

important consideration. Second, though also of great importance, is the economical use of the space occupied—the installation of the equipment, desks, tables, files, machines, etc. Third, arranging them most conveniently for the operatives and the work to be done on, at, or with them; and finally to impress the visitor or customer with the business-like appearance of the office itself. The chief factors to be considered may be thus enumerated:

1. The arrangement must be such as to save unnecessary travel on the part of the clerks.

2. The work must always flow in straight lines, always forward and never crossing its own path.

3. The provision of good working conditions, proper equipment, light, heat and ventilation.

4. Space must be economically used.

In this investigation we compare the space at your disposal with the Best Known Practice in the economical use of office space, a standard which allots 50 square feet to each clerk, and 100 square feet to each executive in the establishment.

Our findings, then, are comprised in the following tabulation:

THIRD FLOOR		Square feet
Total space available (less (Department M).....		4,391
Required for clerical space		
Department C.....		
1 Executive	100	
27 Clerks	1,350	
Photostat equipment	150	
Special information files.....	275	
Miscellaneous files	50	
Mail Department	1	
5 Clerks	250	
Files	792	
Department C.....		
2 Clerks	100	
Vault space	170	
Total space required.....		3,237
Excess space		1,154

(In this manner we detailed each floor, but I am omitting details from this paper and giving end figures only.)

RECAPITULATION		
	Available	Excess
Mezzanine Floor	1,660	525
Third Floor	4,391	1,154
Fourth Floor	5,921	1,901
Fifth Floor	2,106	1,056
Totals	14,078	4,636

On the basis of your valuation of space at \$3 per square foot, this excess space represents a rental value of \$13,908 per annum, a sum which you are now losing, but which could be saved by a re-arrangement of the clerical space in your office. This space can be saved

by a re-arrangement of your equipment alone, no change in the equipment itself being necessary, although we will have a few words to say about your equipment under that heading. Neither would it involve the removal of any partitions, walls, or private offices.

The Total deduction on Economical Use of Space is 9.5 points.

Suggestion No. 11. We suggest that your offices on all floors, with the exception of those excluded as before mentioned, are greatly in need of re-arrangement.

We will endeavor to explain briefly what is covered by scientific office arrangement. It is a highly technical procedure and bears a very close relation to the work of an architect. Whenever possible it should be done in co-operation with the architect, as the building is being designed, but of course in your case, the building is already erected. The same principles apply, however, in either case. They are as follows:

First, a careful study should be made of the work of each department, the relations of one with another, and the relations of one clerk within that department with another. While this data is being compiled, the next step is taken.

Second, a scale drawing is made of present space, with all equipment shown (we usually use $\frac{1}{4}$ inch to the foot, scale). On this drawing the route of the travel of work on main routines is sketched. Any departures from the "straight line" principle of routine will then show up.

Third, when the data have been compiled they should then be studied in connection with the scale drawing. At the same time, templates should be made of the desks and other equipment shown on the drawing.

Fourth, the new arrangement should be made with the templates on a blank floor space plan, and each department lay-out discussed with all persons concerned.

Fifth, when the final details have been approved, the new arrangement should be sketched in, exactly to scale, and should serve as a guide to re-arrangement.

Here are a few things to remember: 1. Desks should be placed in rows of not more than two desks side by side. 2. Desks should be so arranged that the work flows from one clerk to another in "straight" lines on the main routine. 3. Aisles should be at least 36 inches wide. 4. Desks should not be less than 30 inches apart, from the back of one desk to the front of another. This allows ample seating space. 5. There should be adequate cross aisles not farther apart than 20 to 25 feet.

¹ In this case sixty suggestions were made for the improvement of existing conditions.

Though we have said that the space mentioned as being possible to recover in your present arrangement could be saved without eliminating partitions, we would strongly urge the consideration of the problem of removing as many of them as possible and desirable, for they waste space.

(After summarizing our findings on the other ten points, in a similar manner we give the rating on this subject of Arrangement of Office as follows):

RECAPITULATION	
Economical use of space.....deducted	9.5 points
Direct flow of work.....	6.8 "
Adequate light	9.38 "
Adequate circulation aisles.....	1.5 "
Reduction of preventable noise.....	2.0 "
Adequate ventilation	3.0 "
Adequate drinking fountains.....	1.4 "
Adequate cloak rooms	1.5 "
Adequate toilet facilities	0.0 "
Adequate reception room for public.....	1.5 "
Appearance	1.0 "

Total deducted

Your rating on Arrangement of Office is therefore 100 points less 37.58 points, or 62.42 percent.

V. FILING: VALUE OF FILED MATERIAL

A. FIELD EXAMINER'S QUESTIONS AND REPLIES

Go to filing department, select one drawer at random and record: a. Total number of pieces filed in drawer, 2,652. b. Number of pieces misfiled, 44. c. Number of pieces of temporary value which should not be in file, 798.

Note on c. There are often to be found, a number of kinds of filing matter of obviously temporary value. As you go through the files, tally each temporary piece opposite its listing, adding any additional temporary classes that come to your attention:

Catalogue requests	200
Obviously temporary price quotations.....	
Remittance acknowledgments	200
Order acknowledgments	
Advertising matter	
Temporary reports on statements	
Hotel reservations	
Letters of temporary value.....	398
Total	798

B. OFFICE RATING SHEET

The allowance for Value of Filed Material is 15 points.

The formula is "deduct $\frac{a}{15c}$ points," in which a is the number of pieces counted and c the number of pieces obviously of temporary value.

$$\frac{15 \times 798}{2552} = 4.5 \text{ points deduction.}$$

C. SUMMARY OF FINDINGS REPORTED TO CLIENT

The crowding of files with material of only temporary value should be carefully guarded against, as it is almost a sheer waste of time and labor. In your collection department we found the letters filed in two drawers with a 25 alphabetical division. With the present number of letters, this division would not be adequate if the material were frequently referred to. But, as by far the largest portion of this correspondence is of but temporary value, a different system should be used. Out of the 484 letters examined in this department, no less than 398 were of obviously temporary value, consisting mostly of impersonal collection notes that should have been destroyed as soon as the account in question was settled. The remaining material consisted almost entirely of reference letters about customers. We examined also the files of your advertising and sales departments. Out of the 500 pieces examined, 100 pieces could properly be considered as of temporary value only. These consisted of requests for booklets, samples, prices, etc. If thought desirable, the pertinent details of such letters could have been taken off and used for sales purposes, but the letters themselves are obviously of no value for reference purposes and should be destroyed. We also found here about 100 order acknowledgments which are obviously of little future value. We have deducted 4.5 points.

Suggestion No. 19. We suggest the use of a "pending" or "suspense" file for material of this character. At stated times, say every 30 days, this file should be gone over and the material in it returned to the person who requested that it be filed. This person can then examine it and if he concludes it is of no value, he can destroy it; if he judges that it is desirable to preserve it longer, he can return it to the suspense file.

XI. CONTROL OF OUTPUT: UNINTERRUPTED FLOW OF WORK

A. FIELD EXAMINER'S QUESTIONS AND REPLIES

Are peaks in a department handled by a "flying squadron" or similar methods? *No.* Are vacations so scheduled as to eliminate peaks? *Yes.*

Are any methods for planning the work of the office in use? (Do not confuse with scheduling.) Check your findings below:

a. Approved planning method.....	
b. Planning methods on part of routine.....	
c. Inferior planning method.....	
d. No planning method.....	X

Interview each department head and determine if work is up to date in his department. If it is not,