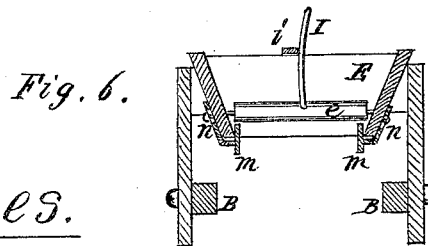
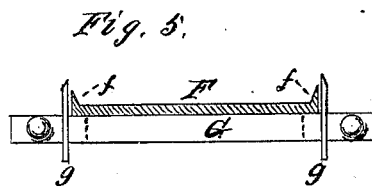
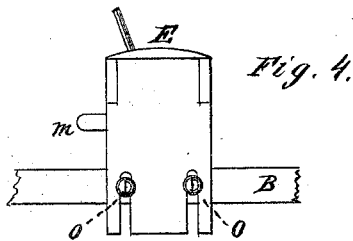
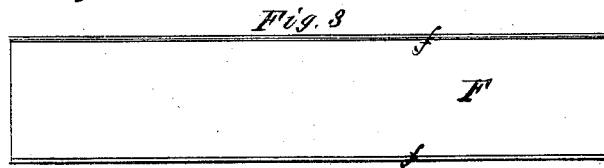
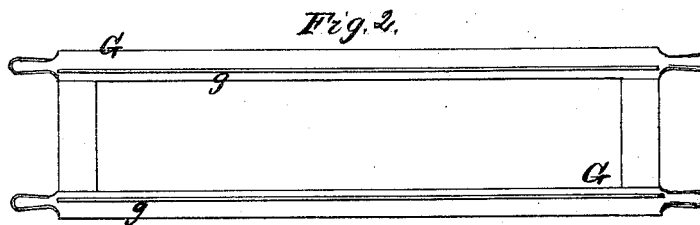
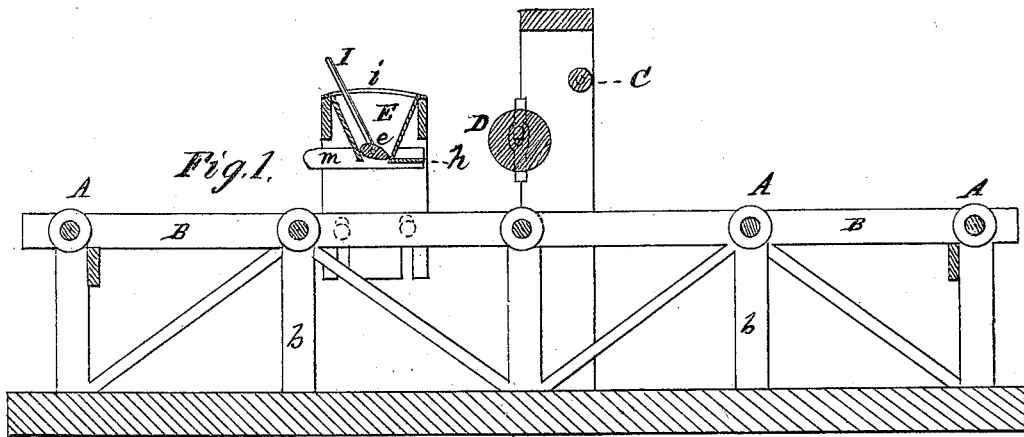


# D. HITCHCOCK & W. GIBBS.

Improvement in Machines for the Manufacture of Roofing.

No. 114,139.

Patented April 25, 1871.



Witnesses.

E. U. Scoville  
W. L. Scoville

Inventor.

D. Hitchcock  
W. Gibbs  
per R. A. Mayberry  
att'y.

# United States Patent Office.

DWIGHT HITCHCOCK AND WILLIS GIBBS, OF SYRACUSE, NEW YORK,  
ASSIGNORS TO OLIVER T. BURT, OF SAME PLACE.

Letters Patent No. 114,139, dated April 25, 1871.

## IMPROVEMENT IN MACHINES FOR THE MANUFACTURE OF ROOFING.

The Schedule referred to in these Letters Patent and making part of the same.

*To all whom it may concern:*

Be it known that we, DWIGHT HITCHCOCK and WILLIS GIBBS, of Syracuse, in the county of Onondaga and State of New York, have invented a new and useful Improvement in Roofing-Machines; and we do hereby declare that the following is a full, clear, and exact description thereof, which will enable others to make and use the same, reference being had to the accompanying drawing forming part of this specification, in which—

Figure 1 is a sectional side view of the machine.

Figure 2 is a plan or top view of the carriage or frame for supporting the tray.

Figure 3 is a top view of the tray.

Figure 4 is an end view of the box or hopper for holding and distributing the compound.

Figure 5 is an end view of the carriage and tray together.

Figure 6 is a longitudinal vertical section of the hopper.

Similar letters of reference indicate like parts in the several figures.

A series of grooved rollers, A, fig. 1, are mounted in pairs on a table or frame-work, B b, to form an anti-friction bed for the hand-frame or carriage to travel on.

Over the table B b is mounted a felt-roller, C, and a heavy pressing-roller, D, of iron, which is suspended in boxes in such manner as to have a slight vertical play.

A hopper, E, for the tar compound, is also placed above the said table B.

A number of trays, F, fig. 3, is provided, and a hand-carriage or frame, G, fig. 2.

A tray, F, is covered with a thin bed of sand and then placed on the carriage G, and it is then placed on the table B, and after the end of the felt has been attached to the front end of the carriage, one of the operators pushes the carriage over the table, while a second operator attends to the distributing-valve of the hopper.

As the carriage is pushed forward the hopper E covers the sand in the tray F with a coating of the tar or compound, and the felt is drawn from its roller C, and, passing over the pressing-roller and under it, is pressed down firmly and evenly onto the compound as the carriage advances.

When the full length of the carriage and tray has passed, the valve of the hopper is shut and the felt cut off, and the carriage G is then carried away by hand to the cooling-floor, and the tray F, with its piece of warm roofing, is slid off, and an empty tray placed on the carriage and the process repeated, and empty trays are used until the contents of the first has become

cold, and in this manner no time is lost by waiting for the roofing to cool after it comes from the rollers.

Heretofore the tray F and carriage G have been made in one piece, but we make them separate, as shown in figs. 2 and 3, so that but one carriage or frame G is necessary for a large number of trays.

In making the carriage G we get the required stiffness with the least weight by inserting wide strips of iron g g in the side pieces of the frame. These strips run the whole length of the carriage, and are placed vertically, as shown in end view, fig. 5; and the whole being well secured, they prevent all springing of the carriage.

The lower edges of these iron strips g g form ribs below the carriage, which travel in the grooved rollers to guide the carriage over the table, and the upper edges can be sharpened, so that the pressure-roller D will by its weight shear off the edges of the felt on these sharpened edges; but said edges can be used blunt or sharpened, as desired.

The hopper E has a valve, e, fig. 1, that works on a pivot, and is operated by a hand-lever, I. This lever is made of spring metal, and works against a fixed cross-bar, i, fig. 6, with sufficient pressure and friction to hold the valve in any position in which it is set, and by this means the valve requires less attention and the operator can leave it momentarily when it is discharging.

The hopper has a shelf, h, fig. 1, on the outside near its discharge, on which heated bricks or pieces of iron are placed, to keep the compound limpid or soft, so as to not drag and make the surface rough and irregular as the carriage takes it from the mouth of the hopper. As these bricks become cooled they are removed and hot ones from the fire substituted.

The bottom of the hopper is also provided with two guards, m m, that prevent the compound from flooding over at the sides of the tray.

These guards are attached to the ends of the hopper by set-screws n n, fig. 6, passing through slots in such manner that the guards can be adjusted vertically.

This machine is also used for making composition slabs for covering cellar floors or for covering sidewalks. In making these slabs the hopper is set higher so as to give greater thickness to the manufactured sheets. The hopper is held by set-screws o o, fig. 4, which occupy slots in the side pieces of the hopper, so that its height can be readily regulated, as desired.

When making said slabs the ribs or side flanges f f of the trays F are removed, and the granadizing can be applied to the top of the compound by letting the sand run from a second hopper.

Having thus described our invention,  
What we claim, and desire to secure by Letters Patent, is—

1. The hand-carriage G, made with flat strengthening-pieces *g g* of metal, arranged vertically, as shown, to prevent springing, and projecting below the carriage to act as guide-ribs, and projecting above to act as guards, and knives, if desired, in connection with the table B A, pressure-roller D, and hopper E, as and for the purpose described.

2. In connection with the table B, roller D, and hopper E, the carriage G, made with a detachable bottom or tray, F, as and for the purpose herein described.

3. The hopper E, constructed with a shelf, *h*, at its discharge, for heating purposes, in connection with a

suitable carriage and table for running off the asphaltic compound and pressing it into sheets, substantially as described.

4. The hopper E, with adjustable flooding-guards *m m* and valve-lever I, with friction-stop *i*, in connection with the machine A B D G, as and for the purpose specified.

The above specification of our invention signed by us this 1st day of March, 1871.

DWIGHT HITCHCOCK.  
WILLIS GIBBS.

Witnesses:

E. H. SCOVILLE,  
F. A. MORLEY.