

R. T. Havens.

Roofing Apparatus.

N^o 18,278.

Patented Sept. 29, 1857.

Fig: 1.

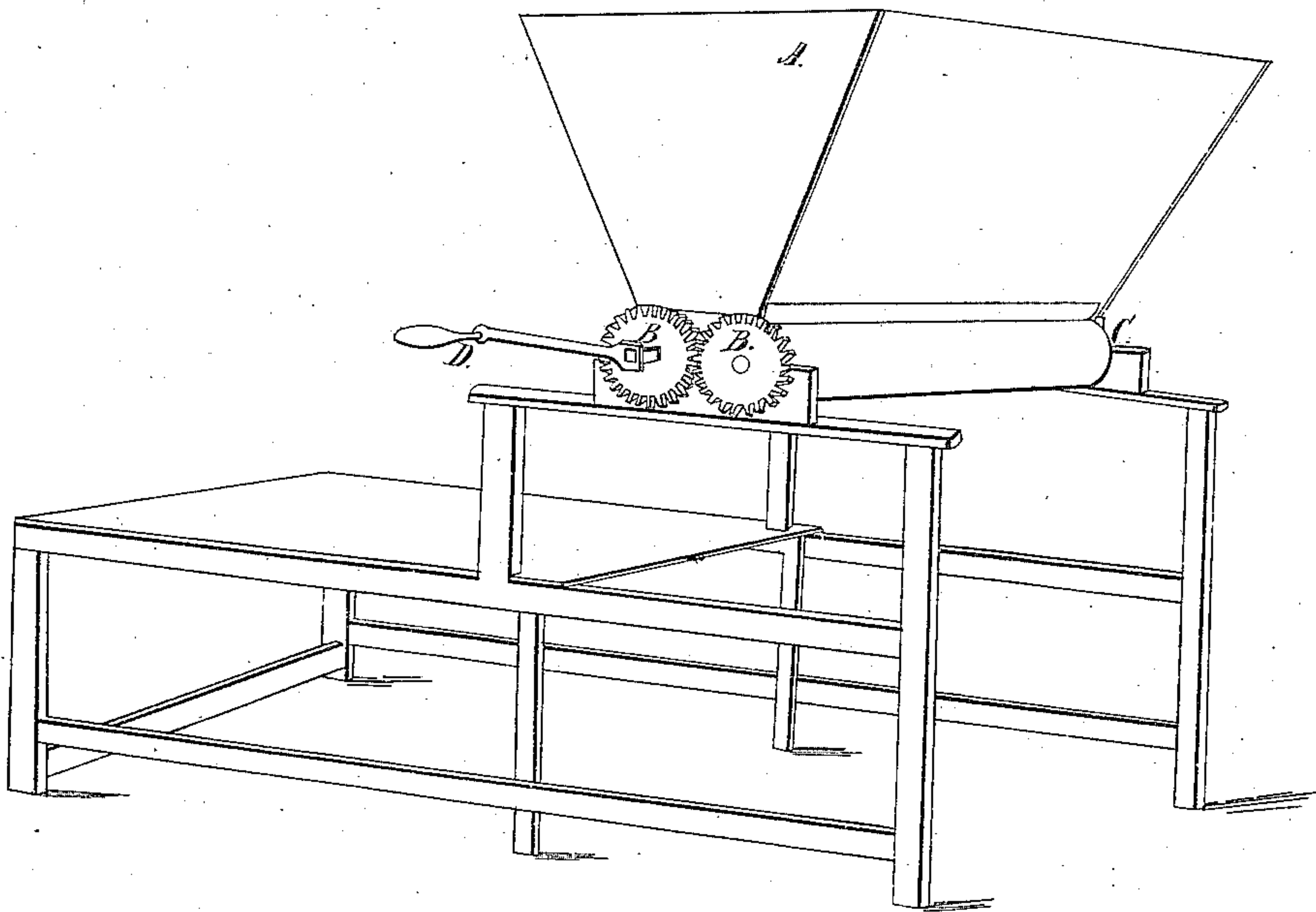
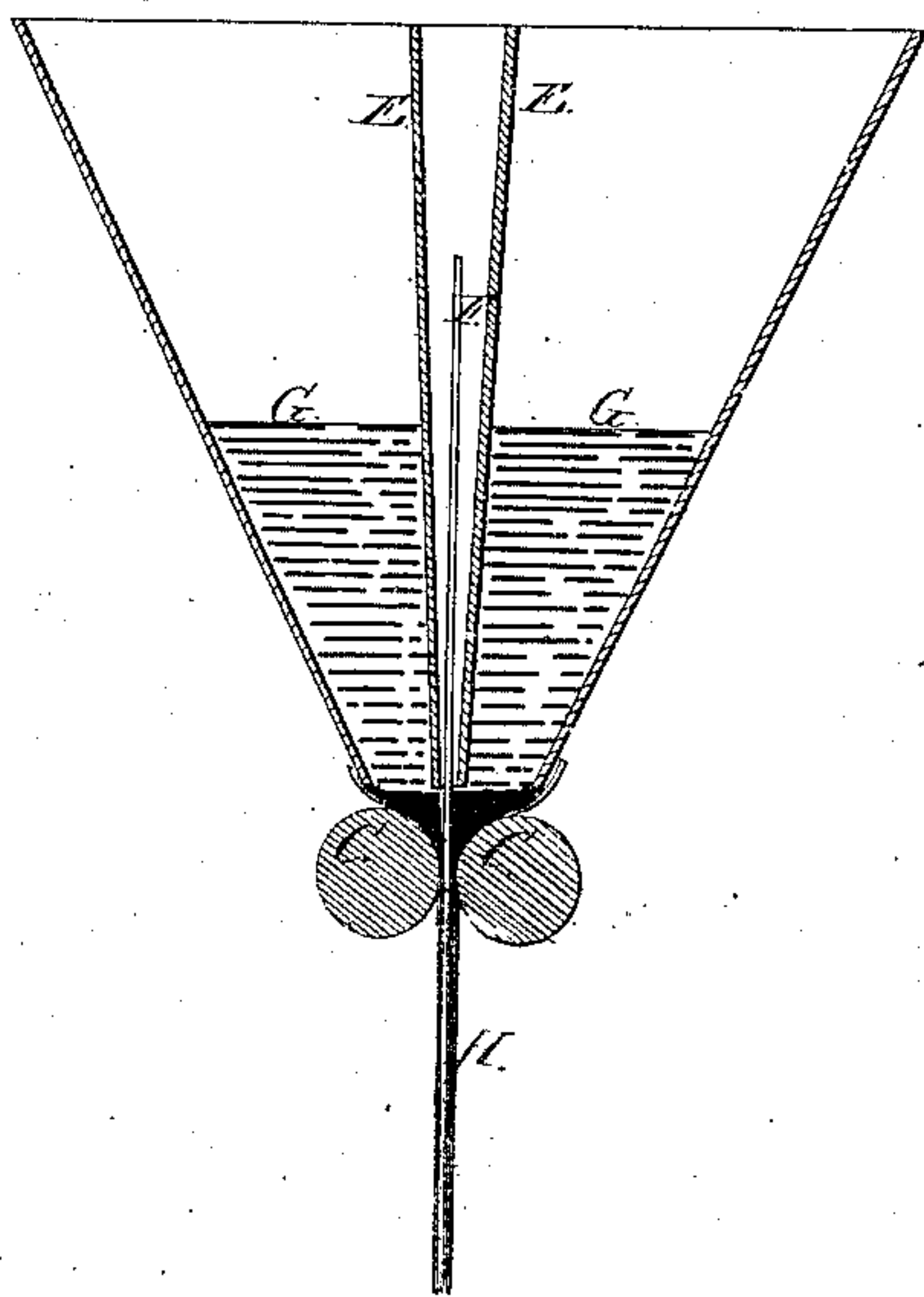


Fig: 2.



UNITED STATES PATENT OFFICE.

ROBERT T. HAVENS, OF CASSTOWN, OHIO.

IMPROVEMENT IN PREPARING ROOFING-CEMENTS.

Specification forming part of Letters Patent No. 18,278, dated September 29, 1857.

To all whom it may concern:

Be it known that I, ROBERT T. HAVENS, of Casstown, in the county of Miami and State of Ohio, have invented a new and Improved Mode of Making Slate; and I do hereby declare that the following is a full and exact description thereof.

The nature of my invention consists in combining coal-tar and sand, sifted through a bolting-cloth or other suitable material, with paper or wood in the following manner: First, I raise the temperature of the tar to a boiling heat and then let it cool, when an oily substance is found on the top, which I skim from the tar. To one gallon of tar thus prepared I add three gallons, or nearly in that proportion, of sand, prepared as aforesaid, and stir them well together. I then put sheets of paper or very thin wood in pieces of suitable size into a rolling-machine which I have constructed for the purpose and pour the mixture into the hopper of said machine. I then pass the mixture and paper or wood together between the rollers of the machine, which is so contrived as to press the mixture upon and into the substance of the wood or paper on both sides.

In the drawings hereto annexed and made part of this specification, Figure 1 is a general view of said machine, and Fig. 2 a transverse section of the inside of the hopper thereof.

The hopper is divided into three apartments E, E, and F. The mixture above described is poured into the compartments E E and the wood or paper placed in F, the three E, E, and F uniting just above the rollers C C, so that at this place of union the mixture shall come in contact with the wood or paper on each side thereof before passing between the rollers C C. In turning the rollers the mixture is pressed into the pores of the wood or into the paper on each side, making a smooth surface. The product passes from the press in the direction H.

The draft of this machine is annexed merely to show how by rolling and pressing the mixture is thoroughly and smoothly combined with the wood or paper. It is not intended thereby to limit the process to the use of this or any other particular machine by which the pressure may be applied and the smooth surface obtained, my claim not being for the mere mixture of the coal-tar and sand, nor for the machine, but for the process of making artificial slate by combining the mixture above described with wood or paper by means of rolling and pressing.

The union thus produced between the mixture and the paper or wood is extremely close and becomes still closer by time. The composition by means of the pressure is forced into the pores of the wood. The paper being a more pervious substance, the composition so penetrates it as for all practical purposes to form with it a single body.

I thus produce an artificial slate suitable for marking or roofing purposes, non-combustible, and which, when exposed to the sun and atmosphere, becomes very hard and exceedingly durable, and which, to the best of my knowledge and belief, has not been before manufactured or produced.

I do not claim that the ingredients herein specified have not been used before in compositions, but do claim that they have not been so combined as to produce any article identical with or equivalent or similar to the above.

What I claim as my invention, and desire to secure by Letters Patent, is—

The process of combining and pressing coal-tar and sand with paper or wood in the manner above described and represented for the production of an artificial slate.

R. T. HAVENS.

Witnesses:

R. S. HEUT,
J. O. FELTON.