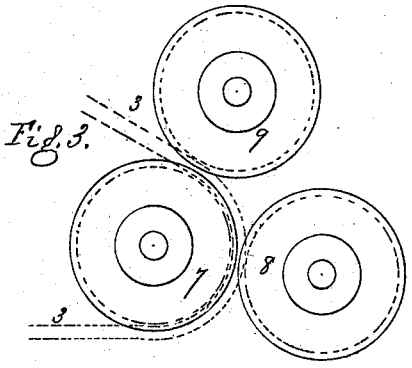


Fig. 3.



Witnesses.

E. H. Gratimer.

W. J. Pratt.

Inventor.

Henry W. Guest

by Crosby & Gregory Attys

UNITED STATES PATENT OFFICE.

HENRY W. GUEST, OF NEW LONDON, CONNECTICUT, ASSIGNOR TO THE ASBESTOS PACKING COMPANY, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN MACHINES FOR MAKING ASBESTUS PACKING.

Specification forming part of Letters Patent No. **189,893**, dated April 24, 1877; application filed September 22, 1876.

To all whom it may concern:

Be it known that I, HENRY W. GUEST, of New London, in the county of New London and State of Connecticut, have invented Improved Machines for Making Asbestus Packing, of which the following is a specification:

This invention relates to a machine for the preparation of asbestus for packing; and consists in the combination, with the thread-carriers for winding the rope-like packing with fibrous strands, of intermittingly-acting compressing-jaws, to compress and form the asbestus before it is wound with fibrous strands.

Asbestus packing is commonly prepared in the form of rope, and round, square, or flat. The asbestus is usually placed between longitudinal strips of fabric. The asbestus and fabric are then drawn through a guide or former to shape the packing, and, issuing from the former, is wound with fibrous strands carried by a rotating carriage moving about the packing.

In this invention, instead of drawing the asbestus and fabric through the usual guide-opening, it is drawn into and through a compressing-box in which is placed an intermittingly-acting jaw, that firmly compacts and consolidates the asbestus into proper form before it leaves the box to be wound.

Figure 1 represents, in side view, a machine provided with my improvements, part of the frame being broken away, and one side of the compressing-box being removed, to show the movable jaw; Fig. 2, a front view of the compressing box and jaw, and Fig. 3, a detail of the take-up mechanism.

The bed *a* of the machine, of proper form to support the working parts, is mounted on suitable legs. (Not shown.) The main shaft *b* of the machine, driven in any usual way, has a crank-pin or eccentric, *c*, fitted to a block, *d*, provided with studs *e*, adapted to receive a link or links, *f*, connected with a swivel-block, *h*, fitted about a pin or bolt, *i*, attached to the compressing-jaw *j*. This jaw is pivoted at *k*, is provided on its lower face with a groove, 1, (see Fig. 2,) is fitted between the sides 2 2 of the compressing-box *l*, forming the stationary member of the compressing mechanism *j l*, and is vibrated at each rotation of shaft *b*.

The asbestus to be made into a continuous strand or rope is placed, preferably, upon a fibrous strip, *m*, laid in a channel or way made in a table, *o*, (a portion thereof being shown in Fig. 1,) placed immediately in front of the compressing-jaw. The asbestus is crowded into this groove by hand, and a second strip of fabric or other binder, *n*, carried preferably on a spool, is laid on the asbestus in the groove. In this way the asbestus has applied to its upper and under portions a fibrous strip, that holds the fibers or particles of asbestus partially together as the asbestus and fibrous strip or strips pass from the groove in the table into the groove between the compressing mechanism, and the jaw *j*, as it vibrates, compresses the asbestus and fabric firmly into a strand, and so compressed and shaped it passes, as shown in dotted lines 3, Fig. 1, through an opening at the center of the revolving carriage *p*, provided with bobbins supplied with thread, cord, or yarn adapted to be wound about the asbestus. Each thread passes from its bobbin through a guide-post, 4, and, delivered at 5, is wound directly about the asbestus and fabric, holding the materials together securely, and enabling it to be handled as desired.

The carriage is connected by band *r* with a pulley, 6, on shaft *b*. After the asbestus is wound with fibrous strands, as described, it passes to and between grooved take-up rollers 7 8 9, on shafts provided with pinions 10 11 12. These take-up rolls move in unison, and are operated through a worm, 13, on shaft *b*, that engages a large toothed wheel (shown in dotted lines, Fig. 1) on the upper end of shaft 15.

Other connections than those shown between the shaft *b* and jaw *j* may be employed without departing from this invention. The space or groove between the compressing devices may be of any desired shape. The jaw *j* might be made to reciprocate up and down in a right line, rather than vibrate.

The compressing devices *j l* may be made detachable from the machine, so as to permit

a jaw and compressing-box of proper size, and with a groove of the desired shape, to be employed. The grooves in the take-up rollers will be proportioned to the size of the packing being made.

I claim—

In a machine for the manufacture of asbestus packing strands or ropes, the combination, with the intermittingly-acting compressing-jaw *j*, and a grooved box, *l*, of the carriage and bobbins, adapted to wind the fibrous strands about the asbestus to make a packing rope or strand, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HENRY W. GUEST.

Witnesses:

G. W. GREGORY,

W. J. PRATT.