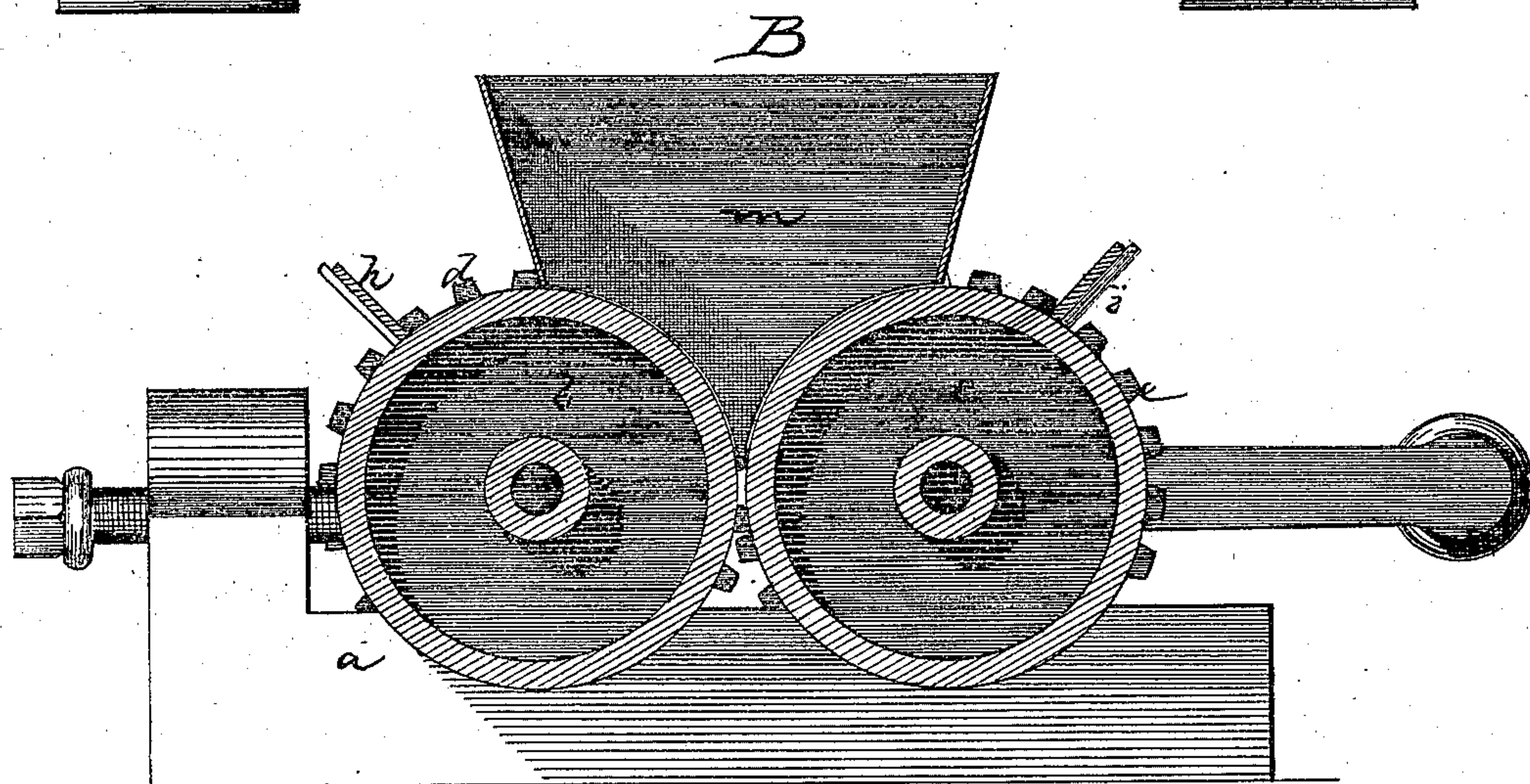
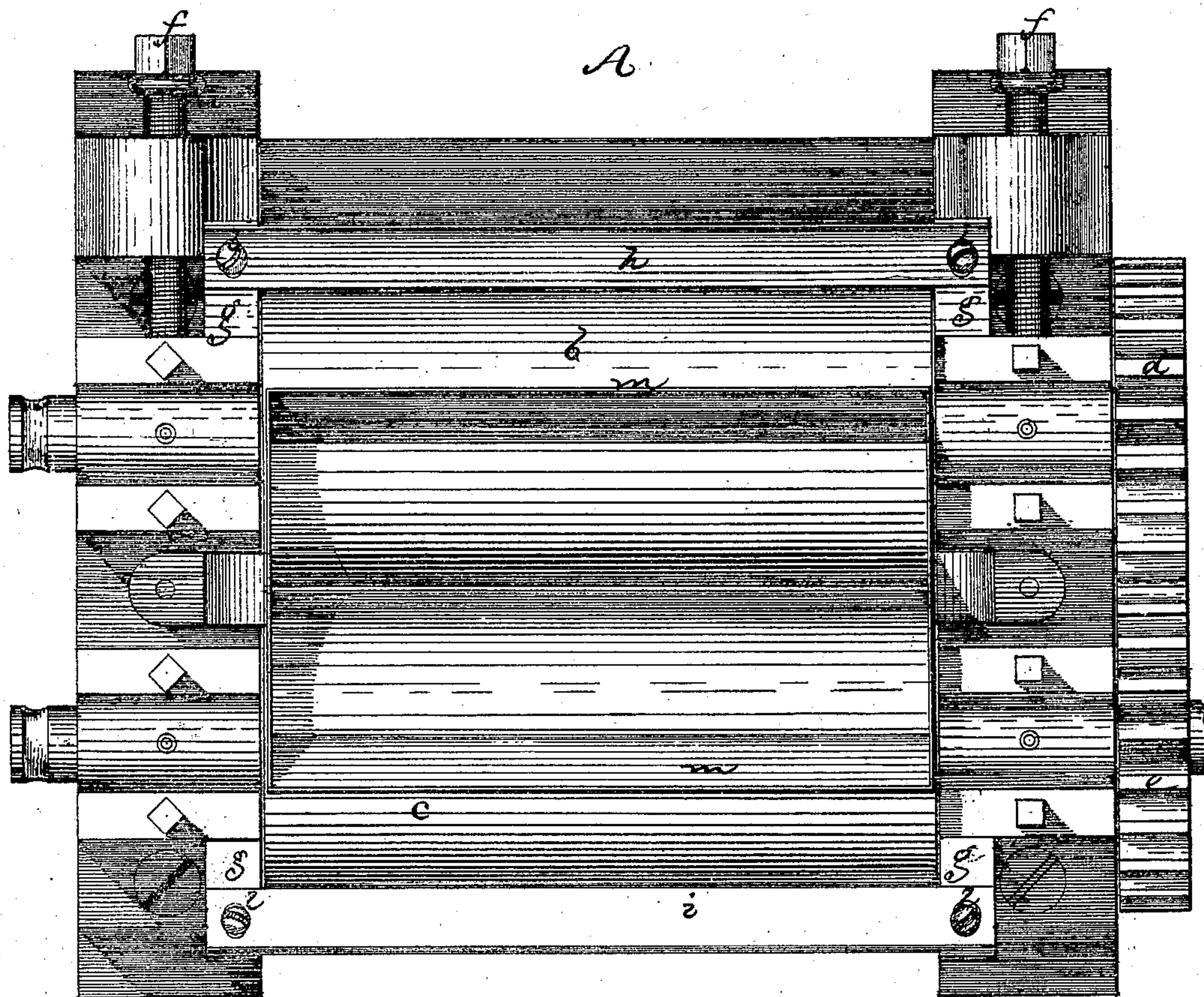


J. MANNING.
 Manufacture of Isinglass.

No. 134,690.

Patented Jan. 7, 1873.



WITNESSES.
No. W. Frothingham.
Leff. C. Cutmer.

INVENTOR.
James Manning.
By his Atty.
Crosby & Gould.

UNITED STATES PATENT OFFICE.

JAMES MANNING, OF ROCKPORT, MASSACHUSETTS, ASSIGNOR TO C. J. NORWOOD, OF IPSWICH, AND J. J. MANNING AND W. N. MANNING, OF ROCKPORT, MASSACHUSETTS.

IMPROVEMENT IN THE MANUFACTURE OF ISINGLASS.

Specification forming part of Letters Patent No. 134,690, dated January 7, 1873.

To all whom it may concern:

Be it known that I, JAMES MANNING, of Rockport, in the county of Essex and State of Massachusetts, have invented an Improvement in the Manufacture of Isinglass; and I do hereby declare that the following, taken in connection with the drawing which accompanies and forms part of this specification, is a description of my invention sufficient to enable those skilled in the art to practice it.

In the manufacture of ribbon isinglass from fish-sounds it is customary to feed the softened and moist or macerated sounds to and between feed and compressing rollers, by which the viscid substance is compressed and joined and formed into a continuous sheet. Notwithstanding the constant application of cold water into the rolls, the substance adheres tenaciously to the roll and accumulates thereupon, and has to be cut away therefrom an operation which is very slow and laborious and productive of imperfect sheets.

My invention is designed to obviate the return of the adhering gelatinous substance to the action of the rolls before it is stripped therefrom, and to so strip it that the rolls may work continuously or without stoppage, the ribbon, as it is stopped, being again fed or guided by the operator into and between the rolls until sufficiently reduced or elongated for removal or for the action of other rolls set nearer together to produce a thinner ribbon.

To effect this result I place at the side of each roll a scraper extending the whole length of the roll and having an edge set up to the roll, so that the roll shall run just clear of it, which scraper or cleaner strips from the whole surface of the roll the adhering gelatine in the form of a sheet.

The invention consists in this method of passing the isinglass between hollow rolls cooled by water thrown into the rolls and then stripping the gelatinous matter from the rollers and returning it to the hopper to be again treated, the rollers being adjustable.

The drawing represents a pair of rollers for forming isinglass with scrapers applied thereto to strip the sheets from the rolls.

A shows a plan of the rolls; B, a vertical cross-section.

a denotes a frame having suitable boxes for supporting the journals of the two rolls *b c*, geared together by gears *d e* and running at

coincident speed, the journal-boxes of one roll being preferably made adjustable by set-screws *f*, for the purpose of bringing the roll toward the other roll or permitting it to fall back therefrom. From the bearings of each roll two arms, *g*, extend, two of these arms supporting a scraper, *h*, and the other two a similar scraper, *i*, the edge of the scraper *h* standing close to the surface of one roll, *b*, and the edge of the other, *i*, close to the surface of the other roll *c*. Each scraper stands at an angle to the roll, as seen at *b*, and each is preferably made adjustable by screws *k* and slots *l*.

The macerated sounds are thrown to the rolls through a hopper or conductor, *m*, and as the rolls take them they are compressed and fed by and between the rolls, but emerge therefrom with the gelatinous matter strongly adhering to the surfaces of the rolls. But as this adhering matter is brought by the two rolls against the two scraper-edges it is peeled or stripped from them by the scrapers, and is taken by the operator as it leaves the rolls and scrapers, in continuous-sheet form, and reconducted back into the hopper and between the rolls, to be again seized by them and compressed and elongated, the scrapers continuing to strip the sheet so long as the material continues to adhere.

By feeding the roll *b* forward the sheet or ribbon may be more and more compressed to reduce its thickness, or the sheet, after having been brought to a uniform thickness by the rolls, may be removed to another machine, to be rolled thinner, and run through a set of machines until the required thinness is obtained.

I claim—

The herein-described method of converting isinglass into sheets of any desired thickness by running it between hollow rolls into which cold water is thrown to cool the compressing surfaces, such rolls being preferably made adjustable to graduate the degree of compression, and the adhering sheets being removed from the rolls by stationary scrapers or cleaners and returned to the hopper, as required.

Executed this 16th day of September, A. D. 1872.

JAMES MANNING.

Witnesses:

ARTEMUS GOTT,
ALFRED PARSONS.