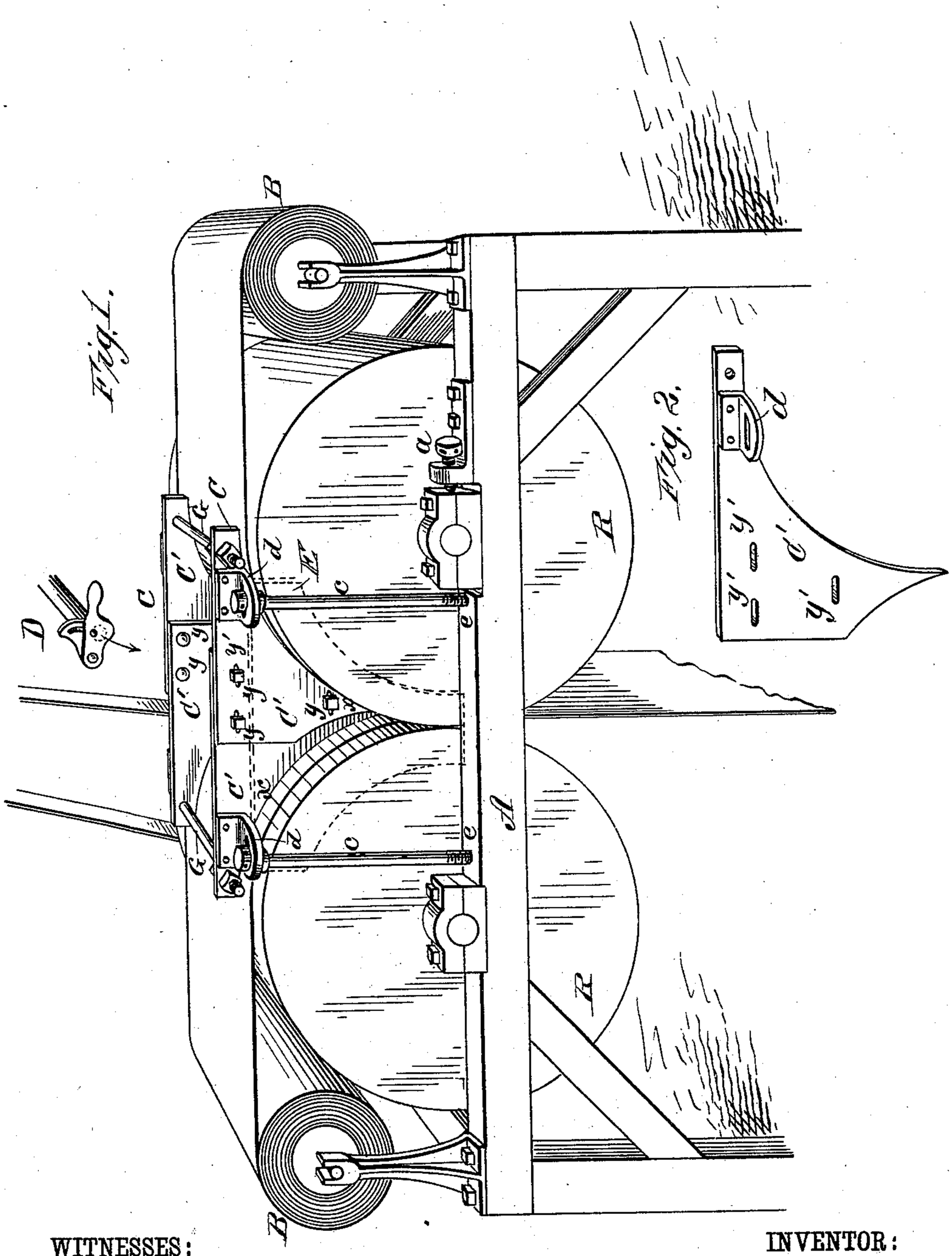
(No Model.)

W. H. H. CHILDS.

MACHINE FOR MAKING SHEATHING PAPER.

No. 361,050. Patented Apr. 12, 1887.



WITNESSES:

J. D. Layfield

C. Sedgwick

INVENTOR:

W. H. H. Childs

BY Munn & Co

ATTORNEYS.

UNITED STATES PATENT OFFICE.

WILLIAM H. H. CHILDS, OF BROOKLYN, NEW YORK.

MACHINE FOR MAKING SHEATHING-PAPER.

SPECIFICATION forming part of Letters Patent No. 361,050, dated April 12, 1887.

Application filed December 20, 1886. Serial No. 222,032. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. H. CHILDS, of Brooklyn, in the county of Kings and State of New York, have invented a new and useful Improvement in Machines for Making Sheathing-Paper, of which the following is a full, clear, and exact description.

My invention relates to a new and improved machine for making sheathing or other coated paper in which the edges are to be kept free from the composition applied. Hitherto this has been effected by applying the melted pitch, asphalt, or other substance to the paper by means of a roll narrower than the paper itself. This involved, where two-ply paper was to be prepared, the use of an extra roller for applying the composition, the two plies then being united by passing through regular rollers of full width. Again, by this process and mechanism a limited amount only of pitch could be applied, as it was all derived from the surface of a roller. No approach to immersion of the fabric was possible.

By my improved machine these features are avoided. As regards the inner surfaces, the sheets of paper are immersed in a body of the coating material. Such material is confined to the center or any desired section of the sheets. Adjustments may be provided for by which the width of this coated portion may be changed.

The apparatus can be adjusted to paper of different thickness and to irregularities in the sheets without stopping the machine. This latter feature is one of the elements of my invention.

Having now declared some of the advantages in my apparatus, I will proceed to describe its construction more particularly.

Figure 1 is a perspective view of my improved machine. Fig. 2 is a view of one section of a retaining-piece.

R R are two rollers of the usual description, mounted on a frame, A, one or both of which may be mounted in adjustable bearings, as shown, whereby these rollers can be adjusted as regards their distance from each other by screws *a*, or equivalent devices. Paper is fed to and between the rolls from two rolls, B B, or other source of supply. The two sheets pass over the upper surface of the rollers R R and down between them. The space between the rollers is adjusted so as to suit the thickness of the sheets, and yet so as not to be too tight to admit of a proper supply of the pitch or other material being preserved on and fed through with the paper.

Two retaining-pieces, C C, are provided, of such shape as to fit closely against the surface of the paper where it is in contact with the upper and inner surface of the rolls at *x x*. To adapt the pieces C to the distance of the rolls from each other, they are formed of two similar overlapping parts, C′, and adjustment of these parts C′ to meet these changes is provided for by bolts *y* and slots *y′*. By these the lateral adjustment is effected. To meet variations in the thickness of the paper, screws *c c*, working in slotted lugs *d d* on the parts C′ and entering threaded apertures *e e* in the frame, are provided. The pieces C can be raised or lowered equally at each end, or either end may be adjusted independently of the other. Thus, if thicker paper comes from one side than from the other, a special adjustment of one end of the pieces C can be made. The width of the uncoated margin or of the space to be coated is regulated by the bolts G G uniting the pieces C C. The object is to have these pieces fit against the paper as tightly as compatible with the general operation of the machine.

The operation is as follows: The rollers R R are revolved, drawing the two pieces of paper down between them. The space included between the rollers and the two pieces C C forms a trough or receptacle substantially tight. Into it is poured melted asphalt, coal-tar, pitch, or any other cementing preservative or disinfecting compound from a pipe and faucet, D, or by other means. The paper is fed down between the rollers, carrying with it, adhering to its two surfaces, any desired amount of the material, according to the lateral adjustment of the rollers. Owing to the close fit between the side pieces and paper, no lateral spreading of the composition takes place. Even if there were a tendency to such spreading, the continual new supply of paper would effectually prevent it. Furthermore, by adjusting the space between the rollers more or less of the composition will be carried down, adhering to or absorbed by the paper. The margins in any case are kept clean and perfectly free from any composition. This feature makes the product suitable for transportation and conven-

ient handling, as the pitch or tar does not escape from the inner surfaces on account of this margin.

I have now described the machine and its operation where the two pieces C C are employed to produce two clean margins; but I may dispense with one of these pieces and, operating the machine substantially as just described, obtain a paper with one margin or portion only protected. Then a regular exterior side piece has to be employed—such as is shown in dotted lines at E. The piece C may then be set at any point, so that only one-half or less of the paper may be coated or cemented.

I am aware that two-ply paper possessing this feature of uncoated margins has already been made. I am also aware that by the use of a narrow roll the surface of a sheet of paper has had the central portions of its area coated with asphalt or similar substance.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a machine for coating paper, two rollers with one or more pieces closely fitting on their upper and inner surfaces, forming with such surfaces a trough or hopper arranged at intermediate portions between their ends, substantially as shown and described.

2. The pieces C C, adjustable laterally by the bolts *y y* and slots, substantially as shown and described.

3. The pieces C C, adjustable vertically by the screws *c c*, substantially as shown and described.

4. The process of coating a restricted area of one or more sheets of paper, which consists in sustaining a supply of asphalt or other material in fusion upon the restricted area in question of the paper where it passes over the rolls, substantially as shown and described.

5. The combination, with two rolls, of adjustable retaining-pieces held between the rolls to bear upon the surfaces of the paper passing over and between the rolls, substantially as set forth.

6. The combination, with the rolls R R, of the pieces C C, having lugs *d*, and the bolts *c*, substantially as shown and described.

7. The combination, with the rolls R R, of the adjustable pieces C, fitting between the rolls, the bolts *c*, engaging the said pieces, and the bolts G, substantially as shown and described.

8. The combination of side pieces, C, formed of the two overlapping parts C′, having slots *y′*, and the bolts *y*, substantially as shown and described.

WILLIAM H. H. CHILDS.

Witnesses:
LINDLEY F. SEAMAN,
C. E. LOCKWOOD.