

July 2, 1929.

J. SCHUMACHER

1,719,199

APPARATUS FOR PRINTING WALL BOARD

Original Filed Oct. 12, 1925 2 Sheets-Sheet 1

Fig. 1

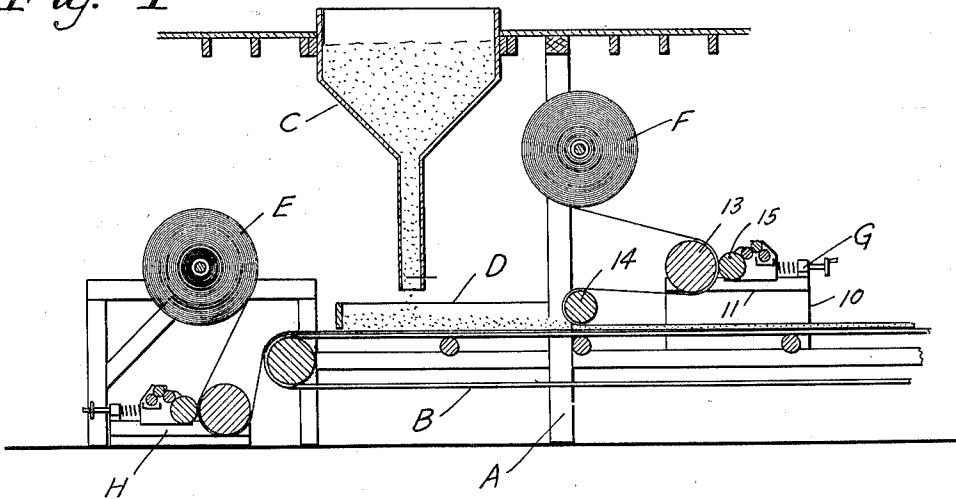


Fig. 2

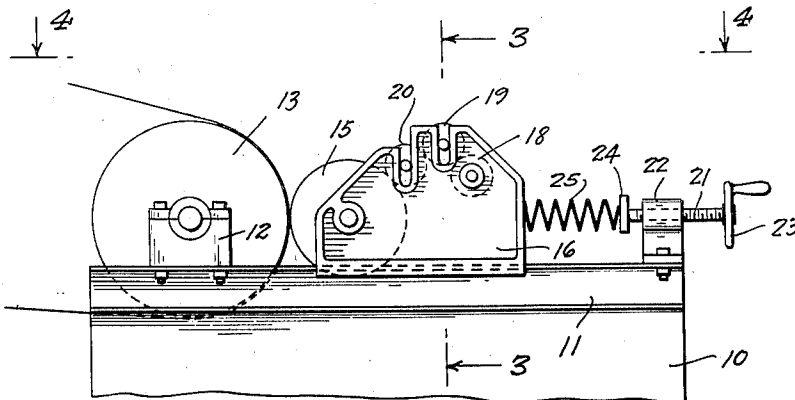
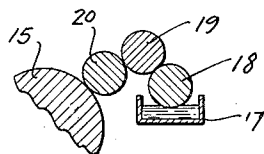


Fig. 2-a



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Fig. 3

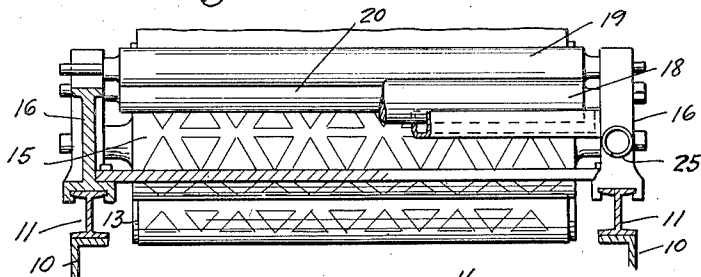


Fig. 4

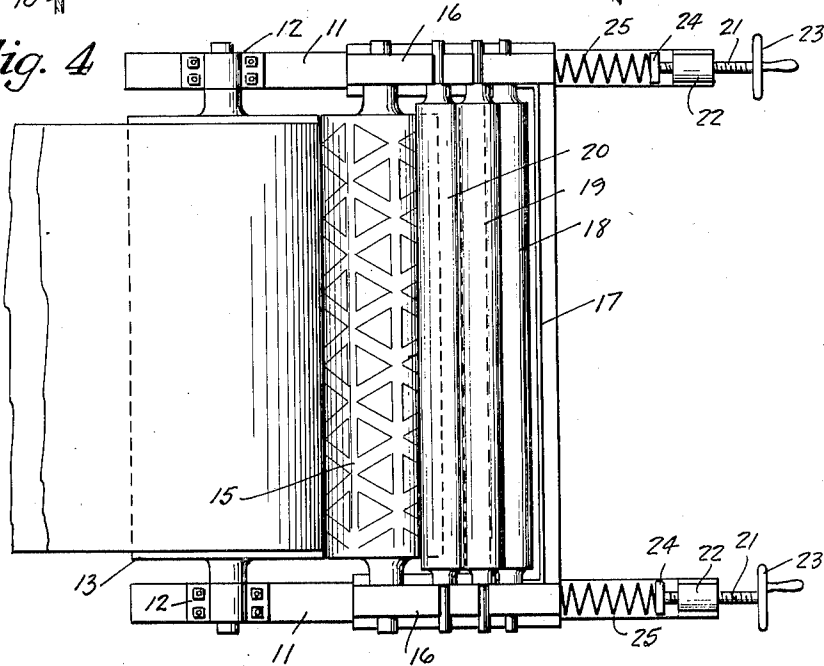
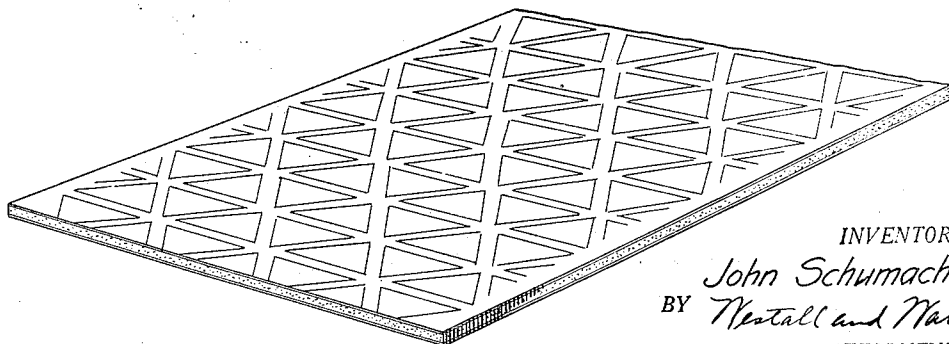


Fig. 5



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APPARATUS FOR PRINTING WALL BOARD.

Application filed October 12, 1925, Serial No. 61,980. Renewed May 1, 1929.

This invention relates to means for imprinting the surface of plaster board with display matter during the formation of the board. It is often found desirable to mark and ornament the cover sheets of plaster board. Using the continuous process of manufacture, wherein cover sheets are continuously advanced and a plastic composition interposed therebetween, it is found convenient and economical to imprint the sheets with the display matter during the advance of the sheets. Uniformity of marking or imprinting is thus obtained and no additional handling of the board is required. A minimum of handling operations is a desideratum in the manufacture of plaster board. The present invention has for its primary purpose the provision of an instrumentality to accomplish the above mentioned objects.

These objects together with other objects and corresponding accomplishments are obtained by means of the embodiment of my invention illustrated in the accompanying drawing, in which:

Fig. 1 is a side elevation of the head end of a plaster forming machine; Fig. 2 is an elevation on an enlarged scale of a portion of the machine showing the marking cylinder; Fig. 2^a is a vertical section showing a fragment of the marking mechanism; Fig. 3 is a section as seen on the line 3—3 of Fig. 2; Fig. 4 is a plan view as seen looking in the direction of the arrows 4—4 of Fig. 2; and Fig. 5 is a perspective view showing a panel of plaster board in its final marked condition.

Referring more particularly to the drawing, a plaster board forming machine of substantially the same broad character as is now well known in the art is disclosed. This machine comprises a long frame A, upon which is mounted an endless conveyor belt B, the upper lead of which forms the bed upon which the board is formed. A hopper C provided with a suitable chute is designed to supply plaster to the lower cover sheet of the plaster board being formed. The plaster is directed into a bottomless box D and under which travels the lower cover sheet supplied from a roll E suitably journaled in a sub-frame. The upper cover sheet is supplied from a roll F; the proper thickness of board is formed by pressure rollers. This is the mechanism now in use for making the ordinary plaster board.

In the structure disclosed herein, the cover

sheets are marked as they pass from the supply rolls to the board forming mechanism. The marking mechanisms are indicated by G and H, and as they are substantially the same construction, only one will be described.

A marking frame 10 of any suitable structure has side rails 11. Mounted upon opposite rails are bearings 12 in which a platen roller 13 is journaled. The web of paper to provide the upper cover sheet passes from the supply roll F over the platen roller 13 and about the pressure roller 14. In its travel, a suitably inked printing roller 15 having the designs to be marked upon the paper engraved thereon rolls against the surface of the latter. The roller 15 is journaled in the side plates 16 slidably mounted upon rails 11. Extending between the plates is an ink trough 17, from which ink is delivered by a roller 18 journaled in the side plates 16. Distributing rollers 19 and 20 transfer the ink from roller 18 to the printing roller 15. In order that there may be an adjustment of the contact of the printing roller against the paper, side plates 16 are slidably mounted upon rails 11 and are held in position by adjustment members comprising threaded stems 21 mounted in bearing nuts 22 secured to the rails. At the ends of the stems 21 are hand wheels 23 for turning the stems. On the end of each stem 21 is a head 24 supporting a compression spring 25 which forms a resilient connection between the stem and the side plate. By properly adjusting the side plates through turning the hand wheels, the pressure of the printing roller may be adjusted. The lower sheet of paper is marked by similar mechanism indicated by H.

Although I have shown herein a mechanism for marking both the upper and lower cover sheets, yet either one sheet or the other may be marked and the mechanism be within the scope of my invention. The display matter marked upon the sheets, may be varied. It may be for purposes of ornamentation or for any other purposes such as imprinting trade-mark and names or instructions.

What I claim is:

1. In a wall board machine having board forming mechanism, the combination of a cover sheet supply roll, a platen and guide roller about which the web of said sheet is passed in its advance to the board forming mechanism, a printing roller opposed to said platen roller for marking the cover sheet

with display matter during its travel and means to continuously pull upon said web so as to unwrap and withdraw the sheet from said roll and advance the latter.

- 5 2. A device of the class described comprising the combination of a cover sheet supply roll, a platen and guide roller about which the web of said sheet is passed in its travel, an adjustable printing roller opposed to said platen roller for marking the cover sheet with display matter, and means to continuously pull upon said web so as to withdraw the sheet from said roll and advance the latter.

- 15 3. In a wall board machine having board forming mechanism, the combination of a

cover sheet supply roll, a platen and guide roller about which one of said sheets is passed, a printing roller opposed to said platen roller for marking a sheet with display matter during its travel, said printing roller being adjustable, distributing rollers for supplying ink to said printing roller, and means to continuously pull upon said web so as to unwrap and withdraw the sheet from said roll and advance the latter, said means being included in said board forming mechanism. 20 25

In witness that I claim the foregoing I have hereunto subscribed my name this 28th day of September, 1925.

JOHN SCHUMACHER.