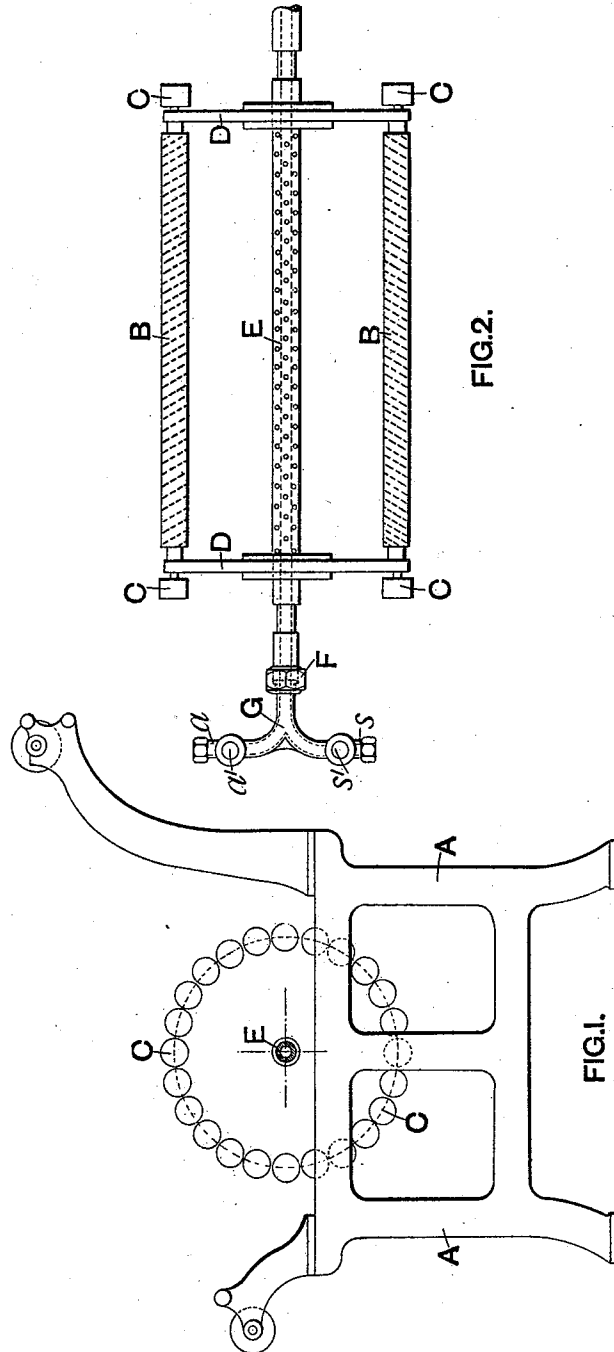


(No Model.)

W. HOLLAND.  
NAP RAISING MACHINE.

No. 544,536.

Patented Aug. 13, 1895.



WITNESSES

*Giles P. Moore*  
*Edgar T. Brandenburg*

INVENTOR

*William Holland*  
*By Geo. Whitney,*  
*Atty.*

# UNITED STATES PATENT OFFICE.

WILLIAM HOLLAND, OF MANCHESTER, ENGLAND.

## NAP-RAISING MACHINE.

SPECIFICATION forming part of Letters Patent No. 544,536, dated August 13, 1895.

Application filed April 10, 1895. Serial No. 545,124. (No model.) Patented in England November 14, 1894, No. 21,960.

*To all whom it may concern:*

Be it known that I, WILLIAM HOLLAND, a citizen of the United Kingdom of Great Britain and Ireland, residing at Manchester, in the county of Lancaster, England, have invented certain new and useful Improvements in Nap-Raising Machines, (patented in Great Britain November 14, 1894, No. 21,960,) of which the following is a specification.

In nap-raising machines and other machines of a similar type there is usually after some little use an accumulation of fly or fluff, which is highly combustible and frequently becomes ignited by accident; and it is the object of my invention to provide means for promptly extinguishing any fire which may be originated in or communicated to the machine. In most instances the use of my invention is limited to extinguishing fires, as hereinafter described, by being put into action by the attendant; but it may be provided with known automatic devices for turning on the supply of the extinguishing fluid, if desired.

According to my invention, I substitute the central or main shaft of the machine by a hollow perforated shaft which is connected with a source of high-pressure steam or water supply, and may also be connected with a fan-blower or the like. In use, should a fire occur, the steam or water is turned on by the attendant, whereupon the machine and its surroundings are immediately suffused with steam or water spray from the perforations of the hollow shaft, and the fire is thereby immediately put out. If the hollow perforated shaft be also connected with a fan or blower, the current of air therefrom may be permitted to pass through the perforated shaft while the machine is in use and thus blow away the fly or fluff, as it is produced, to some extent.

The accompanying drawings illustrate how my invention may be carried into practical effect and show it as applied to an ordinary raising-machine.

Figure 1 is an end elevation, and Fig. 2 a partial side elevation.

A is the framing of the machine; B B, the

raising-rollers, and C C pulleys for driving the rollers, all of which are of the ordinary known construction, as are also the disks or carriers D, upon which the rollers have their bearings. These disks or carriers, instead of being mounted upon the ordinary solid shaft, are fixed upon the hollow shaft E, the surface of which is perforated, as indicated. This shaft may be closed at one end and be provided at the other end with a joint F, connecting it with the water-supply pipe G, and constructed to permit the shaft to rotate with respect to the pipe. This pipe is also provided with a tap or valve s' in a convenient position for turning the water on and off. If the air-supply also be desired, this may be connected in a similar manner with the opposite end of the shaft, or it may be connected at the same end with the water-supply, suitable valves a' being also in either case arranged upon the air-supply pipe a.

The perforated pipe may be connected to a steam-supply or to a source of any suitable fire-extinguishing fluid under suitable pressure instead of to a water-supply.

My invention may in a similar manner be applied to other machines of a similar type for similar purposes.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is—

In a nap raising machine, the combination with the frame, the raising rollers, and the carriers upon which said rollers are borne, of a hollow perforated rotatable shaft having said carriers mounted upon it and suitably journaled in the frame, a fluid supply pipe, and a swivel joint connecting said pipe with said shaft, substantially as described.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 28th day of January, 1895.

WILLIAM HOLLAND.

Witnesses:

WILLIAM E. KEYS,  
ARTHUR W. PULMAN.