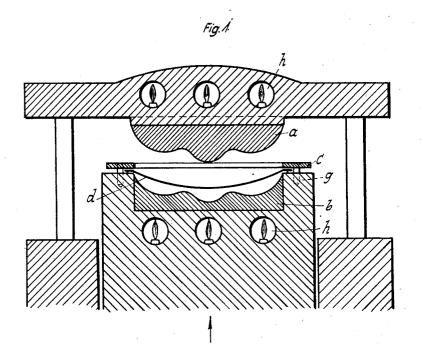
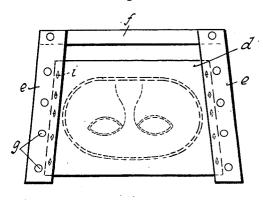
June 17, 1930. J. KUPPER 1,764,215 METHOD OF MANUFACTURING FACE MASKS, PSEUDO REPRODUCTIONS OF ARTICLES AND THE LIKE, AND A DEVICE FOR CARRYING THIS METHOD INTO PRACTICE Filed Nov. 22, 1927







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J. Küpper INVENTOR By, Marlo & Clarke Hys

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## UNITED STATES PATENT OFFICE

## JOSEF KÜPPER, OF COLOGNE, GERMANY

## METHOD OF MANUFACTURING FACE MASKS, PSEUDO-REPRODUCTIONS OF ARTICLES AND THE LIKE, AND A DEVICE FOR CARRYING THIS METHOD INTO PRACTICE

Application filed November 22, 1927, Serial No. 235,065, and in Germany December 21, 1926.

a method of manufacturing face-masks, pseudo-reproductions of articles, and the like, and in the second case to a device for 5 practicing this method. My invention is to manufacture the respective articles in a less circumstantial manner than has been done hitherto, also in a shorter time, and to obtain better products, especially such free of

10 folds. According to this method the articles are made of the ready-glued flat material in one pressing procedure. The material from which the mask etc. is to be made is placed

- 15 in dry state over a matrix, the material having been attached prior thereto to a frame and fastened to the same only on two sides or rims, preferably the short sides of the frame, whereas at the long sides or rims of
- 20 the frame the material is permitted to hang through in sagged state. If the matrix must be deeper at one of the long sides owing to the shape of the article to be produced, the frame parts on the short sides

25 are not parallel, but converge from the more shallow portion of the matrix to the less shallow portion of the same, in consequence whereof the material hangs through or sags more on this latter side than on the opposite

30 side, where the matrix is more shallow. These provisions constitute practically a preliminary shaping of the mask or other article or pseudo-reproduction of such a one and the sagged material is stretched and

35 subjected to tension only when the patrix is lowered down upon it so as to press the material into the matrix and shape it there-in. The matrix and the patrix are em-ployed in heated state, but I lay no claim 40

upon this stage of the procedure, as it is known.

The method is carried into practice by means of the device illustrated on the draw-

ing diagrammatically and by way of ex-47 ample. Figure 1 is a vertical section through the device, and Figure 2 a plan of the frame to which the material to be pressed and shaped is attached. In Fig. 1, a denotes the patrix and b the matrix. Both can be

50 heated by gas-burners h or the like. The

This invention relates in the first case to material or fabric or foil d to be pressed and shaped which is ready-glued is attached in moist state to the frame c (Fig. 1) which consists of two converging members e e (Fig. 2) connected at their nearer end by a mem- 55 ber f. The material d is attached to the bottom surface of the frame members e eby pins  $i i i \dots$ , and the frame e f e (Fig. 2), or c (Fig. 1) respectively, is held upon the matrix-holder in proper position by guide pins g extending downwardly from 60 the frame and engaging suitably located bores in the matrix-holder.

> I wish it to be understood that there may be departures of the details of the device 65 without including a departure from the method.

I claim:

1. The method of stamping sheet material consisting in increasing the degree of sag 70 of the material in the vicinity of the portions of the die, having the greatest surface irregularities.

2. The method of stamping sheet material consisting in increasing the degree of sag 75 of the material in the vicinity of the portions of the die having the greatest surface irregularities and clamping the edges of the material.

3. A device for stamping sheet material so comprising a matrix and patrix, a frame for said material having sides converging in the direction of the portion of the matrix having the greatest surface irregularities, and means on said sides for holding said ma- 85 terial.

In testimony whereof I affix my signature. JOSEF KÜPPER.

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