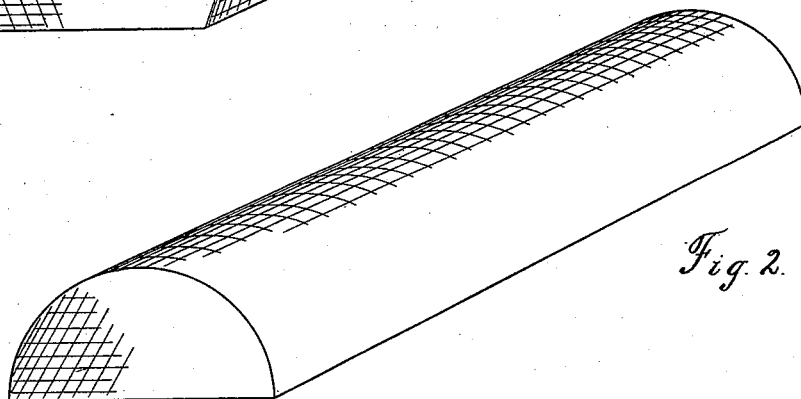
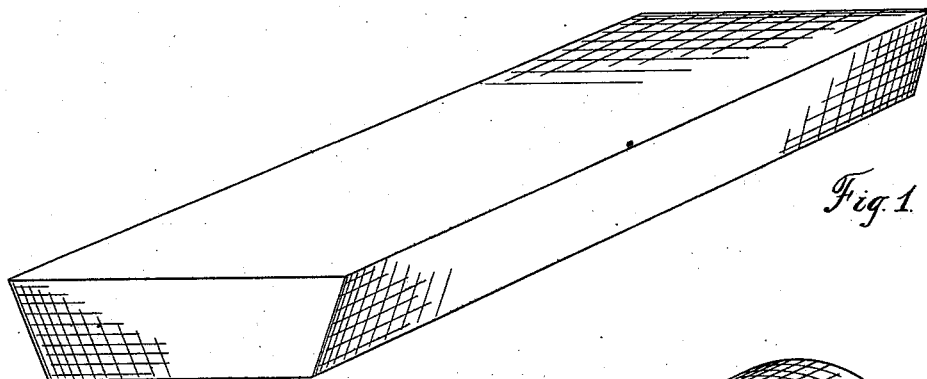


(No Model.)

J. D. LE BEL.  
COMPOSITION FOR FIRE KINDLERS.

No. 522,666.

Patented July 10, 1894.



Witnesses  
*Jas. Edmunds*  
*S. Mc Bain*

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Attorney.

# UNITED STATES PATENT OFFICE.

JOHN D. LE BEL, OF LONDON, CANADA.

## COMPOSITION FOR FIRE-KINDLERS.

SPECIFICATION forming part of Letters Patent No. 522,666, dated July 10, 1894.

Application filed April 16, 1894. Serial No. 507,809. (No specimens.)

### *To all whom it may concern:*

Be it known that I, JOHN D. LE BEL, a subject of the Queen of Great Britain, and a resident of the city of London, in the Province of Ontario, Canada, have invented a new and useful Composition of Matter to be Used for Kindling or Lighting Fires, of which the following is a specification.

In the accompanying drawings, Figures 1, and 2, are perspective views of briquets, showing the preferable shape into which this fire kindler or lighter composition is molded.

My composition consists of the following ingredients combined in the proportions stated, viz: To make one ton of this composition for kindling or lighting fires, I take rosin eight hundred pounds; fuel oil twenty pints; common salt twenty pounds; starch refuse forty pounds; powdered brimstone twenty pounds; water forty pints; saw dust eight hundred pounds; coal dust three hundred and twenty pounds.

The rosin is melted in a crucible, and poured into a vat containing the fuel oil, salt, starch refuse and powdered brimstone. Heat is then applied to this vat until the whole mass commences to boil, at this stage the water is added. The saw dust and coal dust mixed together are then added. The water and fuel oil primarily thin the composition, so that it will readily and quickly impregnate the coal dust and saw dust, and permit the whole to be readily, thoroughly and intimately incorporated together, and pour freely into molds. The starch refuse is for the purpose of absorbing any excess of oil or rosin, prevents the briquets from having an oily or gummy feel and from sticking together, and toughens and hardens the same. The use of the salt, water and starch refuse renders the composition perfectly safe, and avoids and completely prevents it from igniting spontaneously or accidentally while in storage or during transportation. On the other hand when the composition is ignited the intense heat of combustion decomposes the ingredients of

which this composition is formed, particularly those ingredients which prevent this composition from spontaneously or accidentally igniting, releases the chlorine and permits the oxygen to form a more perfect combustion of the kindler. The use of the fuel oil, powdered brimstone, rosin and saw dust, provides a composition which when ignited, gives a quick fierce flame, and burns with intense heat. The use of the coal dust in connection therewith, gives said composition lasting characteristics.

The advantages of this composition compounded as described, are, that it is easily and quickly manufactured, it is perfectly safe from accidental or spontaneous combustion during transportation or in storage, at the same time provides a briquet of easily lighted material, which burns with a quick fierce flame and with intense heat, so that it will readily and quickly kindle or light the fuel, with which it is brought in contact, and a small piece only is required to kindle or light a fire, consequently, a fire is kindled at a very small expense, at least one-half of what it would cost to light a fire with wood kindling.

I am aware that a composition consisting of rosin or pitch, fine coal, saw dust and coal oil has been used for a similar purpose, but I am not aware that all of the ingredients of my composition in the proportions stated have been used together.

What I claim, and desire to secure by Letters Patent of the United States, is—

The herein described composition of matter to be used for kindling or lighting fires, consisting of rosin, fuel oil, common salt, starch refuse, powdered brimstone, water, coal dust and saw dust in the proportions specified.

In testimony whereof I have signed in the presence of the two undersigned witnesses.

JOHN D. LE BEL.

Witnesses:

P. J. EDMUNDS,  
S. MCBAIN.