

UNITED STATES PATENT OFFICE.

HENRY S. CROOKE, OF NEW YORK, N. Y.

ROLLED-FOIL WRAPPER.

SPECIFICATION forming part of Letters Patent No. 229,676, dated July 6, 1880.

Application filed October 29, 1877.

To all whom it may concern:

Be it known that I, HENRY SUYDAM CROOKE, of New York, in the county of New York and State of New York, have made an invention of a new article of manufacture of dead-surfaced or whitened rolled-foil wrappers, and of the process for manufacturing the same; and I do hereby declare that the following is a full, clear, and exact description and specification of the same.

Wrappers of metallic foil are used for inclosing many articles which it is desirable should be protected in whole or in part from atmospheric influences. Rolled metallic tin-foil (either of pure tin or of tin combined with lead) is the article generally used for such wrappers, on account of its flexibility; but such wrappers as hitherto produced have had the bright or burnished metallic surfaces which rolled tin-foil possesses when it leaves the rolls employed to manufacture it. Such a bright surface is objectionable, because it does not take printer's ink with facility, and because it reflects too much light to the eye and does not afford a good contrast to the printing.

The manufacture which is the subject-matter of this patent is free from the above objections; and it consists of a wrapper or sheet of rolled tin-foil (either pure or alloyed) having a dead or whitened surface at one or at both faces. These new wrappers are distinguished from wrappers of paper or cloth by being impervious. They are distinguished, also, from articles made of hammered tin-foil by their property of a soft and velvety feeling to the touch. They also do not rattle when shaken, as hammered tin-foil does. They are distinguished from previous articles of rough-surfaced sheet metal by their flexibility, which corresponds substantially with that of paper, and enables them to be used in place of paper wrappers for wrapping up various articles, such as soap, tobacco, and ground spices. These new wrappers also are distinguished from the rolled-foil wrappers hitherto produced by their dead or whitened surface at one or both sides, in contrast with the glistening or burnished metallic surfaces hitherto possessed by rolled foil wrappers.

The mode in which I have produced my new

manufacture with success is by pressing tin-foil in contact with paper or other material having a dead surface, whereby the peculiar dead surface of the paper or other material is imparted in whole or in part to the tin-foil. The wrappers may be cut to size before being subjected to the deadening or whitening process, or may be so cut afterward as deemed expedient, and after the dead or whitened surface is imparted to them they are printed with such figures or letters, or both, as may be required for the purpose for which they are to be used, such printing being effected in the usual manner heretofore practiced for printing tin-foil wrappers, which it is not necessary to describe in detail.

The mode of producing the dead or whitened surface and the means used for the purpose may be varied, as found expedient. Thus the tin-foil is produced by rolling it out of a cast ingot in the usual manner, which, being well known, need not be described in detail. The rolled foil may then be cut into wrappers of the required size, and the deadening or whitening of the surface may be effected by applying sheets of paper to one or both sides of the tin-foil and by passing the whole between calender-rolls, whereby the required pressure is applied. I prefer, however, to subject the rolled tin-foil to the deadening or whitening process while in the long sheet or roll in which it generally exists when finished by the rolling-mill, and to cut the dead or whitened surfaced foil into wrappers subsequently. In such case the dead or white surfacing may be effected by passing the sheet of rolled tin-foil between calender-rollers with a sheet of paper at either one or both of its sides, according to whether the wrappers are to be dead or white surfaced at one or at both faces.

The paper as it passes from the rolls may be rolled upon a roller provided for the purpose. I prefer, however, to impart the dead or whitened surface to the sheet of foil by passing it between a pair of calender-rolls, the surface of one or both of which is frosted mechanically.

The sheet of dead or white surfaced tin-foil passing from the rolls is, by preference, printed in the sheet, and is cut afterward into wrappers of the required size.

The means used for printing and cutting up the dead or white surfaced tin-foil may be the same as those used for printing and cutting up burnished tin-foil.

5 If the paper or other means employed to impart the dead or whitened surface be sufficiently unyielding the tin-foil need not be reduced to its ultimate thinness before its surface is deadened or whitened, but the last reduction in thickness and the dead or white
10 surfacing may be effected simultaneously.

In case the foil is to be dead or white surfaced at both sides this result may, if deemed expedient, be produced by passing the long
15 sheet of foil and one corresponding sheet of paper between a pair of rolls one of which is smooth-surfaced and the other of which has a frosted surface, the paper being between the foil and the smooth-surfaced roll.

20 When the dead or white surfaced rolled-foil wrappers are produced in sheets, as above described, they may be sold to the users in that condition, and may be cut by them to the sizes required for the purposes to which they are to
25 be applied.

I am aware that sheet-metal articles, such as are made of Britannia metal and silver, have had a matted, engraved, or roughened surface imparted to them in various ways; also, that
30 sheet metals, such as tin plates, have been

roughened or abraded and then painted or printed upon. In both these cases, however, the thickness and rigidity of the sheet metal was such as to prevent its use as a wrapper. I therefore do not claim, broadly, an article or
35 manufacture of sheet metal either rough-surfaced alone or both rough-surfaced and printed; but

I claim as my invention—

1. As a new article of manufacture, the
40 wrappers of rolled tin-foil having a dead or whitened surface, substantially as herein described.

2. As a new article of manufacture, the
45 wrappers of rolled tin-foil having a dead or whitened surface and printed, substantially as herein described.

3. The improvement in the art of making metallic-foil wrappers consisting of the following operations, viz: the rolling of the tin-foil out
50 of the ingot, the dead-surfacing or whitening of the rolled foil, and the subsequent printing of the dead surface, substantially as before set forth.

Witness my hand this 26th day of October, 55
A. D. 1877.

HENRY SUYDAM CROOKE.

Witnesses:

W. L. BENNEM,
W. H. ISAACS.