

(No Model.)

W. WRIGHT & T. BINTLIFF.

MANUFACTURE OF SOAP POWDER AND APPARATUS THEREFOR.

No. 255,070.

Patented Mar. 14, 1882.

FIG:2.

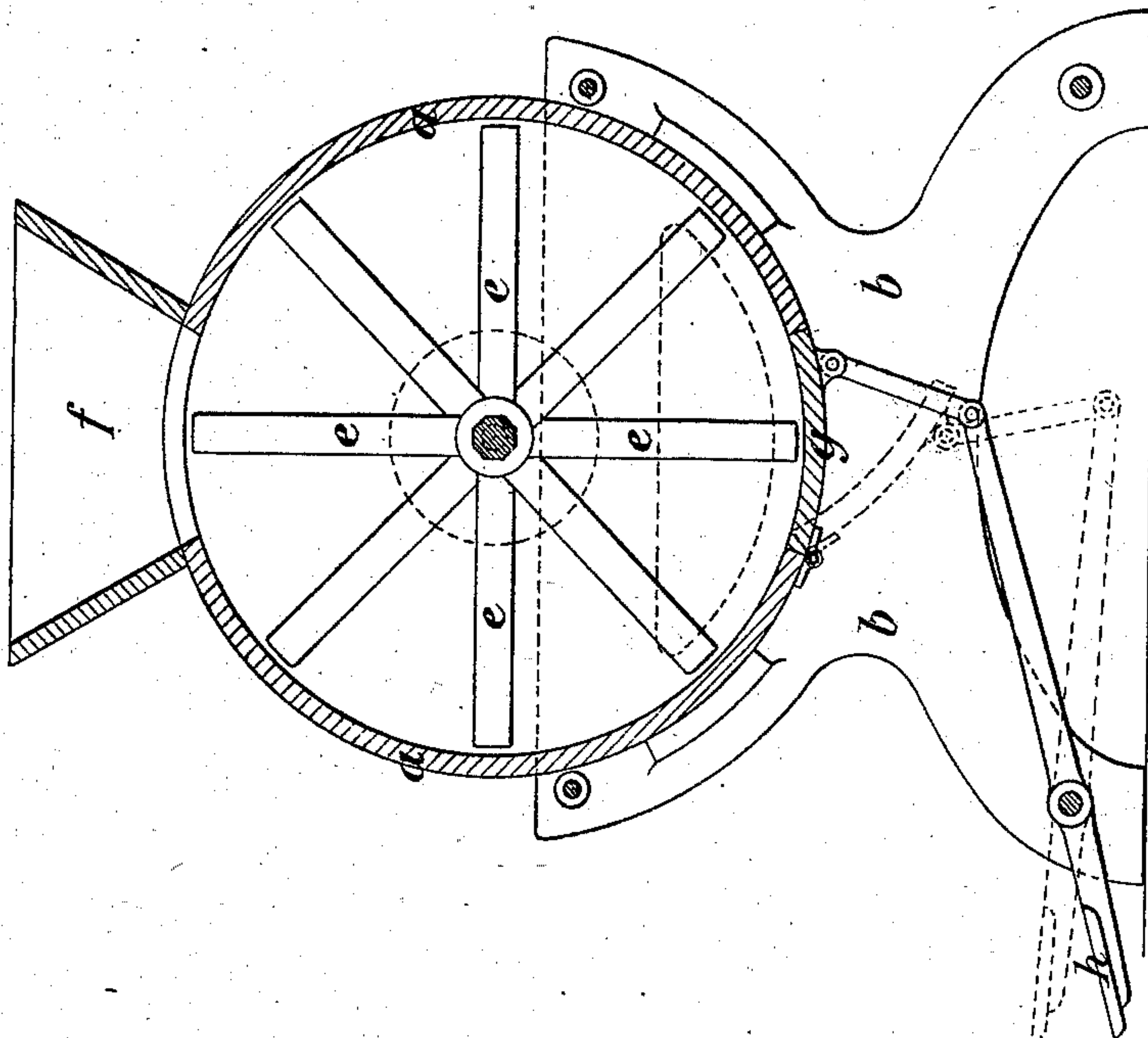
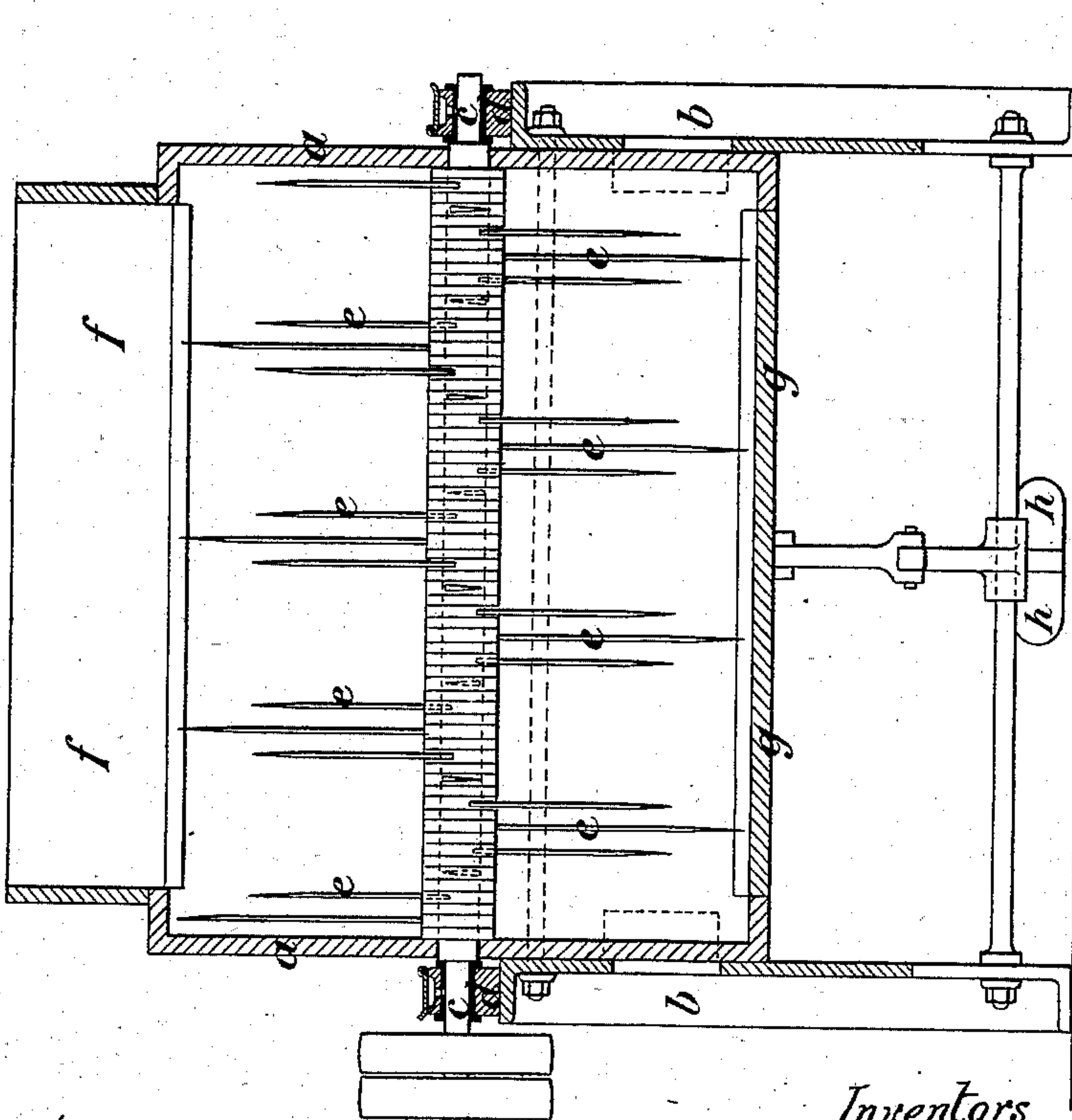


FIG:1.



Witnesses  
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William Wright and  
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by their attorneys  
Howson and son



# UNITED STATES PATENT OFFICE.

WILLIAM WRIGHT, OF DROYLSDEN, AND THOMAS BINTLIFF, OF MANCHESTER, COUNTY OF LANCASTER, ENGLAND; SAID BINTLIFF ASSIGNOR TO SAID WRIGHT.

## MANUFACTURE OF SOAP-POWDER AND APPARATUS THEREFOR.

SPECIFICATION forming part of Letters Patent No. 255,070, dated March 14, 1882.

Application filed October 20, 1881. (No model.) Patented in England September 17, 1878.

*To all whom it may concern:*

Be it known that we, WILLIAM WRIGHT and THOMAS BINTLIFF, residing respectively at Droylsden, in the county of Lancaster, and Manchester, in the same county, England, and subjects of the Queen of Great Britain and Ireland, have invented Improvements in the Manufacture of Soap-Powder and Apparatus therefor, (for which we obtained a patent in Great Britain, No. 3,600, dated September 17, 1878,) of which the following is a specification.

This invention is designed for the purpose of cutting and mixing or compounding hard soap with alkalies or other materials for the purpose of making soap-powder.

In the process of making soap-powder as usually practiced the soap requires to be boiled and the alkali or other materials mixed with it when in a fluid or semi-fluid state. It is well stirred and boiled together for some time. It is then allowed to cool and dry, and is afterward broken up into powder. This process occupies several days.

By the use of our improved apparatus no boiling is necessary. There is hence no loss by evaporation. No chemical change takes place in the ingredients, as they are mixed or compounded mechanically, and are not chemically combined, and a great saving in time is effected.

Figure 1 in the annexed drawings is a longitudinal section, and Fig. 2 a transverse section, of our improved machine for cutting and mixing or compounding soap and other ingredients or materials.

The apparatus consists chiefly of a barrel or cylinder, *a a*, mounted or fixed longitudinally or in other convenient position in a frame, *b b*. Through the center of this passes a shaft, *c c*, capable of revolving in suitable bearings, *d d*, and driven by means of an endless strap or otherwise, and making about one hundred revolutions per minute. On this shaft *c c* are mounted a series of knives, *e e*, projecting radially therefrom parallel with their lines of movement, and arranged spirally or otherwise thereon.

Above the barrel *a a* is an opening fitted with a hopper, *f f*, for introducing the soap,

alkali, or other materials to be cut and mixed, and beneath the barrel is a second opening for removing or discharging the contents. This discharge-opening is fitted with a door, *g g*, opening downward, and closed by means of a treadle, *h h*.

The shaft *c c*, with its knives *e e*, being in continuous motion, the attendant places his foot on the treadle *h h*, and thus closes the discharge-opening. He now fills in the soap and alkali or other material, and when the same has been sufficiently cut or disintegrated and well mixed or compounded together he removes his foot from the treadle *h h*, and the contents of the barrel *a a* are immediately discharged. He then replaces his foot on the treadle and proceeds as before.

The nature and proportions of the alkaline ingredients differ according to the purpose for which the mixture is to be employed, and, being well known to the manufacturers of such soaps, form no part of our invention, which consists in cutting, pulverizing, and mechanically compounding together the hard soap and alkali while in their ordinary dry state, thereby dispensing with the boiling-down, drying, and grinding processes hitherto employed in this manufacture.

A soap-powder may be made by the addition to every pound of common hard soap in the bar or lump of about eight pounds of soda-ash or common soda; but the ingredients and proportions may be varied as found desirable.

We claim as our invention—

1. As an improvement in the art of making powdered soap, the mode herein described of cutting, pulverizing, and mechanically compounding together the hard soap and alkali in their ordinary dry state, substantially as set forth.

2. The herein-described soap cutting and mixing apparatus, consisting of a cylinder with a feed-hopper on the top, and a discharge-opening below closed by a removable door, and a rotary shaft carrying cutting-knives parallel with their lines of movement, all substantially as set forth.

3. The combination of the rotary knife-shaft  
and a cylinder having a hopper and a dis-  
charge-opening with a door for closing said  
discharge-opening and a treadle under the con-  
5 trol of the operator for opening and closing the  
door, as described.

In testimony whereof we have signed our

names to this specification in the presence of  
two subscribing witnesses.

WILLIAM WRIGHT.  
THOMAS BINTLIFF.

Witnesses:

CHARLES DAVIES,  
JNO. S. HUGHES.