April 5, 1932. M. ADAMCIKAS ET AL 1,852,949

PATTERN

Filed July 21, 1931 2 Sheets-Sheet 1

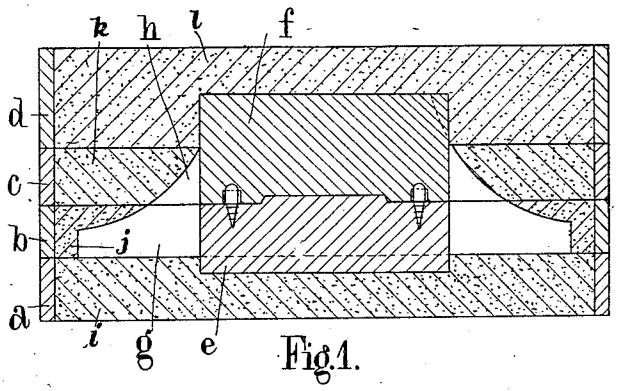

Fig.1.

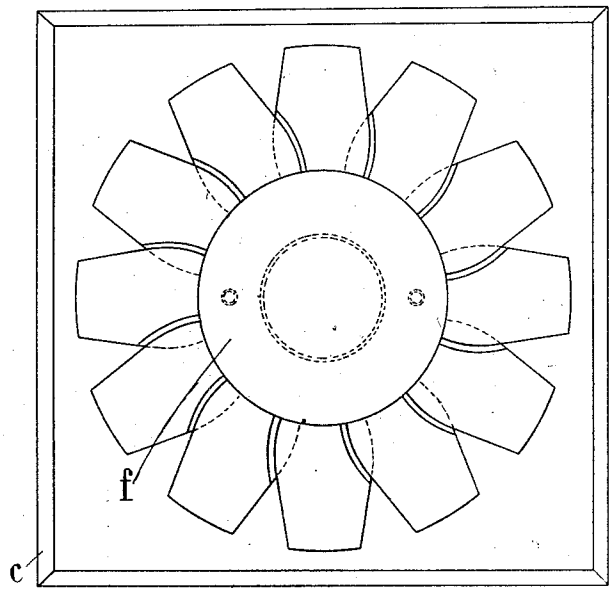

Fig.2.

M. Adamcikas
G. Massera
INVENTORS

By: Marks & Clerk
Attys.

April 5, 1932. M. ADAMCIKAS ET AL 1,852,949

PATTERN

Filed July 21, 1931 2 Sheets-Sheet 2

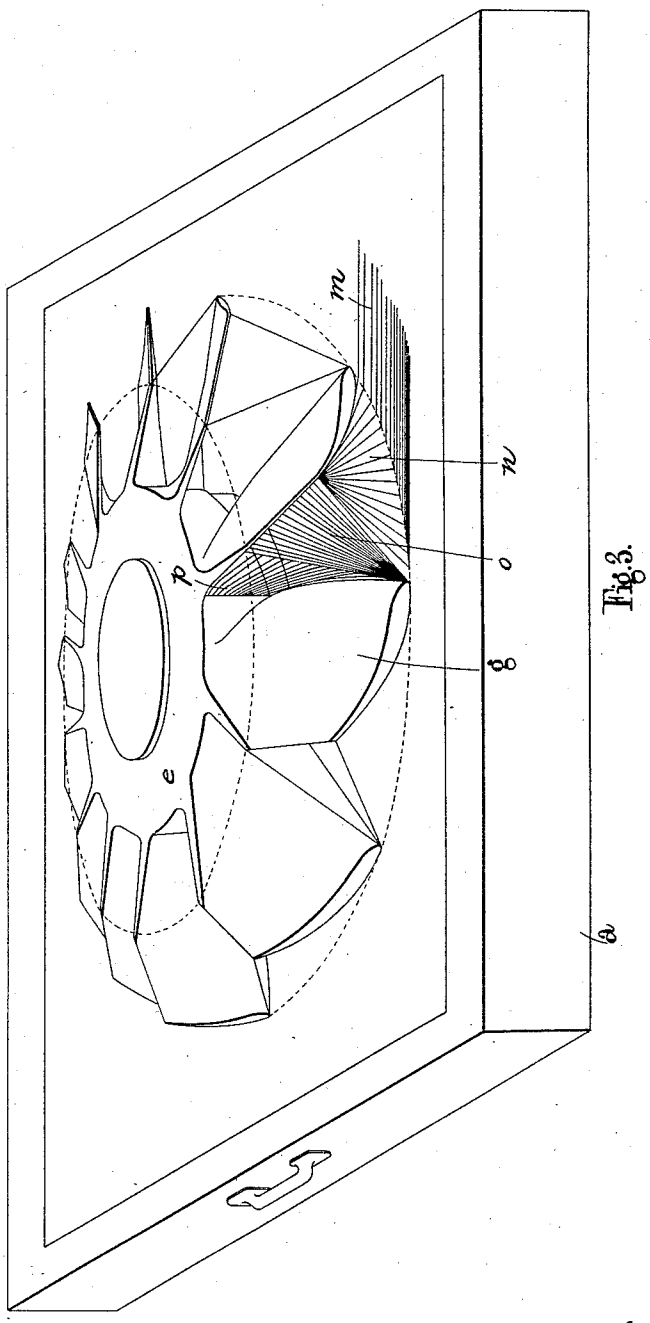

Fig. 3.

M. Adamcikas
G. Massera
INVENTORS

By: Marks & Clerk Attys.

Patented Apr. 5, 1932

1,852,949

UNITED STATES PATENT OFFICE

MYKAS ADAMCIKAS AND GIUSEPPE MASSERA, OF ALDWYCH, LONDON, ENGLAND

PATTERN

Application filed July 21, 1931, Serial No. 552,222, and in Great Britain March 8, 1930.

This invention relates to the moulding of a fan rotor having overlapping blades and more particularly to a fan in which the width and geometrical pitch of the pressure side of the blades gradually increase towards the hub in such a way that the width and geometrical pitch are at their maximum for the cross-section of the blade lying on the hub itself.

The moulding of a fan rotor having such blades causes great difficulties when the blades overlap one another at the hub because of the twist of the blades and because of the sand which comes to lie between the overlapping parts, and the object of the present invention is to provide a moulding method which will overcome this difficulty.

According to the present invention use is made instead of two moulds, of four or more moulds divided into planes at right angles to the axis of the rotor, four moulds being preferably used in the case of a blade overlapping at the hub up to 50% and six or eight moulds when the overlapping is greater than 50%.

When four moulds are used the pattern is split into two parts at right angles to its axis, one single casting being obtained from the four moulds.

In the case of six or eight moulds, the pattern is split into three or four parts at right angles to its axis, one single casting being obtained.

Referring to the accompanying drawings, which illustrate the invention by way of example,

Fig. 1 shows in sectional elevation the application of the invention to the case when four moulds are used,

Fig. 2 showing a plan view of the moulding means illustrated in Fig. 1 with the upper mould removed, while

Fig. 3 is an isometric view of the bottom mould with the lower part of the pattern in position.

a, *b*, *c* and *d* are the four moulds which are superposed on one another. The pattern is split into two parts *e* and *f* at right angles to its axis, *g* and *h* being the portions of the blades forming part of the respective patterns. *i*, *j*, *k* and *l*, represent the sand which lies within each mould.

Referring to Fig. 3, *m* shows the level of the sand in the mould *a*, while *n*, *o* and *p* show the contours of the bodies of sand rammed in underneath the lower pattern of the blades *g* and between the same.

In order to remove the pattern from the mould in the first operation the section *d* is lifted upwardly and afterwards the section *c* is removed in an upward direction. When this has been done the upper part *f* of the pattern is lifted upwardly, the lower half *e* remaining in the sections *a* and *b* of the mould. The mould section *a* is then moved downwardly and leaves a clear passage permitting the removal of the lower section *e* of the pattern from the mould section *b*.

What we claim is:—

A pattern for moulding a rotor having overlapping blades, comprising a plurality of sections, said pattern being divided in planes at right angles to its axis to facilitate removal thereof from a mould.

In testimony whereof we have signed our names to this specification.

MYKAS ADAMCIKAS.
GIUSEPPE MASSERA.